

CHAPTER I

INTRODUCTION

1.1 Background

The industrial revolution has forced almost all sectors including the government sector to be able to adapt to the rapid development of information and communication technology as an important factor in managing public sector organizations in addition to natural, material and human resources (Amanuha *et al.*, 2021). This industrial revolution is an effort to develop science and technology which ultimately encourages the digitalization of government in various countries. Government digitalization is considered to be able to improve the quality of public services to become more effective and efficient because it ensures the integration of electronic document and information management and processing systems in the development of a transparent public service system (Hawa & Salomo, 2020). Good public or corporate services can strengthen democracy and human rights, promote economic prosperity, social cohesion, reduce poverty, increase environmental protection, maintain policies regarding natural resources, deepen trust in government and public administration (Irawan, 2018).

In the Indonesian government system, the industrial revolution encouraged the digitalization of government with the launch of the development of an Electronic-Based Government System (SPBE) through various innovations in community service systems, data processing, and the provision of digital-based development planning participation spaces. Correlated with this, the development of an Electronic Based Government System (SPBE) is one of the supporting factors for the development of smart governance which is proven to be able to form a more transparent and accountable government (Kusumandari, 2020). This is in line with the Presidential Regulation of the Republic of Indonesia Number 95 of 2018 concerning Electronic-Based

Government Systems (SPBE) which aims to encourage and regulate the use of information and communication technology in various aspects of government at all levels, starting from the center of public service processes and managing government administration to make it more efficient, transparent and accountable (BKPSDM, 2023). By adopting this system, it is hoped that it can help to improve the efficiency and effectiveness of government by integrating information and communication technology in the delivery of public services.

Correlated with the implementation of regional autonomy involves the delegation of tasks from the central government to local authorities, granting them the authority to govern their respective regions. Consequently, local governments are tasked with the implementation of e-government and e-service. The existence of e-government and e-service represents a realization of government digitalization efforts undertaken by local governments to achieve good governance. The United Nations Development Programme (UNDP) has identified eight principles of good governance which are participation, transparency, accountability, effectiveness and efficiency, legal certainty, responsiveness, consensus, and equality and inclusiveness. Through the utilization of e-government, stereotypes regarding bureaucratic, complex, and rigid government services can be eliminated, transforming them into more flexible, effective, efficient, and citizen-oriented processes that align with the sustainable principles of good governance established by the UNDP (Irawan, 2018). Therefore, to support its implementation, the Central Government issued several guidelines regarding the implementation of e-government, including Guidelines for Regional Portal Infrastructure Development, Development of Government Electronic Document System Management, and Preparation of Institutional E-government Plans (Kusumandari, 2020). Subsequently, in 2004, the government issued guidelines on quality standards and the scope of services, as well as the development of applications (e-services). These guidelines covered policies regarding the institutionalization

of authorities, information, and private sector involvement in good governance policies, as well as project implementation guidance and budgeting for e-government. Additionally, there was a blueprint for central and regional e-government applications. The policies formulated by the central government were eventually adopted by local governments in the implementation of e-government and e-services. In this context, it can be discerned that both the central and local governments have committed to realizing government digitalization through the execution of e-government and e-services.

Magelang Regency is one of the regions in Central Java Province that has implemented e-government in the execution of its governmental system (Lestari *et al.*, 2019). The online-based services provided are adapted to the Regional Work Units (SKPD) in Magelang Regency (YANDIP PROVINSI JATENG, 2023). This is proven by several applications developed by the Magelang Regency Government, including SIPRIMA, an electronic system provided by the Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu (DPMPTSP). SIPRIMA is used for the submission of non-business permits, covering research permits, health or medical personnel permits, advertising installation permits, fieldwork practice permits, and building permits; E-PIKIR is an application that facilitates research permits, internship permits, and Community Service Program (KKN) permits; PKK Kab. Magelang is an application that records data related to the PKK's tasks, including birth data, infant and toddler death data, mother data, and family data; JELAJAH MAGELANG is an application for obtaining information related to tourist locations, products, and ticket reservations, covering the Magelang Regency area, among other applications (Cahyana, 2023). In the end, the various applications launched align with the government's expectations as stipulated in Law Number 14 of 2008 concerning Public Information Transparency, which mandates that public information should be open and accessible to the public easily, quickly, and accurately.

After the reform era, which implemented the principles of democracy, the enthusiasm to create a good, clean, and efficient government through public service oversight based on citizen participation has been steadily increasing (Hadi, 2020). Improving the administration of government in the field of public services cannot be done in isolation from other aspects, so the improvement is carried out comprehensively beyond institutional structures. Legal reforms in the field of public services are implemented through Law Number 25 of 2009 on Public Services, aimed at providing legal certainty in the relationship between the public and providers of public services. Substantively, the existence of this law is expected to accommodate the role of the public in overseeing public services. In this regard, the citizen plays a pivotal role in driving the improvement of public service quality because through control and participation, the public can access data related to public interests quickly and easily (MENPANRB, 2017).

However, in reality, the level of public participation in the implementation of e-government is considered to be still low, which is then considered to be the cause of the low quality of public services. This is in accordance with (Syaepudin & Dwiyanto Nurlukman, 2022) that states that the poor quality of public services is caused by the lack of citizen participation in monitoring and improving public services. Other factors influencing the low level of public participation in the implementation of e-government stem from both internal and external sources. Internally, the low level of public participation in e-government correlates with the inadequate capacity of government officials, making it challenging for the government to address all complaints and aspirations from the public in public services. In this context, the government plays a role as a guide and facilitator, creating a conducive environment for the enhancement of public service quality, where the competence of government officials becomes essential. On the external front, the low level of public participation in the implementation of e-government is influenced

by the quality of internet networks as a form of supporting infrastructure that is still inadequate. Additionally, the low quality of the public as the main actors in overseeing and developing public services also affects the level of participation in the implementation of e-government. Fundamentally, the national development of a nation will succeed when there is synergy between the government and the society, each working in accordance with their respective roles (Putra, 2017). Therefore, citizen participation is one of the most crucial aspects in the administration of government. To enhance the quality of public services, collaboration between the government as a service provider and the citizen as both service recipients and overseers of the public service delivery process is indeed essential (Rozikin *et al.*, 2020).

The case study in this research focuses on Magelang Regency due to low level of citizen participation in the implementation of e-government in this region. This can be proven through the implementation of the Public Aspiration Service of Magelang Regency, which has been managed by the Department of Communication and Informatics (Diskominfo) of Magelang Regency since June 2016. However, many people still do not understand or are unaware of the existence of this aspiration service (Lestari *et al.*, 2019). With an implementation duration of more than two years, the application should have developed and been able to assist the Magelang Regency Government in increasing public participation. However, in reality, the lack of socialization from the government has caused the public to feel that there is no platform or means to accommodate their aspirations. Through this situation, it can be concluded that the level of public participation in the implementation of public services in Magelang Regency is still relatively poor. Therefore, the researcher is interested in examining several variables that may influence the level of public participation in the implementation of public services in Magelang Regency.

Based on the background explanation, the potential independent variables that may influence the level of citizen participation in e-government

implementation are networked governance, public engagement, and digital literacy. Practically speaking, e-government is aiming to foster dialogue between the government and the public or the citizens, compels the government to explore various ways to communicate with the citizens. Moreover, the public is the primary stakeholder in the provision of public services, serving as both the subject and object of those services. Based on (Wulansari & Inayati, 2019), The public consistently desires the integration of online service systems, both related to public services and internal government functions. The objective is to facilitate quick and easy access to services for the community. Furthermore, several assessments determine whether e-government implementation is oriented towards the public. These assessments encompass dimensions such as institutions, interactions, and online services, which involve various variables like culture, citizen-oriented policies, user-friendly applications, functionality, reliability, and system integration (Pratiwi *et al.*, 2023). That is relevant to the variables that will be addressed in this research, namely networked governance, public participation, and digital literacy. This research will explore the extent to which these independent variables influence the level of citizen participation in the implementation of e-government in Magelang Regency in the year of 2024. This research is also unique by taking a case study in Magelang Regency, which is one of the regencies with diverse population behaviors.

1.2 Research Question

How much influence does are networked governance, public engagement, and digital literacy have on the citizens participation in implementing e-government in Magelang Regency in the period of January to February 2024?

1.3 Research Objectives

Explaining how far the influence of networked governance, public engagement, and digital literacy on the level of citizens participation in

implementing e-government in Magelang Regency in the period of January to February 2024.

1.4 Research Benefits

1.4.1 Theoretical Benefit

This research is useful for the development of Government Science, especially scientific studies related to the citizens participation in the implementation of e-government.

1.4.2 Practical Benefit

This research is useful for Magelang Regency Government policy, especially as a consideration for increasing citizens participation in implementing e-government in Magelang Regency.

1.5 Literature Review

The previous studies related to the citizen participation in the implementation of e-government in Indonesia can be categorized as follows:

- 1) Surasa in the research related to the governance in e-government stated that governance involves all mechanisms, processes, and institutions that accommodate the public and its groups in expressing their interests and exercising their legal rights (Surasa, 2019). In the context of e-government, governance must meet the citizen needs for up-to-date information in context of governmental information, which is a fundamental requirement as citizens. Therefore, with the current development of information technology, e-government has become an integral part of the governance system.
- 2) Related to the implementation of e-government in Indonesia, Akbar mentioned that the most significant challenges in the implementation of e-government especially in Indonesia including the capacity as well as the readiness of management to embrace change (Akbar *et al.*, 2021). Other obstacles including lack of

commercial communication networks in certain regions, low information sharing among institutions, and a very low level of digital literacy among the population. In the research, it is also explaining that citizens participation is crucial in the implementation of e-government. The level of citizens participation in the provision of e-government in a region is considered to be directly proportional to the quality of public services in that area.

- 3) Results research and data analysis from Winarni stated that the use and development of information technology in the modernization process of bureaucracy is a necessity (Winarni, 2019). In this context, it implies that the supporting infrastructure for the implementation of e-government is already sufficiently robust. However, ultimately, the strongest supporters of e-government are the vision, mission, and programs built for its implementation. Challenges in its execution are non-technical in nature, such as suboptimal management systems and insufficient competencies of human resources.
- 4) Arafah and Winarso stated in their research that in the context of a smart city, citizens participation is a voluntary contribution from citizens to the government in various aspects such as development, service improvement, disaster preparedness, and administrative processes (Arafah & Winarso, 2020). The public can engage through facilities provided by the government, including e-government applications and other media. The effectiveness of citizens engagement depends on their willingness to be engaged and the awareness that their engagement has positive impact on both themselves and the public services provided. The integration of smart people, smart community, and smart governance can enhance the government's effectiveness and efficiency in shaping and realizing participatory and community-oriented governance.

- 5) Albarkah did research using qualitative descriptive method on the enhancement of community participation in public policy-making through e-government reveals that empirically, the implementation of e-government can increase public involvement in decision-making related to the public service policies by leveraging technological advancements (Albarkah *et al.*, 2023). The study also elucidates that the implementation of e-government faces various challenges and obstacles in optimizing community participation, such as the lack of digital literacy among the population, government capacity limitations in implementing e-government, and insufficient budgetary allocations for the development of applications within e-government. The challenges and obstacles are considered to have an impact on the quality of public services and the level of community participation in the implementation of e-government.
- 6) Putra conducted research using a quantitative method on variables influencing community participation in the implementation of e-government as a public service innovation in Boyolali Regency in 2017 (Putra, 2017). Putra explained that the execution of e-government is also influenced by citizens engagement in utilizing e-government applications. The study notes that the willingness of the citizens to participate in e-government is relatively high, but they lack sufficient digital literacy to use the applications effectively. Despite the low scores, the citizens engagement in e-government is considered effective in improving the quality of public services in Boyolali Regency.
- 7) The research results by Firmansyah regarding the determinant factors for utilization by the community in Probolinggo City in 2023

stated that digital literacy is a significant issue and challenge in sustainable development in developing countries, particularly in the digital transformation of public services (A. Firmansyah *et al.*, 2023). The research results also propose the concept of digital literacy in enhancing citizens participation through e-government. According to the findings, digital literacy is not only limited to technological skills but also encompasses the capacity of citizens to filter and evaluate information.

- 8) Haerana and Riskasari stating the same point through their research, namely that nationwide digital-based public services will accelerate the improvement of public service quality, which will be realized through active participation from the citizens in utilizing public service applications (Haerana & Riskasari, 2022). In its research on the development of the e-government system in Makassar City in 2022, they stated that commitment from the government is necessary to enhance the construction and development of e-government, especially in terms of infrastructure, human resources, applications, regulations, and both internal as well as external public awareness. The research findings also indicate that socialization activities aimed at increasing public awareness of digital literacy in public services can have a positive impact on the development of e-government in Makassar City.
- 9) Nugroho and Purbokusumo stated the same thing regarding the success factors of e-government implementation, based on research findings on the readiness of key actors in the implementation of e-government in Indonesia (Nugroho & Purbokusumo, 2020). They conducted research at the Ministry of Communication and Information Technology using the e-readiness framework STOPE approach and the budget in the year 2020. The research reveals that the inadequacy of e-government implementation readiness is

attributed to budget constraints, particularly in the allocation for human resources and technology development. Furthermore, the research emphasizes that limitations in both the quality and quantity of human resources, along with insufficient support or digital literacy among the public, constitute the most significant obstacles. Therefore, e-government implementation in Indonesia has yet to reach its optimal potential and falls below the average in the Southeast Asian region.

10) Zidane expressing the same sentiments regarding prioritizing the development of digital ethics as a fundamental foundation in the advancement of e-government in Indonesia (Zidane *et al.*, 2023). Challenges in e-government implementation in Indonesia stem from a lack of collaboration and support among relevant stakeholders. Therefore, to enhance the successful implementation of e-government, several crucial elements are needed, such as government commitment to providing adequate infrastructure and offering appropriate education to the public. Additionally, the government should focus on improving digital literacy and encouraging public participation in utilizing the electronic services provided. A robust foundation of digital ethics will aid in improving the quality of e-government implementation in Indonesia.

However, previous studies and research have lacked attention to factors such as networked governance, public engagement, and digital literacy in relation to community participation in e-government. Therefore, this research differs from the previous studies mentioned above conducted by several researchers. According to the research result by Medzini regarding the e-government in Birmingham, it is highly important to pay attention in certain factors such as networked governance in the implementation of e-government (Medzini, 2022). Furthermore, Leah said through the research that the public engagement is one the most important thing in the implementation of e-

government in United Kingdom (Holmes *et al.*, 2019). Last but not least, Hiller Spires did the research regarding the digital literacy in 21st century in the United State of America came with the result that digital literacy contributing mostly in the implementation of e-government (Spires *et al.*, 2018). All of those statements are in line with the focus on this study which are the influence of networked governance, public engagement, and digital literacy towards toward citizen participation in the implementation of e-government especially in Indonesian government.

1.6 Theoretical Framework

This research adheres to the e-participation theory. As explained by (Damanik, 2016), this theory states that the level of citizen participation influences the quality of electronic government implementation in certain location. Participation, in this context, encompasses interaction and communication with the government, direct involvement of the community in the policy-making process regarding public services through the use of information and communication technology (ICT). According to this theory, the variables affecting the level of citizen participation in electronic government can be narrowed down to three which are networked governance, public engagement, and digital literacy.

1.6.1 Citizen Participation in Electronic Government

Raharja and Qodir defining citizen participation in electronic government as a form of citizen active participation in government activities such as policy making and its implementation that might affects their live. Electronic government allows citizens to participate actively through the online platforms they have provided such as websites, social media, discussion forums, and electronic polls (Raharja & Qodir, 2024). Therefore, Raharja and Qodir explained the forms of public participation in electronic government, such as citizen actively visiting official government websites and carrying out online transactions on official

government websites. Apart from that, consultations, discussions, feedbacks and complaints from the public are also conveyed online via platforms provided by the government.

From the above description, it can be concluded that citizen participation in the implementation of electronic government encompasses several crucial aspects such as e-information, e-consultation, and e-decision making. Through those three aspects, this theory concluded that networked governance, public engagement, and digital literacy might be influences the level of citizen participation in e-government that might influences the quality of e-government itself.

1.6.2 Networked Governance

Medzini defining networked governance as a form of government administration that involves two or more actors in a government networking (in this context could be the local government or other stakeholders such as private sectors and the citizens themselves) (Medzini, 2022). The involvement of various actors is the result of policy implementation which causes these actors to depend on each other. According to Medzini, the form of implementing networked governance is cooperation between regional government agencies that provide public services, involvement of agencies outside the regional government that provide public services in a place, and cooperation as well as coordination between agencies so that the completion of public services can be accelerated. Through these things, networked governance is believed to be able to increase public trust through transparency and accountability, which in the end can help the implementation of public services which in turn will increase public participation in various government initiatives.

1.6.3 Public Engagement

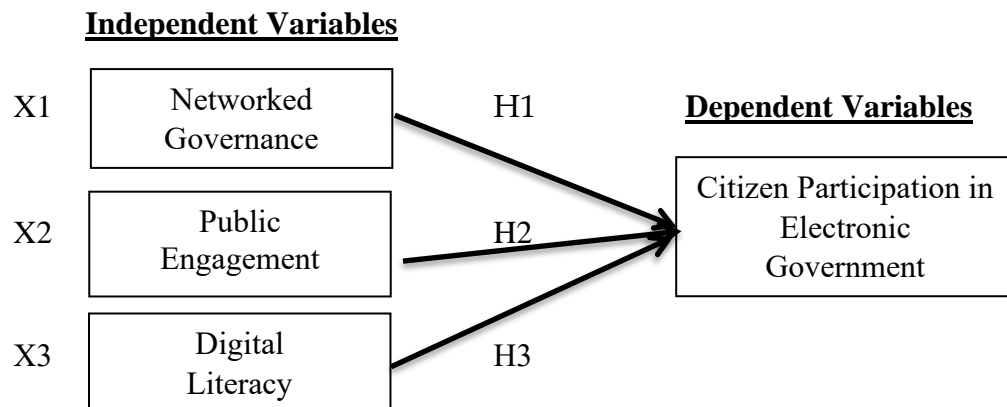
Widya explains through the theory that public involvement is a partnership between state actors (the government) and non-state actors such

as non-governmental organizations, religious leaders, or service users in the context of public policy. (Widya, 2021). Public involvement is considered the highest level in the stages of open government, starting from government transparency such as citizen access to public records and documents, progressing to open participation through public meetings or public consultations which then continues to openness. Therefore, Widya said that indicators of good public involvement are the presence of the community in public meetings, hearings, or consultations; public access to public records and documents; and public input regarding suggestions and complaints regarding government performance.

1.6.4 Digital Literacy

Annisa defining digital literacy as the ability of citizens to navigate and articulate their various interests in the online world (Annisa, 2018). Overall, Annisa explained that digital literacy includes the ability to operate a computer, communicate via social media, the ability to access the internet, and the ability to operate multimedia. Furthermore, digital literacy aims to mitigate potential dangers and crimes on the internet, such as the spread of negative content, thereby enabling individuals to actively participate in a positive way in the digital world.

Figure 1.1.1 Theoretical Framework



1.7 Hypothesis

1. (H1) Networked governance positively and significantly influences citizens participation in the implementation of electronic government.
2. (H2) Public engagement positively and significantly influences citizens participation in the implementation of electronic government.
3. (H3) Digital literacy positively and significantly influences citizens participation in the implementation of electronic government.

1.8 Conceptual and Operational Definition

1.8.1 Conceptual Definition

1. Citizen participation in electronic government
Citizen participation in electronic government is the process of involving the public or citizen in decision-making and policy formulation related to public services in the implementation of electronic government.
2. Networked governance
Networked governance is a governance system in which collaboration is implemented by multiple actors both within and outside the government.
3. Public engagement
Networked governance is a form of public involvement in all public service activities, ranging from policy formulation to evaluation and monitoring.
4. Digital literacy
Digital literacy is the ability of the community to behave ethically and responsibly in the digital world, ensuring that the information disseminated and the technologies used are targeted appropriately.

1.8.2 Operational Definition

1. Citizen participation in electronic government indicators including:
 - a) The number of visits to electronic government websites
 - b) The number of online transactions
 - c) The number of consultations, discussions, or feedbacks
 - d) The number of complaints submitted via electronic government websites
2. Networked governance indicators including:
 - a) Collaboration between local government agencies providing public services in one place
 - b) Involvement of agencies outside the local government providing public services in one place
 - c) Cooperation and coordination between agencies so that the completion of public services can be accelerated
3. Public engagement indicators including:
 - a) Attendances at public meetings, hearings, or consultations
 - b) Amount of access to public records and documents
 - c) Amount of input suggestions and complaints
4. Digital literacy indicators including:
 - a) Ability to operate a computer
 - b) Ability to communicate via social media
 - c) Ability to access the internet
 - d) Multi-media capabilities

1.9 Research Method

Basically, research is a scientific way to obtain data with a specific purpose and use. In its development, there are two types of research, namely qualitative and quantitative. This research specifically uses a quantitative research approach. Based on (Putu Agung & Anik, 2017), quantitative research is research that is structured and quantifies data so that it can be generalized.

1.9.1 Research Type

Correlated with the research objective which is elucidating the extent of influence of networked governance, public engagement, and digital literacy on citizen participation in the implementation of electronic government in Magelang Regency in 2024, this study is categorized as survey research. Based on Maidina, survey research is a type of study that gathers information from a sample by questioning through surveys or interviews to depict various aspects of the population and utilizes questionnaires as the primary data collection tool (Maidiana, 2021). The aim of survey research is to provide an overview or explanation of a research object and to conduct analysis regarding that object.

1.9.2 Population (N) and Sample (n)

According to Amin, population refers to the entire set of objects or subjects of study, which constitutes the entire group of individuals that attract the researcher's attention (Amin *et al.*, 2023). The population must align with the predetermined criteria set by the researcher because it directly relates to the quality, level of representation, and generalizability of the research. Therefore, the population encompasses not only the sheer number of individuals within the subject of study but also includes all the characteristics or traits possessed by those subjects of study.

In this research, the population consists of all the individuals who finished transaction and received public services the public service mall website in Magelang Regency in the year 2024. Data from Magelang Regency indicates that the population of individuals who finished transaction in the public service mall website in Magelang Regency on the period of January until February 2024 are 1.159 people (<https://mpp.magelangkab.go.id/statistic>).

According to Heryana, sample refers to the quantity and characteristics possessed by a population (Heryana, 2017). In this case, the

sample should represent the entire population under study to achieve the desired outcomes as intended by the researcher. Based on Firmansyah and Dede, sampling technique is the method or procedure used by researchers to select a relatively smaller number of items or individuals from a population systematically to be the subjects or data sources for research (D. Firmansyah & Dede, 2022).

In this research, sampling uses Slovin Formula [$n = N / (1 + Ne^2)$], with margin of error 10% (0,01). Based on Slovin Formula:

$n = N / [1 + Ne^2]$	Notes:
$n = 1159 / [1 + 1159 (0,01)]$	n = Sample
$n = 1159 / 12,59$	N = Population
$n = 93$	e = Margin of Error

So, the amounts of samples in this research are 93 respondents.

1.9.3 Data Collection Method

According to Makbul, data collection method refers to the techniques or approaches that researchers can utilize to gather the necessary data sources for their research (Makbul, 2021). Based on Priadana and Sunarsi, data sources can be divided into two categories: primary data and secondary data (Priadana & Sunarsi, 2021). Primary data is information collected directly by the researcher during a specific time period. On the other hand, secondary data refers to information collected by others, which the researcher then processes. In this context, the data typically originates from research conducted by other individuals, institutions, or organizations.

In this research, the data collection method that used is questionnaire. Based on Priadana and Sunarsi, a questionnaire is a data collection technique that involves sending several questions to respondents

to be filled out according to the research theme (Priadana & Sunarsi, 2021). Therefore, the researcher distributes questionnaires to respondents, namely individuals from the community who have visited the public service mall website in Magelang Regency in 2024, either occasionally or frequently. The questionnaire is designed in a combination of Google Forms, which is delivered to respondents electronically, and in print-out form, which is distributed to respondents manually.

The simple random sampling method is used in this research. This means that the representatives of the population sampled in this study do not have strata so they are relatively homogeneous. Apart from that, this research also provides an equal opportunity for the population to be sampled. In the context of this study, the respondents referred to are all individuals from the community who have visited the public service mall website in Magelang Regency during the year 2024. The researcher shares the questionnaire to the 93 respondents in the survey research.

The researcher also supplements the data collection technique with interview and documentation methods. The researcher conducts interviews with several respondents who have genuinely visited and completed their affairs through the public service mall website in Magelang Regency. The researcher obtains documents such as writings or images related to the public service mall. This document study is conducted to complement the questionnaire and interview methods previously carried out.

1.9.4 Instrument and Research Data Measurement

According to Hakimah, research instruments are tools used to obtain and collect research data, serving as a step to discover the results or conclusions of the research without compromising the criteria for creating a good instrument (Hakimah, 2016). Research instruments are divided into two categories which are test instruments and non-test instruments. Test

instruments consist of psychological tests and non-psychological tests. Meanwhile, non-test instruments include questionnaires, interviews, observations, Likert scales, and documentation.

In this research, the researcher uses closed-ended questionnaires as its instrument. According to Arifin, a closed-ended questionnaire is a questionnaire where statements are provided with predefined answer choices, making it easier for respondents to select one of the provided answers (Arifin, 2014). Closed-ended questionnaires assist researchers in processing incoming responses more easily and in shortening the time spent on grouping answers because enumerators' assistance can be utilized. Additionally, closed-ended questionnaires make it easier for respondents to select answers because several answer choices are provided by the researcher, thus making questionnaire completion more effective and efficient.

According to Sarirah, measurement data refers to the agreement used as a reference to determine the weight of data from a particular variable so that it can be analyzed based on its measurement level (Sarirah, 2018). In quantitative research, there are four scales used to measure data. First, the ordinal scale, which is a measurement scale that already indicates the ranking between levels. Second, the nominal scale, which is only used to provide categories such as labels, symbols, icons, or names to a category, making it easier to group data according to its category. Third, the interval scale, commonly used to express ranking for each level. Fourth, the ratio scale, which is aimed at measurement results that can be differentiated, ordered, have a specific distance, and can be compared.

In this research, the Likert Scale is used for data measurement. This means that respondents are asked to complete a questionnaire requiring them to indicate their level of agreement with a series of statements. The Likert Scale is used to determine responses from the respondents who are selected as samples in this study, where scale 1 indicates strongly disagree

(strongly not true), scale 2 indicates disagree (not true), scale 3 indicates neutral (somewhat true), scale 4 indicates agree (true), and scale 5 indicates strongly agree (strongly true).

1.9.5 Data Analysis Method

According to Muhson, data analysis method is the research process carried out after all necessary data to solve the researched problem have been obtained completely (Muhson, 2018). In data analysis, there are several simple steps conducted such as editing, scoring, coding, cleaning, data tabulation, descriptive analysis, and inferential analysis. Subsequently, the results of the sample analysis in statistical units will be continued to predict population parameters.

In this research, SEM-PLS uses to analyze the data. According to Harahap, SEM-PLS (Structural Equation Modeling-Partial Least Squares) is an analysis that combines factor analysis approach, structural model, and path analysis (Harahap, 2018). In this research, SEM-PLS is used to calculate validity and reliability, as well as to test regression and hypotheses. Validity is the measure of how accurately a measurement tool performs its function, indicating the precision of an instrument in measuring (Mukhlisa, 2023). Reliability is the consistency that occurs in a set of methods, conditions, and results obtained (Aminah, 2012). Regression analysis is a study of the relationship between one variable, known as the dependent variable, and one or more variables, known as independent variables, which explain the variation in the dependent variable (Yuliara, 2016). Hypothesis testing is a branch of inferential statistics used to test the validity of a statement statistically and draw conclusions about whether to accept or reject the statement (Santiyasa, 2016).