

## Contingent Valuation Method (CVM) Analysis for Estimating the Economic Value of Pagutan Green Open Space

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### **Abstract**

**Keywords:** *Contingent Valuation Method; Green Open Space; OLS Regression; Total Economic Value; Willingness to Pay*

Urban green open spaces provide ecological, social, and economic benefits, yet their preservation is often underfunded because many of these benefits are not reflected in market prices. This study estimates the total economic value (TEV) of Pagutan Green Open Space (Ruang Terbuka Hijau, RTH) in Mataram City, Indonesia, and examines the determinants of visitors' willingness to pay (WTP) for its preservation. Using the contingent valuation method (CVM) with a bidding game format and an annual voluntary donation scenario, data were collected from 100 visitors selected through accidental sampling and analyzed using ordinary least squares (OLS) regression. The direct use value was derived from parking and Aula Bencingah rental revenues, while the existence value was obtained by aggregating WTP over annual visits. The mean WTP was Rp17,750 per individual per year, yielding a direct use value of Rp196,536,000, an existence value of Rp2,157,264,000, and a TEV of Rp2,353,800,000 per year. Income had a significant positive effect on WTP, gender had a positive effect that was significant at the 10% level, and the number of dependents had a significant negative effect, whereas education, organizational participation, and visit frequency were not significant. These results suggest that the preservation value of the park does not depend primarily on direct use. The findings provide an empirical basis for equitable green space financing policies. The article includes three tables, eight figures, and 19 references.

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## INTRODUCTION

Pagutan Green Open Space (Ruang Terbuka Hijau, hereafter RTH Pagutan) is one of the largest green areas in Mataram City, covering approximately 8.2 hectares in the eastern part of the city on the border with West Lombok Regency (Madyawati, Diswandi, & Maryam, 2026). It is located on Jalan Batu Bolong No. 2, Pagutan Barat, Mataram District, West Nusa Tenggara. The area has been developed as an integrated green open space that serves horticultural, agrotourism, and recreational functions. Vegetables, fruits, and superior local plant varieties are cultivated on site, so the park also serves as a venue for environmental education and urban agriculture. The Mataram City Government has further directed that several regional government agencies be involved in managing RTH Pagutan so that the area can fulfill its social, ecological, and economic functions. Its ecological function is particularly important because urban green spaces provide measurable ecosystem services, including the removal of air pollutants, carbon sequestration and storage, and flood regulation (Alpaidze & Salukvadze, 2023).

Despite this potential, RTH Pagutan faces several constraints, including inadequate facilities, unsafe children's play areas, suboptimal maintenance, and limited budgets for management and facility improvement (Madyawati et al., 2026). At the same time, the park is vital to environmental quality and community well-being, as it provides public green space, enhances urban aesthetics, and helps preserve urban ecosystems. These conditions call for evidence-based management and development, which in turn requires quantifying the economic value of RTH Pagutan, particularly its existence value, a component that is rarely reflected in market transactions (Pearce & Turner, 1990).

Previous studies have examined the economic value of green open spaces in Mataram City. Orchidamoty, Diswandi, and Firmansyah (2026) estimated willingness to pay (WTP) for Udayana Green Open Space, whereas Madyawati et al. (2026) applied the contingent valuation method (CVM) to RTH Pagutan to inform user fees and management strategies, estimating an economic value of approximately Rp476 million per year based on 145 respondents. The present study extends this work in two ways. First, it combines the direct use value derived from the area's actual revenues (parking fees and Aula Bencingah rental) with the WTP-based preservation value in a single total economic value (TEV) estimate. Second, it examines gender, number of dependents, and participation in environmental organizations as determinants of WTP, which were not tested by Madyawati et al. (2026).

Accordingly, this study aims to estimate the TEV of RTH Pagutan, comprising the direct use value based on market prices and the existence value derived from WTP using the CVM.

## LITERATURE REVIEW

### Total Economic Value and Existence Value

Environmental economics conceptualizes the value of natural assets through the total economic value (TEV) framework, which distinguishes use values from non-use values (Pearce & Turner, 1990). Use values comprise direct use, such as recreation and activities that generate revenue, and indirect use, such as the regulation of air quality and the urban microclimate. Non-use values comprise option, bequest, and existence values; existence value refers to the welfare that individuals derive from knowing that a resource exists, even if they never use it (Pearce & Turner, 1990). Urban green spaces generate both types of value. They provide recreational opportunities and measurable ecosystem services, such as pollutant removal and carbon storage (Alpaidze & Salukvadze, 2023), and residents also value their continued existence and preservation, which motivates public support for their funding (Mandziuk et al., 2025).

Because non-use values are not traded in markets, they are rarely recognized in policy and planning processes, which can lead to underinvestment in urban green spaces, particularly in developing countries (Sabyrbekov, Dallimer, & Navrud, 2020). Silva, Silva, and Carvalho (2022) showed that the TEV of an urban park can be decomposed into use values, captured by visitors' WTP for entrance and activities, and non-use values, captured by an annual donation to preserve the park. This distinction underpins the approach of the present study, which combines the actual revenues of RTH Pagutan with an annual preservation donation.

### Willingness to Pay and Its Determinants

The CVM estimates non-market values by asking respondents to state their WTP for a change in the provision of a public good within a hypothetical market. Its validity depends on a credible scenario, an appropriate payment vehicle, and a transparent elicitation procedure (Johnston et al., 2017). The method has been widely applied to urban parks in Southeast Asia (Othman & Jafari, 2019; Yarnvudhi, Leksungnoen, Tor-ngern, & Premashthira, 2024) and in Indonesia (Fitra & Sasana, 2021; Idris, Hoque, & Susanto, 2022; Madyawati et al., 2026).

From the perspective of consumer theory, WTP for environmental quality is constrained by the household budget. Higher income relaxes this constraint and is therefore expected to increase WTP, whereas a larger household or a greater number of dependents directs spending toward basic needs and is expected to reduce it (Sabyrbekov et al., 2020). Empirical studies support the positive effect of income (Kalfas, Chatzitheodoridis, Loizou, & Melfou, 2022; Madyawati et al., 2026) and the negative effect of the number of dependents (Rahmawati, Darusman, Hermawan, & Avenzora, 2018). Evidence on other characteristics is mixed: gender and education affected the WTP of urban park visitors in Greece (Halkos, Leonti, & Sardanou, 2022a; Halkos, Leonti, Petropoulos, & Sardanou, 2022b), whereas education had no significant effect in Mataram City (Orchidamoty et al., 2026). Moreover, a strong attachment to nature does not necessarily

translate into a higher WTP (Sabyrbekov et al., 2020). Finally, because existence value does not depend on actual use (Pearce & Turner, 1990), a WTP that is unrelated to visit frequency can be interpreted as evidence of existence value.

Based on this framework, the following hypotheses were formulated: education, income, participation in environmental organizations, and visit frequency positively affect WTP; the number of dependents negatively affects WTP; and gender influences WTP.

## METHODS

### Research Design, Population, and Sample

This quantitative study applied the CVM in RTH Pagutan, with WTP as the dependent variable (Pearce & Turner, 1990). The population comprised visitors to RTH Pagutan, which receives approximately 121,536 visits per year (Madyawati et al., 2026). Respondents were recruited through accidental sampling, that is, visitors who were encountered in the park and agreed to participate. A sample size of 100 respondents was determined using the Slovin formula with a 10% margin of error.

### Variables and Measurement

The independent variables comprised six socioeconomic and behavioral characteristics: gender, education, income, number of dependents, participation in environmental organizations, and visit frequency. Gender was coded as a dummy variable (1 = male, 0 = female); education was measured in years of schooling; income in million rupiah per month; dependents in number of persons; organizational participation as a dummy variable (1 = yes, 0 = no); and visit frequency as the number of visits per year.

### Data Collection

Data were collected through a face-to-face questionnaire built around a CVM scenario designed in line with contemporary guidance for stated preference studies (Johnston et al., 2017). Because RTH Pagutan is a public good that is not traded in an actual market, eliciting its existence value requires the construction of a hypothetical market. Respondents were first given a description of the current condition of RTH Pagutan and its role as an urban ecological buffer and were then presented with a preservation scenario requiring direct financial contributions from the community. All respondents were informed of the research objectives and gave their voluntary consent before completing the questionnaire.

WTP was elicited using the bidding game technique (Fitra & Sasana, 2021; Madyawati et al., 2026). The enumerator proposed a starting bid of Rp5,000 for an annual voluntary donation to preserve RTH Pagutan, adjusted in increments of Rp500. If a respondent accepted the bid, the amount was raised iteratively until the respondent declined to pay more, thereby revealing their maximum WTP. If the starting bid was rejected, the amount was lowered until the respondent accepted.

### Data Analysis Techniques

Descriptive statistics were used to profile the respondents and to calculate the mean WTP, which was aggregated into total WTP as  $TWTP = E(WTP) \times N$ , where  $E(WTP)$  is the mean WTP and  $N$  is the annual number of visits (Madyawati et al., 2026).

In addition to the existence value, classified as a non-use value (NUV), this study estimates the direct use value (DUV) of RTH Pagutan using the market price approach, based on the area's actual operating revenues from visitor parking fees and the rental of a public facility (Aula Bencingah). The TEV was then obtained by summing the DUV and the NUV (Pearce & Turner, 1990; Silva et al., 2022).

The effects of the six independent variables on WTP were estimated using ordinary least squares (OLS) multiple linear regression in SPSS after testing for normality, multicollinearity, and heteroscedasticity.

## RESULTS

### 1. Respondent Characteristics

The study involved 100 respondents recruited through accidental sampling among visitors to RTH Pagutan. Their demographic and socioeconomic characteristics are important in a CVM study because individual profiles shape how respondents reason about their WTP for environmental preservation. The characteristics examined include gender, formal education, monthly income, number of dependents, participation in environmental organizations, and visit frequency. The respondent profile is presented below:

- **Gender ( $X_1$ ):**

The majority of respondents were male (58%), and the remaining 42% were female (Figure 1).

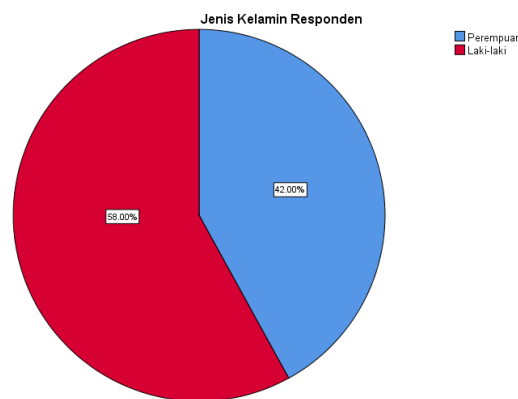


**Figure 1.** Distribution of Respondents by Gender  
Source: Primary data (processed)

- **Education ( $X_2$ ):**

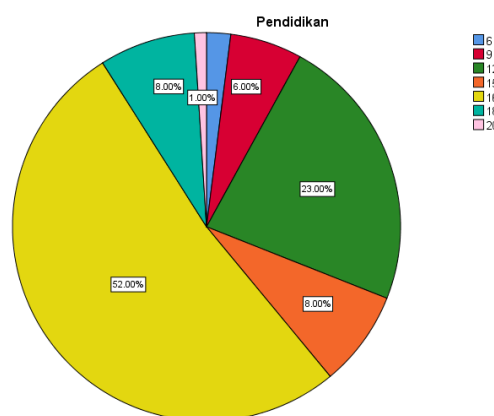


**Figure 2.** Distribution of Respondents by Years of Education  
Source: Primary data (processed)

As shown in Figure 2, respondents' formal education varied considerably, ranging from 6 to 20 years of schooling. Most respondents were highly educated: 52% had 16 years of education (equivalent to a bachelor's degree), followed by 23% with 12 years (equivalent to senior high school).

Respondents with 15 years of education (equivalent to a diploma) and 18 years (equivalent to a master's degree) each accounted for 8%. Smaller groups had 9 years of education (junior high school, 6%), 6 years (elementary school, approximately 2%), or a doctoral degree (20 years, 1%). Overall, this high level of formal education suggests that most respondents had sufficient literacy to understand the valuation scenario.

- **Income ( $X_3$ ):**

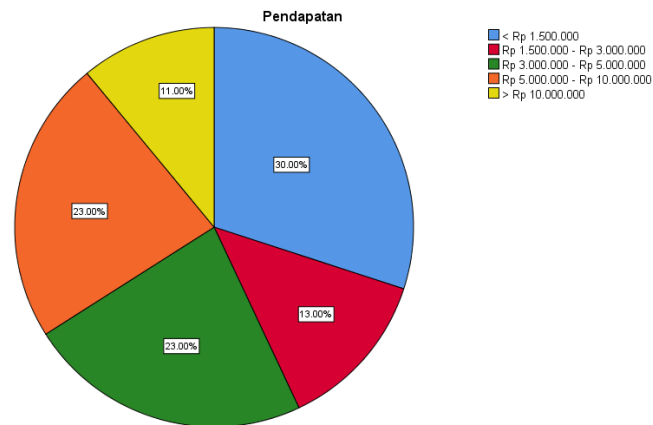


**Figure 3.** Distribution of Respondents by Income  
Source: Primary data (processed)

Respondents' monthly incomes varied (Figure 3). The largest group (30%) earned less than Rp1,500,000 per month. The middle-income groups were evenly distributed, with the Rp3,000,000–Rp5,000,000 and Rp5,000,000–Rp10,000,000 brackets each accounting for 23% of the sample. The Rp1,500,000–Rp3,000,000 bracket accounted for 13%, and the highest income bracket (above Rp10,000,000) was the smallest, at 11%.

- **Number of Dependents ( $X_4$ ):**

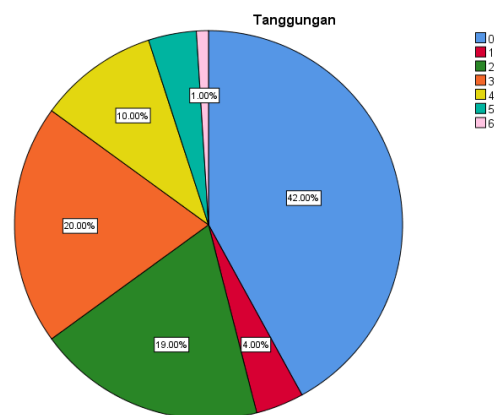


**Figure 4.** Distribution of Respondents by Number of Dependents  
Source: Primary data (processed)

The largest group of respondents (42%) had no dependents (Figure 4). Respondents with three and two dependents accounted for 20% and 19%, respectively, and those with four dependents for 10%. Approximately 4% of respondents each had one or five dependents, while only 1% had six dependents, the maximum observed.

- **Organizational Participation ( $X_5$ ):**

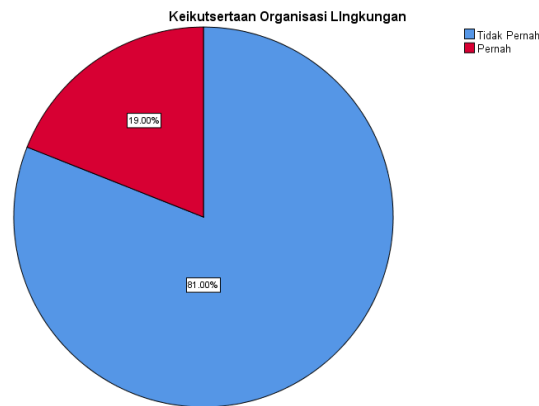


**Figure 5.** Distribution of Respondents by Organizational Participation  
Source: Primary data (processed)

Participation in environmental organizations was markedly low (Figure 5). Most respondents (81%) reported never having joined an environmental organization or community, whereas only 19% had participated in one.

- **Visit Frequency ( $X_6$ ):**

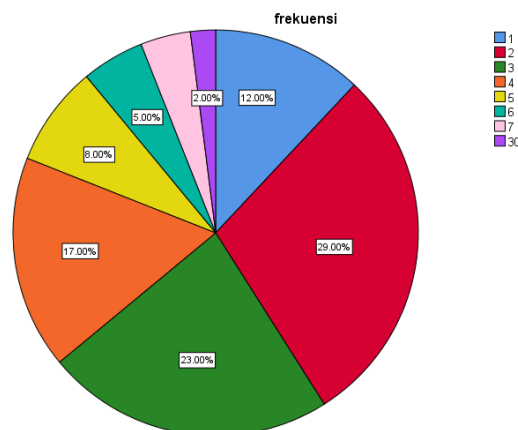


**Figure 6.** Distribution of Respondents by Visit Frequency  
Source: Primary data (processed)

Most respondents visited the park at low to moderate frequencies (Figure 6). The largest group had visited twice (29%), followed by those who had visited three times (23%).

Respondents who had visited four times accounted for 17% of the sample, and those who had visited only once for 12%. Higher frequencies were less common: five visits (8%) and six visits (5%). The remaining respondents had visited seven times (approximately 4%), and a small group of very frequent visitors, with up to 30 visits, accounted for only 2% of the sample.

## 2. Estimation of Willingness to Pay (WTP) and Existence Value

The bidding game revealed considerable variation in respondents' WTP for the preservation of RTH Pagutan. The mean WTP was Rp17,750 per individual per year. This value was aggregated over the approximately 121,536 annual visits to RTH Pagutan reported by Madyawati et al. (2026). The existence value (total WTP) of RTH Pagutan is therefore estimated as follows:

$$TWTP = \text{Rp } 17,750 \times 121,536$$

$$TWTP = \text{Rp } 2,157,264,000 \text{ per year}$$

The preservation value was obtained by multiplying the mean WTP by the annual number of visits. Because WTP was measured per individual per year, whereas the visitor data record visits, repeat visitors may be counted more than once; this value should therefore be interpreted as an upper-bound estimate. For comparison, Madyawati et al. (2026) estimated the economic value of RTH Pagutan at approximately Rp476 million per year based on a WTP of Rp3,917 per visit. This difference arises mainly from the unit of WTP measured, namely a per-visit fee versus an annual preservation contribution. The distinction is consistent with Silva et al. (2022), who showed that WTP for park entrance reflects use value, whereas an annual donation to preserve a park reflects non-use value.

### 3. Estimation of the Total Economic Value (TEV)

The direct use value was estimated using the market price approach based on the two main sources of operating revenue at RTH Pagutan: visitor parking fees and the rental of the Aula Bencingah facility. The data sources and calculations are described below:

#### Parking Fee Revenue ( $DUV_{parking}$ )

Parking revenue was calculated by converting the annual number of visits into the number of vehicles. RTH Pagutan receives an estimated 121,536 visits per year (Madyawati et al., 2026), or an average of approximately 333 visits per day. The calculation assumes that all visitors arrive by motor vehicle and pay the same fee; the result should therefore be regarded as an estimate. The parking fee of Rp2,000 per motor vehicle is based on Mataram City Regional Regulation No. 1 of 2024 on Regional Taxes and Levies (Pemerintah Kota Mataram, 2024). Assuming an average occupancy of two persons per vehicle, the annual vehicle volume is calculated as follows:

$$Volume_{vehicle} = \frac{121,536 \text{ visits/year}}{2 \text{ persons/vehicle}} = 60,768 \text{ vehicles/year}$$

Based on this vehicle volume, the annual parking revenue is calculated as follows:

$$DUV_{parking} = Volume_{vehicle} \times Fee_{parking}$$

$$DUV_{parking} = 60,768 \times Rp2,000$$

$$DUV_{parking} = Rp121,536,000 \text{ per year}$$

#### Aula Bencingah Rental Revenue ( $DUV_{hall}$ )

According to the 2025 Regional Levy Revenue Realization Report of the Mataram City Environmental Agency (Dinas Lingkungan Hidup Kota Mataram, 2025), the rental of the Aula Bencingah facility generates Rp75,000,000 per year.

$$DUV_{hall} = Rp75,000,000 \text{ per year}$$

#### Aggregate Direct Use Value ( $DUV_{total}$ )

The total direct use value of RTH Pagutan is the sum of the parking and hall rental revenues.

$$DUV_{total} = DUV_{parking} + DUV_{hall}$$

$$DUV_{total} = Rp121,536,000 + Rp75,000,000$$

$$DUV_{total} = Rp196,536,000 \text{ per year}$$

#### Calculation of the Total Economic Value (TEV):

The TEV of RTH Pagutan is calculated as follows:

$$TEV = DUV + NUV$$

$$TEV = Rp196,536,000 + Rp2,157,264,000$$

$$TEV = Rp2,353,800,000 \text{ per year}$$

The estimated TEV of Rp2.35 billion per year provides an economic rationale for investment by the Mataram City Government in the preservation of RTH Pagutan. However, only the direct use value (Rp196.5 million) represents actual revenue. Approximately 91.7% of the TEV derives from the WTP-based preservation value, which reflects welfare benefits to the community and is not recorded as local own-source revenue (*Pendapatan Asli Daerah*, PAD). This structure accords with TEV theory, in which non-use values can constitute a substantial share of the value of environmental assets (Pearce & Turner, 1990; Silva et al., 2022).

Because WTP was elicited from visitors, it may capture use value components in addition to existence value. Moreover, the direct use value was approximated using levy revenues as a proxy, and other TEV components (indirect use, option, and bequest values) were not estimated; the TEV reported here is therefore partial. Although these components were not measured separately, non-market values such as existence, option, and bequest values are recognized as key motivations for public funding of urban green spaces (Mandziuk et al., 2025).

#### 4. Classical Assumption Tests

Although several respondents reported zero bids, OLS was used to estimate the model parameters. Before the multiple linear regression results were interpreted, the model was tested against the classical assumptions required for a best linear unbiased estimator (BLUE):

##### Normality Test:

The normal P-P plot (Figure 7) shows that the residuals lie close to the diagonal line, indicating that they are approximately normally distributed.

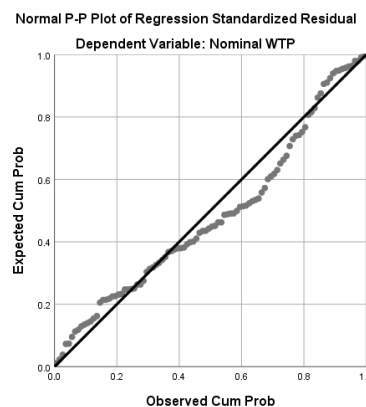


**Figure 7.** Normality Test Results (P-P Plot)  
Source: Primary data (processed)

##### Multicollinearity Test:

All six independent variables had tolerance values  $> .10$  and variance inflation factor (VIF) values  $< 10$  (VIF range: 1.024 to 2.177), indicating no serious multicollinearity among the independent variables.

**Table 1.** Multiple Linear Regression Results

| Model                        | (B)        | (Std. Error) | (Beta) | T      | Sig. | (Tolerance) | (VIF) |
|------------------------------|------------|--------------|--------|--------|------|-------------|-------|
| (Constant)                   | -3,668.144 | 10,418.821   |        | -.352  | .726 |             |       |
| Gender                       | 7,719.385  | 4,026.040    | .191   | 1.917  | .058 | .818        | 1.223 |
| Education                    | 651.138    | 769.974      | .88    | .846   | .400 | .760        | 1.315 |
| Income                       | 6,665.901  | 1,912.466    | .464   | 3.486  | .001 | .459        | 2.177 |
| Dependents                   | -6,482.486 | 1,536.070    | -.539  | -4.220 | .000 | .500        | 2.000 |
| Organizational Participation | 4,998.459  | 4,851.181    | .98    | 1.030  | .306 | .892        | 1.122 |
| Visit Frequency              | -203.581   | 447.586      | -.042  | -.455  | .650 | .976        | 1.024 |

Source: Primary data (processed)

### Heteroscedasticity Test:

Visual inspection of the scatterplot (Figure 8) shows that the residuals are randomly scattered without any discernible pattern, indicating no evidence of heteroscedasticity.

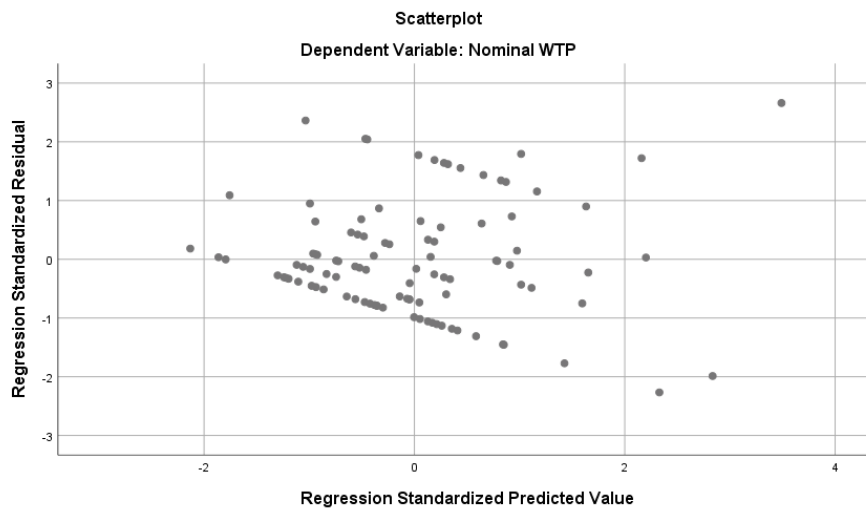


**Figure 8.** Heteroscedasticity Test Results (Scatterplot)  
Source: Primary data (processed)

### 5. Regression Model Estimation

The estimated regression model of visitors' WTP for the preservation of RTH Pagutan is as follows:

$$Y = -3668.144 + 7719.385X_1 + 651.138X_2 + 6665.901X_3 - 6482.486X_4 + 4998.459X_5 - 203.581X_6 + \varepsilon$$

The coefficient of determination was  $R^2 = .243$  (Table 2), indicating that the six independent variables explain 24.3% of the variation in WTP. The overall model was statistically significant,  $F(6, 93) = 4.98$ ,  $p < .001$ , with a medium-to-large effect size (Cohen's  $f^2 = .32$ ).

**Table 2.** Coefficient of Determination (Model Summary)

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .493 | .243     | .194              | 17,969.348                 |

Source: Primary data (processed)

The remaining 75.7% of the variation in WTP is attributable to factors outside the model. An  $R^2$  of this magnitude is typical of CVM studies based on cross-sectional survey data, as such models capture complex subjective preferences and individual economic behavior.

## DISCUSSION

### a. Partial Hypothesis Tests and Determinants of WTP

This section discusses the significance of each variable and compares the results with previous valuation studies of green open spaces, including two studies conducted in Mataram City. Table 3 summarizes this comparison.

The partial effects of the variables (Table 1) on WTP for the preservation of RTH Pagutan are interpreted as follows:

- **Income ( $X_3$ ) Has a Positive and Significant Effect:** Income had a positive and highly significant effect on WTP,  $b = 6,665.901$ ,  $t(93) = 3.486$ ,  $p = .001$ . This result is consistent with consumer theory, in which WTP for an environmental good is bounded by the household budget: as disposable income rises, households can allocate a larger share of discretionary

spending to the preservation of public green spaces (Sabyrbekov et al., 2020). The finding is consistent with other green space valuation studies in Indonesia. Fitra and Sasana (2021), in a CVM study of Taman Indonesia Kaya in Semarang City, likewise found a positive and significant effect of income on WTP. Similar findings were reported by Madyawati et al. (2026) for RTH Pagutan and by Kalfas et al. (2022) in Florina, Greece, both of whom identified income as a key determinant of WTP for urban green spaces.

- **Number of Dependents ( $X_4$ ) Has a Negative and Significant Effect:** The number of dependents had a negative and significant effect on WTP,  $b = -6,482.486$ ,  $t(93) = -4.220$ ,  $p < .001$ ; each additional dependent reduced WTP by approximately Rp6,482. This result supports the budget constraint argument: a larger number of dependents directs household spending toward essential needs such as food, health, and education, leaving less room for discretionary environmental contributions, a pattern also reported by Sabyrbekov et al. (2020), who found that household size constrains WTP for urban green spaces. The finding is in line with Rahmawati et al. (2018), who also reported a negative coefficient for the number of dependents in their valuation of Srengseng Urban Forest, Jakarta. The consistency of this result across two green space contexts reinforces the relevance of budget constraint theory in explaining the WTP of households with many dependents.
- **Gender ( $X_1$ ) Is Significant at the 10% Level:** Gender had a positive effect on WTP that was significant only at the 10% level,  $b = 7,719.385$ ,  $t(93) = 1.917$ ,  $p = .058$ , suggesting that men tend to report a higher WTP. From an economic sociology perspective, this may reflect the structure of financial control in local households, in which men are predominantly the main breadwinners and have greater discretion over additional expenditures. This finding is consistent with Fitra and Sasana (2021) and Rahmawati et al. (2018), who found that male visitors were willing to pay more than female visitors. By contrast, Idris et al. (2022) found no significant effect of gender, whereas Halkos et al. (2022a) reported that gender affects the WTP of urban park visitors in Greece.
- **Education ( $X_2$ ) and Organizational Participation ( $X_5$ ) Are Not Significant:** Neither education,  $t(93) = .846$ ,  $p = .400$ , nor organizational participation,  $t(93) = 1.030$ ,  $p = .306$ , had a significant effect on WTP. Although higher education and social participation may raise environmental awareness, this awareness does not necessarily translate into a willingness to make monetary contributions. This finding supports the argument that pro-environmental attitudes and attachment to nature do not necessarily translate into a higher WTP (Sabyrbekov et al., 2020). It is also consistent with public goods theory: because the benefits of a park are non-excludable, individuals tend to regard its financing as the responsibility of government rather than of individual users (Pearce & Turner, 1990). Residents often express their environmental concern through communal physical work (*gotong royong*) instead. The non-significance of education is consistent with Orchidamoty et al. (2026) and Madyawati et al. (2026), who likewise found no significant effect of education on WTP for green open spaces in Mataram City. In contrast, Halkos et al. (2022b) found that education affects the WTP of urban park visitors in Greece.
- **Indication of Existence Value: Non-Significance of Visit Frequency ( $X_6$ ):** Visit frequency had no significant effect on WTP,  $t(93) = -.455$ ,  $p = .650$ , suggesting that WTP is not determined primarily by the intensity of direct use. Because existence value does not depend on actual use (Pearce & Turner, 1990), this pattern is consistent with the presence of existence value: respondents appear to regard RTH Pagutan as a valuable urban asset worth preserving as one of the city's green lungs, regardless of how often they use it for recreation. This finding is consistent with Idris et al. (2022) for Imam Bonjol Park, Padang, and with Madyawati et al. (2026) for RTH Pagutan, both of which found no significant effect of visit frequency on WTP. However, it differs from the findings of Yarnvudhi et al. (2024) at CU 100 Park, Bangkok, where more frequent visitors were more likely to be willing to pay.

## b. Comparison of Results with Previous Studies

**Table 3.** Comparison Matrix of Results with Previous Studies

| Independent Variable      | Direction & Significance (RTH Pagutan) | Supporting                                                                                                       | Contradicting                                                         |
|---------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Income ( $X_3$ )          | Positive & Significant                 | Setyowati, Taufiq, Laksono, & Fallo (2025); Fitra & Sasana (2021); Kalfas et al. (2022); Madyawati et al. (2026) | Idris et al. (2022)                                                   |
| Dependents ( $X_4$ )      | Negative & Significant                 | Rahmawati et al. (2018)                                                                                          | Idris et al. (2022)                                                   |
| Gender ( $X_1$ )          | Significant (Male > Female)            | Rahmawati et al. (2018); Fitra & Sasana (2021); Halkos et al. (2022a)                                            | Idris et al. (2022)                                                   |
| Education ( $X_2$ )       | Not Significant                        | Orchidamoty et al. (2026); Madyawati et al. (2026)                                                               | Setyowati et al. (2025); Fitra & Sasana (2021); Halkos et al. (2022b) |
| Organization ( $X_5$ )    | Not Significant                        | -                                                                                                                | -                                                                     |
| Visit Frequency ( $X_6$ ) | Not Significant                        | Idris et al. (2022); Madyawati et al. (2026)                                                                     | Orchidamoty et al. (2026); Yarnvudhi et al. (2024)                    |

Source: Research results and previous studies (processed)

## CONCLUSION

The CVM analysis shows that the mean WTP of visitors to RTH Pagutan is Rp17,750 per individual per year and that the TEV of RTH Pagutan is approximately Rp2,353,800,000 per year, indicating that the park has substantial economic value as an ecological buffer for the city. The OLS regression shows that income has a significant positive effect on WTP, gender (male) has a positive effect that is significant at the 10% level, and the number of dependents has a significant negative effect, whereas education, visit frequency, and participation in environmental organizations have no significant effect. These findings suggest that visitors' willingness to contribute to the park's preservation is driven more by their ability to pay and an existence motive than by the intensity of recreational use.

This study complements previous valuations of RTH Pagutan in three respects. First, it combines the area's actual revenues (parking fees and hall rental) with the community's WTP for preservation in a single TEV estimate. Second, it examines gender, number of dependents, and participation in environmental organizations as determinants of WTP, which had not previously been tested at this site. Third, by eliciting an annual preservation donation rather than a per-visit entrance fee, it shows that visitors value the park not only for access but also for its continued existence.

Based on these findings, the Mataram City Government and the management of RTH Pagutan are advised to avoid a uniform conservation levy and instead adopt cross-subsidy schemes or voluntary donations that do not burden households with many dependents. Because gender is significant only at the 10% level, gender-targeted fundraising campaigns warrant further investigation. Rather than relying on environmental organizations for financial contributions, the government could engage them as volunteer partners in park maintenance. Greater transparency in budget management is also needed to strengthen the sense of ownership among educated residents, so that the preservation of green open spaces is viewed as a shared responsibility. This study has several limitations. First, respondents were selected through accidental sampling of visitors. Second, the aggregation multiplies annual WTP by the number of visits and therefore provides an upper-bound estimate. Third, the TEV is partial because indirect use, option, and bequest values were not estimated. Finally, the parking revenue estimate relies on assumptions regarding vehicle occupancy and payment. Future research should employ probability sampling of

both residents and visitors, record the number of unique visitors, and apply the travel cost method to estimate recreational use value more accurately.

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