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The Impact of Village Public Service Transformation Policy Implementation on SDGs Achievement: A Study of Village Governments in Banyumas Regency

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ABSTRACT

Driven by the pressures of modernization and globalization, traditional villages must evolve to navigate emerging structural and environmental hurdles. This research examines how transforming village public services impacts the attainment of Sustainable Development Goals (SDGs) within the Banyumas Regency. Utilizing a descriptive quantitative methodology, data were gathered via Likert-scale surveys from 76 village officials and stakeholders, subsequently analyzed using logistic regression in Python. The results indicate that descriptively, the implementation of public service transformation is in the fairly good category, but hypothesis testing revealed no statistically significant effect on SDG achievement. This is evidenced by a p-value of 0.5478 (> 0.05) and a very low Pseudo R2 (McFadden) value of 0.0040. These findings indicate a "broken link" between administrative modernization and real welfare indicators. The main obstacles identified include discrepancies in human resource competencies, limited digital infrastructure, and institutional inertia. This study concludes that service transformation at the village level remains procedural and has not significantly driven sustainable development targets. Substantial capacity building and more inclusive public participation are needed for village autonomy to have a real impact on achieving the SDGs.

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Public Service Transformation; Village Government; Village SDGs.

INTRODUCTION

The acceleration of globalization and modernization has placed traditional villages in a difficult position, with issues such as cultural disruption and ecological degradation posing a real threat (Junaedi et al., 2023; Liu et al., 2022). The rapid development of digital technology and global integration has made the obstacles to sustainable development increasingly widespread, encompassing various strategic issues from the political realm to environmental sustainability (Wahyunengseh et al., 2025). Massive technological transformation has become a major catalyst in paradigm shifts across various sectors (Setyowati et al, 2025). The impacts go beyond the loss of traditional values, and this phenomenon has exacerbated regional inequality and weakened the socio-economic resilience of rural communities (Jiao et al., 2016). Village development is a key pillar that must be prioritized in all government strategic plans, given its crucial role in the success of development policies in Indonesia (Hernowo, 2004). The implementation

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of Village Law Number 6 of 2014 directs the orientation of national development toward strengthening village independence (BPKP, 2015; Coste & Tudor, 2013). This effort is realized through massive financial support, with the government allocating Rp 72 trillion in village funds in 2021. The budget was distributed for village infrastructure development (Rp 37.08 trillion), cash assistance (Rp 29.16 trillion), and Covid-19 handling (Rp 5.76 trillion) (katadesa.id, 2021). However, the low performance of village government officials in several regions remains a major obstacle that triggers the failure of managing these funds (Saragih, 2019). This condition has encouraged the birth of various efforts to transform village governance, including in the aspect of public services. Village public services are one of the main faces of village government performance, because they are directly related to the quality of government and community interactions and the fulfillment of citizens' basic rights. Therefore, the transformation of village public services is an important agenda in strengthening modern, responsive, and community-oriented village governance.

The global development model has recently shifted towards comprehensive sustainability, as outlined in the 2030 Sustainable Development Goals (SDGs) agenda. The objective of the SDGs is to promote social, economic, and environmental fairness (Sachs et al, 2023). On the other hand, Indonesia has pledged to fulfill the Sustainable Development Goals (SDGs) by 2030. The SDGs represent a worldwide development agenda crafted by the United Nations, with a wider emphasis not only on poverty reduction but also on environmental, economic, and social aspects (Eisenmenger et al, 2020; Elder & Olsen, 2019). To ensure the simultaneous accomplishment of the SDGs, an innovative governance framework is essential so that various synergies can be optimized and potential conflicts among and within each SDG goal and target can be reduced (Leininger et al, 2018). While the international community has prioritized systemic risk and sustainable growth for over three decades, actual policy alignment remains a challenge. Current reforms typically emphasize institutional improvements, such as streamlined operations and transparency, which are regarded as the primary requirements for successful policy implementation (Fukuyama, 2016).

In Indonesia, the localization of the SDGs is crucial due to its vast demographic and geographic structure. The Indonesian government responded to this by creating the concept of “Village SDGs,” an effort to ground global targets within the scope of the smallest government units. Villages are considered the spearhead of successful national development; if villages succeed in achieving their sustainability targets, then in aggregate, national goals will also be met. However, the reality on the ground shows that achieving the Village SDGs faces complex structural challenges, particularly in aspects of governance and the quality of public services. Village governments have a strategic role in achieving the SDGs, especially since the implementation of the Village SDGs as a derivative of the global agenda but adapted to the local village context. The Village SDGs position villages not only as objects of development, but also as active subjects in

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determining the direction of sustainable development. Several Village SDG goals, such as poverty alleviation, improving the quality of education, health services, infrastructure development, and effective village governance are directly related to the quality of public services. The government's public service delivery encompasses both the community and administrative sectors. The integration of these two elements is key to creating a good governance system (Restu & Yuningsih, 2025). Therefore, the transformation of village public services is a crucial instrument in accelerating the achievement of the SDGs at the local level.

The caliber of village-level governance is a primary determinant in the realization of fundamental citizen rights, encompassing administrative, healthcare, and economic accessibility. In an era characterized by rapid information disruption, the restructuring of public services has transitioned from a discretionary policy to a strategic necessity. This transition necessitates a radical transformation of the engagement between local authorities and the public, facilitated by digital integration, streamlined bureaucracy, and enhanced transparency. A failure to implement such reforms threatens to confine rural governance to obsolete, inflexible frameworks that lack responsiveness to evolving social needs. Consequently, the modernization of village services serves as a vital engine for the expedited achievement of the Sustainable Development Goals (SDGs).

Banyumas Regency, with a large number of villages in Central Java, has an interesting dynamic in its efforts to transform village public services. Various villages in Banyumas have implemented innovations in the provision of administrative services, the use of information technology, and the capacity building of village officials. The implementation of digital-based service systems such as village administration service applications, archive digitization, the use of village information media, and the development of integrated service spaces are some of the emerging innovations. However, the implementation of village public service transformation policies is not always uniform. Differences in village official capacity, infrastructure availability, community readiness, and policy support from local governments can impact the quality of policy implementation in each village.

Policy implementation is always related to the extent to which a policy is effectively implemented in accordance with its stated objectives. The policy implementation process is influenced by several factors, including human resources, policy clarity, communication between implementers, implementer disposition, and socio-political conditions. Policy alignment and coordinated implementation are essential for addressing pressing development issues involving multiple sectors. The interrelationships between various development goals have also been extensively studied in the context of the 2030 Agenda for Sustainable Development (Breuer et al., 2023). Although various efforts have been made to align national development policies across sectors and actors, political and administrative commitment to truly integrate these sectors remains limited (Candel, 2017; Candel & Biesbroek, 2016; Tosun & Lang, 2017; Trein et al., 2018; Ugland & Veggeland,

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2006). To date, the implementation of development policies in many countries remains far from an integrative concept and tends to adhere to a sectoral approach with a clear division of ministerial authority. Various factors contribute to this institutional inertia, including high transaction costs, uncertainty about policy outcomes, dependence on previous policy patterns, strong entrenched interests, and a lack of legitimacy (Munck af Rosenschöld et al., 2014). As a result, potential conflicts or trade-offs between policy objectives are often not clearly addressed and can even hinder the achievement of other policy objectives (Breuer et al., 2019).

In the context of village public service transformation, policy implementation encompasses the process by which village officials understand policies, translate regulations into service programs, implement service procedures, and adapt to changing community needs. Shifts toward more transparent, expeditious, and accountable services require adjustments to village organizational culture, enhanced information technology capabilities, and strengthened coordination across stakeholders at the district and village levels. The success of village development relies heavily on active community contributions through their input, energy, and creative ideas. This participation is rooted in residents' positive perceptions of the village government's credibility, which typically develop through direct involvement and tangible benefits from implemented programs. This relationship between positive perceptions and willingness to participate aligns with the findings of Junaedi (2022), Yevmieshkina (2019), and Basri et al. (2021). Therefore, effective communication through program transparency and activity management is key to influencing the achievement of village development targets. Furthermore, the achievement of the Village SDGs is inextricably linked to the effectiveness of village public services. Good public services contribute to various SDGs, such as reducing inequality, improving the quality of transparent and accountable village institutions, and fostering sustainable local economic development. Therefore, transforming village public services is fundamental to strengthening villages' position as drivers of sustainable development. Village public service transformation policies can be realized through streamlining administrative services, improving the quality of village population databases, digitizing services, implementing minimum service standards, and enhancing the competency of village officials. However, the implementation of these policies often faces obstacles such as limited digital infrastructure, a lack of a technology culture, low digital literacy among communities, and capacity gaps between villages.

In Banyumas Regency, the local government has implemented various coaching and mentoring programs to strengthen village capacity. However, variations in the level of progress between villages remain evident. Some villages have successfully implemented technology-based services and received awards as innovative villages, while others still rely on manual processes and have not yet developed more modern service systems. Furthermore, preliminary observations indicate that village communities still face poverty and difficulties in accessing public services (Abidin, 2015). This

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highlights the importance of an in-depth study of the implementation of village public service transformation policies, particularly in relation to their contribution to achieving the Village SDGs in Banyumas Regency. SDG achievement across villages in Banyumas Regency depends on variations in apparatus capacity and disparities in digital infrastructure, which have the potential to trigger fragmentation in SDG achievement between villages. This demonstrates that policy implementation is often hampered at the interpretation stage at the local level. Unequal distribution of human resource competencies and supporting facilities can lead some villages to leapfrog with innovation, while others remain stuck with basic administrative issues. If this transformation is not carried out evenly, it will be difficult to accelerate crucial targets such as poverty alleviation (SDG 1) and development partnerships (SDG 17). However, a study of policy implementation at the village level is also relevant, given the diverse social, economic, and cultural characteristics of villages. Various villages in Banyumas have different local strengths, both in terms of local wisdom, levels of community participation, and resource support. Therefore, the process of implementing public service transformation policies in villages also reflects the extent to which village governments are able to adapt policies to the local context and community needs. This study is important to provide a comprehensive overview of the strengths, constraints, and opportunities faced by village governments in implementing public service transformation policies.

The success of village public service transformation in gaining public support depends heavily on transparency and citizen participation, as mandated by SDGs point 16. However, the reality on the ground shows gaps; available channels for aspirations have not been optimized due to low public policy literacy and fluctuations in apparatus responsiveness. In fact, performance effectiveness is still hampered by a mismatch between human resource capacity and assignment (Matondang, 2015). This confirms that obstacles to village development often stem from internal socio-cultural factors, namely community indifference and apathy that hinder the emergence of a strong desire to transform the situation (Adisasmita, 2006). In fact, community participation plays a crucial role in village development (Pangemanan, 2017). Community empowerment in the form of active community participation will support the achievement of sustainable village independence (Wijaya et al, 2020). This phenomenon leads to the conclusion that there is a "broken chain." Although the service system has undergone technical upgrades, its impact on welfare indicators has not been clearly visible due to classic issues such as budget constraints, sectoral egos, and isolated data management. Using a quantitative approach through logistic regression testing, this study aims to measure the probability of the impact of service transformation on the achievement of the SDGs. The urgency of this study lies in the urgent need for evidence-based evaluation to ensure that autonomy and village funds do not merely produce "ornamental" transformations, but are capable of significantly driving sustainable development indicators. Given the fragmentation of capacity among villages in Banyumas, the results of this study are crucial as a strategic

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foundation for the local government in formulating more inclusive interventions, while also providing a theoretical contribution regarding the adaptability of modern governance within the dynamic village government ecosystem without creating new administrative burdens.

METHOD

Adopting a descriptive quantitative framework, this research evaluates how village-level public service reforms influence Sustainable Development Goal (SDG) outcomes within Banyumas Regency. Primary data were gathered from 76 village officials and stakeholders using a 5-point Likert scale. To ensure data integrity, the instrument underwent rigorous quality testing; specifically, 10 items were validated through the Corrected Item-Total Correlation technique (following the exclusion of 4 invalid items), while a Cronbach's Alpha of 0.757 confirmed the survey's reliability. The analytical phase was executed via Python on the Google Colab platform, utilizing descriptive statistics for frequency distribution and logistic regression to examine causal links. Model fit and explanatory power were further verified using McFadden's Pseudo R^2 and the Likelihood Ratio (LR) Test.

RESULTS AND DISCUSSION

This section presents empirical findings and an in-depth analysis of the correlation between the implementation of public service transformation policies at the village level and the acceleration of the achievement of the Sustainable Development Goals (SDGs). This analysis specifically evaluates the effectiveness of public service governance engineering based on the parameters of sustainable development targets within the village government bureaucracy. Given that villages are the smallest government units with direct contact with the community, service transformation at this level is seen as a key catalyst in realizing global targets into local realities. To strengthen the validity and reliability of the findings, this study uses primary data collected through a questionnaire instrument from 76 respondents representing village officials and key stakeholders in the Banyumas Regency area. By involving respondents from various geographic and institutional backgrounds, this study aims to comprehensively capture the spectrum of variations, dynamics, and empirical realities of public service delivery at the grassroots level. All collected data was digitally processed using the Python programming language through the Google Colab platform to ensure the accuracy of statistical calculations. The following is a systematic description of the results of the data analysis and discussion in this study:

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Frequency Distribution

The following data description contains information including the mean, median, mode, and standard deviation for each research variable. The data description also presents the frequency of each variable category to provide a detailed description of each variable. The Implementation of Public Service Transformation Policy consists of 14 items with 5 alternative answers. The scores given are 1, 2, 3, 4, and 5. This means the lowest ideal score is 5 and the highest ideal score is 70. Based on data obtained from respondents in this study, the lowest score was 38 and the highest score was 67. Based on statistical calculations using Google Colab and the Python programming language, the frequency distribution of the Implementation of Public Service Transformation Policy can be seen in the following table:

Table 1. Frequency Distribution

	Interval Skor	Frekuensi	Persentase (%)	Frekuensi Kumulatif	Persentase Kumulatif (%)
0	38–42	1	1.32	1	1.32
1	43–47	1	1.32	2	2.63
2	48–52	9	11.84	11	14.47
3	53–57	25	32.89	36	47.37
4	58–62	29	38.16	65	85.53
5	63–67	11	14.47	76	100.00

Source: processed data, 2026.

Based on the analysis of the data distribution presented in Table 1, we can identify the tendency of respondents' perceptions regarding the implementation of public service transformation policies at the village level, which shows a central tendency in the 58–62 interval class with the highest frequency of 29 respondents. The concentration of scores in this high category indicates that the majority of village officials and stakeholders in Banyumas Regency perceive that changes in service governance have been carried out quite massively and are structured, approaching the maximum ideal score. Conversely, variations in perception at a lower level are recorded in the 38–42 and 43–47 intervals, each with only one frequency, indicating that certain village units still face significant obstacles in adopting bureaucratic transformation. The emergence of these lower extreme scores illustrates that despite collective optimism for transformation, there are still gaps in the quality of implementation in the field that require special attention so that public service standards can be evenly distributed across all grassroots levels. Based on the table above, a bar chart can be made as in the following image:

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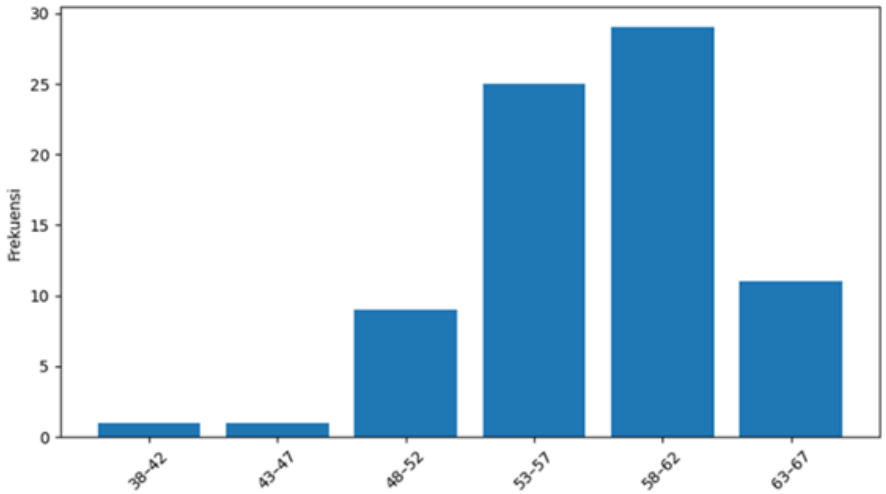

Figure 1. Bar Chart of Frequency Distribution of Public Service Transformation Policy Implementation
Source: processed data, 2026.

Validity Testing

Validity testing is conducted to measure the accuracy and precision of the questionnaire instrument in measuring what it is supposed to measure. In the context of this research, the validity test aims to ensure that each statement item proposed to measure the Public Service Transformation Policy Implementation variable is truly relevant and can be understood well by respondents in various villages in Banyumas Regency. Validity testing in this study was conducted by analyzing the correlation between the scores of each statement item and the total score of the construct using the Corrected Item–Total Correlation technique, which correlates the score of each item with the total score of the corrected variable (the total score without that item). According to Sugiyono (2019), a statement item is declared valid if the correlation coefficient value of the item to the total score meets the criteria, namely a correlation coefficient value (r calculated) ≥ 0.30. Items with correlation values below this criterion are declared invalid and need to be considered in further analysis. The following is a presentation of the validity test results for each indicator in the research variables:

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Table 2. Results of the Questionnaire Validity Test on the Effect of the Implementation of Vil lage Public Service Transformation Policies on the Achievement of the SDGs

	Item	r hitung	r tabel (teori)	Keputusan
0	X1	0.605	0.3	Valid
1	X2	0.377	0.3	Valid
2	X3	0.194	0.3	Tidak Valid
3	X4	0.323	0.3	Valid
4	X5	0.619	0.3	Valid
5	X6	0.363	0.3	Valid
6	X7	0.489	0.3	Valid
7	X8	0.286	0.3	Tidak Valid
8	X9	0.393	0.3	Valid
9	X10	0.631	0.3	Valid
10	X11	0.633	0.3	Valid
11	X12	0.610	0.3	Valid
12	X13	0.036	0.3	Tidak Valid
13	X14	0.187	0.3	Tidak Valid

Source: processed data, 2026.

Based on the validity test conducted on the 14 initial statement items, the statistical analysis identified four invalid items, namely items X3, X8, X13, and X14. This invalidity was caused by the item-total correlation coefficient (r-count) being below the significance threshold of 0.30, indicating that these items failed to measure the public service transformation construct accurately or consistently. In contrast, this study confirmed that 10 statement items were valid because they met the established criteria for accuracy and precision of measurement. As a methodological follow-up, it was decided to eliminate (drop) the four invalid items and only include the 10 valid items in the subsequent data processing stages. This step was taken to ensure that the logistic regression analysis constructed was based on an instrument with high integrity and free from data interference (noise) that could potentially distort the research results.

Reliability testing

Reliability testing is a crucial statistical procedure used to evaluate the level of consistency and stability of a research instrument in measuring the same variable under relatively similar conditions, so that a reliable instrument will produce consistent data even if used repeatedly. In this study, the variable Influence of Public Service Transformation Policy Implementation (X) was deconstructed into 14 statement items

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using a Likert scale (1–5), so this test is an absolute prerequisite to ensure that all items have strong internal consistency in measuring the public service construct accurately. The method adopted in this analysis is Cronbach's Alpha, an inter-item correlation technique that mathematically measures the extent to which a set of statements collectively represents a single concept. Referring to the criteria set by Sugiyono (2019), the research instrument is declared reliable and suitable for use in further analysis if the Cronbach's Alpha coefficient value reaches a threshold of ≥ 0.70, indicating that the questionnaire has adequate stability and is free from random measurement errors. The following are the results of the data reliability test in this study:

```
def cronbach_alpha(df_items: pd.DataFrame) -> float:
    items = df_items.dropna()
    k = items.shape[1]
    varians_item = items.var(axis=0, ddof=1)
    varians_total = items.sum(axis=1).var(ddof=1)
    return (k / (k - 1)) * (1 - varians_item.sum() / varians_total)

# daftar item X (18 butir)
x_items = [f"X{i}" for i in range(1, 15)]

alpha_x = cronbach_alpha(df[x_items])
alpha_x_round = round(alpha_x, 3)

print("Cronbach's Alpha =", alpha_x_round)

# kesimpulan otomatis
if alpha_x < 0.60:
    kesimpulan = "Instrumen tidak reliabel"
elif alpha_x < 0.70:
    kesimpulan = "Instrumen cukup reliabel"
elif alpha_x < 0.80:
    kesimpulan = "Instrumen reliabel"
else:
    kesimpulan = "Instrumen sangat reliabel"

print("Kesimpulan:", kesimpulan)
```

```
Cronbach's Alpha = 0.757
Kesimpulan: Instrumen reliabel
```

Figure 2. Results of the Reliability Test of the Questionnaire on the Impact of Village Public Service Transformation Policy Implementation on SDG Achievement
Source: processed data, 2026.

Based on the data analysis presented in Figure 2, the reliability of the research instrument was tested using the Cronbach's Alpha coefficient statistic. The calculation results indicate that the variable "Influence of Public Service Transformation Policy Implementation" has a coefficient value of 0.757. Methodologically, this value indicates that the instrument used has a good level of internal consistency in measuring the construct of public service transformation at the village level. These test results explicitly confirm that the questionnaire "Influence of Village Public Service Transformation Policy Implementation on SDG Achievement" is reliable, dependable, and consistent.

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This is based on the testing criteria, which stipulate a Cronbach's Alpha coefficient value of ≥ 0.70 as the minimum requirement for instrument reliability. With a value of 0.757 exceeding the standard, it can be concluded that the statement items in this questionnaire are able to produce stable and reliable data even though repeated measurements are carried out on different groups of respondents. This reliability provides a strong basis for researchers to continue the analysis to the hypothesis testing stage using logistic regression without doubting the existence of bias due to inconsistent instruments. Logistic regression testing was conducted by the author after obtaining the results of validity and reliability tests on the research instrument items. With the results of the logistic regression test as follows:

```
Optimization terminated successfully.
         Current function value: 0.529154
         Iterations 5
                           Logit Regression Results
==============================================================================
Dep. Variable:                      Y   No. Observations:                   76
Model:                          Logit   Df Residuals:                       74
Method:                           MLE   Df Model:                            1
Date:                Sun, 01 Mar 2026   Pseudo R-squ.:                0.004472
Time:                        07:13:17   Log-Likelihood:                -40.216
converged:                       True   LL-Null:                       -40.396
Covariance Type:            nonrobust   LLR p-value:                    0.5478
==============================================================================
                 coef    std err          z      P>|z|      [0.025      0.975]
------------------------------------------------------------------------------
const          3.0828      3.118      0.989      0.323      -3.028       9.193
X_total_final -0.0441      0.074     -0.595      0.552      -0.189       0.101
==============================================================================
```

Figure 3. Logistic Regression Test Results: The Effect of Village Public Service Transformation Policy Implementation on SDG Achievement
Source: processed data, 2026.

Based on the logistic regression analysis, this model involved a total of 76 observations representing village officials and key stakeholders in Banyumas Regency, meeting the minimum sample size for statistical estimation stability testing. Technically, data processing using the Python programming language demonstrated that the model met the convergence criterion (converged = True), meaning the Maximum Likelihood Estimation (MLE) iteration procedure successfully found optimal parameters and stable regression coefficients without data bias or perfect separation. This model specifically tested the interaction between the independent variable (X), namely the Implementation of the Village Public Service Transformation Policy, which encompasses the dimensions of innovation and administrative digitalization, and the dependent variable (Y), namely the Achievement of the Sustainable Development Goals (SDGs), which represents the success of sustainable development at the local level. The fulfillment of the convergence

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criteria for the number of valid observations provides a strong methodological basis for researchers to continue interpreting the significance value and predictive power of the model in explaining the phenomenon of bureaucratic transformation in rural areas.

Based on the logistic regression estimation results, the regression coefficient for the variable X_total_final was obtained at -0.0441, which technically indicates a very weak negative relationship between public service transformation and the probability of achieving the SDGs. A crucial parameter in testing this hypothesis lies in the significance value (p-value) of 0.552, which, when compared with the standard threshold for social research ($\alpha = 0.05$), far exceeds the established significance criteria ($p > 0.05$). Referring to these statistical decision-making criteria, the model fails to reject the Null Hypothesis (H0), thus conclusively concluding that the Implementation of the Village Public Service Transformation Policy (X) does not have a significant impact on the Achievement of the SDGs (Y). Thus, the previously proposed research hypothesis cannot be accepted empirically, indicating that changes in service governance at the village level in this study have not been a determinant factor capable of significantly driving sustainable development indicators in Banyumas Regency.

The Pseudo R-squared value of 0.004472 indicates that the model's explanatory power for variations in the dependent variable is very low, indicating that the implementation of public service transformation is only able to explain approximately 0.44% of the change in the probability of achieving the SDGs. This provides an empirical indication that there are other external factors outside the model that have a much more dominant influence in determining the success of sustainable development in the study location. In line with these findings, the LLR p-value of 0.5478, which exceeds the significance threshold of 0.05, confirms that the logistic regression model as a whole is insignificant in mapping the relationship between variables, because the inclusion of independent variables does not provide significant improvement in predictive ability compared to the model without variables (null model). Therefore, the analysis continued with a goodness-of-fit test of the logistic regression model to further evaluate whether this insignificance is rooted in a mismatch between the theoretical framework and the reality of the data in the field.

Logistic Regression Model Fit Test

The goodness-of-fit test is a crucial step in logistic regression analysis to ensure that the constructed statistical model has valid and reliable predictive ability through a systematic evaluation of the relationships between the independent and dependent variables. Because logistic regression uses Maximum Likelihood (ML) estimation with a categorical dependent variable, this test cannot use the conventional R2 assumption. Therefore, model reliability is measured using the Likelihood Ratio Test (LR Test) and Pseudo R2 (McFadden). The Likelihood Ratio Test serves as a simultaneous significance test that compares the log-likelihood of the base model (null model) with the full model

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to assess whether the addition of the service transformation variable provides a meaningful improvement in fit. In this study, a p-value of 0.5478 (>0.05) confirmed that the overall model was not statistically significant. In line with that, McFadden's Pseudo R2 was used to measure the model's explanatory power, where the obtained value of 0.0040 indicates a very limited contribution of the independent variables in explaining variations in the probability of achieving the SDGs. Thus, these two indicators integratively show that the model built has not been able to provide better results than the model without independent variables, which confirms that the public service transformation factors in this study are not the main determinants of the success of sustainable development in the study location. The following are the results of the feasibility test of the logistic regression model:

	Indikator	Nilai	Kesimpulan
0	Pseudo R^2 (McFadden)	0.0040	Kecocokan model lemah
1	LR Chi-Square	0.3610	Uji Likelihood Ratio
2	df	1.0000	Derajat bebas = 1
3	p-value (LR Test)	0.5478	Model tidak layak digunakan

Figure 4. Logistic Regression Model Test Results: The Effect of Village Public Service Transformation Policy Implementation on SDG Achievement
Source: processed data, 2026.

Methodologically, the evaluation of the logistic regression model in this study was conducted using a systematic goodness-of-fit approach, considering that the categorical nature of the dependent variable precludes the use of the Coefficient of Determination (R2) as in conventional linear regression. Instead, model effectiveness was measured using McFadden's Pseudo-R2 and the Likelihood Ratio Test (LR Test) to assess the extent to which the addition of independent variables increased predictive power compared to a model without independent variables (an intercept-only model). McFadden's Pseudo-R2 measures the contribution of the service transformation variable in explaining the probability of SDG achievement. Values approaching zero, such as the 0.0040 found in this study, indicate very limited explanatory power. Similarly, the Likelihood R2 test was used to simultaneously test the model's significance by comparing log-likelihood values between models. The p-value of 0.5478, exceeding the 0.05 threshold, confirms that the overall model is insignificant and fails to demonstrate any increase in predictive accuracy resulting from the policy implementation variable. Therefore, this series of tests provides a strong statistical basis for concluding that the public service transformation framework tested has not been a major determinant of SDG achievement dynamics at the research site.

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The model fit test in this study aimed to ensure that the logistic regression model developed adequately explains the influence of the Village Public Service Transformation Policy Implementation on SDG achievement. In other words, this test was used to assess whether the resulting model is not only partially significant but also feasible and relevant for simultaneous use in the research analysis. Based on the statistical analysis, this research model demonstrated a relatively weak goodness-of-fit, as reflected in the Pseudo R2 (McFadden) value of 0.0040. This indicates that the tested independent variables have a very limited contribution in explaining variation in the dependent variable. Accordingly, the Likelihood Ratio Test yielded a p-value of 0.5478, which is above the significance threshold of 0.05. Thus, the study failed to reject H0, meaning that the variables estimated in this model did not statistically significantly influence the phenomenon under study.

CONCLUSION

Following a rigorous and comprehensive evaluation of how policy implementation has shaped the transformation of public services within the Banyumas Regency, this research definitively concludes that while there have been visible initiatives to modernize village-level administration, these efforts have failed to translate into a statistically measurable impact on the progress of Village Sustainable Development Goals (SDGs). This disconnect is mathematically underscored by the results of the logistic regression analysis, which yielded a p-value of 0.5478 well above the standard 0.05 threshold, thereby necessitating the rejection of the primary research hypothesis and suggesting that current reforms are not yet driving developmental outcomes.Furthermore, the negligible McFadden's Pseudo R^2 of only 0.0040 provides empirical evidence of a "*broken chain*" in the policy-to-outcome pipeline, revealing that the current service transformation framework accounts for a mere 0.4% of the variance in SDG achievement, leaving the vast majority of developmental progress to be dictated by external variables beyond the scope of this model. This statistical gap points toward deep-seated structural impediments, including a significant mismatch in the digital and administrative competencies of village officials, the presence of fragmented and inadequate technological infrastructure, and a persistent state of institutional inertia where local governance remains tethered to obsolete, conventional bureaucratic paradigms. Consequently, the study posits that the existing modernization trajectory remains largely procedural or "on paper," failing to reach the substantive level of community empowerment required to influence tangible welfare indicators or social prosperity. Ultimately, achieving the 2030 Agenda at the grassroots level demands a paradigm shift that moves beyond simple technological adoption; it requires a holistic strategy centered on robust human resource capacity building, the institutionalization of radical transparency, and the cultivation of inclusive public engagement to dismantle the layers of sociocultural apathy that currently obstruct the acceleration of SDG targets in rural environments.

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