

Implementation of One Indonesian Data by the Central Statistics Agency of East Nusa Tenggara Province

Jefirston Richset Riwukore^{1*}, Luis Marnisah², Fellyanus Habaora³, Tien Yustini⁴

Magister Manajemen, Universitas Indo Global Mandiri, Palembang, Sumatera Selatan^{1,2,3,4}

jefritson@uigm.ac.id^{1*}, luisarnisah@uigm.ac.id², 2020502006@students.uigm.ac.id³,

tien_yustini@uigm.ac.id⁴



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Abstract

Purpose: The purpose of this study was to analyze the implementation of One Data Indonesia conducted by the Central Statistics Agency of East Nusa Tenggara Province.

Research Methodology: This research was conducted for one month, starting from February 19, 2022, to March 13, 2022. This research is classified as qualitative research with a purposive sampling approach. Focus Group Discussion (FGD) was used to obtain data. Data sources consist of secondary and primary data. Data analysis was done descriptively.

Results: The results showed that the implementation of one Indonesian data in the Province of East Nusa Tenggara through the role of the Central Statistics Agency for the Province of East Nusa Tenggara was still constrained from the aspect of infrastructure, coordination, and human resources both internally and externally. The problem of electrification and wireless networks is a technical problem that greatly affects aspects of the implementation of one Indonesian data. The problem of coordination which is still a sectoral ego further increases the obstacles to implementing one Indonesian data. Although BPS human resources have met the standards, internal aspects such as limited human resources and external constraints such as a lack of understanding of statistical literacy in the public further complicate the obstacles to implementing SDI in NTT. The government's attention to resolving existing obstacles is very urgent to accelerate the implementation and development of SDI in East Nusa Tenggara Province.

Limitations: This research is still limited from the aspect of implementing the one data Indonesia program, from the aspect of the Central Statistics Agency as the implementer, and the Department of Communication and Information as of the guardian of the data. This research is still from the perspective of institutional perception.

Contribution: This research can contribution in communication, management, and policy implemented.

Keywords: *one Indonesian data, implementation, development, constraints*

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1. Introduction

One of the considerations in the formation of Law Number 16 of 1997 concerning Statistics is that statistics are important for planning, implementing, monitoring, and evaluating the implementation of various activities in all aspects of the community, national and state life in national development as the practice of Pancasila, to promote welfare. the people to achieve the ideals of the nation as stated in

the preamble to the 1945 Constitution ([Tajulfitri, 2019](#)). Due to the important role of these statistics, it is necessary to take steps to regulate the implementation of integrated national statistics to realize a reliable, effective, and efficient National Statistics System. Apart from being based on the principles of national development, Statistical Law is also based on: (a) cohesiveness, (b) accuracy, and (c) up-to-date as stated in Article 2 of the Law on Statistics. Statistical activities aim to provide complete, accurate, and up-to-date statistical data to realize a reliable, effective, and efficient National Statistics System to support national development ([BPS Indonesia, 2022](#)).

The Central Bureau of Statistics (in Indonesia: BPS) is a Non-Ministerial Government Institution that is directly responsible to the President who must carry out government duties in the field of statistics by statutory regulations. One manifestation of this task is to provide statistics that are easily accessible and obtainable by the public. Thus, the community can participate in all stages of development, from planning, implementation to the evaluation of regional development. To make all stages of development successful that involve public participation, on June 12, 2019, President Joko Widodo signed the Presidential Regulation of the Republic of Indonesia Number 39 of 2019 concerning One Indonesian Data. In Article 1 paragraph (1) of Presidential Regulation Number 39 of 2019 concerning One Indonesian Data, it is stated that One Indonesian Data is a government data management policy to produce data that is accurate, up-to-date, integrated, and accountable, as well as easy to access and use and share between central agencies and regional agencies through compliance with data standards, metadata, data interoperability, and using reference codes and master data.

This Presidential Regulation was issued with the following considerations: (1) to realize the integration of planning, implementation, evaluation, and control of development, it is necessary to support data that is accurate, up-to-date, integrated, accountable, easily accessible, and shared, as well as carefully managed, integrated, , and sustainable; (2) to obtain data that is accurate, up-to-date, integrated, accountable, easily accessible, and shared, it is necessary to improve the governance of the data produced by the government through the implementation of One Indonesia Data; (3) so far there has been no provision that regulates One Indonesian Data ([Ogi News, 2021](#)).

The problems that are the focus of the research include: (1) the implementation of One Data Indonesia (in Indonesia: SDI) requires the readiness of digital infrastructure. One of the digital infrastructures needed is an integrated data center. However, according to the Ministry of Communications and Informatics, Indonesia has around 2700 data centers spread across 630 Ministries/Institutions (K/L) and Regional Governments (in Indonesia: Pemda); (2) another challenge for digital infrastructure is the need for construction of a fiber optic backbone and BTS to support cellular broadband networks. However, the construction of the infrastructure takes a long time and costs little. Moreover, the digital divide is also a problem that must be resolved so that people in all regions can feel the same access and opportunity to data and digital services; (3) SDI implementation requires the same format and metadata for data between K/L and Local Governments. SDI organizers and managers need the cooperation of all stakeholders to harmonize all these formats and metadata. However, until now there is still a sectoral ego between K/L and local government so this alignment is still one of the biggest challenges for SDI. This means that coordination between stakeholders is also one of the crucial issues; (4) data privacy is also one of the problems that must be addressed in realizing SDI. The absence of legislation at the level of the law is a challenge for SDI governance so that the public can be trusted with the security of data held by the government; and (5) the readiness of digitally capable human resources (HR) is also still limited in various regions. This is because the open government and open data require qualified technical capabilities so that data management can take place properly. The limitation of human resources is one of the key factors that must be addressed to make SDI successful in all regions of Indonesia.

The aims and objectives of this research are to analyze the implementation of Law Number 16 concerning Statistics which is focused on the implementation of Presidential Regulation Number 39 of 2019 concerning One Indonesian Data; obtain information from stakeholders regarding the implementation of Presidential Regulation Number 39 of 2019 concerning One Indonesian Data; obtain information from relevant stakeholders regarding the development of SDI implementation in

the regions; obtain information related to the problems and challenges of SDI in the regions; produce recommendations regarding the implementation of Presidential Regulation Number 39 of 2019 concerning One Indonesian Data. The output of this research is expected to be able to obtain a comprehensive picture of the realization of SDI implementation, obtain information related to data synchronization between Ministries/Agencies and Local Governments; obtain information regarding obstacles/problems in the implementation of SDI and as a means of recommendation regarding various issues related to the implementation of SDI.

2. Literature Review

Citation from [BPS Indonesia \(2022\)](#), the Central Statistics Agency is a non-ministerial government agency that reports directly to the President. Previously, BPS was the Central Bureau of Statistics, which was established based on Law No. 6/1960 on Census and Law No. 7/1960 on Statistics. As a replacement for the two laws, Law No. 16/1997 on Statistics was enacted. Based on this law, which was followed up with the legislation below, the name of the Central Bureau of Statistics was formally changed to the Central Statistics Agency. Taking into account performance achievements, paying attention to people's aspirations, potentials, and problems, and realizing the Vision of the President and Vice President, the Central Statistics Agency's vision for 2020-2024 is: "Provider of Qualified Statistical Data for Advanced Indonesia" ("Provider of Qualified Statistical Data for Advanced Indonesia").

The new vision means that BPS plays a role in providing national and international statistical data, producing statistics that have accurate truths, and describing the actual situation, to support Advanced Indonesia. With this new vision, the existence of BPS as a provider of statistical data and information is becoming increasingly important, because it plays a central role and influence in providing quality statistics not only in Indonesia but also at the world level. This vision also strengthens the role of BPS as a builder of statistical data. The mission of BPS is formulated by taking into account the functions and authorities of BPS, BPS vision, and carrying out the 1st President and Vice President Mission (Improving the Quality of Indonesian Humans), 2nd (Productive, Independent, and Competitive Economic Structure) and the 3rd Equitable and Equitable Development, with the following description:

1. Provide quality statistics of national and international standards
2. Fostering K/L/D/I through a sustainable National Statistics System
3. Realizing excellent service in the field of statistics for the realization of the National Statistical System
4. Building superior and adaptive human resources based on the values of professionalism, integrity, and trust

The duties, functions, and authorities of BPS have been determined based on Presidential Regulation Number 86 of 2007 concerning the Central Statistics Agency and the Regulation of the Head of the Central Statistics Agency Number 7 of 2008 concerning the Organization and Work Procedure of the Central Statistics Agency. The task of BPS is to carry out government duties in the field of statistics by statutory regulations. The functions of BPS, consist of: (1) Studying, formulating, and formulating policies in the field of statistics; (2) Coordination of national and regional statistical activities; (3) Determination and implementation of basic statistics; (4) Establishment of a national statistical system; (5) Guidance and facilitation of the activities of government agencies in the field of statistical activities; and (6) Implementation of guidance and general administrative services in the fields of general planning, administration, organization and management, personnel, finance, archives, public relations, law, equipment, and household.

The authority of BPS consists of: (1) Preparation of macro national plans in their respective fields; (2) Formulation of policies in their respective fields to support macro development; (3) Determination of information systems in their respective fields; (4) Determination and implementation of national statistics; (5) Other authorities in accordance with the provisions of the applicable laws and regulations, namely; (a) Formulation and implementation of certain policies in the field of statistical activities; and (b) Preparation of guidelines for the implementation of sectoral statistical surveys.

President Joko Widodo enacted Presidential Regulation Number 39 of 2019 concerning One Indonesian Data (Perpres SDI) on June 12, 2019. One Data Indonesia is the government's data management policy to produce data that is accurate, up-to-date, integrated, and accountable, as well as easily accessible and shared between central and regional agencies.

Data produced by data producers must be based on the following principles: (1) Meet data standards; (2) Has metadata; (3) Complying with the rules of data interoperability; and (4) Using reference codes and/or master data. Data standards other than statistical data and geospatial data are set by other Data Trustees at the central level. This Presidential Decree also established the Steering Committee and the One Data Indonesia Forum. The forum is a forum for communication and coordination of central and/or regional agencies in the administration of One Indonesia Data ([Agustini, 2020](#)).

3. Research Methods

The implementation of this research is approximately 1 (one) month, starting from February 19 to March 13, 2022. This research is classified as qualitative research using the described method. The research population was determined by purposive sampling consisting of parties related to the management of one Indonesian data, namely representatives from the Central Statistics Agency and the Regional Government Communications and Information Office as data guardians, including representatives of legislators in charge of statistical. To obtain a sampling of the research population, the Convenience or opportunistic sampling method was used, which consisted of Mr. Ir. Adi H Manafe, M.Si (Plt. Head of BPS NTT), Mr. Ir. Tio Farida Gultom, MM (Prakom Madya), Mr. Indra A Sofian Souri, SST, M.Si (Statistics of Associate Expert), Minanur Rohman, SST (Statistics of Primary Expert), Mr. WR Otta (Head of Communications and Information Technology of Kupang City), Joseph L Kale (Secretary of the Kupang City Communication and Informatics Service), Irine Ludji (Head of E-Government Services of Kupang City Communication and Information Service), Rudi Purnomo (Head of ICT Diskominfo Kupang City), and Hilda Manafe (DPD RI member in charge of statistical). The technique for obtaining research data was carried out using the Focus Group Discussion technique which took place at the Kelapa Lima Marine Park Hall, Kupang City on February 25, 2022, where previously the terms of reference were given as a source of study material and key questions. Sources of data used are primary data and secondary data. Data analysis used descriptive qualitative which was explained narratively.

4. Results and discussion

Indonesian One Data (SDI) Regulation

Until now, the regulations governing SDI are still at the level of a Presidential Regulation, namely Presidential Regulation of the Republic of Indonesia Number 39 of 2019 concerning One Indonesian Data. Based on this, the position of the Presidential Regulation in the order of laws and regulations, whenever possible, changes to the position of the Presidential Regulation which is currently regulated in Law Number 12 of 2011 taking into account the delegation of authority from the law and the position of the Presidential Regulation should be aligned with the Regulations. Government. Starting from this, and addressing the legal umbrella based on the type and hierarchy of laws and regulations and their legality and legitimacy, perhaps it would be more binding if SDI regulations were formed at the level of Laws or Regulations instead of laws (Perppu) which are legal products that produced by the DPR together with the President and DPD.

Development and Implementation of SDI in NTT

The development and implementation of SDI in the regions are carried out through steps to achieve a reliable, effective, and efficient National Statistics System (SSN) as outlined in the National Strategy for Development of Statistics Indonesia (SNPSI) which is one of the change agendas from the existing 7 change agendas as follows: part of the BPS project of East Nusa Tenggara Province. In general, SNPSI is a framework for building statistical capacity for statistical activity organizers and data users as well as strengthening coordination across Ministries/L/D/I responsible for statistical data collection. However, in particular, SNPSI can be defined as strengthening the capacity of BPS in integrating all statistical activities covered by the SSN. The involvement of all stakeholders is very

much needed in the preparation and successful implementation of the SNPSI, for this purpose, BPS developed the One Data Portal in the application of the Integrated Statistical Data Information System (Simdasi) as a form of involvement of data producers (related agencies), data trustees (Diskominfo) and sectoral statistics builder (BPS). BPS Province of NTT always strives to implement the implementation of SDI, one of the tangible manifestations is the implementation of data synchronization for the publication of "Regions in Figures" where in this forum discussions and discussions related to data produced by agencies/agencies are carried out so that the data can be accounted for.

Other activities to SDI, BPS East Nusa Tenggara Province also carried out several sectoral data development activities with the Regional Government which consisted of:

1. Development of SIMANDATARIS (Strategic Data Management Information System) at the request of the Governor of NTT, Viktor B. Laiskodat with the main priority being the compilation of a database of social assistance recipients/poverty by name by address. SIMANDATARIS involved several stakeholders, including the NTT Province Bappelitbangda, NTT Provincial Social Service, NTT Provincial PMD Service, Bank Indonesia, NTT Provincial DJPb Office, NTT Provincial Health and Dukcapil Office, NTT Provincial Discominfo and Special Staff for the Governor of NTT.
2. Development of statistical love villages (CANTIK VILLAGE) in 3 selected villages from 100 CANTIK villages throughout Indonesia. The selected villages include:
 - a) Tebara Village in West Sumba Regency with the main priority of developing a tourism village with a website technology approach.
 - b) Nanga Labang Village in East Manggarai Regency is part of the village involved in smart city development in East Manggarai Regency.
 - c) Watu Mori Village in East Manggarai Regency is part of the village involved in smart city development in East Manggarai Regency.
3. Development of sectoral statistics in several related agencies/services, namely:
 - a) The Department of Agriculture and Food Security of the Province of East Nusa Tenggara with the submission of an explanation of the calculation of the forecast for the number of plantations. In addition, discussions regarding food crop data (KSA data and Statistics of Rice and Palawija Agriculture) have been carried out. Meanwhile, discussions regarding the implementation of the 2023 Agricultural Census have been carried out. From the meeting with the Department of Agriculture and Food Security of the Province of NTT, the agenda is continuous.
 - b) The Tourism Office of the Province of NTT regarding the compilation of administrative products (Compromise) that has been carried out and has received statistical recommendations.
 - c) Kupang Class I Agricultural Quarantine Center in the form of identification of business processes for administering statistics. From the identification results, 2 aspects that need to be improved are the stages of statistical data quality assurance and statistical data dissemination.
 - d) Development of sectoral statistics in 30 agencies/agencies related to socialization and initial identification of statistical recommendations.

The efforts of the BPS of NTT Province to make policies based on data and evidence (evidence-based policy) related to the implementation of SDI, for example as follows:.

1. BPS NTT conducts survey relevance, feasibility of survey integration and statistical recommendations.
 - a) BPS NTT evaluates the relevance of the surveys to the needs of internal and external users, as well as the fulfillment of indicators for the RPJMD, SDGs and National Priorities.
 - b) Feasibility of survey integration in methodological aspects, consistency of the resulting indicators, availability of data that supports the main needs in providing data.
 - c) BPS NTT provides input related to surveys carried out by relevant agencies/agencies that have the potential to be integrated, for example judging from the similarity of the variables collected, the similarity of the unit of observation, as well as the stages of the business process.

2. BPS periodically updates the statistical business register/SBR (containing a business directory) so that it can be used as an integrated sample frame for all business-based surveys by relevant agencies/agencies.

BPS NTT Readiness in SDI Implementation

In the implementation of SDI, digital infrastructure readiness, integrated coordination, and qualified human resources are needed. The following describes the preparations related to the implementation of SDI in NTT by BPS NTT.

1. Infrastructure readiness

- a) BPS NTT Province seeks to establish an understanding regarding the sharing (interoperability) of administrative data in the Integrated Statistical Data Management Information System (SIMDASI). Regulations to protect data security and confidentiality of personal data in the restructuring process. In addition to digital infrastructure planning, requires HR competencies in the field of statistics, which must be integrated, they must be integrated to produce a comprehensive national statistical framework in the regions.
- b) So far, BPS NTT Province uses a virtual private network (VPN) in every data transmission activity with periodic backups on the NTT Province BPS server. BPS NTT Province is also part of the BPS CSIRT (computer security incident response team) as the BPS cyber incident response team.
- c) In the aspect of data processing, user authentication is provided and allows the application to log off automatically when it is not in use. In addition, there is the use of passwords in the database and encryption of respondents' data will be able to protect respondent data from changing and data theft. BPS also avoids sending by CD. Use a secure e-mail. Can also use a centralized database, with cloud technology. Each survey processing result can only be accessed using an application built by BPS on the Trans Cloud website.

Nevertheless, there are obstacles faced by BPS NTT related to digital infrastructure faced in realizing SDI, including:

- a) Not all agencies/agencies have infrastructure that supports data interoperability (machine to machine), while still prioritizing the security and confidentiality of individual data.
 - b) The digital infrastructure built by each relevant agency/agency does not yet support integrated systems and data to increase data user satisfaction with high accessibility of data utilization.
 - c) Regarding the governance of the use of big data for official statistics which also includes constraints in the aspect of the quality assurance framework, capacity building of human resources in the field of big data development and artificial intelligence, regulatory documents that regulate the legality of access to the use of big data for official statistics, in addition to the feasibility of sources -the source of big data that can be used for official statistics, and infrastructure needs for its management and utilization.
2. Coordination readiness. BPS NTT Province as the holder of the mandate for statistical development in NTT always strives to be able to continue to build coordination, integration, synchronization, and standardization with all organizers of statistical activities. This is done with the aim that the organizers of statistical activities can utilize resources and data sources optimally, avoid the possibility of duplication of activities by the organizers of statistical activities, and create a reliable, effective, and efficient National Statistics System. BPS NTT Province has coordinated with the Office of Communication and Informatics of NTT Province as the data guardian and provided guidance on sectoral statistics in coordination meetings for one Indonesia data with related agencies/agencies so that they have an understanding of statistics administration. Three things become the focus of the development of sectoral statistics, namely:
 - a) Strengthening understanding of the implementation of statistical activities.
 - b) Strengthening understanding of reporting on the results of sectoral statistical activities.
 - c) Strengthening understanding of the proposal for the implementation of sectoral statistical activities, which are summarized in an activity called a coaching clinic as a coaching medium provided to support the implementation of statistical activities.

The obstacle faced related to coordination in realizing SDI in NTT is the readiness of digital infrastructure in East Nusa Tenggara where NTT already has an integrated data center under the name NTT ONE DATA, but it has not worked as expected. While each service/agency has its

standards and works patterns in data collection, analysis, and presentation so that it is presented in different formats, metadata, and data updating, more effort is needed for this so that the data produced is by norms, standards, and standards. applicable procedures and criteria. In addition, almost every service/agency in NTT has different applications in processing data, and the big job is to build an integrated data center, even if it is possible to build one application that can be used by all government institutions both at the central and regional levels, including in NTT.

3. Readiness of human resources. The ability of qualified human resources in managing integrated data is one of the main requirements for the success of SDI. BPS NTT Province has human resources with an adequate statistical and computational scientific background so this is one of the advantages of BPS human resources in the success of SDI. In addition, BPS routinely makes efforts to increase literacy in statistical activities including SDI both internally and externally.
 - a) Improved internal literacy, namely efforts to develop literacy capacity provided for BPS HR in the form of education, training, capacity building, focus group discussions, and internalization of statistical activities both directly and virtually.
 - b) Increasing external literacy, this literacy improvement activity is carried out for policymakers and the community which is strived to be sustainable depending on the availability of the BPS budget.
 - Improved literacy for related agencies/agencies in the form of coaching to improve the quality of sectoral statistics administration and build collaboration to prepare awareness of the importance of quality statistics/data.
 - Increasing literacy for academics in the form of introducing statistical activities in the world of education in the form of BPS Goes to Campus, International Education Fair, Statistical Tourism, and Statistical Corner which aims to provide education and socialization for students, students, and educators on the importance of quality statistical data and efforts prepare human resources with interest and expertise in statistics.
 - Increasing literacy for media crews in the form of seminars held for journalists/press from both print and online media. Efforts to provide education on the interpretation of strategic data that are the output of BPS in the implementation of basic statistics and development of sectoral statistics. BPS realizes that the media can play an important role in the development of regional statistics and even national statistics, so it needs to be empowered to disseminate news related to statistical activities with a good understanding.
 - Improving literacy for the community in the form of posting messages and content for statistical advocacy delivered through various media and by various parties. The existence of a consistent and continuous statistical advocacy process is expected to increase the public's statistical understanding. Social networks are always used by the BPS of NTT Province to disseminate data and statistical information massively. In addition, BPS always strives to improve public access to services and requests for data and statistical consultations.

BPS HR capacity development, the things that become obstacles consist of 2 (two) namely::

- a) Internal HR capacity development related to SDI
 - BPS has an Education and Training Center (Pusdisklat) which always guides in the fields of statistics and non-statistics where the training and education provided is an effort to improve the ability of employees in the administration of statistics, including the success of SDI.
 - The development of new work procedures and business processes requires additional qualifications in BPS HR competencies such as data science and statistical communication. BPS Province of NTT is also focusing on the clarity of career patterns and competency development to fulfill employee needs. For this reason, BPS NTT Province will also develop ASN talent management as a strategic step toward BPS succession plans in the future.
 - So internally, the development of quality BPS human resources capacity so far has not caused many significant obstacles, but it is still constrained in terms of the number and availability of BPS human resources for statistical administration in new expansion districts in NTT such as Central Sumba, Sabu Raijua and Malacca districts. Even the BPS offices in the three divisions are not yet available so the implementation of statistical activities

regarding SDI is still the responsibility of the district BPS which is the parent with a limited number of human resources.

b) Development of HR capacity related to SDI externally

- Development which is an initiative of Central BPS for sectoral statistics development will be carried out in 2021 in the form of a learning management system (LMS) as well as sectoral statistics training for K/L/D/I. However, this LMS media has not been optimally utilized by BPS external parties.
- In general, the number of HR providers for statistics and SDI with a scientific background in statistics at the relevant offices/agencies is still lacking.
- The rotation and mutation of human resources in the relevant offices/agencies that specifically handle statistics and SDI tend to quickly result in the continuity of understanding of the concepts and the main tasks that must be carried out without maintaining consistency.

NTT Province BPS Constraints in SDI Implementation

In the implementation of SDI in NTT by the BPS of NTT Province, the obstacles are as follows.

1. Constraints faced by BPS in implementing SDI are the differences in the data held by the relevant agencies with BPS data and the discrepancy between national and regional data (provincial and district/city). Therefore, the presence of SIMDASI as a platform is considered capable of being a solution to the problem of data differences. SIMDASI was built to harmonize data collection activities in numbers with the One Data Indonesia development plan and strategy by involving various related institutions, both central and regional. This is because the institution that collects data is not only BPS.
2. In addition, BPS as a government agency that provides statistical data, has participated in the use of big data for official statistics. Along the way, there are still many obstacles faced in the use of big data for official statistics, including those related to quality, legality, classification used, accessibility, data acquisition, and the complexity of available big data. In addition, there is no official guide from the United Nations regarding the use of big data for official statistics.
3. Constraints on the availability, completeness, and continuity of sectoral statistical data that do not meet the norms, standards, procedures, and criteria (NSPK), so that data cannot be compared between regions over time.

Data Privacy and Security

Data privacy and security are also the concerns of many stakeholders in the effort to realize SDI. Efforts made by BPS of NTT Province in ensuring data privacy and security, among others:

1. BPS in ensuring data privacy and security always guarantees the confidentiality of data sourced from respondents. BPS protects individual data and only provides aggregated data so that the confidentiality of respondent data is guaranteed. However, BPS is trying to rearrange the regulations to cover data security and the confidentiality of personal data.
2. As previously explained, so far, BPS NTT Province uses a virtual private network (VPN) in every data transmission activity with periodic backups on the NTT Province BPS server. BPS NTT Province is also part of the BPS CSIRT (computer security incident response team) as the BPS cyber incident response team.
3. Protection is carried out to prevent data leakage by hackers, crackers, intruders, and others on the website, BPS performs encryption through the use of a secure socket layer (SSL) or hypertext transfer protocol secure (HTTPS). This is done to ensure that communication between respondents and the web page server is maintained in the CAWI (computer-assisted web interviewing) scheme. The data sent by the respondent is encrypted, as well as the data from the server is also encrypted. This is to keep the data safe as it is transmitted between the responder and the server.
4. To avoid theft when sending documents, pick up the questionnaire at the respondent's place. If this is not done, then it can be done by agreeing with the delivery service in terms of document protection during delivery.
5. Tighten the rules for officers and impose sanctions on field officers who are caught copying. In addition to conducting socialization to explain that the data collected is confidential and it is not allowed to copy and or archive survey and census documents.

6. In the aspect of data processing, user authentication is provided and allows the application to log off automatically when it is not in use. In addition, there is the use of passwords in the database and encryption of respondents' data will be able to protect respondent data from changing and data theft. BPS also avoids sending by CD. Use a secure e-mail. Can also use a centralized database, with cloud technology. Each survey processing result can only be accessed using an application built by BPS on the TransCloud website.

Although BPS has tried to maintain data privacy and security, there are still obstacles to convincing the public regarding data privacy and security in managing SDI, including:

1. In carrying out data collection for individuals or companies, for example, field officers always convey that the data provided by respondents is guaranteed to be confidential and will only be published in aggregate form, even in the corner of the front page of the questionnaire the word "CONFIDENTIAL" is always written in bold and in large letters. box to confirm this. However, in other aspects regarding this, there are still respondents, both individuals, households, and companies who are reluctant to give actual information openly and honestly.
2. The raw data purchasing mechanism has been regulated by PNBK provisions and continues to protect individual data, but policymakers often request data by name by address to the lowest level, this is a limitation that cannot be fulfilled by BPS regarding the confidentiality of individual data, applicable laws and regulations, the feasibility and adequacy of the sample data with a minimum error that must be met.
3. Statistical data presented in the publication "Regions in Figures" is displayed by mentioning the source and only displays the data as provided by the relevant service/agencies. However, ordinary people think that BPS keeps the existence of the data a secret excessively. However, not all data is produced by BPS. The availability of sectoral statistical data is the responsibility of the relevant agencies/agencies, in this case, BPS is only a facilitator in the development and implementation of the sectoral statistics in question.

One of the roles of technological developments is the ease of carrying out services such as data services that can be integrated by all data source components into one easily accessible data with certain accuracy. One of them is One Data Indonesia. This is as stated by [Islah \(2018\)](#) that the existence of big data innovation through integration of one data service becomes a form of opportunity as well as a challenge for the government to innovate the integration of public services to the community by utilizing big data technology.

Related to the results of this study, in the implementation of One Data Indonesia, the government is still constrained by aspects of infrastructure, coordination, and human resources. This has been stated by Aryasa (2015) op. cit. [Islah \(2018\)](#) that big data technology is an indication of the integration of one data but is still constrained by several things, including:

1. Availability of data. One of the keys to doing big data analysis is of course the availability of data. Access to data, both old data and new data can be an obstacle for big data, especially old data stored in different and varied forms, often in physical form. Access to new data also requires more effort because permits and licenses are required to legally access non-public data. Especially if the sectoral ego between agencies is the owner of the data. This is as stated by [Da Silva et al. \(2020\)](#) that the obstacles to implementing government policies in the regions are due to sectoral egos so communication and coordination do not go well.
2. Standardization of government data. In line with the principle of open data, the available data needs to be presented in a standard form / certain platform, namely a format that can be easily reused, machine-readable and interoperable, for example in .xls and .csv formats, and not in the form of scanned documents or scans. pdf.
3. Data privacy. On the one hand, data disclosure is needed, but on the other hand, privacy is a sensitive issue and is often injured through technological advances. Privacy relates to a person's data that must be protected. The data is used as data obtained directly from consumers, many of which are personal data and are very prone to be misused by other parties.
4. HR competencies. In utilizing big data, ideally, it is necessary to require human resources who are experts in the field of data analysis (data scientists), have analytical skills, computer programming

skills, and creativity to determine new methods that can be used to collect, interpret and analyze data. Although data scientists may not develop their analytical tools, they must be able to sort out the various tools to be used, as well as select and organize the data to be analyzed.

The benefits of having a single data system provide easy access to integrating the ease of data that needs to be completed and easy access to information. This is as reported by [Maharani et al. \(2018\)](#) that with data integration, data that has been inputted will be accessible to the next stage or process so that at the next stage it is sufficient to complete data that does not yet exist. This will greatly minimize redundancy in the recording process and increase the effectiveness of the data collection process. In addition, with the existence of data storage in an integrated database, all stakeholders can monitor the conditions needed more easily, and assist in recapitulation and report generation from the lowest level to the highest level. In addition, the designed system also helps in monitoring historical data so that the history of changes at each level can be monitored more easily.

The existence of one data Indonesia policy that is currently being carried out is an enterprise architecture ([Wulandari et al., 2020](#)), which is a collection of several different elements or organizations that integrate to achieve the goals of an organization or company. This means that one Indonesian data is a government data management policy to produce data that is accurate, up-to-date, integrated, and accountable, as well as easily accessible and shared between central and regional agencies through compliance with data standards, metadata, data interoperability, and using codes in the form of several characteristics or special characteristics of a population obtained by collecting, processing, presenting, and analyzing geospatial data as well, namely data on geographic location, dimensions or size, and or characteristics of natural and/or man-made objects that are under, or above Earth surface. Although the implementation of one Indonesian data has become a major concern for the development of data accuracy, in its application there are still technical problems, namely electricity and internet networks. This is a major requirement in implementing the one data Indonesia program. This is as stated by Senator Hilda Manafe in the FGD activities as follows.

“In the implementation of one Indonesian data, the main obstacles are of course electrification and wireless networks. Both are important to support the implementation of this SDI. Regarding electrification, NTT is still <90% in 2021, while the standard ratio is at 92.75% according to the calculation of the Ministry of Energy and Mineral Resources. In addition, NTT is classified as a yellow zone (Java-Bali-Nusra) or between 59.85-62.31% or lower than for the Papua-Maluku region. Of course, from the aspect of electrification, hard work is needed to implement SDI. The same applies to wireless networks, especially BTS. The number of villages/kelurahan in NTT is 3,353 according to BPS data in 2019, wherefrom this number until 2020, the area with a strong signal is 707 villages/kelurahan, a weak signal is 156 villages/kelurahan, and the rest have no signal. This is certainly very disturbing the implementation of SDI in Indonesia”.

Therefore, to maximize the implementation of one Indonesian data, these obstacles need to be overcome both in terms of data availability, data standardization, data privacy, and HR competence. If this has been implemented, the benefits of this one data policy are the creation of accountability, effectiveness, and strategy. Accountability is related to the form of governance related to accountability for leadership decisions and performance that has been obtained based on the authority that has been given to be responsible for managing all management within the organization ([Azzahra et al., 2021](#)). Effectiveness can also be interpreted as a measure of the success or failure of an organization in achieving its goals ([Seran et al., 2022](#)). While the strategy is related to the collection of information from existing data, then it is compiled and analyzed to become a tactic for solving a phenomenon ([Halim & Adianto, 2021](#)).

Policy Recommendations

Based on the results of this study, the policy recommendations include:

1. The Central Bureau of Statistics is central in the implementation of one Indonesian data, but has not been fully supported by infrastructure and coordination aspects, even though from the HR aspect, BPS in NTT has met competency standards. Therefore, it is very important to pay attention to infrastructure solutions and coordination at this time.
2. Electrification and wireless networks in East Nusa Tenggara Province are the main goals for solving infrastructure problems and constraints.
3. The absence of good coordination related to the role of each organization in the implementation of one Indonesian data, is likely to be strongly influenced by regulatory aspects. The implementation of one Indonesian data which is still at the level of a Presidential Regulation does not yet have binding power in general, so it is very important to increase the level of the One Data Indonesia regulation from the level of a Presidential Regulation to a Law or Government Regulation instead of Law.

5. Conclusion

The implementation of one Indonesian data in the Province of East Nusa Tenggara through the role of the Central Statistics Agency for the Province of East Nusa Tenggara is still constrained by the aspects of infrastructure, coordination, and human resources both internally and externally. The problem of electrification and wireless networks is a technical problem that greatly affects aspects of the implementation of one Indonesian data. The problem of coordination which is still a sectoral ego further increases the obstacles to implementing one Indonesian data. Although BPS human resources have met the standards, internal aspects such as limited human resources and external constraints such as a lack of understanding of statistical literacy in the public further complicate the obstacles to implementing SDI in NTT. The government's attention to resolving existing obstacles is very urgent to accelerate the implementation and development of SDI in East Nusa Tenggara Province.

Limitations and Further Studies

This research is still limited from the aspect of implementing the one data Indonesia program, from the aspect of the Central Statistics Agency as the implementer, and the Department of Communication and Information as of the guardian of the data. This research is still from the perspective of institutional perception. It is essential to expand its scope to the agencies involved in it, such as the relevant technical offices in charge of preparing data. These villages are not able to carry out the mandate of this regulation due to the very limited aspects of electricity and internet networks, including supporting but very limited infrastructure support.

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