

# Data Governance Integrative Strategy For Optimizing Poverty Reduction Programs In Garut District Using System Dynamic Modeling Approach

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## Abstract.

*The issue of overlapping poverty data among government agencies in Garut Regency has led to ineffective policy implementation. This study aims to analyze the factors influencing data governance and design an integrative strategy to optimize poverty programs through a System Dynamics Modeling (SDM) approach. Using a qualitative method, this research develops a stock-flow diagram to capture structural mechanisms in data governance. Data collection was conducted through interviews with key informants, historical data analysis, and a fuzzy scale, then analyzed using Vensim software. The model refers to Abraham's Data Governance Theory, which includes Data Scope (Traditional Data and Big Data), Domain Scope, Antecedents (Internal and External), Structural Mechanisms, Relational Mechanisms, and Procedural Mechanisms. The simulation results show that improving data quality, metadata management, effective communication, and strengthening roles and responsibilities across agencies significantly reduce data discrepancies. Additionally, better decision-making coordination and performance monitoring mechanisms enhance data accuracy. The findings emphasize the importance of integrating data governance strategies through cross-sector collaboration, consistent policy implementation, and a sustainable monitoring system. This integrative approach effectively addresses data overlaps and improves the accuracy and efficiency of poverty alleviation programs, serving as a model for other regions facing similar challenges.*

**Keywords:** Data Governance, Poverty, System Dynamics Model and Garut Regency.

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## I. INTRODUCTION

Most households in Indonesia are poor. In the 1960s, Indonesia was on the verge of a 'chronic economic downturn' (Booth, 1992). Since then, the government has launched various programs to reduce poverty. Vision Indonesia 2045 aims to completely eradicate poverty by 2045 (Sugiharti et al., 2022). However, poverty in Indonesia is rooted in complex socio-economic problems, and this stems from how the government manages poverty data. However, poverty in Indonesia is rooted in complex socio-economic problems, and this stems from how the government manages poverty data. The governance of the poor has been a major focus in the critical social policy literature for some time, and research on data governance in social policy continues to emerge (Staines et al., 2021). Although budget allocations for poverty alleviation programs have increased progressively, the pace of poverty reduction has slowed down in recent years (Nugroho et al., 2021). Data related to the poor are sometimes collected in a way that is incidental and not always open. administrative data are routinely collected when individuals receive government services, often as a prerequisite for receiving those services (Gillingham & Graham, 2017). Based on the number of population poverty data in March 2023, Garut became the second highest contributor to poverty data in West Java Province, more than 240 thousand people are considered poor (BPS, 2023). Government efforts with government programs such as the non-cash food assistance program (BPNT) family hope program (PKH), direct cash assistance (BLT) and others have not been optimal to reduce poverty.

According Lu & Zhang, (2024) Effective data governance plays an important role in poverty alleviation, especially in developing countries, transparency, accountability, and public participation in data management can improve the accuracy of identifying poor areas and distributing targeted aid. Data transparency also enables more informed and effective decision-making. In Garut Regency, various agencies play a role in poverty alleviation. The Education Agency focuses on increasing the average length of schooling, the Health Agency through the JKN program for health services for vulnerable groups, and the

Manpower Agency with job training and entrepreneurship programs. BAPPEDA acts as a cross-sectoral coordinator, while the Housing and Settlement Agency provides basic infrastructure. However, coordination between agencies is still a challenge, especially due to differences in data collection methods. DTKS presents individual and family data per sub-district, while BPS and Kemenko PMK provide macro data with overall poverty indicators. These differences often hinder the effectiveness of poverty alleviation programs. BPS data shows 259 thousand poor people in Garut, while the Social Service DTKS recorded 234 thousand people.

This difference shows the importance of optimizing the digital data collection system to unify poverty data as a basis for implementing poverty alleviation programs. Policies that support this effort include Presidential Regulation No. 96 of 2015 concerning the Acceleration of Poverty Alleviation, and Garut Regent Regulation No. 64 of 2018 concerning Social Welfare Centers at the village and sub-district levels. In addition, the support of each agency related to poverty is different, meaning that the perspective and methodology for solving poverty are different so that the use of data by each agency is different (Suryahadi et al., 2012). Differences in poverty measurement approaches can cause significant variations in the poverty data produced (Ravallion, 2016). Masuku et al., (2022) state that community dissatisfaction with assistance programs is due to diverse characteristics and needs. Islamy et al., (2023) added that aid programs actually cause dependence. Niki et al., (2020) assessed that collaboration between parties in governance has not been fully effective, while Tirtosuharto, (2022) emphasized the importance of good governance for the efficient allocation of public resources. Piliang, (2023) suggested complex data collection based on community characteristics, such as food assistance for the elderly and competency training for productive age. Paik et al., (2023) emphasized the importance of fair data and continuous monitoring to evaluate disparities.

Hurulle et al., (2023) emphasized the importance of using accurate data for informed decision-making in social protection programs. Further studies are needed to project an integrative data governance strategy using the System Dynamic Modeling approach to optimize poverty alleviation programs. This study contributes to the literature on data governance as an effort to alleviate poverty and support the positive impact of good governance. The lack of effectiveness of government programs is caused by overlapping data collection systems and minimal collaboration between related agencies. Quality data is an important indicator in making poverty alleviation policies. Therefore, the System Dynamic Modeling approach is used to design an integrative data governance strategy to optimize poverty alleviation programs in Garut Regency. Therefore, it is necessary to project the scenario of data governance integrative strategies for optimizing poverty reduction programs, with the following problem formulation:

- 1) What are the Data Governance factors that influence/drive poverty reduction programs?
- 2) How to project the Data Governance Integrative Strategy to optimize poverty reduction programs?

Data governance mechanisms include formal structures linking government, IT, and data management; formal processes for decision-making and monitoring; and collaborative practices between stakeholders (Abraham et al., 2019). These mechanisms consist of structural, procedural, and relational mechanisms. This study focuses on poverty data management as an effort to optimize poverty alleviation programs in Garut Regency. According to (Nurkse, 1963), underdevelopment, market inefficiency, and limited capital lead to low production, which leads to low income, minimal savings and investment, thus strengthening the cycle of underdevelopment.

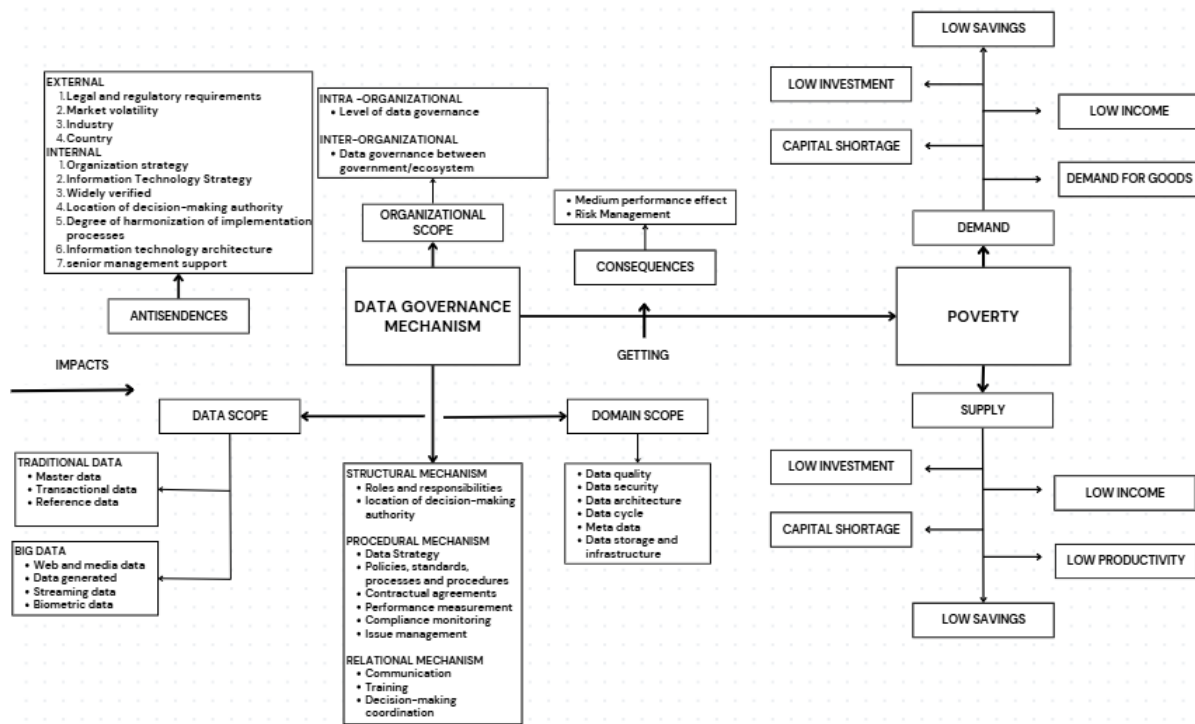


Fig 1. Conceptual Framework

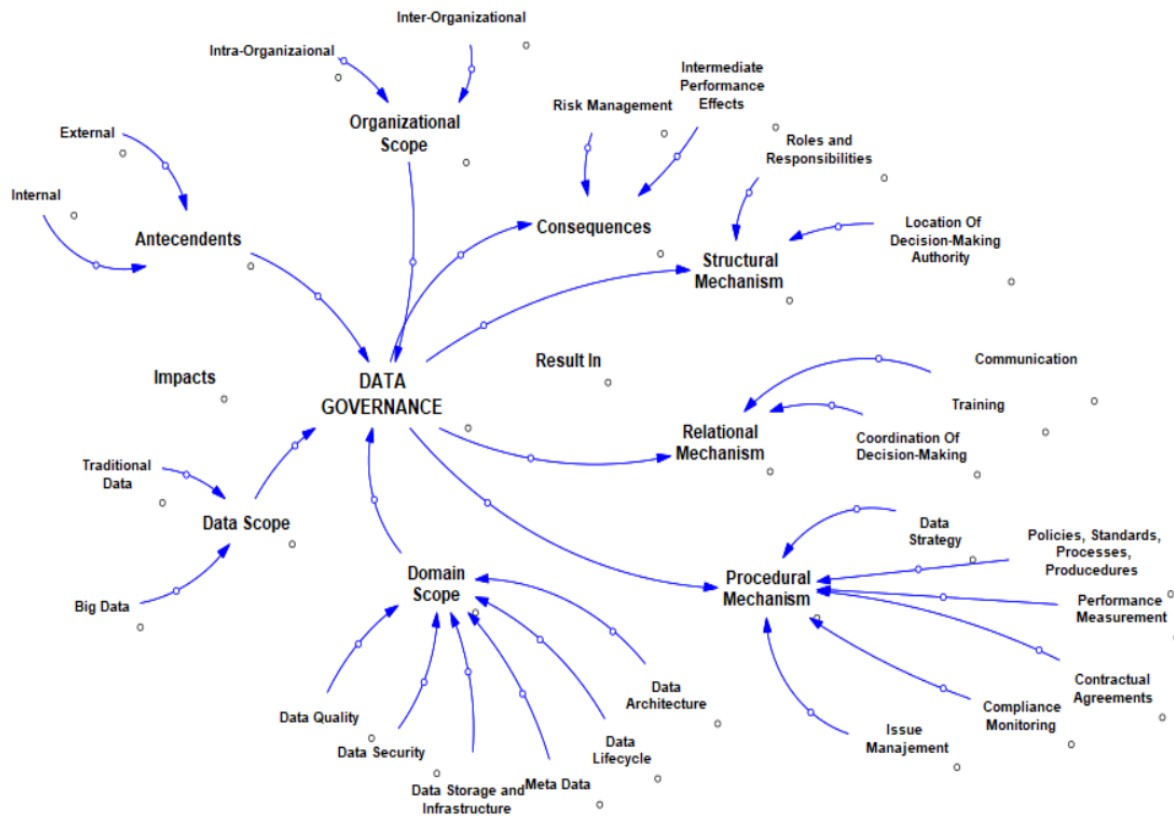
## II. METHODS

This study uses a System Dynamics Modeling (SDM) approach to analyze the integrative strategy of poverty data governance in Garut Regency. The data used consists of historical poverty level data from BPS, DTKS (Integrated Social Welfare Data), and data from various related agencies such as the Social Service, Education Service, Health Service, and Manpower Service. In addition, in-depth interviews were conducted with 11 key informants to understand the data management process, roles and responsibilities between agencies, and challenges faced in data harmonization. In the modeling process, a fuzzy scale of 1-10 is used to measure performance in each dimension of data governance based on Abraham's (2019) data governance theory. The simulation results are visualized through a Reference Mode graph to see the pattern of data governance dynamics from 2025 to 2045, as well as a Tornado graph to analyze sensitivity and identify variables that have the most significant influence on improving the quality of poverty data governance.  $Poverty\ Data\ Governance = Data\ Scope * 0.125 + Domain\ Scope * 0.125 + Attecondences * 0.125 + Consequences * 0.125 + Procedural\ Mechanism * 0.125 + Relational\ Mechanism * 0.125 + Organizational\ Scope * 0.125 + Structural\ Mechanism * 0.125$ . In addition to historical data in this study, each parameter in the model is assumed to have the same effect so that the calculation will be multiplied by a percentage of 0.125.

## III. RESULTS AND DISCUSSION

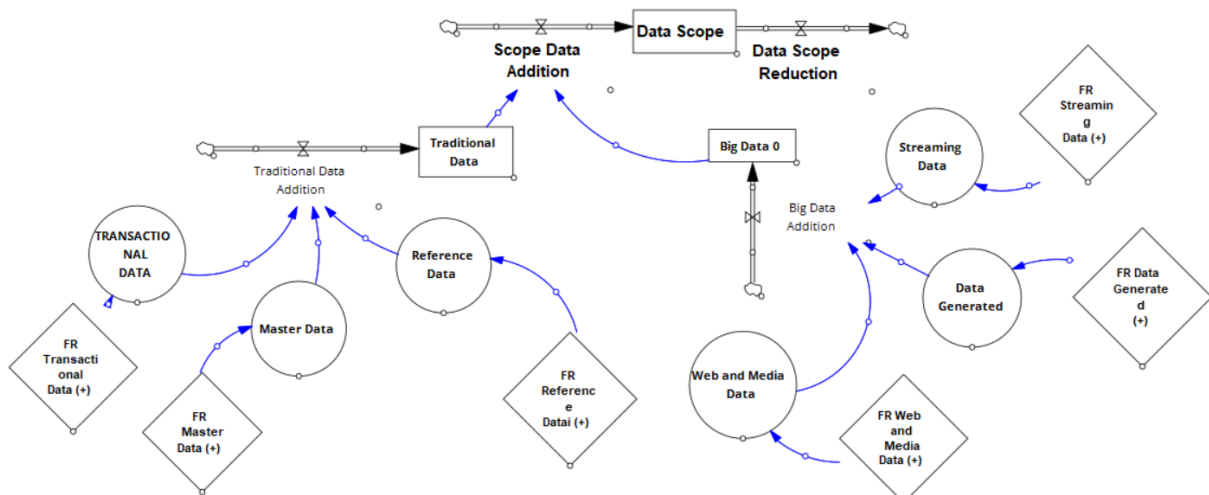
### 3.1 Results

The causality diagram is a representation of the mental model used by researchers as the basis for building the model. This diagram was prepared based on mental data and the results of interviews with related parties to validate the mental model used. The causality model framework is a reference for the development of data governance sub-models with stock and flow diagrams built.



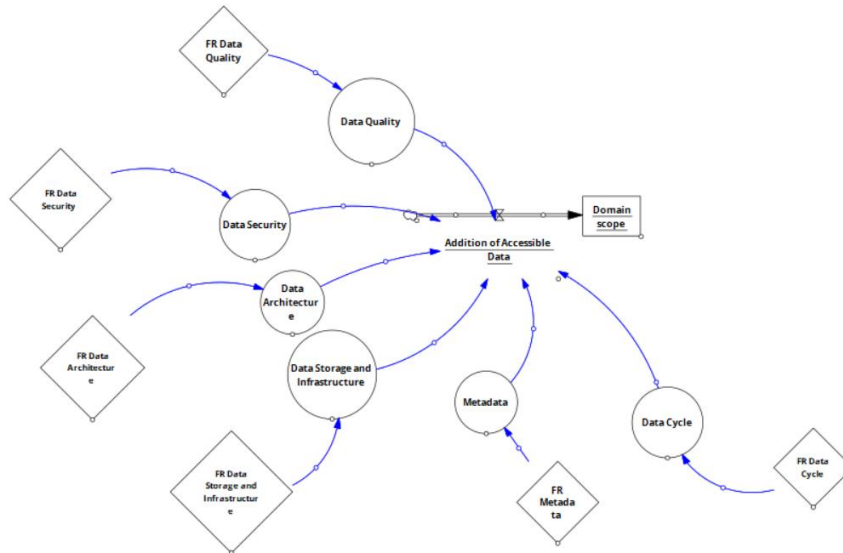
**Fig 2.** Causality Diagram of Data Governance

The causality diagram of the data governance integrative strategy for poverty alleviation in Garut Regency consists of seven main interacting elements. The Data Scope dimension focuses on managing traditional data and big data to ensure data accuracy and integrity, while Domain Scope covers aspects of data quality, security, metadata, and storage infrastructure. From the organizational side, Organizational Scope plays a role in coordinating data governance at the internal and inter-agency levels. Furthermore, the Data Governance Consequences aim to improve data quality, risk management, and more accurate decision-making through continuous evaluation. Governance effectiveness is also supported by Structural Mechanisms that emphasize roles and responsibilities and location of decision-making, Relational Mechanisms that strengthen inter-agency communication, training, and coordination, and Procedural Mechanisms that include data strategy, standardized policies, performance measurement, and compliance monitoring. These seven elements form an integrated system to improve the effectiveness of data governance in poverty alleviation efforts. The figure below is a model that will be analyzed as a strategy scenario



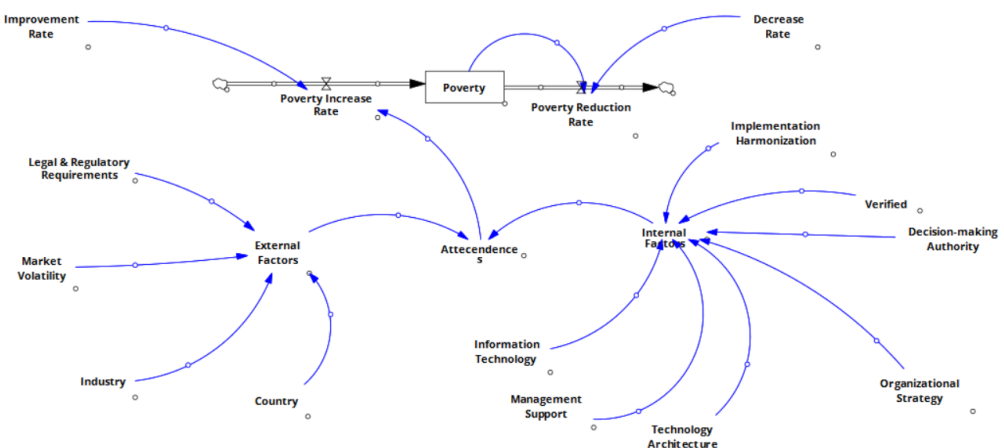
**Fig 3.** Stock Flow of Data Scope Model

The Data Scope module in the poverty data governance strategy in Garut serves to manage and process various types of data used in poverty alleviation programs. Data Scope includes Traditional Data, Big Data, Transactional Data, Master Data, Reference Data, Web and Media Data, and Streaming Data. The addition of Data Scope occurs through the inflow of traditional data from transactional data, master data, and reference data, while Big Data is obtained from web data, social media, and streaming data. In contrast, the reduction of Data Scope occurs through the process of cleaning and deleting irrelevant data. In figure 7 This module enables a more in-depth analysis of the volume and quality of data, so that data governance can be optimized to support more accurate decision-making in the poverty alleviation program in Garut Regency.



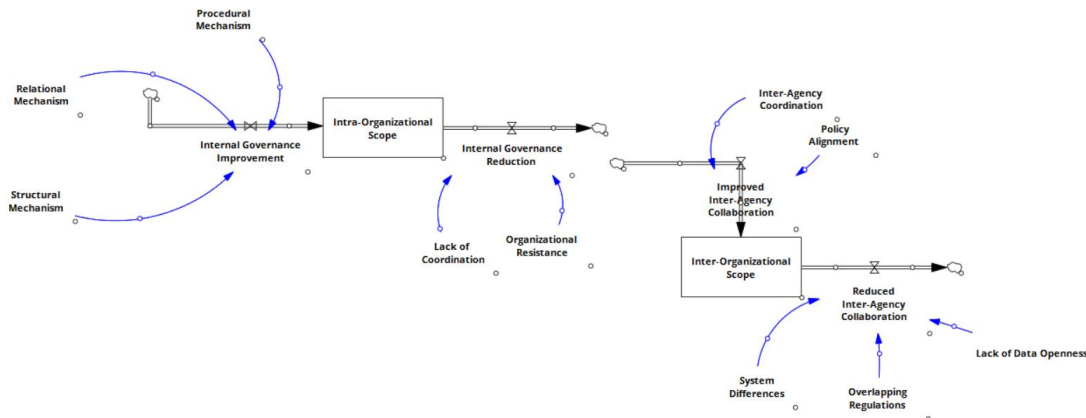
**Fig 4.** Stock Flow of Domain Scope Sub Model

The dynamic system model in the data governance integrative strategy for poverty reduction in Garut Regency shows how various factors affect the poverty rate. The main variable in this model is Poverty, which is influenced by two main streams, namely the Poverty Increase Rate and the Poverty Decrease Rate. External factors such as Legal Regulations, Market Volatility, Industry, and Government Policies contribute to changes in the poverty rate through influences on economic conditions and prevailing regulations. Meanwhile, internal factors such as Information Technology, Management Support, Technology Architecture, Implementation Harmonization, and Decision-Making Authority play a role in increasing the effectiveness of poverty alleviation programs. In addition, the Attendances aspect, which refers to the active participation of the community and stakeholders, also plays an important role in supporting the success of the program. With effective management of internal and external factors and optimal participation, an integrated data governance strategy can accelerate poverty reduction in Garut Regency more efficiently. The following researcher presents it in Figure 5.



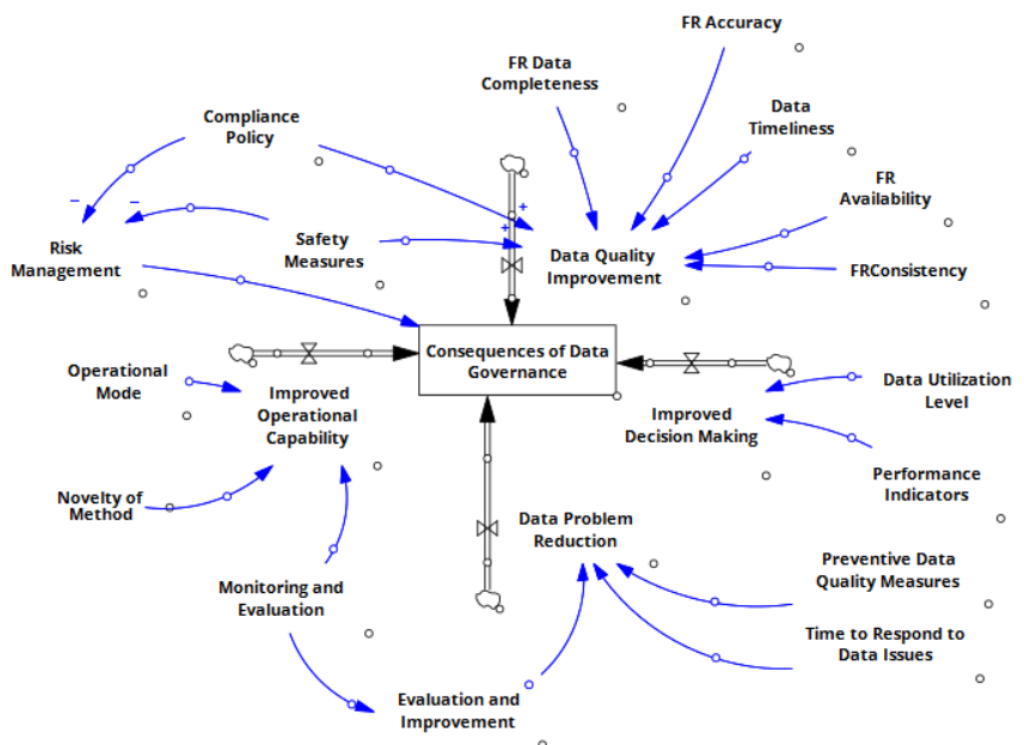
**Fig 5.** Stock Flow of Data Antecedents Sub Model

Organizational Scope in poverty data governance in Garut Regency plays an important role in improving the effectiveness of data management, both at the intra-organizational and inter-organizational levels. At the intra-organizational level, strengthening structural, relational, and procedural mechanisms, such as good internal coordination and more effective policy implementation, can improve the efficiency of data management. However, challenges such as lack of coordination and resistance to change are often obstacles. Meanwhile, at the inter-organizational level, collaboration between agencies is key to ensuring optimal data integration. However, system differences, overlapping regulations, and lack of data disclosure often hinder inter-agency synergy. Therefore, the effectiveness of data governance largely depends on how coordination, policies, and regulations are implemented at these two levels to support a more integrated and efficient poverty reduction program.



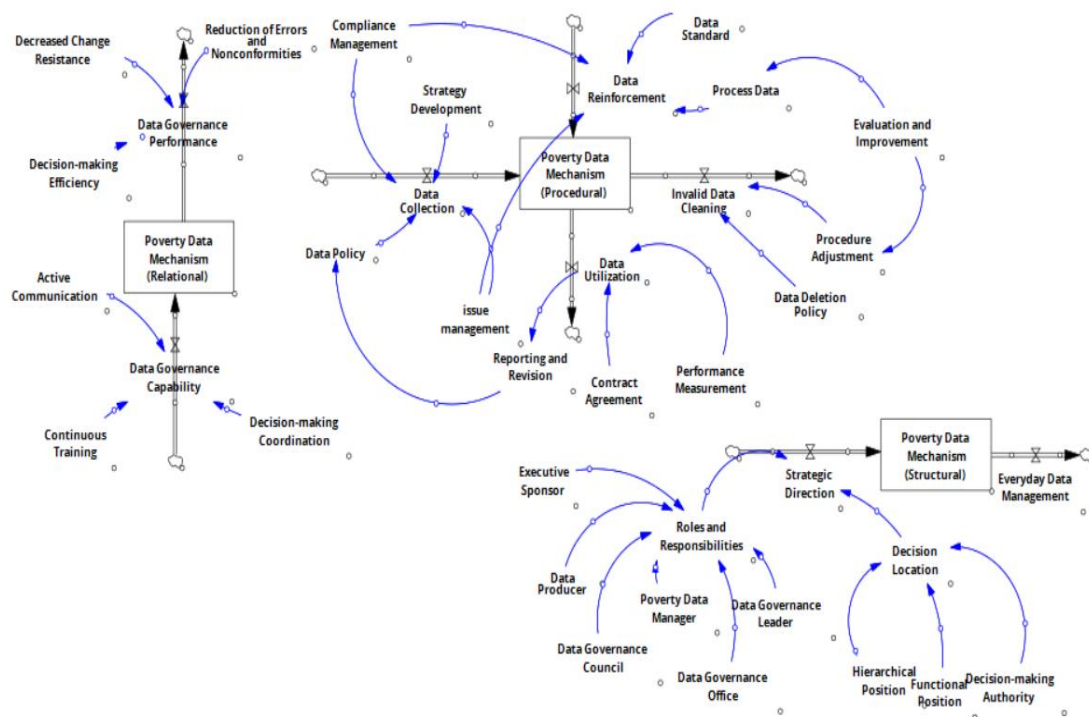
**Fig 6.** Stock Flow of Organizational Scope Sub Model

Figure 7 below explains the Consequences module in poverty data governance in Garut Regency, showing that effective data management contributes to risk management and improved organizational performance. Good data governance is able to minimize risks such as data errors, information leakage, and uncertainty in decision-making through compliance policies, security measures, and regular monitoring. In addition, the effectiveness of data governance also has an impact on improving data quality, reducing data problems, and optimizing decision-making. With good data governance, local governments can ensure that policies are based on accurate, reliable, and relevant data.



**Fig 7.** Stock Flow of Consequences Sub Model

The stock-flow diagram of the procedural mechanism in poverty data management shows how the flow of data from collection to utilization can be effectively managed. Through monitoring inflows and reducing outflows, this diagram illustrates the improvement of data quality and the reduction of errors and discrepancies between agencies. Continuous feedback and evaluation ensure that the data used remains valid and in line with established policies, as shown in Figure 8. This diagram also emphasizes the importance of active communication and continuous training to improve data governance capabilities. Core processes such as data collection, data cleaning, evaluation and performance measurement play an important role in maintaining accurate and reliable data quality. In addition, issue management is applied to handle problems that arise during the data management process. Data governance mechanisms are divided into three main categories: structural mechanisms that focus on roles, responsibilities, and hierarchies within the organization; relational mechanisms that strengthen collaboration and communication between agencies; and procedural mechanisms that ensure that data policy standards, performance measurement, and compliance monitoring are followed. With a structured and adaptive approach, this model ensures that poverty data is optimally managed to support accurate and targeted decision-making.



**Fig 8.** Stock Flow of Mechanism Data Governance Sub Model

The validation test above shows that the model used in this study can describe the actual conditions. The test was conducted for data for the last 5 years consisting of poverty, GRDP and HDI data in Garut Regency. Each variable tested shows a MAPE rate of <5% so that this model can be said to be very precise.

**Table 1.** Poverty Model Validation Test Results

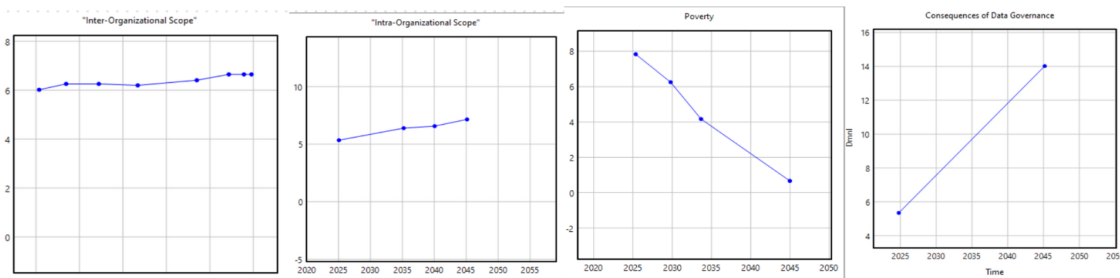
Years	Poverty (Thousand People))			GRDP (Million Rupiah)			human development index		
	Simulated	Data	Percentage Error Simulated	Simulated	Data	Percentage Error Simulated	Simulated	Data	Percentage Error Simulated
2022	280	281.4	0.50%	60,500,000	60,836,393	0.55%	65	66.45	2.18%
2023	275	276.7	0.61%	66,000,000	66,590,620	0.89%	66	67.41	2.09%
2024	259	260.5	0.58%	72,000,000	72,229,230	0.32%	68	69.22	1.76%
MAPE	0,57%			0,50%			2.13%		

Based on the simulation results in 2025 as the initial data projection, the condition of poverty data governance in Garut Regency shows several important findings in each sub-model. Data Scope shows a 15% increase in the accuracy of poverty data through the integration of traditional data and big data, but is still constrained by the low capacity of human resources in managing big data and limited technological infrastructure. Domain Scope succeeded in reducing inter-agency data errors by 20% through improved data quality and metadata management, but differences in data recording standards at the village and sub-district levels are still the cause of data inconsistencies. In Organizational Scope, coordination between agencies such as the Social Affairs Office, BPS, and the Education Office began to improve, but sectoral ego between agencies still hampered data synchronization. Furthermore, the Structural Mechanism shows the strengthening of roles and responsibilities in decision-making, but overlapping authority between agencies still slows down the data validation process. The Relational Mechanism is able to improve communication and collaboration between agencies by up to 25%, but information gaps at the regional level are still a major obstacle in the distribution of accurate data. The Procedural Mechanism shows improvement in the implementation of data policy standards, performance measurement, and compliance monitoring, but is still constrained by budget limitations for the implementation of integrated data systems. Meanwhile, in the Consequences of Data Governance, the difference in poverty data between institutions has been reduced from 10% to 3%, but the effectiveness of poverty alleviation programs is still hampered by the slow process of updating data at the village level.

The results of this simulation become an important basis in designing the 2025-2045 scenario projection as an effort for a more optimal and sustainable data governance integrative strategy to support the optimization of poverty alleviation programs in Garut Regency. Based on the simulation results of projections from 2025 to 2045, the implementation of data governance in poverty alleviation in Garut Regency shows a diverse trend in each sub-model. In Data Scope, there is a consistent increase in data management capacity, which indicates an improvement in data integration across institutions. Domain Scope also shows a positive trend in improving data quality and reducing recording errors. Meanwhile, the Inter-Organizational Scope experienced a significant increase in inter-agency coordination, but tends to slow down after 2040 due to sectoral ego which is still a challenge. In the Consequences of Data Governance, there is a sharp increase in positive impacts until 2045, indicating that more accurate data management contributes to the effectiveness of poverty alleviation programs. On the other hand, the Poverty graph shows a gradual downward trend in the number of poor people, which proves that the data governance strategy implemented is able to have a real impact in reducing the poverty rate. However, despite the positive results, there are still some challenges that need to be overcome, such as data inconsistencies at the regional level and limited human resources in managing more complex data. Based on the simulation results of projections from 2025 to 2045, the implementation of data governance in poverty alleviation in Garut Regency shows a diverse trend in each sub-model.

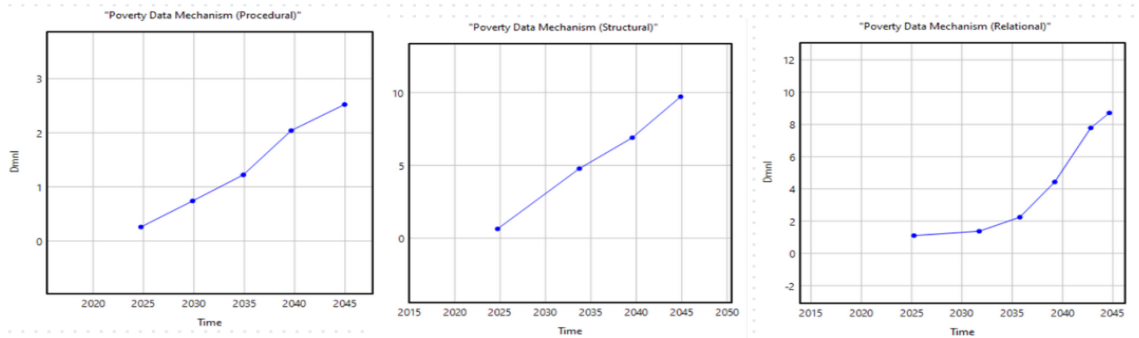
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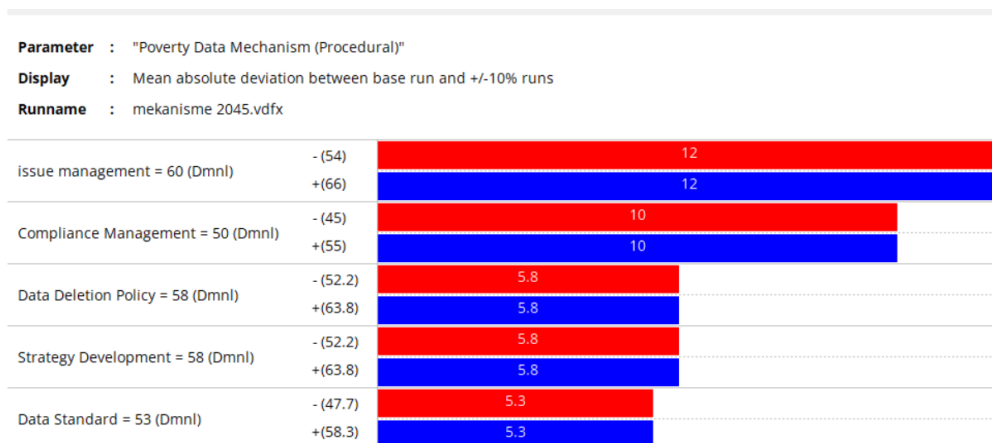
**Fig 4.** Simulation Results of Graphical Model of Domain Scope, Data Scope, Organization Scope, Consequences, Antecedents

while the data governance mechanism sub model is drawn 4



**Fig 5.** Simulation Results of Graph Model of Procedural, Structural and Relational Mechanisms

According to the simulation results for the 2025-2045 projection, the Poverty Data Mechanism (Procedural) shows a gradual improvement in the management of data policy standards and compliance monitoring, indicating the efficacy of data governance procedures that have improved over time. The Poverty Data Mechanism (Structural) is also showing a considerable improvement trend in terms of decision-making roles and duties, however synchronization amongst institutions remains a concern. Meanwhile, the Poverty Data Mechanism (Relational) saw a significant growth after 2040, demonstrating that collaboration and communication across institutions were improving, despite the fact that there were still barriers to the delivery of correct information at the start of the period. These three mechanisms overall show positive developments, but still need to be strengthened in terms of cross-sectoral coordination and data technology capacity building. Meanwhile, sensitivity analysis using a tornado graph for the period 2025-2045, the results show that procedural mechanisms and relational mechanisms have the most significant influence in improving poverty data governance in Garut Regency. Improving data policy standards, performance measurement, and compliance monitoring in the procedural mechanism proved effective in reducing data discrepancies between agencies. Finally, strengthening communication and collaboration between agencies in the relational mechanism can improve the synchronization of more accurate data. Furthermore, the researcher displays Figure 5. which is a tornado graph on the procedural mechanism sub model.



**Fig 5.** Tornado Sensitivity Chart

The scenario strategy for poverty data governance in Garut Regency focuses on seven main aspects. Data Scope Optimization is carried out through data digitization and integration of various data sources to increase the accuracy of beneficiary identification by 20%. Domain Scope improvement is implemented by standardizing data quality and strengthening data protection, which can increase the efficiency of social assistance distribution by 15%. Strengthening Organizational Scope through cross-agency coordination forums and increasing human resource capacity has reduced data duplication by 30%. Consequences improvement is carried out with a real-time monitoring and early warning system that can reduce data collection errors by 25%. Strengthening Structural Mechanisms through clear role assignment and data-based decision making increased policy effectiveness by 18%. Meanwhile, Improving Procedural Mechanisms by developing comprehensive governance policies and audit systems increases compliance with data policies by 22%, while reducing the risk of data manipulation. The simulation results show that the implementation of these strategies can improve the effectiveness of data governance holistically and have a significant impact on the poverty alleviation program in Garut Regency.

### **3.2 Discussion**

The findings of this study highlight the critical role of integrated data governance in optimizing poverty alleviation programs in Garut Regency. The simulation results using the System Dynamics Modeling (SDM) approach demonstrate that improving data accuracy, strengthening inter-agency coordination, and enhancing decision-making processes contribute significantly to reducing poverty rates. This discussion further explores the implications of these findings, their alignment with existing literature, and the challenges that must be addressed for effective implementation.

#### *1. The Role of Data Governance in Poverty Reduction*

The study identifies seven key elements of data governance—Data Scope, Domain Scope, Organizational Scope, Consequences, Structural Mechanisms, Relational Mechanisms, and Procedural Mechanisms—that collectively influence the effectiveness of poverty alleviation efforts. The results indicate that procedural and relational mechanisms have the most significant impact on improving data accuracy and reducing discrepancies across institutions. This aligns with previous studies (Abraham et al., 2019; Lu & Zhang, 2024), which emphasize that clear governance policies, compliance monitoring, and cross-sectoral collaboration are essential for effective social programs. In particular, the integration of traditional and big data has proven effective in enhancing the precision of beneficiary targeting, which corresponds with findings from Paik et al. (2023), who argue that data-driven decision-making is crucial for reducing socio-economic disparities. However, inconsistencies in data collection standards between different government agencies continue to pose a challenge, as seen in the mismatch between BPS and DTKS poverty statistics in Garut. This issue is also noted in research by Staines et al. (2021), which discusses how fragmented data systems can undermine poverty alleviation strategies.

#### *2. Challenges in Data Governance Implementation*

Despite the potential benefits, several barriers to effective data governance remain, particularly related to institutional coordination, technological capacity, and resource constraints. One major obstacle is sectoral ego and resistance to data-sharing among agencies, which hampers efforts to integrate and standardize poverty data. Similar challenges were observed by Niki et al. (2020), who found that inter-agency collaboration in governance remains suboptimal, leading to inefficiencies in policy execution. Another critical issue is the limited digital infrastructure and human resource capacity for managing big data, particularly in local government settings. The study's findings reveal that although data accuracy improved by 15% through integration efforts, weaknesses in technological infrastructure and staff competencies continue to hinder progress. This is consistent with insights from Hurulle et al. (2023), who argue that investments in data literacy and IT systems are essential for maximizing the effectiveness of digital governance initiatives. Furthermore, budget limitations for integrated data systems remain a key barrier. The study finds that although the implementation of real-time monitoring and an early warning system could reduce data collection errors by 25%, financial constraints restrict the scalability of such initiatives. This reinforces arguments by Tirtosuharto (2022), who stresses that good governance must be supported by adequate funding to ensure policy sustainability.

### *3. Policy and Practical Implications*

Addressing the challenges in data governance for poverty reduction requires a comprehensive approach that ensures consistency, collaboration, and technological advancement. One of the primary areas of improvement lies in the standardization of data collection processes. The establishment of a unified framework for poverty data management across institutions is crucial to minimize discrepancies that often arise due to variations in statistical reporting methods. By integrating a centralized system, policymakers can ensure that all relevant agencies operate under the same parameters when collecting and analyzing data. In addition, the adoption of real-time data updates through digital platforms will enhance the accuracy of information and enable a more responsive policy framework, allowing for timely interventions based on the most current socio-economic conditions. Equally important is the strengthening of institutional coordination to facilitate smoother collaboration between government agencies and other stakeholders involved in poverty alleviation. A cross-agency governance body should be established to oversee the integration of poverty-related data and to ensure that inter-agency communication is effectively managed. This body would serve as a central entity responsible for harmonizing data collection efforts, resolving inconsistencies, and improving the efficiency of poverty reduction programs. Furthermore, formal data-sharing agreements between institutions can enhance transparency and accountability, reducing the risks of redundant or conflicting data sources that often lead to inefficiencies in resource distribution. Beyond governance structures, investing in digital infrastructure and human resources is essential to maximize the effectiveness of data management systems.

Capacity-building initiatives, such as specialized training programs for government officials, will equip policymakers and administrators with the necessary skills to handle complex data analytics and big data applications in poverty monitoring. Additionally, increasing budget allocations for IT system upgrades will ensure that advanced data processing tools are available to support the integration of various data sources, thus improving analytical capabilities and decision-making processes. Without adequate technological infrastructure, even the most well-designed policies may fail to achieve their intended outcomes. Finally, ensuring sustainable monitoring and evaluation mechanisms will be instrumental in maintaining the effectiveness of data governance strategies over the long term. A structured monitoring system should be implemented to assess the impact of data governance improvements on poverty reduction, enabling policymakers to make informed adjustments based on performance trends. At the same time, fostering community participation in data validation can strengthen the reliability of poverty data while enhancing public trust in government programs. By involving local communities in the verification process, authorities can gain deeper insights into the socio-economic realities on the ground, ensuring that poverty alleviation efforts remain well-targeted and relevant. By implementing these strategies, the effectiveness of poverty alleviation programs in Garut Regency can be significantly improved. The study's findings provide valuable insights not only for local policymakers but also for other regions facing similar challenges in managing poverty data. However, further research is needed to explore how external factors such as political changes, economic fluctuations, and social dynamics influence the success of data governance strategies.

## **IV. CONCLUSION**

According to the simulation results and analysis, there are seven major data governance factors that influence the effectiveness of poverty alleviation programs in Garut Regency: Data Scope, Domain Scope, Organizational Scope, Consequences, Structural Mechanisms, Relational Mechanisms, and Procedural Mechanisms. The simulation results in 2025 show that procedural mechanisms and relational mechanisms have the most significant influence in reducing data mismatches and improving the accuracy of beneficiary identification. Furthermore, to project the data governance integrative strategy until 2045, seven main scenarios were applied, including Data Scope Optimization, which was able to increase the accuracy of beneficiaries by 20%, Domain Scope Improvement, which increased the efficiency of aid distribution by 15%, and Organizational Scope Strengthening, which succeeded in reducing data duplication by 30%. In addition, Increasing Consequences through a real-time monitoring system can reduce data collection errors by 25%, Strengthening Structural Mechanisms increases policy effectiveness by 18%, and Improving

Procedural Mechanisms which increases compliance with data policies by 22%. These findings demonstrate that an integrated data governance strategy implemented holistically may solve the problem of overlapping data and boost the efficacy of poverty alleviation initiatives in Garut Regency in a sustainable way until 2045.

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