

RT/RW-BASED INTEGRATED SOCIAL DATA GOVERNANCE AS A MANAGEMENT MODEL FOR POVERTY INTERVENTION, SOCIAL ASSISTANCE, AND VULNERABLE CITIZEN SERVICES IN LOCAL GOVERNMENT

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ABSTRACT

Local governments require accurate, updated, and integrated social data to improve poverty intervention, social assistance distribution, and vulnerable citizen services. However, in practice, social data are often fragmented, periodically updated, weakly validated, and not sufficiently connected to real-time conditions at the community level. This situation may cause delays in identifying poor households, elderly citizens, persons with disabilities, unemployed residents, vulnerable families, uninhabitable houses, births, deaths, and population mobility. This article aims to formulate an RT/RW-based integrated social data governance model as a management framework for poverty intervention, social assistance, and vulnerable citizen services in local government. This study employs a conceptual qualitative approach through a narrative literature review, policy document analysis, and contextual synthesis of local government data governance, community-based reporting, and social protection service practices. The findings indicate that RT/RW, or neighborhood and community units in Indonesia's local governance structure, can be positioned not merely as administrative units, but as micro-level social data nodes that support real-time citizen data updating, initial verification, local reporting, and early detection of social problems. This article proposes an integrative model based on seven pillars: RT/RW as micro-level social data nodes, real-time citizen data updating, village or urban ward validation, subdistrict coordination, integrated social assistance dashboard, cross-agency poverty intervention, and vulnerable citizen service accountability. The contribution of this article lies in repositioning community-level governance as strategic data infrastructure for improving social protection accuracy, public service responsiveness, budget effectiveness, and public trust in local government.

Keywords: integrated social data governance, local government, poverty intervention, RT/RW, vulnerable citizen services

1. INTRODUCTION

Poverty intervention, social assistance distribution, and vulnerable citizen services require accurate, updated, and integrated social data. In public management, social data are not merely administrative records, but strategic instruments for identifying households in need, determining program eligibility, allocating public resources, monitoring service delivery, and evaluating the effectiveness of poverty reduction policies. Without reliable and regularly updated data, local governments may face difficulties in identifying poor households, distributing assistance fairly, responding to social vulnerability, and ensuring that public programs reach the intended beneficiaries. Therefore, data accuracy should be understood not only as a technical issue, but also as a management issue involving institutional coordination, verification mechanisms, human resource capacity, digital systems, community participation, and public accountability.

In Indonesia, social protection programs have long relied on integrated databases to identify poor and vulnerable households. The Integrated Social Welfare Data, known as Data Terpadu Kesejahteraan Sosial (DTKS), has been used as a key database for targeting beneficiaries of social protection and poverty alleviation programs. However, one persistent challenge is data freshness. SMERU Research Institute (2021) notes that not every district or city government updates DTKS periodically, resulting in recurring mistargeting in the implementation of social protection and poverty alleviation programs. This indicates that the problem of social assistance targeting is not only related to the existence of a database, but also to the quality, timeliness, verification process, and local updating mechanism behind the database.

The World Bank also emphasizes that data quality and freshness are crucial for an effective social registry. Hadiwidjaja, Williams, and Giannozzi (2022) explain that Indonesia's social registry does not only function as a beneficiary database, but can also support monitoring, reporting, and integration across service delivery systems. Their report notes that DTKS contains individual and household information and has been used to target multiple national programs, including food assistance, conditional cash transfers, subsidized health insurance, education assistance, and cash transfer programs. This confirms that social data have a strategic role in public service delivery because inaccurate or outdated data can directly affect social assistance accuracy, budget effectiveness, and public trust.

Recent policy development also shows increasing urgency for more integrated social data governance. Presidential Instruction Number 4 of 2025 on the National Socio-Economic Single Data, or Data Tunggal Sosial Ekonomi Nasional (DTSEN), marks an important step in improving Indonesia's data management and data ecosystem. SKALA (2025) emphasizes that socio-economic data updating requires clear institutional responsibilities, verification and validation mechanisms at national and regional levels, skilled human resources, and sufficient funding, especially for remote, underdeveloped, and island regions. Similarly, BPS (2025) states that social assistance and community empowerment programs across government institutions are expected to be based on DTSEN. This policy direction strengthens the need for local governments to improve data integration from the lowest administrative and community levels.

At the same time, digital government and open data policies emphasize that up-to-date and integrated data can help governments formulate more targeted policies and improve public participation. The Open Government Partnership (2024) explains that One Data Indonesia supports digital transformation through cross-sectoral technology in planning, implementation, monitoring, and performance evaluation processes. In this context, social data governance should not be treated merely as an administrative database or reporting obligation, but as a strategic management system for improving policy targeting, public service responsiveness, and social protection accountability.

Nevertheless, social data governance remains challenging in practice. Social assistance data may be fragmented across agencies, updated periodically rather than continuously, and disconnected from micro-level social realities. Vulnerable citizens such as elderly people living alone, persons with disabilities, unemployed residents, poor households, families living in inadequate housing, newborns, deceased residents, and people moving in or out of neighborhoods may not be captured quickly if the data updating process depends only on periodic surveys or centralized administrative updates. World Bank studies on social protection inclusion also show that vulnerable groups, especially in remote and rural areas, may face barriers in accessing social protection programs, making local identification and community-based updating increasingly important.

Another important dimension that can strengthen social data governance is household electricity account and subsidy status. In practice, electricity customer data can provide additional socio-economic signals, particularly whether a household is registered as a subsidized or non-subsidized electricity customer. This information may help local governments identify potential mismatches between household welfare conditions and electricity subsidy access. For example, a vulnerable household that should receive an electricity subsidy may not be properly registered, while a subsidized electricity account may be used by a household that is no longer eligible or by a different user. Therefore, electricity account and subsidy status can serve as complementary validation data within an integrated social data governance system, especially when combined with RT/RW verification, village or urban ward validation, and cross-agency coordination.

This article argues that RT/RW can play a strategic role in strengthening integrated social data governance. In the Indonesian local governance context, RT/RW refers to neighborhood and community units that function as the closest administrative and social structures to citizens. RT/RW are directly connected to everyday community dynamics and can identify changes in household conditions faster than higher administrative levels. Interestingly, Hadiwidjaja et al. (2022) also show that RT and RW are among the variables used in Indonesia's social registry identification structure, alongside household numbers, national identity numbers, names, birth details, and other demographic information. This indicates that RT/RW are not external to the social data ecosystem, but can be strengthened as micro-level social data nodes within local government data governance.

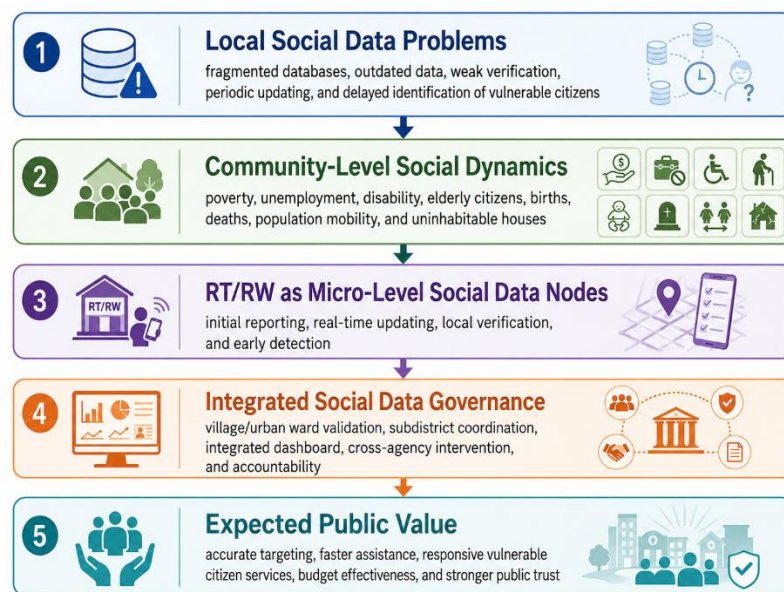
The novelty of this article lies in repositioning RT/RW not merely as neighborhood administrative structures, but as micro-level social data nodes in local government data governance. Unlike previous studies that focus on social assistance systems, poverty databases, digital government platforms, or social registries separately, this article offers an integrated management model that connects RT/RW-based real-time data updating, village or urban ward

validation, subdistrict coordination, cross-agency intervention, integrated dashboards, and vulnerable citizen service accountability. The model also allows the integration of complementary socio-economic indicators, such as electricity account and subsidy status, to strengthen household welfare validation and detect potential subsidy mismatches. In this sense, RT/RW are not only community-level administrative actors, but also strategic micro-level data infrastructure for improving social protection accuracy, public service responsiveness, budget effectiveness, and public trust.

The research question of this article is: How can RT/RW-based integrated social data governance be formulated as a management model for poverty intervention, social assistance, and vulnerable citizen services in local government?

The objective of this study is to formulate a conceptual model that positions RT/RW as micro-level social data nodes to strengthen data accuracy, accelerate poverty intervention, improve social assistance targeting, support vulnerable citizen services, and enhance public trust in local government.

Figure 1. Research Framework



Source: Author's elaboration, 2026.

2. LITERATURE REVIEW

2.1 Integrated Social Registry and Poverty Targeting

Integrated social registries are essential instruments for identifying poor and vulnerable households. A social registry provides data infrastructure for targeting, registration, program delivery, monitoring, and evaluation. The World Bank explains that social registries can support multiple programs beyond social assistance and may include cash transfers, in-kind assistance, education support, health insurance subsidies, and other public services.

In Indonesia, DTKS has played an important role as a social registry for social protection programs. However, the effectiveness of a social registry depends heavily on coverage, data

quality, updating mechanisms, verification processes, and institutional capacity. Data that are not updated regularly may create inclusion errors and exclusion errors. Inclusion errors occur when people who no longer meet eligibility criteria continue receiving assistance, while exclusion errors occur when eligible poor or vulnerable citizens are not included.

This problem is highly relevant to local government. Local governments are closest to citizens and have an important role in identifying changes in household conditions. However, without an integrated and routinely updated data governance system, local governments may continue to rely on outdated data and reactive reporting.

2.2 Data Freshness, Verification, and Local Updating

Data freshness refers to how current and accurate the information is in relation to real social conditions. The World Bank highlights that quality and freshness are central to an effective social registry, and that continuous data collection and capacity building are needed to maintain data accuracy.

The SKALA policy brief on DTSEN also emphasizes that data updating requires institutions responsible for updating, verifying, and validating data at national and regional levels. It further highlights the need for skilled human resources and sufficient funding for data updating, particularly in remote and disadvantaged regions.

These findings show that social data governance requires more than digital platforms. It requires a structured updating mechanism, local verification capacity, human resources, operational procedures, and institutional coordination. In this context, RT/RW can become the first layer of local data detection because they are closest to citizens.

2.3 Digital Government, One Data, and Social Protection Systems

Digital government and data integration have become central to public sector transformation. One Data Indonesia aims to strengthen data integration and policy quality. The Open Government Partnership explains that up-to-date and open data integration can help governments create more targeted policies and enable better public participation. It also supports digital transformation through cross-sectoral technology in planning, implementation, monitoring, and evaluation.

Digital public infrastructure has also been shown to support social protection responses. The World Bank's study on digital systems in the COVID-19 social assistance response across 178 programs in 85 countries found that digital databases, digital identification, and digital payments enabled more innovative targeting, registration, and payment approaches during crisis response.

For local governments, digital systems can help integrate social assistance data, complaint mechanisms, household updates, poverty intervention records, and service delivery monitoring. However, digitalization alone does not guarantee effective governance. Data must be verified, updated, integrated, and used for decision-making.

2.4 SIKS-NG and Digital Social Welfare Information Systems

Indonesia has developed digital systems to support social welfare and assistance distribution, including the Social Welfare Information System-Next Generation, known as SIKS-NG. Sarjito (2025) explains that SIKS-NG was introduced to modernize social assistance programs by addressing data inaccuracies, delays, and inefficiencies. The study found that while SIKS-NG improved data centralization and transparency, challenges remained, including limited digital infrastructure, capacity gaps among administrators, and weak inter-agency coordination.

This finding is important because it shows that social data governance cannot depend only on national systems. Local capacity, inter-agency coordination, and field-level data updating are critical. RT/RW-based data governance can complement digital welfare systems by providing micro-level reporting and early verification.

2.5 Vulnerable Citizen Services and Inclusion Challenges

Vulnerable citizens often face barriers in accessing social protection programs. The World Bank's 2024 assessment on social protection inclusion in Indonesia's remote areas found that rural populations continue to face obstacles in accessing social protection programs, contributing to disparities in education, healthcare, access to clean water, and other services. The assessment focused on social assistance and insurance programs such as PKH, Program Sembako, BLT-DD, and employment insurance.

This evidence strengthens the need for local, community-based data updating and service accountability. Vulnerable citizens are not always visible in administrative databases. Some may lack complete documentation, have limited access to digital systems, or be socially isolated. RT/RW can support early identification because they operate within the closest social environment.

2.6 RT/RW as Micro-Level Social Data Nodes

RT/RW can be understood as community-level governance units that bridge citizens and formal government structures. In social data governance, RT/RW can perform several functions: identifying vulnerable households, recording births and deaths, reporting residents moving in and out, detecting uninhabitable housing, reporting elderly citizens living alone, identifying persons with disabilities, and helping validate social assistance eligibility.

However, RT/RW-based data governance must not be informal or unstructured. It requires standard operating procedures, digital forms, verification rules, privacy protection, reporting frequency, village or urban ward validation, and cross-agency follow-up. Without these mechanisms, community-based data may become inconsistent, subjective, or difficult to integrate.

Therefore, the main argument of this article is that RT/RW should be positioned as micro-level social data nodes within an integrated local government data governance system. This model does not replace national databases such as DTKS or DTSEN, but complements them by strengthening data updating, early detection, and service responsiveness at the neighborhood level.

2.7 Research Gap and Novelty Position

Previous studies and policy documents have discussed social registries, DTKS, SIKS-NG, digital government, One Data Indonesia, and social assistance targeting. However, several gaps remain. First, many studies focus on national-level social registry systems, while micro-level neighborhood data governance remains less developed. Second, digital social welfare systems are often discussed from the perspective of databases and applications, but less attention is given to the role of RT/RW as field-level data nodes. Third, social assistance targeting studies often emphasize data accuracy, but do not fully integrate real-time community reporting, local validation, cross-agency intervention, and vulnerable citizen service accountability. Fourth, RT/RW is often treated as an administrative unit, not as strategic data infrastructure.

The novelty of this article lies in formulating an RT/RW-based integrated social data governance model that connects micro-level data updating, village or urban ward validation, subdistrict coordination, integrated dashboards, cross-agency poverty intervention, and vulnerable citizen service accountability. This model positions RT/RW as micro-level social data nodes for strengthening social protection accuracy, public service responsiveness, and public trust.

Table 1. Literature Mapping and Article Position

Research Area	Common Focus in Literature	Research Gap	Position of This Article
Social registry	DTKS, beneficiary targeting, social protection database	Local real-time updating remains challenging	Positions RT/RW as micro-level updating nodes
Digital welfare system	SIKS-NG, data centralization, digital assistance systems	Field-level data verification and local capacity remain weak	Connects digital system with community verification
One Data Indonesia	Data integration, open data, policy targeting	Social data integration at neighborhood level is underdeveloped	Offers RT/RW-based integrated social data governance
Vulnerable citizen services	Access to social protection and service barriers	Early detection of vulnerability is not always real-time	Uses RT/RW for early identification and reporting
Local government management	Service delivery and poverty intervention	Cross-agency coordination often fragmented	Integrates dashboard, validation, and intervention flow
Public trust	Trust in service quality and targeting accuracy	Trust is weakened by mistargeting and slow response	Links data accuracy with accountability and trust

Source: Author's elaboration, 2026.

3. METHODS

This study employs a conceptual qualitative approach using narrative literature review, policy document analysis, and public management model synthesis. This approach is selected because the article aims to formulate a conceptual model of RT/RW-based integrated social data governance rather than to test causal relationships quantitatively.

The data sources consist of three categories. First, recent academic literature and policy studies from the last five years related to social registry, social assistance targeting, digital

government, data governance, and vulnerable citizen services. Second, institutional and policy documents from the World Bank, SMERU, SKALA, Open Government Partnership, and relevant Indonesian policy sources discussing DTKS, DTSEN, One Data Indonesia, SIKS-NG, and social protection systems. Third, contextual synthesis of local government practices related to RT/RW reporting, poverty intervention, community verification, social assistance distribution, and vulnerable citizen services.

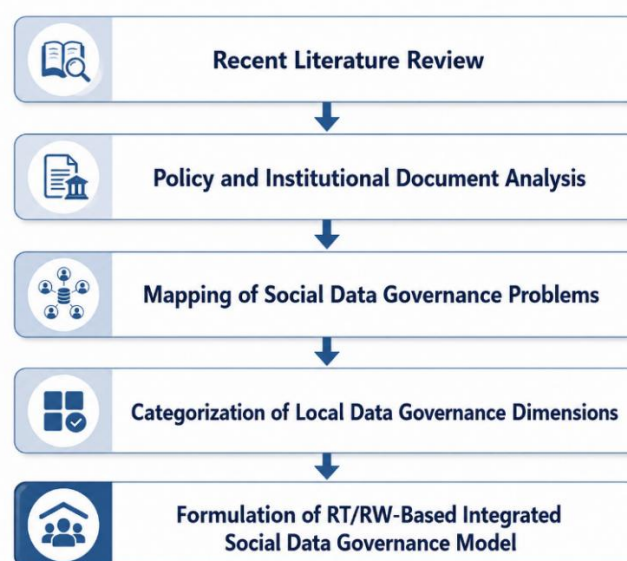
The analysis was conducted through four stages. First, identifying key problems in social data governance, including data fragmentation, outdated data, weak verification, and delayed intervention. Second, mapping relevant literature on social registry, digital data governance, and social protection systems. Third, categorizing the issues into micro-level data updating, local validation, digital integration, cross-agency response, and service accountability. Fourth, synthesizing an RT/RW-based integrated social data governance model for local government.

Table 2. Research Analysis Stages

Stage	Analytical Activity	Expected Output
Issue identification	Identifying social data problems and vulnerable citizen service gaps	Problem map
Literature review	Reviewing social registry, digital governance, and social assistance studies	Conceptual foundation
Issue categorization	Grouping issues into updating, validation, integration, intervention, and accountability	Analytical framework
Model synthesis	Formulating an RT/RW-based integrated social data governance model	Conceptual model

Source: Author's elaboration, 2026.

Figure 2. Conceptual Research Method Flow



Source: Author's elaboration, 2026.

4. RESULTS AND DISCUSSION

4.1 Social Data Problems in Local Government

The findings indicate that social data problems in local government are not only technical, but also managerial. Data may be fragmented across agencies, updated periodically, weakly verified, and disconnected from real community conditions. This can result in delayed poverty intervention, inaccurate social assistance targeting, and inadequate vulnerable citizen services.

Local governments need data that are not only stored, but continuously updated and operationally useful. Social data should support decisions on who needs assistance, what type of intervention is required, which agency should respond, how fast the response should be delivered, and how the intervention should be monitored.

4.2 RT/RW as the First Layer of Social Detection

RT/RW are the closest social structures to citizens. They can observe changes in neighborhood conditions faster than higher administrative levels. For example, RT/RW can identify births, deaths, residents moving in or out, elderly citizens living alone, persons with disabilities, unemployed residents, households experiencing sudden income loss, and families living in inadequate housing.

However, RT/RW-based reporting must be supported by clear data standards. Without digital forms, verification mechanisms, and regular reporting schedules, data may remain informal and difficult to integrate. Therefore, RT/RW should be positioned as the first layer of social detection within a structured data governance system.

4.3 Real-Time Citizen Data Updating

Real-time citizen data updating does not necessarily mean that data must change every second. In this context, real-time means that local governments can receive timely updates from community-level structures when important social changes occur. These updates may include births, deaths, migration, poverty status changes, health vulnerability, disability status, disaster impact, job loss, or housing problems.

This updating process should be linked to village or urban ward validation, subdistrict coordination, and agency-level response. Therefore, RT/RW data updating should not stand alone; it must be part of an integrated workflow.

Figure 3. RT/RW-Based Social Data Updating Flow



Source: Author's elaboration, 2026.

4.4 Village/Urban Ward Validation and Subdistrict Coordination

RT/RW data must be validated at the village or urban ward level to prevent errors, duplication, bias, or subjective reporting. Validation may include checking identity documents, household conditions, socioeconomic status, and supporting evidence. Subdistricts can then coordinate broader prioritization, especially when problems involve multiple villages or urban wards.

This structure creates a layered verification mechanism. RT/RW provide initial data; village or urban ward offices validate; subdistricts coordinate; technical agencies intervene. This model can reduce the gap between community-level reality and administrative decision-making.

4.5 Integrated Social Assistance Dashboard

An integrated dashboard is needed to transform data into managerial information. The dashboard should not only contain lists of beneficiaries, but also show report status, vulnerability categories, assistance history, agency responsibility, intervention progress, and evaluation indicators.

For example, the dashboard can classify households into categories such as extreme poverty, elderly vulnerability, disability, unemployed household members, uninhabitable housing, children at risk, or health vulnerability. The dashboard can also show whether the case has been reported, verified, assigned, followed up, completed, or still pending.

Table 3. Social Data Categories and Governance Responses

Social Data Category	Example of Field Condition	Governance Response
Poverty status	Household income decline, food insecurity	Social assistance verification and poverty intervention
Elderly vulnerability	Elderly living alone or without income	Social care and health service coordination
Disability	Person with disability requiring support	Disability service referral and assistance
Housing vulnerability	Uninhabitable house or unsafe dwelling	Public works and social housing intervention
Population mobility	Moving in, moving out, undocumented residents	Population administration update
Births and deaths	Newborns or deceased residents	Civil registration update
Unemployment	Productive-age resident without job	Employment program referral

Source: Author's elaboration, 2026.

4.6 Cross-Agency Poverty Intervention

Poverty and vulnerability are multidimensional. They cannot be solved only by the Social Affairs Agency. A poor household may also need population administration services, health access, education support, employment training, housing improvement, or clean water access. Therefore, integrated social data must support cross-agency intervention.

Cross-agency intervention requires clear assignment of responsibility. Each case should be categorized and assigned to the relevant agency. The system should show which agency is responsible, what action is needed, how long the response should take, and whether the problem has been resolved.

4.7 Vulnerable Citizen Service Accountability

Accountability is essential in social data governance. Citizens need assurance that reported data will not disappear, assistance will not be misdirected, and vulnerable people will receive appropriate services. Accountability can be strengthened through report tracking, verification records, intervention status, beneficiary history, public complaints, and periodic audit.

This is important because social assistance programs often face public trust issues when citizens perceive that assistance is mistargeted. Transparent and traceable social data governance can improve trust by showing that assistance decisions are based on verified data and accountable processes.

4.8 RT/RW-Based Integrated Social Data Governance Model

Based on the analysis above, this article proposes an RT/RW-based integrated social data governance model. The model consists of seven pillars: RT/RW as micro-level social data nodes, real-time citizen data updating, village or urban ward validation, subdistrict

coordination, integrated social assistance dashboard, cross-agency poverty intervention, and vulnerable citizen service accountability.

Figure 4. RT/RW-Based Integrated Social Data Governance Model



Source: Author's elaboration, 2026.

4.9 Evaluation Indicators of the Model

To make this model applicable for future empirical research or local government practice, evaluation indicators are needed. These indicators can help assess whether RT/RW-based integrated social data governance improves data quality, service responsiveness, and social assistance accuracy.

Table 4. Evaluation Indicators of RT/RW-Based Integrated Social Data Governance

Dimension	Evaluation Indicator	Purpose
Data freshness	Frequency of citizen data updates	Ensure data reflect current conditions
Data accuracy	Verification and validation results	Reduce mistargeting
RT/RW capacity	Ability to report and update data digitally	Strengthen micro-level governance
Integration	Linkage among RT/RW, village/urban ward, subdistrict, and agencies	Reduce data fragmentation

Dimension	Evaluation Indicator	Purpose
Dashboard use	Availability of report status and case mapping	Improve decision-making
Response speed	Time from report to intervention	Measure service responsiveness
Cross-agency coordination	Number and quality of coordinated interventions	Address multidimensional poverty
Accountability	Traceability of assistance and service follow-up	Strengthen public trust

Source: Author's elaboration, 2026.

5. CONCLUSION AND LIMITATION

RT/RW-based integrated social data governance can be positioned as a management model for improving poverty intervention, social assistance targeting, and vulnerable citizen services in local government. This article emphasizes that social data problems are not merely technical database issues, but also management problems involving local updating, verification, coordination, institutional capacity, cross-agency response, and accountability. The proposed model positions RT/RW as micro-level social data nodes that can support real-time citizen data updating, early detection of social vulnerability, and initial verification at the community level. The model integrates seven pillars: RT/RW as micro-level social data nodes, real-time citizen data updating, village or urban ward validation, subdistrict coordination, integrated social assistance dashboard, cross-agency poverty intervention, and vulnerable citizen service accountability. This article contributes to public management literature by repositioning community-level governance as strategic data infrastructure for social protection accuracy, public service responsiveness, budget effectiveness, and public trust. The limitation of this article lies in its conceptual nature because it has not yet empirically tested the proposed model through field data. Future research should conduct surveys with RT/RW administrators, interviews with local government officials, case studies of social assistance distribution, dashboard simulation, data quality audits, and citizen satisfaction analysis to examine the effectiveness of RT/RW-based integrated social data governance in real local government contexts.

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