



Digital Policy Integration for Poverty Reduction: Leveraging e-Government and Data Interoperability

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A B S T R A C T

This study aims to analyze the integration of digital policies through e-government and data interoperability in supporting effective poverty alleviation in Tasikmalaya City. The approach used is a qualitative case study design, through in-depth interviews with relevant agencies such as Bappelitbangda, the Social Service, the Health Service, the Education Service, the Communication and Information Service, the Manpower Service, and users of digital services. The results show that data interoperability enables faster, more accurate, and more efficient cross-sectoral information exchange, and supports decile-based poverty classification, which serves as the basis for developing more targeted job training and social assistance programs. However, challenges such as differences in information systems between agencies, limited technological infrastructure, lack of human resource capacity, and cross-institutional coordination remain obstacles to optimizing digital policy implementation. This study also underscores the importance of multi-stakeholder collaboration between the government, the private sector, and educational institutions in improving the quality of human resources and creating innovative public services. These findings align with the e-Government Interoperability Framework (eGIF) and provide theoretical and practical contributions to the development of adaptive and sustainable digital governance at the local level. This research recommends strengthening regulations, increasing digital capacity, and developing an integrated monitoring and evaluation system to support the successful integration of e-government within the context of data-driven social policy.

INTRODUCTION

This study aims to analyze the integration of government services as an optimal step to address poverty more efficiently. Three things that the government can do in utilizing e-government in poverty alleviation include: first, enabling synergy in service provision, second, information on aid distribution, and third, developing targeted poverty alleviation programs. This concept is an effort to implement data interoperability. Interoperability aims to provide the ability to exchange information and mutually use the exchanged information. This system will enable information systems from various agencies to provide integrated services. Interoperability will assist in the exchange of information in mapping, providing integrated public data (Liu et al., 2022; Malomo & Sena, 2017; Wang et al., 2024). Open data plays a vital role in public policymaking and service delivery, and also has significant value for other stakeholders, including the provision of traffic information (Agarwal et al., 2004; Janssen et al., 2014).

The difficulty in achieving interoperability is due to the diversity of public information systems and the need to adapt to the technical requirements and unique characteristics of the organizations implementing them, while there is also a lack of comprehensive evaluation and analysis of the various factors that play a role (Casalino et al., 2014). Successful policy implementation depends on numerous supporting and inhibiting factors. Various models have been designed to assist policy implementation, including management factors, implementing organizational factors, political support, and implementing bureaucracy. Policy implementation is a logical development process, the subject of these models. The goal is to provide precise explanations and bring policy implementation closer to success. The government is being urged to find ways to empower

communities, in addition to providing various facilities in poverty alleviation efforts (Budijaya, 2023; Pratama & Chandra, 2022).

This response highlights several key trends that have been recognized as potential areas of interest for future research in the smart city field. These trends cover several aspects, including privacy, information security, open data, collaborative culture, stakeholder trust in co-production, and the public benefits derived from the concept of public value in smart cities (Rocha et al., 2020). The majority of e-Government projects face difficulties when integrating with external services. This results in a lack of coordination and information exchange between various public administration e-services (Pamungkas et al., 2019).

Human resources must demonstrate the right attitudes, knowledge and skills to the community to initiate, implement and maintain the interoperability movement (Andoh et al., 2023; Atmadja et al., 2021; Benany et al., 2019). Its technical guidelines on the eGovernment Interoperability Framework (eGIF), first published in 2000 and revised to version 6.1 in March 2005, require a set of standards and regulations for cross-agency collaboration and e-government service delivery. It is divided into four sections: interconnection, data integration, e-service access, and content management (Gupta, 2019). By reviewing the literature on this matter Rico-Pinto & Sánchez-Torres (2018) was able to determine what elements are important in facilitating interoperability between government entities. Interoperable, efficient and successful public services for citizens and businesses are the goals of the European Interoperability Framework (EIF) (Agarwal et al., 2004; Zaoui et al., 2019).

The European Interoperability Framework (e-GIF) describes interoperability standards that are essential for the successful implementation of several aspects, including interconnection, data integration, content and metadata management, information access and presentation, and security (Casiano Flores et al., 2022;

Kalogirou et al., 2022; Kanagwa et al., 2018). The proposed six-layer technology architecture for e-Government is derived from previous research findings. The architectural components include display, content management, application integration, data exchange, interconnection, and security.

The development of information and communication technology has transformed governance in various countries. Governments in both developed and developing countries must adopt e-government strategies to increase transparency and accountability. A crucial element in this regard is data interoperability, namely the ability to integrate and exchange data. In poverty alleviation, data interoperability is expected to be a target, preventing policy duplication and evidence-based decision-making. Implementing data interoperability faces challenges, such as limited resources and institutional capacity.

The aim of this research is to integrate digital policies with data interoperability. Its significance lies in its contribution to governance, for example, highlighting the barriers infrastructure and institutions pose. A mid-sized city like Tasikmalaya still faces serious poverty issues.

E-government studies based on Scopus journal searches still focus largely on the national level, while research at the city level is still very limited. This research was conducted through the application of the European Interoperability Framework (EIF) in Europe. Research on mid-sized cities in developing countries needs to be expanded to build data interoperability and poverty alleviation policies. The novelty of this research lies in its focus on interoperability practices at the city government level in Indonesia, with all the limitations of infrastructure, human resource capacity, and inter-institutional coordination. Thus, this research adds new empirical evidence to the global literature on digital governance and emphasizes the importance of contextual strategies to strengthen poverty alleviation policies.

A bibliometric analysis was conducted using VOSviewer software with a Scopus-indexed publication database covering the period 2010–2024. Keywords used included "e-government," "data interoperability," "poverty alleviation," and "digital governance." The analysis revealed three main findings. First, the global trend of publications on e-government and interoperability has increased significantly since 2015, particularly in Europe and Asia. Countries such as the United Kingdom, the Netherlands, and China are noted as the most productive in research in this area, with a focus on interoperability standards, data sharing models, and information security.

Second, keyword mapping shows that the topics "poverty alleviation" and "social policy" remain peripheral compared to dominant clusters such as "big data," "open government," and "digital transformation." This indicates that the direct link between digital governance and poverty alleviation remains relatively under-recognized in the international literature. Third, the authors' collaborative networks demonstrate a predominance of collaboration among European researchers, while contributions from Southeast Asia, including Indonesia, remain very limited. This fact reinforces the urgency of research in this region, particularly in cities seeking to integrate digital governance into social policy.

Overall, these bibliometric results demonstrate a research gap: there is still little research linking e-government interoperability with poverty alleviation at the local level. This gap is what this study seeks to address.

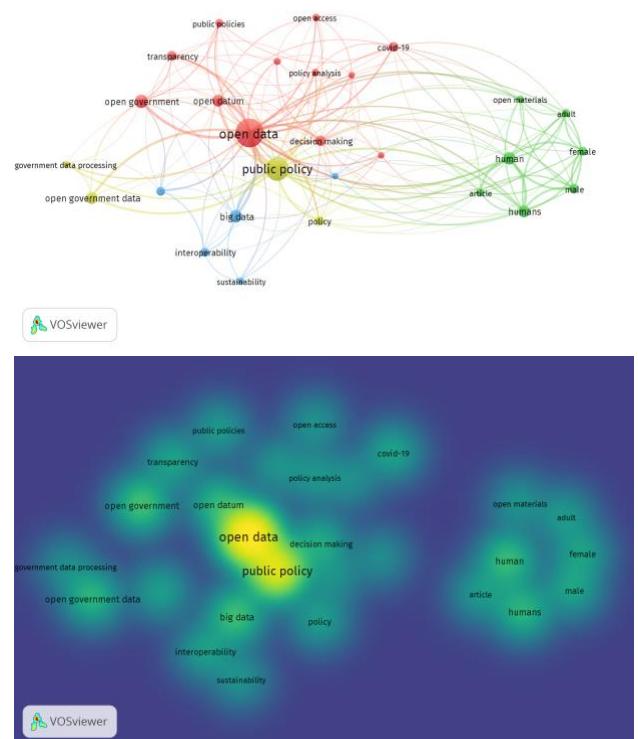


Figure 1. Bibliometric Mapping of E-Government Research, Data Interoperability, and Poverty Alleviation (VOSviewer Analysis, 2010–2024)

Source: VosViewer. 2025.

The integrated service will facilitate the Tasikmalaya city government's development of a platform for managing and collecting poverty data. Some key services include population data, education, health, and even employment information. Integration is also highly beneficial for designing economic empowerment programs and creating an integrated online public service portal that provides information on everything from social assistance to job training programs. This service will facilitate accurate information access for low-income groups as part of poverty alleviation services.

Therefore, this study will examine in depth how data interoperability and e-government are implemented in the context of poverty alleviation policies in Tasikmalaya, as well as the challenges and opportunities for inter-agency collaboration. Based on the description above, this research is directed to answer the main question: How can data interoperability and e-government be implemented effectively to strengthen poverty alleviation policies at the city government level, especially in areas with limited resources such as Tasikmalaya?

METHOD

The purpose of this research is to analyze the transformation of e-government policies and data interoperability in poverty alleviation in Tasikmalaya City. Therefore, the method used is a qualitative research method with a case study design (Noor, 2008). Interviews were conducted with several agencies, with the research subjects being policy makers, related agencies, and users of e-government services. The research location was Tasikmalaya City. The following informants were selected:

1. The Tasikmalaya City Regional Development Planning Agency. Researchers will obtain information on the regional development master plan and e-government development priorities in Tasikmalaya City, as well as poverty alleviation programs implemented by the Tasikmalaya City government.
2. The Communication and Informatics Agency plays a crucial role in integrated information technology management and challenges in data interoperability.
3. The Social Affairs Agency is responsible for implementing several poverty programs. This agency will comprehensively explain the implementation of policies using the e-government approach used.
4. The Health Agency: Public access to health services is a crucial factor in poverty alleviation. Information on data interoperability is crucial in this research.
5. The Education Office highlights how information technology and data integration can improve access to and quality of education.
6. The Manpower Office highlights data on poverty alleviation through empowerment programs and job opportunities.
7. Consultants/Experts in e-government, strengthening information on implementation challenges in Tasikmalaya City.

Users of e-government services in Tasikmalaya City receive information on public service evaluations and advocacy for integrated poverty alleviation policies. Case study research techniques and interview data collection are expected to provide information on the challenges of e-government policies, which are still sectoral, and the efforts of each agency in developing integrated services. This research will contribute to the implementation of the mandates of Presidential Regulation Number 95 of 2018 concerning the Electronic-Based Government System (SPBE) and Presidential Regulation Number 39 of 2019 concerning One Data Indonesia (SDI).

RESULTS AND DISCUSSION

E-Government Integration and Data Interoperability Strategy

The results of this study demonstrate how the principles outlined in the theoretical framework in the introduction, particularly those related to data interoperability and digital governance, are beginning to be implemented at the local level. Tasikmalaya City serves as a case study that concretely illustrates these dynamics. Based on the research results, it shows the urgency for the Tasikmalaya City Government to carry out several comprehensive strategies related to e-government integration and interoperability.

- 1) Optimizing the Implementation of E-Government Policy, namely the Tasikmalaya City Government should continue and strengthen the e-government policy by increasing the use of information and communication technology to support transparency, accountability, and efficiency in public services (Spalević et al., 2023a). This includes the development of a digital platform that allows citizens to more easily access government information, social services, and public complaints in real time (Spalević et al., 2023b). The government must develop employee competencies to maximize the use of e-government in government services (Kurniati et al., 2020). Supervision is an additional aspect in

preventing misuse of technology and achieving the goals of the system. This is because after employees receive competency development to utilize e-government through training, it must be accompanied by strong ethics and integrity so as not to misuse their competencies, therefore government supervision is very important, for now data misuse carried out by employees within the Tasikmalaya City Government has not become a threat but if in the future it is serious about implementing e-government then strengthening supervision is mandatory.

- 2) Improving Data Interoperability Between Agencies: Various poverty alleviation programs should be regulated in the data integration process. (Walker et al., 2021). The Tasikmalaya City Government continues to face challenges in quickly and accurately exchanging data. This includes the use of uniform data standards across all government agencies, the implementation of Application Programming Interfaces (APIs) for application integration, and a centralized content management system to manage relevant information. The Tasikmalaya City Government needs to monitor and evaluate social welfare programs more effectively, particularly to reduce administrative costs. This is where a poverty data integration system, through data interoperability between agencies, particularly those involved in poverty alleviation programs, becomes crucial, ensuring targeted programs. Currently, the Tasikmalaya City Government has not demonstrated serious commitment to developing such a system, as poverty data across agencies remains disparate.
- 3) Improving Technology Infrastructure and Data Security: Infrastructure is an element of implementing information technology services (Lin et al., 2023). The Tasikmalaya City Government has not yet demonstrated its prioritization of secure digital infrastructure services, such as high-speed internet networks, servers, or the latest software for handling large amounts of data. The security of citizens' personal information must also be guaranteed to prevent data leaks. Data security measures such as data encryption, strict access policies, and enforcement are essential to mitigate data leaks and cyberattacks.
- 4) Decision making involving public participation: Some actions that can be taken by the Tasikmalaya City Government include utilizing digital platforms to maximize active public participation, for example in complaint forums, discussions or surveys (Farooq et al., 2022). Citizens' needs and aspirations are used to tailor ideal poverty alleviation programs. An active community can encourage support for government programs. However, currently the Tasikmalaya City Government has not utilized digital platforms either through websites or social media to provide space for public participation and accommodate aspirations (suggestions and criticisms) from the community, especially in the field of poverty alleviation, so that poverty programs that have been running so far still have minimal community participation from the planning process (program proposals), financing, implementation, and supervision.
- 5) Collaboration between the private sector and academics: The problem of poverty is very complex so it is necessary to create collaborative and sustainable development (Pinilla-De La Cruz et al., 2022). The Tasikmalaya City government hasn't yet established many strategic partnerships, for example with technology companies, academics, researchers, or the media. Software and hardware could be provided by the private

sector, while academics could contribute to improving research and data analysis for policy implementation and evaluation. Furthermore, the media could play a role in monitoring the publication of government programs, so that government programs, especially in the field of poverty alleviation, can be known by the public so that in the end the public understands and is actively involved in supporting the program to achieve its goals.

6) Increasing Budget and Resources for Technology Development: Budget allocation in e-government policy requires support from the government, especially in the allocation of technology budgets and human resource training (Shahabi et al., 2021). The Tasikmalaya City Government still faces budgetary and implementation weaknesses. Therefore, The Tasikmalaya City Government must demonstrate a strong commitment by allocating a sufficient budget to build a technology development system within the government sector to support data uniformity through data interoperability between government agencies and training government employees to operate the developed technology. Furthermore, as a precautionary measure against misuse, regular audits can prevent irregularities, especially corruption.

Practical Actualization of Government and Stakeholders

This study has several practical implications for the Tasikmalaya City Government and related parties in poverty alleviation efforts. First, strengthening e-government policies needs to be further optimized to accelerate poverty alleviation, especially through increasing transparency, accountability, and efficiency in public services. Second, Rapid information exchange must be supported by information exchange between government agencies. Policy implementers also need to develop the knowledge, attitudes, and skills to initiate and implement data interoperability.

Conceptually, the e-Government Interoperability Framework (eGIF) requires a set of standards and regulations in every cross-agency collaboration and electronic-based government service delivery. This framework consists of four main parts, namely: 1. Interconnection; 2. Data integration; 3. Access to electronic services; and 4. Content management (Campmas et al., 2022; Oumkaltoum et al., 2021).

The literature review shows that understanding the important elements of interoperability is crucial in facilitating cooperation between government entities. The main objective of the European Interoperability Framework (EIF) is to create integrated, efficient and accessible public services for citizens and businesses. The European Interoperability Framework (e-GIF) outlines interoperability standards that are essential for successful implementation of a number of aspects, including interconnection, data integration, content and metadata management, information access and presentation, and security. Based on findings from previous studies, a six-layer technology architecture for e-Government is proposed, which includes: 1. User interface (display); 2. Content management; 3. Application integration; 4. Data exchange; 5. Interconnection; and 6. Security levels (Ahmad & Hasibuan, 2012; Bansal et al., 2022; Konnon et al., 2023).

The Tasikmalaya City Government needs to emulate the interoperability system that has been implemented in other countries, the system seems complicated and expensive but if it

is running the system is actually very good for the government's work in the long term, making government work more effective and efficient, so far the Tasikmalaya City Government has not seen at all the direction of the system development policy. Therefore, from now on, the Tasikmalaya City Government should issue a policy towards the development of data interoperability as a long-term development capital.

The Reality of Using E-Government

Based on the results of the research conducted by the researcher, information was obtained from the results of interviews with the Manpower Office regarding the correlation of the use of e-government in poverty alleviation efforts, that the Manpower Office obtained data produced by several stakeholders of the Tasikmalaya City government including: Bappelitbangda Office; Kominfo Office; BPS Tasikmalaya City; and Tasikmalaya City Social Service. The fields handled by the Tasikmalaya City Manpower Office include Industrial Relations and General Personnel.

In efforts to alleviate poverty, poverty data plays a crucial role and is very relevant to the vision and mission of the Acting Mayor of Tasikmalaya, who has a strong commitment to reducing, even eradicating poverty in his area. In this context, the Manpower Office (Disnaker) has played an active role in integrating its poverty data with data from the Regional Development Planning Agency (Bappelitbangda). This step is not only aimed at creating synergy between institutions, but also ensuring that every policy intervention is based on valid and comprehensive data.

The Manpower Office has synchronized data from the Extreme Poverty Alleviation Program (P3KE) with data from the Central Statistics Agency (BPS), the Social Services Office, and internal data from the Regional Development Planning Agency (Bappelitbangda). This step aims to integrate various data sources previously managed separately by each agency, thereby forming a more valid and comprehensive database. This process will also improve the accuracy of identifying the most vulnerable community groups, allowing for more targeted assistance and empowerment programs. Data interoperability is a key factor in poverty alleviation strategies (Bagyendra et al., 2023; Dinçol et al., 2023; Silva et al., 2023), particularly at the local government level, which is working to integrate information from various sectors to formulate more effective policies. Data interoperability refers to the ability of various systems and institutions to coordinate with each other through consistent and accurate data exchange and integration. In the context of poverty alleviation, this allows data from institutions such as Bappelitbangda, the Social Services Office, the Manpower Office, and BPS to be used in an integrated manner to form a complete picture of poverty conditions in a region.

One of the main impacts of data interoperability in poverty alleviation is the increased accuracy and validity of data used for policy formulation (Weber, 2024). Through interoperability, data from various agencies can be combined, avoiding duplication and inconsistencies that often arise when data is managed separately. For example, poverty data obtained from the Social Services Agency can be verified and enriched with data from the Statistics Indonesia (BPS), resulting in a more comprehensive and precise picture of poverty. This picture can include important aspects such as demographic data, education level, access to health services, and various other indicators needed to fully understand poverty conditions.

Data interoperability also allows for more in-depth and evidence-based analysis in formulating poverty alleviation strategies (Cacciaguerra & Chiarelli, 2023). When data from various agencies can be accessed and analyzed collaboratively, local governments have the ability to conduct more in-depth cross-sectoral analyses. This enables the identification of patterns or relationships that might not be apparent if the data were analyzed separately. For example, the relationship between education levels and poverty levels can be analyzed more accurately by integrating data from the Department of Education and the Department of Social Affairs. With this approach, poverty alleviation strategies can be formulated in a more targeted manner, based on the findings generated by comprehensive data analysis. Furthermore, data interoperability also strengthens the monitoring and evaluation system for poverty alleviation programs. Integrated data allows local governments to monitor the progress of program implementation and assess its impact on poor communities. This allows the government to determine the extent to which programs are achieving their targets and determine whether adjustments need to be made to improve their effectiveness. (Ye et al., 2022). For example, data from job training programs can be compared with poverty data to assess whether the training is effective in reducing poverty levels among participants. This evaluation is an important basis for continuous improvement of poverty alleviation programs.

Data interoperability also increases efficiency in resource utilization. With data that can be accessed and utilized simultaneously by various agencies, local governments can avoid repetitive data collection and management efforts (Amjad et al., 2021). This benefit not only saves time and budget, but also ensures that each agency uses consistent data, making inter-agency collaboration more efficient and focused (Lai & Deng, 2018). This kind of efficiency is crucial in a situation of limited government budget, where every resource needs to be utilized as well as possible to produce maximum impact in poverty alleviation efforts.

Data interoperability supports transparency and accountability in poverty alleviation (Mahmoud et al., 2019a). When poverty data is managed openly and can be accessed by various stakeholders, including the community and non-governmental organizations, it encourages broader participation in the process of policy formulation and monitoring. This transparency ensures that the policies and programs implemented truly reflect the needs of the community and that the resources allocated for poverty alleviation are used effectively (Basereh et al., 2023a). This accountability also increases public trust in the government, which is an important factor in the success of poverty alleviation programs.

Ultimately, data interoperability is a critical foundation for sustainable, evidence-based poverty alleviation efforts (Basereh et al., 2023b). Without data interoperability, poverty alleviation efforts tend to be fragmented, with each agency working independently with uncoordinated data. As a result, the resulting policies are less effective and efficient. Conversely, when data interoperability is well-established, local governments can formulate and implement policies that are more targeted, evidence-based, and have a real impact on poverty reduction. Therefore, developing and strengthening data interoperability systems must be a top priority in all poverty alleviation efforts, both at the regional and national levels.

The results of the data integration have enabled the creation of a comprehensive poverty decile classification, allowing the poor in Tasikmalaya City to be grouped based on their level of poverty. This classification is highly strategic because it assists the local government in developing and implementing more specific and targeted policies. For example, groups in the lowest decile may require different forms of assistance or intervention than those in higher deciles, whether in the form of social assistance or empowerment programs. This approach optimizes resource distribution, and policy implementation becomes easier to monitor and evaluate for effectiveness.

This data matching and integration process not only produces more comprehensive and accurate information but also strengthens the capacity of relevant institutions in managing poverty data. With an integrated database, each institution can access uniform information, minimizing the potential for duplication of work and making inter-agency coordination more effective. Furthermore, integrated data facilitates the monitoring and evaluation of ongoing and planned programs. This ensures that poverty alleviation efforts in Tasikmalaya City are more focused, sustainable, and produce tangible benefits for the community.

Currently, the Tasikmalaya City Manpower Office receives data from the Regional Development Planning Agency (Bappelitbangda) in the form of compiled and analyzed files. This data has been grouped into five deciles, from decile 1 to 5, and used as the basis for designing training programs. The majority of training participants are from low-income communities, identified by the Manpower Office through an online registration process using Google Forms.

In the employment sector, the Tasikmalaya City Manpower Office organizes various training programs designed to improve community skills, both for job placement and independent business development. As part of its efforts to support e-government implementation, the office also initiated innovative programs such as 'Hayu Gawe,' which was broadcast live on the TikTok Live platform. This program provides information about job openings and has received positive feedback from the public, especially those who have successfully secured employment through the information provided in the program. Furthermore, the Manpower Office has partnered with job placement agencies to host podcasts discussing training and job placement topics.

In designing and implementing its training programs, the Tasikmalaya City Manpower Office utilizes poverty data obtained through data integration and analysis by the Tasikmalaya City Research and Development Agency (Bappelitbangda). This data serves as the basis for designing more targeted training, particularly for residents categorized as poor. Data interoperability is a crucial element in poverty alleviation strategies, particularly at the regional level, such as Tasikmalaya City. In this context, interoperability refers to the ability of government agencies to share, combine, and optimally utilize data. This process involves collaboration between several institutions, such as the Manpower Office, the Social Services Office, the Regional Development Planning Agency (Bappelitbangda), and the Statistics Indonesia (BPS). By combining data from various sources, local governments can obtain more accurate and comprehensive information on the socioeconomic conditions of their communities, particularly regarding poverty. This allows for more precise identification of target groups and the determination of the most appropriate forms of intervention.

Interoperability Implementation Challenges

There are several challenges that are the focus of the implementation of data interoperability in efforts to transform poverty alleviation policies, including:

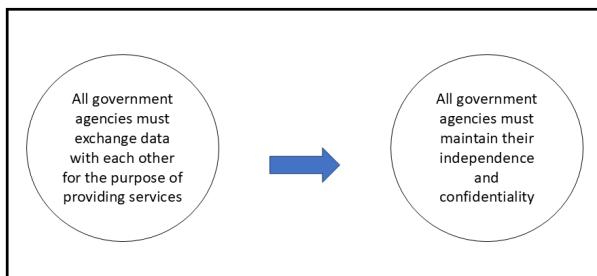


Figure 3. Challenges in the Implementation of Data Interoperability in Efforts to Transform Poverty Alleviation Policies (Chaabane et al., 2014)

Data interoperability plays a crucial role because it enables the creation of an integrated and reliable database, which can serve as a basis for designing poverty alleviation policies and programs. With an optimal interoperability system, poverty data held by the Tasikmalaya City Manpower Office, for example, can be combined and analyzed alongside data from other agencies. This enables more accurate identification of vulnerable groups and supports the formulation of more effective poverty alleviation strategies. Without interoperability, various agencies tend to work separately with uncoordinated information, potentially resulting in poorly targeted and inefficient policies.

Furthermore, data interoperability also strengthens the ability of local governments to monitor and evaluate implemented poverty alleviation programs. An integrated database facilitates tracking of the results and impact of various intervention programs. For example, job training data from the Manpower Office can be analyzed alongside poverty data to measure the extent to which the training contributes to poverty reduction among participants. Furthermore, interoperability enables the government to detect deficiencies or gaps in the implementation of existing programs, allowing improvements and adjustments to increase the effectiveness of implemented policies.

Ultimately, good data interoperability not only strengthens coordination between government agencies, but also increases transparency and accountability in poverty alleviation (Mahmoud et al., 2019b). With data that can be accessed and analyzed by various parties, the community and other stakeholders can also be involved in the monitoring and evaluation process of government programs. This not only ensures that the interventions carried out are right on target, but also that the resources used are truly beneficial to the people in need.

Data interoperability is an important foundation for sustainable and effective poverty alleviation efforts in Tasikmalaya City. The regional development plan has been clearly stated in the Long-Term Development Plan of the Republic of Indonesia Province (RPJPRI). Each task and responsibility has been classified by the relevant agencies, such as the Regional Development Planning Agency (Bappeda) and the Regional Development Planning Agency (Bapelitbangda). Each agency, be it the Manpower Agency, Trade Agency, or Health Agency, has its own portion and role in handling problems according to its field.

However, specifically related to data accuracy, the researcher's informant could not provide a detailed explanation of the role of each agency in this matter. For example, related to expanding the scope of work, the focus of the Manpower Agency is on job seekers, especially those who are not yet working. While the Industry and Trade Agency (Indag) focuses more on fostering business actors, including MSMEs. On the other hand, the Education Agency (Disdik) focuses on those who have just graduated from school or are still studying. For example, the Personnel Division is responsible for training and job placement, as well as increasing work knowledge. And focuses more on fostering and resolving conflicts in the work environment to prevent layoffs. Although all of these are in the same scope, each sector has a different focus. As an effort to prevent poverty due to layoffs, we must ensure that no layoffs occur.

Thus, the focus in each field must be differentiated according to the tasks and responsibilities that have been set. The focus of the Tasikmalaya City Manpower Office is on the data contained in the file, especially the combined data that has been officially received from the Regional Management Agency (Bangda). The data comes from three different offices, and that is our main reference. Our benchmark is based on the data, in accordance with the direction of the Regional Assistant (Asda) I, who emphasized that each office must use the data as a reference in carrying out its duties.

The Manpower Office also conducted sampling by contacting individuals via the available telephone numbers or by cross-checking through the Lurah. In this process, it was found that there were several individuals who were reluctant to take part in the training, even though they were in the category of those in need. In cases like this, the Manpower Office usually replaces participants with other individuals who are more interested in taking the training. The Manpower Office has a selection mechanism, which aims to find individuals who really need work and are very eager to take part in the training provided by the Tasikmalaya City government.

The data used in decision-making is not immediately received in a ready-to-use condition. Stakeholders in the employment sector are not limited to the Manpower Office. The data management center is in the Communication and Information Office (Kominfo), while data validation is carried out by the Central Statistics Agency (BPS). BPS is connected to the Regional Long-Term Development Plan (RPJPD) which is managed by the Regional Planning, Research, and Development Agency (Bapelitbangda). Therefore, all data required by various agencies, including the Social Service, Health Service, and others, comes from BPS. Regarding workforce qualifications, we do not have the authority to intervene directly. This is because each company has different specific needs. For example, companies such as PT. Sansar and PT. Teodoro, two to three years ago, needed 5,000 workers in the garment sector. This demand is quite large, and the absorption of workers is significant with wages in accordance with the City Minimum Wage (UMK). However, the characteristics of the community in Tasikmalaya are different from other areas, such as in Java.

Many job seekers in Tasikmalaya are reluctant to work in the factory sector because of prestige, even though financially, the wages offered are in accordance with standards. As an illustration, the Tasikmalaya City Manpower Office once held sewing training to meet the demand from PT. Sansar. A total of 64 people were trained and given certificates from the National Professional Certification Agency (BNSP), but after being placed,

most of them left the job within two months. When asked, their reasons were fatigue and the inability to meet the daily production targets set by the company. This phenomenon shows that the work mentality in Tasikmalaya has its own challenges.

In addition, when the company needed workers in the Human Resources Development (HRD) position, there were more than 300 applicants, but only two people met the qualifications. This indicates that Human Resources (HR) in this area are still lacking. Therefore, the Manpower Office has the responsibility to organize competency-based and certified training. Based on the Regulation of the Minister of Manpower, companies are required to report available job vacancies, and we have facilitated this through programs such as TikTok "Hayugawe" and "Tamas application".

Although these programs have been quite successful in disseminating job vacancy information, challenges remain. For example, there was a demonstration carried out by five alliances of mass organizations and NGOs in Mangkubumi District demanding the empowerment of the local community with a composition of 60-40%. However, when the company opened vacancies with this composition, many prospective workers did not pass the selection stage, such as psychological tests. This again underlines that the quality of human resources in Tasikmalaya City still needs to be improved.

It is important to remember that the role of the Manpower Office in providing competency-based training is very limited, mainly due to budget constraints. With 615 formal companies and 1,100 active MSMEs in Tasikmalaya City, conducting large-scale training is not an easy task. In addition, in some cases, graduates of Vocational High Schools (SMK) or universities are not interested in working in certain fields, such as sales and marketing, due to target demands and work pressure. In the last five years, the number of formal companies in Tasikmalaya City has decreased from 779 to 615, while the number of MSMEs has increased drastically. This shows that the economy of Tasikmalaya City is increasingly dependent on MSMEs. Financially, although the city's poverty indicator is high, many residents are still able to survive. However, it should be noted that the poverty indicator in Tasikmalaya City is influenced by the comparison of standards with other cities, which of course have different parameters. In addition, there are also challenges in terms of the interest of the people of Tasikmalaya City to work abroad, such as in Japan.

Although there are Job Training Institutions (LPK) that offer training to work in Japan, most of the participants come from other areas, such as Tasikmalaya Regency, Ciamis, and Banjar, not from Tasikmalaya City. This shows that the people of Tasikmalaya City may have been in a comfort zone so that they are less enthusiastic about seeking opportunities abroad. Overall, the challenges in developing Human Resources (HR) in Tasikmalaya City are quite complex and require collaboration between the government, companies, and educational institutions to improve the competence of the workforce so that they are better prepared to face competition in the job market. In this aspect, data interoperability and cooperation with several stakeholders are very much needed in an effort to minimize the poverty rate in Tasikmalaya City. Collaboration between government institutions, companies, and educational institutions is an effort that is highly expected to improve the quality of Human Resources (HR) in Tasikmalaya City.

Inter-institutional collaboration

Data interoperability and collaboration with various stakeholders are very important elements in poverty alleviation efforts in Tasikmalaya City. Data interoperability allows for efficient information exchange between various government institutions, so that policies and programs designed can be based on accurate and up-to-date data. In addition, this collaboration also ensures that various programs planned and implemented can complement and strengthen each other, so that poverty alleviation efforts can be carried out more comprehensively and sustainably.

Collaboration between government institutions with private companies and educational institutions is also very necessary to improve the quality of Human Resources (HR) in Tasikmalaya City. Private companies can act as partners in providing job training opportunities, internships, and job placement for the poor. With support from educational institutions, training and skills development programs can be designed to be more relevant and in accordance with the needs of the labor market. This not only helps reduce unemployment rates, but also increases the competitiveness of HR in Tasikmalaya City, so that they are better able to access better economic opportunities.

Through strong synergy between the government, companies, and educational institutions, poverty alleviation efforts can be carried out more effectively. This collaboration can produce programs that focus on community empowerment, skills improvement, and access to better employment. Thus, the quality of life of the poor in Tasikmalaya City can be improved, while encouraging more inclusive and sustainable economic growth. This collaboration is key to creating an ecosystem that supports holistic poverty alleviation, by integrating various resources and expertise from various sectors. In general, women tend to be more pragmatic in making decisions, especially regarding work, without thinking too much about prestige. This contributes significantly to increasing family income. However, there is a phenomenon that should be of concern; this paradigm shift is more evident in Tasikmalaya City, although it cannot be denied that similar changes have occurred in various other cities. Interestingly, many people are still oriented to work in areas such as Cikarang or Bekasi with a higher city minimum wage (UMK), for example around 5.6 or 5.4 million rupiah. In fact, when compared to the UMK in Tasikmalaya which is around 2.6 million rupiah, the difference does seem significant, which is around 3 million rupiah. However, if calculated with the cost of living in more expensive areas such as Cikarang or Bekasi, including rental costs and daily needs, in the end the net income is not much different. However, the general perception that is developing is that the UMK in Tasikmalaya is relatively small, even though in the East Priangan region, the UMK in Tasikmalaya is the highest.

Therefore, it is important to understand that the diverse characteristics of our society create their own challenges in responding to these changes. The arrangement and management of sectors related to labor and poverty alleviation have been outlined in the Regional Long-Term Development Plan (RPJPD). The document has classified the roles and responsibilities of various related agencies, such as the Regional Development Planning Agency (Bappeda), the Manpower Office, and the Trade Office and Health Office, each of which has a predetermined portion of tasks. Thus, the management of these sectors cannot be carried out carelessly or without clear coordination, because each agency already has a specific mandate and task. However, in

practice, there are constraints related to data accuracy and integration of information between agencies, which hinders detailed explanations of the responsibilities of each agency. For example, in the employment sector, there are different focuses for each agency; such as the Manpower Agency which handles job seekers, the Trade Agency which focuses on developing business actors and MSMEs, and the Education Agency which handles school graduates and students. Thus, each agency has a different focus and approach in efforts to improve the quality of the workforce and alleviate poverty, in accordance with their respective fields of duty and responsibility.

Social security in Indonesia consists of two main categories. The first is health insurance, which covers protection for workers registered with the company, where employers are responsible for registering employees for the National Health Insurance (JKN) program and other health insurance programs. The second is employment insurance, which covers protection for workers in the formal and informal sectors, including Micro, Small and Medium Enterprises (MSMEs), with various programs that each have different rules and regulations. Employment regulations in Indonesia are quite comprehensive, covering various regulations from laws, government regulations (PP), presidential regulations (Perpres), presidential instructions (Inpres), to regional regulations (Perda) and mayoral regulations (Perwal). Each related agency has its own role and responsibility in accordance with existing regulations. In practice, it is often found that existing regulations at the central level have covered all the necessary aspects, so that the creation of regional regulations or mayoral regulations must be adjusted to higher regulations and not create unnecessary duplication. For example, although there is a law on foreign workers, the number of foreign workers in areas such as Tasikmalaya is very small, making regional regulations that regulate this require costs that are disproportionate to their benefits. This shows the need for careful evaluation in the preparation of regional regulations to ensure the efficiency and effectiveness of the implementation of social security and employment. Social security in Indonesia consists of two main categories.

The first is health insurance, which includes health protection for workers, where employers are responsible for registering employees for the National Health Insurance (JKN) program and other programs in accordance with applicable provisions. The second is employment insurance, which applies specifically to the MSME sector and other sectors with various different programs and regulations. Regulations regarding employment insurance in Indonesia have been regulated very comprehensively, including laws, government regulations, presidential regulations, presidential instructions, and regional regulations such as regional regulations (perda) and mayoral regulations (perwal). Each level of regulation has its own role and function, ensuring that aspects of employment are covered comprehensively. In the context of regional regulation making, there are several issues regarding the achievement of regulatory coverage. For example, in Tasikmalaya City, the regional regulations on employment that have been issued may seem to overlap with central regulations, raising questions about the need and effectiveness of these regulations.

Regarding foreign workers, the current regulations may not be fully in accordance with local conditions. In Tasikmalaya, for example, there are only a few foreign workers, but the existence of regional regulations that regulate this requires a significant budget. Therefore, it is important to critically assess whether

additional regulations are really needed or can be simplified to avoid wasting the budget. The Head of the Manpower Office said that although the performance of the Manpower Office cannot be said to be perfect, it can be categorized as 'quite good'. This assessment is based on the fact that we, as stakeholders in the employment sector, do not only depend on the Manpower Office. We routinely coordinate and evaluate performance every three months.

This evaluation covers the employment sector and the decrease in commission that may occur if the achievement does not meet the target. If a decrease in achievement is detected, we will seek an appropriate solution. The Manpower Office follows the same procedure, and information related to the evaluation is reported directly to the center through the Regional Planning and Development Agency (Bappelitbangda). Therefore, although the commission figures have decreased, this shows that the monitoring and evaluation mechanism is running well, even though there is no significant increase in the figures. Overall, the existing system is quite effective in monitoring and evaluating performance at the local level.

The Tasikmalaya City Government has responsibilities in the field of employment which include three main aspects: coaching, development, and dispute resolution. This coaching and development aims to improve protection for workers, both in the formal and non-formal sectors, as well as vulnerable workers. The Manpower Office in Tasikmalaya is trying to ensure that companies register all workers to get appropriate social security, such as BPJS Ketenagakerjaan. This effort includes ensuring that all workers, both registered and unregistered, receive their rights such as old age benefits and job loss benefits. This task aims to mitigate the risks related to layoffs and improve social protection for all workers in the region. Currently, the Manpower Office is preparing the Regional Manpower Plan (RTKD) for the period 2024-2029. One form of collaboration carried out is by involving various sectors in poverty alleviation efforts, including the agricultural sector represented by the Agriculture Office, as well as the trade sector which is also a focus. The data used in this planning is obtained from various related agencies. This collaboration includes data sharing, management, and data analysis together. After the data is collected, a comparison is made with the last three years' data to see existing trends and developments, and to project future policy directions. Therefore, all relevant stakeholders, such as INBRAG, the Social Service, ILO, and others, are involved in this process.

As part of the RTKD planning, a coordination meeting was held inviting all relevant agencies to discuss the necessary collaboration. In terms of job training, although the budget allocation in the Manpower Service is relatively small, job training held at the sub-district level actually has a larger budget and is an important component in supporting the improvement of workforce skills.

Job training held at the sub-district level is often held in each sub-district. Each sub-district has different types of training, such as computer training in one sub-district and other training in another sub-district. The budget allocation for training at the sub-district level tends to be larger compared to the budget available at the Manpower Office (Jaleel et al., 2020). However, there are differences in reporting and evaluating training results. The Manpower Office has a detailed reporting system related to training results, including participant job placement after training. In contrast, at the sub-district level, although the budget allocated is larger, there is often no clear report on training

outputs, such as the location of participant job placement. This raises uncertainty about the effectiveness of training held at the sub-district level. In addition, training held at the sub-district level usually focuses on community empowerment and is short-term, often only lasting two to three days. In fact, ideal training should involve job training institutions (LPK) that have been registered and recognized by the Manpower Office, and supported by competent and credible instructors. Thus, training can produce clear outputs and provide more tangible benefits to the community. Community empowerment-based training is also organized by the Industry and Trade Agency (Disindag) which focuses on developing MSMEs. However, in order for this training to be more effective, better coordination is needed between sub-districts and related agencies, as well as more optimal use of the budget to ensure that the training provides clear and measurable results.

CONCLUSION

This research shows that e-government integration and data interoperability play a strategic role in poverty alleviation efforts in Tasikmalaya City. With a data sharing and integration system between agencies such as Bappelitbangda, the Social Service, the Manpower Service, and the Statistics Indonesia (BPS), the city government is able to build a more accurate and comprehensive poverty database. The resulting poverty decile classification serves as a reference for designing more targeted job training, social assistance, and economic empowerment programs. This interoperability concept also enables more systematic, real-time, and evidence-based program monitoring and evaluation. In addition to improving policy efficiency, this approach also strengthens transparency and accountability in public governance.

However, several challenges remain, such as limited technological infrastructure, low human resource capacity, differences in work culture between agencies, and minimal training reporting at the sub-district level. Furthermore, the work ethic of local communities and low participation in work programs also hinder the implementation of data-driven programs. Therefore, a cross-sectoral commitment is needed to improve human resource quality through relevant and certified training, increased information technology budgets, and strengthened collaboration between the government, the private sector, and educational institutions. By strengthening the interoperability and e-government framework, poverty alleviation policies can be implemented more adaptively, inclusively, and sustainably, tailored to the needs of local communities.

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