# The influence of social media and big data utilization in improving networking and its implications on the quality of civil service decisions in Surabaya city

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| C H R O N I C L E | A B S T R A C T |
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| | The purpose of this study is to analyze the influence of social media and big data utilization in improving networking and its implications on decision quality in civil servants in Surabaya City, East Java Province, Indonesia. The sample in this study was 125 respondents consisting of several Civil Servants in the Surabaya City Government, East Java Province, Indonesia. The sampling technique used the random sampling. Data collected through questionnaires were then analyzed using SEM-PLS. The results of the study and data analysis showed that: Utilization of Social Media directly has a positive and significant effect on Networking; Big Data directly has a positive and significant effect on Networking; Utilization of Social Media directly has a positive and significant effect on Decision Quality; Government Big Data directly has a positive and significant effect on Decision Quality; Networking directly has a positive and significant effect on Decision Quality in Civil Servants of Surabaya City, East Java Province, Indonesia. Networking is able to indirectly mediate the utilization of social media and big data on decision quality in civil servants of Surabaya City, East Java Province, Indonesia. |
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## 1. Introduction

In the increasingly developing digital era, the use of information and communication technology has become an integral part of various aspects of life (Lyon, 2014), including in the government sector (Gil-Garcia et al., 2014; Kapoor et al., 2018). State Civil Apparatus (ASN) as the spearhead of public services is required to be able to adapt to technological advances in order to improve performance and quality of service (Morabito, 2015; Wang et al., 2018). One of the technologies that is experiencing rapid development is social media and big data (Naghib et al., 2023), both of which have a significant impact on strengthening communication networks and making decisions that are more accurate and of higher quality (Yang et al., 2017). Social media has changed from being just a social interaction platform to a strategic tool in building a strong network (Khan et al., 2021), both within the organization and in relations with the wider community (Chen & Lin, 2014; Tene & Polonetsky, 2012). By utilizing social media effectively (Xie et al., 2021), ASN has the opportunity to expand its collaboration network (Abdulkareem et al., 2022), get the latest information (Song et al., 2023), as well as improving transparency and accountability in decision making (Abbasi et al., 2016; Mergel, 2016). Meanwhile, big data plays a critical role in supporting more informed and data-driven decision-making (Lee, 2017). Through big data analysis (Hernandez-Almazan et al., 2022), ASN can extract important patterns from large and complex data (Fauzi et al., 2024; Junedi et al., 2024; U. Nuryanto et al., 2024), which was previously impossible with conventional methods (Bekkers & Edwards, 2018; Lee, 2017). This allows ASN to make faster decisions (Rithani et al., 2023), appropriate (D'Alberto & Giudici, 2023), and has a positive impact on improving the quality of public services (Sivarajah et al., 2017). Social media is not only a means of communication and social interaction, but can also be used by ASN to improve networking with various stakeholders (Sarwar et al., 2023), both inside and outside government (Kim & Cho, 2017). By utilizing social media effectively (Al Halbusi et al., 2024), ASN can establish broader collaboration (Zhu et al., 2023), share information quickly (Chiu et al., 2023), and get feedback from the

community directly (Philip Chen & Zhang, 2014). This may have implications for increasing public involvement in decision-making and policy-making (Günther et al., 2017). On the other hand, big data provides the capacity to collect, analyze, and process large amounts of data originating from various sources (D'Alberto & Giudici, 2023), including social media (Himeur et al., 2023), surveys, and public reports (Milakovich, 2021; Zheng et al., 2022). The use of big data in the decision-making process allows ASN to get a more comprehensive picture of the existing situation (Jumroh et al., 2024). With richer and more structured data (Purwaningsih et al., 2024), decisions taken can be more targeted (Junaidi et al., 2024), evidence-based, and in accordance with the needs of the community (Ainin et al., 2015; Janssen et al., 2017).

Utilizing Social Media in Professional Networking Social media has become a vital platform in building and strengthening professional networks (Nnaji et al., 2024), including among the State Civil Apparatus (ASN) (Bindu et al., 2019; Klijn et al., 2015). Research shows that the use of social media can increase the effectiveness of cross-agency collaboration and expand access to information relevant to ASN work (Fauzi et al., 2023). Platforms such as LinkedIn, Twitter, and Facebook are often used by ASN to interact with colleagues, experts, and the general public, which strengthens transparency and public accountability (Raudeliuniene et al., 2020). Study of Robinson et al., (2015) revealed that the use of social media by government employees accelerates access to policy information, strengthens relations between agencies, and supports public participation in public decision-making. Becker & Edwards (2018) also emphasized the importance of social media as a communication tool that not only supports dialogue between the government and the community but also as a medium for sharing knowledge between ASN. The Role of Big Data in Decision Making Big data offers the ability to analyze large and complex amounts of data in real-time, which is very useful for government decision making (Bello-Orgaz et al., 2016; Berglund et al., 2020). Big data technology enables ASN to explore information from various sources, both structured and unstructured, thus supporting more evidence-based decision making (Robinson et al., 2015; Stieglitz et al., 2018). Research by Chen and Lin (2014) shows that big data integration in government management can improve the efficiency, accuracy, and relevance of information used in the decision-making process. The use of big data also supports predictive processes, which help in more proactive and responsive policy planning to social and economic dynamics (Yeung, 2018). In the Indonesian context, a study by the Ministry of Communication and Information (2019) emphasized that the application of big data in the public sector has shown an increase in the quality of public services and improvements in policy making. The Relationship between Social Media, Big Data, and Networking in ASN The combination of the use of social media and big data forms an ecosystem that supports stronger networking among ASN (Stieglitz et al., 2018; Tene & Polonetsky, 2012). Through social media, ASN can quickly get the latest information from their professional networks, while big data provides in-depth analysis that strengthens the basis of decisions taken (Zheng et al., 2022). Mergel (2016) states that the synergy between social media and big data is able to create a "smart government" where decision-making is more responsive, accurate, and adaptive to changes in socio-political conditions. In addition, research Karim et al., (2020) shows that the use of social media enriched with analytical data from big data is able to strengthen collaboration between agencies and facilitate real-time information sharing, which leads to improving the quality of ASN decisions. Implications for the Quality of ASN Decisions Increased networking through social media and analytical support from big data have a significant impact on the quality of decisions taken by ASN (Yeung, 2018). Decisions taken become more transparent, participatory, and based on more valid data. Bryson (2019) noted that governments that implement big data analytics together with community engagement through social media have a greater chance of making targeted and more inclusive decisions. Recent studies by Zheng et al., (2022) also highlighted that ASN who integrate big data and social media in the decision-making process are better able to respond to community needs quickly and accurately. This is due to fast access to information, input from the community, and more complete data (Yang et al., 2017).

Challenges and Obstacles Although the benefits of social media and big data in improving the quality of ASN decisions are clear, there are challenges that need to be overcome. Janssen et al., (2017) highlighted that issues of data security, privacy, and limited digital literacy among ASN are still obstacles to maximum utilization of this technology. In Indonesia, the level of adoption of big data and the use of social media for professional purposes in the public sector still needs to be increased along with the development of information technology infrastructure and appropriate training (Ainin et al., 2015; Gupta & George, 2016; Jumroh et al., 2024). However, the use of social media and big data among ASN still faces various challenges, such as limited human resources with technological competence, inadequate infrastructure, and resistance to technological change (Kluemper et al., 2016). Surabaya City, as one of the big cities in Indonesia, has great potential in implementing this technology, considering the high level of internet penetration and digital initiatives that have been running at the city government level. Therefore, this study aims to analyze how the use of social media and big data can contribute to improving networking among ASN, as well as measuring its impact on the quality of decisions taken by ASN in Surabaya City. Surabaya City as one of the big cities in Indonesia has adopted various digital technologies to improve the quality of government. This study aims to analyze the influence of the use of social media and big data on improving ASN networking in Surabaya City, and how it affects the quality of decisions taken. Through this study, it is expected to find significant implications that can be the basis for optimizing the use of digital technology in the government sector. Thus, the development of social media and big data has brought significant changes in the way ASN builds networks and makes decisions. Further research is needed to explore effective strategies in maximizing the potential of these two technologies and to overcome the remaining obstacles. This research is important to provide a clearer picture of the concrete benefits of using technology in governance, especially in the context of more effective, transparent, and participatory decision-making. The results of this study are expected to provide useful recommendations for increasing the capacity of ASN in utilizing technology to achieve better public services.

From several expert opinions and gap phenomena that have been found, researchers are interested in studying this research by raising the theme of the Influence of the Use of Social Media and Big Data on Increasing Networking and its Implications on the Quality of Decisions of State Civil Apparatus in the City of Surabaya.

## 2. Literature review

### 2.1  The Relationship between Social Media Utilization and Networking

The use of social media by government employees has a significant influence in increasing networking or professional networks (Pellegrino & Abe, 2023). Expanding Reach and Access to Information Social media allows government employees to expand their networks quickly and easily (Moughal et al., 2023). With platforms like LinkedIn, Twitter, or Facebook, employees can connect with colleagues, experts, and stakeholders across different agencies or regions (Ashraf et al., 2021). The reach of information becomes broader, allowing employees to gain deeper insights into policies or best practices from a variety of sources (Shafiq & Parveen, 2023). Enhancing Inter-Agency Collaboration Social media facilitates communication between employees across agencies, both at the local and national levels, which enhances collaboration and coordination (Khan et al., 2021). Platforms like WhatsApp or Telegram are also often used by government employees to form more informal yet productive discussion groups. This allows employees to collaborate on formulating policies, sharing information, and resolving issues quickly without the need for intensive physical meetings (Ajibade & Zaidi, 2023). Facilitating Access to External Experts and Resources Through social media, government employees can more easily access experts, academics, or practitioners in related fields who are outside the bureaucratic environment (Xie et al., 2021). This improves the quality and relevance of the information obtained, and enriches the perspectives in the decision-making process. Government officials can establish direct relationships with professional communities, both domestically and internationally, to gain new insights on important issues (Alalawneh et al., 2022). Increasing Participation and Transparency Social media not only helps in communication between employees, but also opens up a wider space for dialogue with the community (Song et al., 2023). Government officials can use the platform to share policy information, receive input from the public, and respond to public questions more openly. This helps build networks with non-government stakeholders such as NGOs, academics, and local communities, resulting in more participatory and inclusive decisions (Abdulkareem et al., 2022).

Supporting Professional Development Social media also helps government employees develop their skills and insights through continuous learning (Al Halbusi et al., 2024). Many training resources, seminars, or workshops are held virtually through social media, which provides an opportunity for employees to continue updating their knowledge and expanding their professional networks (Jiang et al., 2024). Accelerating the Spread of Information and Innovation Social media accelerates the process of disseminating information relevant to the work of government employees (Sarwar et al., 2023). Innovations or new approaches in public administration that have proven effective can be quickly shared through social networks, encouraging wider adoption across government organizations (Ramzan et al., 2023). Overall, the use of social media supports the improvement of government employee networking by expanding access to information, strengthening cross-sector collaboration, increasing participation, and supporting their professional development. However, this also requires attention to the ethics of use and data security so that the information shared remains safe and professional (Alhamami et al., 2023). In an effort to improve networking, of course, the important role that must be paid attention to is the use of social media. This is very crucial because to carry out networking, support is needed from good use of social media (Moughal et al., 2023). This is confirmed by research conducted by Ajibade & Zaidi (2023); Alalawneh et al., (2022); Jiang et al., (2024); and Sumba Nacipucha et al., (2024) which states that the Utilization of Social Media can significantly influence the improvement of Networking. Thus, good Utilization of Social Media plays a key role in ensuring that the government can operate efficiently, effectively, and responsively, all of which contribute to the improvement of networking.

**H₁:** *Utilization of social media has an effect on networking.*

### 2.2  The Relationship of Big Data to Networking

Big data has a significant influence in improving networking among government employees (Kaleem et al., 2023). Networking here does not only include relations between employees, but also cross-agency collaboration, partnerships with external parties, and better interaction with the community (Bag et al., 2024). Big data provides access to a variety of sources of information in large quantities that are impossible to process manually (Lăzăroiu et al., 2022). This data covers a wide range of areas, from community behavior, policy trends, to cross-agency operational analysis (Jain & Paikaray, 2024). Government officials can use this data to understand the needs and dynamics within their organization or other agencies, making it easier for them to collaborate and form stronger networks (Ali, 2024). Big data also facilitates cross-agency collaboration through analytics platforms that enable employees from various agencies to share data and information more efficiently (Alahmad et al., 2023). Big data provides in-depth analysis that helps government officials make more data-driven decisions, including determining networking strategies (Qi et al., 2023). With big data, employees can analyze information related to interaction patterns between employees, the most effective communication channels, and which agencies or individuals are most influential in the decision-making process (Agrawal et al., 2022). Thus, government officials can use this information to improve the way they build networks, both internally and externally (Bhatti et al., 2022). Big data can also predict future needs in cooperation, so that ASN can be proactive in building relevant relationships before those needs arise (Jum'a et al.,

2024). Through big data analysis, government officials can understand dynamics outside government, such as social, economic, and political trends, which can be used to strengthen external networks (Calic & Ghasemaghaei, 2021). Data from social media platforms, public surveys, and news reports can be analyzed to identify population groups or sectors that the government needs to reach (Ashaari et al., 2021). Big data allows ASN to see public interaction patterns and community needs, which can then be integrated into their networking strategy (Dai et al., 2020). Big data also accelerates the process of knowledge exchange among government employees, both at the central and regional levels (Song, 2024). With big data technology, employees can more easily access information relevant to their work and share analysis results with colleagues throughout Indonesia (Arshad et al., 2023). This helps build a strong knowledge network, where employees from different regions or agencies can share insights based on accurate and up-to-date data (Abkenar et al., 2021).

Big data-based platforms such as the Electronic-Based Government System (SPBE) implemented in several countries also facilitate the exchange of information between agencies in a faster and more structured manner (Al-Jumaili et al., 2023). This system allows data generated from various agencies to be connected and accessible to other employees, which ultimately encourages the formation of a more effective work network (Ochuba et al., 2024). In the context of government, big data can also support increased networking at the international level (Mirzaei Somarin et al., 2018). Government officials who have access to big data can analyze global information about public policies, geopolitical changes, and government initiatives in other countries (Li et al., 2024). This allows ASN to build relationships with government employees abroad or international organizations with a stronger knowledge base (Fosso Wamba et al., 2024). The influence of big data on improving networking among government employees is very significant, especially in terms of accelerating access to information, increasing the efficiency of cross-agency collaboration, and supporting smarter decision-making (Chen et al., 2022). Through the use of big data, government officials can build stronger networks, both at national and international levels, and strengthen collaboration based on in-depth and detailed data (Mirzaei Somarin et al., 2018). In an effort to improve networking, of course, the important role that must be paid attention to is Big Data, this is very crucial because to carry out networking, the role of Big Data is needed to improve infrastructure for government employees (Hernandez-Almazan et al., 2022; Naghib et al., 2023). This is confirmed by research conducted by D'Alberto & Giudici (2023); Himeur et al., (2023); Kaleem et al., (2023); and Rithani et al., (2023) which states that Big Data is able to significantly influence Networking. Overall, good Big Data supports the government in achieving higher efficiency, reliability, and adaptability in daily operations, which in turn improves networking among employees.

**H₂:** *Big data has an impact on networking.*

*2.3 The Relationship between Social Media Utilization and Decision Quality*

The use of social media by government employees, including State Civil Apparatus (ASN), has a significant influence on the quality of the decisions they make (Fontenot et al., 2024; Shokouhyar & Shahidzadeh, 2024). Social media allows government employees to gain quick access to the latest information, both from within and outside the country (Al-Rahmi et al., 2021; Ervinna et al., 2023). Through platforms such as Twitter, Facebook, and LinkedIn, ASN can follow public policy trends, regulatory changes, and global events relevant to their work (Gultom et al., 2024). With broader and real-time information, decisions taken can be more responsive to the latest conditions and developments (Ashraf et al., 2023; Cheng et al., 2024). Social media also functions as a communication channel between government officials and the public (Fontenot et al., 2024). Government employees can use social media to listen directly to aspirations, complaints, and input from the public regarding various public issues. This community involvement provides a broader perspective and helps ASN to understand the impact of policies from the perspective of citizens (Almarri, 2024). Social media facilitates communication and collaboration between government employees from various agencies and sectors (Nurhadi et al., 2023). With social media, ASN can share information, ideas, and solutions in dealing with complex problems more quickly (Junaidi et al., 2024b). This minimizes information silos and encourages more integrated and holistic decision making (Luo et al., 2024). Social media also increases the accountability of government officials in decision making (Shokouhyar & Shahidzadeh, 2024). Every policy or decision taken can be quickly disseminated and receive a response from the wider community (Nugroho & Angela, 2024). Criticism and input from the public on social media puts pressure on ASN to make more transparent, accountable and responsible decisions (Prastiwi et al., 2023). With social media, ASN can monitor public opinion and trends that develop in society (Chahdi et al., 2024). Utilizing data from social media can provide a clearer picture of people's preferences, concerns, or demands (Vieira et al., 2023). This allows ASN to conduct more in-depth analysis and better predictions regarding the impact of policies to be taken (Bisht & Pal, 2023). ASN can also utilize social media to develop their knowledge and skills through access to various online resources such as discussion forums, articles, research, and webinars (Romadhoni et al., 2023). This supports the improvement of ASN capacity in making better and knowledge-based decisions (Agyapong & Yuan, 2022). Overall, the use of social media can have a positive impact on the quality of government employee decisions by increasing access to information, encouraging community involvement, strengthening inter-agency collaboration, and increasing accountability and transparency (Rini, 2021). However, to maximize its benefits, it is necessary to increase digital literacy and better information management so that the decisions taken are truly quality and on target (Ali et al., 2023). In an effort to improve the quality of decisions, of course the important role that must be given great attention is the use of social media, this is very important considering that the two are interrelated in terms of institutional accountability (Chiu et al., 2023; Zhu et al., 2023). This is confirmed by research conducted by Ali & Shaiq (2023); Nikseresht et al., (2024); Suganda & Arrifianti (2023); and Todisco et al., (2021) which states that the Utilization of Social Media can significantly influence the Quality of Decisions.

Overall, good Utilization of Social Media plays a key role in creating conditions that enable countries or regions to develop and compete effectively on the global stage (Saini et al., 2023). Good decisions not only strengthen institutions in the short term but also ensure sustainability and growth in the long term, thereby providing optimal Decision Quality.

**H₃:** *Utilization of social media influences decision quality.*

*2.4 The Relationship of Big Data to Decision Quality*

Big data has become one of the key factors in improving the quality of decision making in the government sector (Hosen et al., 2024; Khong et al., 2023). Big data enables governments to make decisions that are based more on concrete evidence than on subjective assumptions or experiences (Khong et al., 2023). Government officials can access, analyze, and use large amounts of data from various sources, such as demographic statistics, economic data, and environmental data, so that decisions are made more accurate and relevant (Janssen et al., 2017). The use of big data enables the decision-making process to become faster and more efficient (Al-Okaily & Al-Okaily, 2024). Before the existence of big data technology, the process of analyzing large amounts of data required a lot of time and resources (Korayim et al., 2024). However, with advanced algorithms and analytical technologies, data can be processed in less time and provide faster insights to government officials (Lindebaum et al., 2024; Pansara, 2023). One of the main advantages of big data is its ability to predict and analyze future trends (Taherdoost, 2023). By analyzing patterns from existing data, the government can predict social, economic, and environmental developments (Abu-AlSondos, 2023). Government officials can use these predictions to design more responsive and adaptive long-term policies (Ghasemaghaei & Turel, 2023). Big data also plays a role in increasing transparency and accountability in decision making (Torre et al., 2022). Government officials can use open data to share information with the public, so that the public can monitor and evaluate decisions made by the government (Haverila et al., 2024). Accurate and widely accessible data enables more effective public oversight of public policies (Lindebaum et al., 2024; Pansara, 2023). Big data enables governments to understand the specific needs of different groups of people (Aseeri & Kang, 2023). Data obtained from various sources, such as surveys, transactions, and digital activities, allows governments to adjust policies or public services to be more relevant to each individual or group (Alganb & Alshahrani, 2023). This improves the quality of public services provided and ensures that decisions are more targeted. Through big data analysis, government officials can identify potential problems before they develop into crises (Khan et al., 2024)For example, analysis of economic and social data can help governments recognize signs of economic slowdown or potential social conflict (Khan & Fatima, 2024). With this information, the government can respond more quickly and create more effective mitigation policies (Franke & Hiebl, 2022; Liu et al., 2023). Overall, big data has a significant impact in improving the quality of decisions among government officials (Wang et al., 2024). By leveraging big data, the government can make more accurate, efficient, and proactive decisions, and can better respond to the needs of the community. However, to maximize the potential of big data, investment is needed in technological infrastructure, human resource training, and appropriate regulations to protect data privacy and security (Chatterjee et al., 2023; Ragazou et al., 2023). In an effort to improve the Quality of Decisions, of course, the important role that must be given great attention is Big Data, this is also very important, because to carry out Decision Quality, Big Data management is needed which is certainly in accordance with the current situation (Fu et al., 2023; Nnaji et al., 2024). This is confirmed by research conducted by Didas et al., (2024); Haverila et al., (2024); Khan & Fatima (2024); and Torre et al., (2022) which states that Big Data can significantly influence Decision Quality. Overall, good Big Data improves an organization's ability to operate more efficiently, respond quickly to the market, and offer added value to users. All of these contribute significantly to Decision Quality, allowing organizations to remain competitive.

**H₄:** *Big data influences decision quality.*

*2.5 Relationship of Networking to Decision Quality*

Networking, or building work networks, plays a major role in increasing collaboration and information exchange between individuals and agencies (Arjang et al., 2024; Virmani et al., 2023). In government employees, increased networking can have a significant impact on the quality of decisions taken (Saflor et al., 2024). Good networking allows government employees to access information from various sources quickly and in a timely manner (Razavi Hajiagha et al., 2022). Through relationships with co-workers, experts, or other agencies, employees can obtain more diverse data and input (Lissillour et al., 2023), so that the decisions taken become richer in perspective (Farida et al., 2024; Liu et al., 2024). Effective networking encourages collaboration between various government agencies or even the private sector and civil society (Mohammed & Yaqub, 2024). This cross-agency collaboration enables more holistic integration of information and reduces the risk of decision-making that only considers a single or sectoral perspective (Huda, 2023). Government employees who are active in networking are often exposed to new knowledge and experiences from colleagues or other agencies (Moch, 2024). Through informal discussions, seminars, or professional forums, they can learn new approaches that have been successfully applied elsewhere (Tursunbayeva et al., 2017). This knowledge can be applied in a local context to improve the effectiveness of decisions taken (Al-aloosy et al., 2024; Singh & Gupta, 2024). With strong networking, government employees can respond to changing situations more quickly (Wang et al., 2024; Wawak et al., 2023). Information from the network can provide early warning signals about potential problems or opportunities that may occur, so that decisions can be taken more quickly and in a timely manner (Main et al., 2024). Extensive networking also allows government officials to involve more stakeholders in the decision-making process, including the community, the private sector, and non-governmental organizations (Gallegos et al., 2024; Wang &

She, 2024). This greater involvement of stakeholders results in decisions being taken that are more representative, because they take into account input from various parties affected by the decision (Jalali et al., 2022; Jordão & Novas, 2024). Increased networking has a very significant positive influence on the quality of decisions made by government employees (Xing et al., 2024). With a broad network, government employees have better access to information, more productive collaboration, and increased transparency and innovation (Singh et al., 2024). All of these factors contribute to better decision-making, more data-driven, and more responsive to the needs of the Community (Jordão & Novas, 2024; Tariq et al., 2024). In an effort to improve the quality of decisions, of course the important role that must be considered is the important role of networking (Tajani et al., 2024; Van Nguyen et al., 2024). This is confirmed by research conducted by El Jaouhari et al., (2023); Neiroukh et al., (2024); Nikseresht et al., (2024); and Virmani et al., (2023) which states that Networking can significantly influence Decision Quality. Overall, good Networking creates an environment that supports economic growth, innovation, and efficiency. These are all important factors that give a country or region Decision Quality on the global stage.

**H5:** *Networking influences decision quality.*
**H6:** *There is a relationship between social media utilization and decision quality through networking.*
**H7:** *Big data relationships affect decision quality through networking.*

## 3. Research Methods

### 3.1 Research Design

The research method used is an associative quantitative research method by looking for relationships between variables. Data collection was carried out using survey techniques using questionnaires distributed to respondents.

### 3.2 Types of research

The type of research used in this study is causal research, namely research that seeks to find an explanation in the form of a cause-effect relationship between several concepts or several variables or several strategies developed in management (Sugiyono, 2015). This research is directed to describe the existence of a causal relationship between several situations described in the variables, and on that basis a general conclusion is drawn (Ferdinand, 2014).

### 3.3 Place and Time of Research

The location of the research was conducted in Surabaya City, East Java Province, Indonesia. The research was conducted over a period of 3 months, starting from May to August 2024.

### 3.4 Population and Sample

Population is a combination of all elements in the form of events, things or people who have similar characteristics which are the focus of a researcher's attention and therefore are seen as a research universe (Ferdinand, 2014). The population in this study is the State Civil Apparatus in the Surabaya City Government, East Java Province. A sample is a subset of a population, consisting of some members of the population (Moleong, 2021). This subset is taken because in many cases it is impossible for us to examine all members of the population, therefore we form a representative population called a sample (Ferdinand, 2014). The technique for determining the number of samples refers to Ferdinand's opinion (2014) which is a minimum of 5 times the number of indicators. The number of indicators from 4 variables is 25 indicators, so the number of samples is ($25 \times 5 = 125$) respondents. The sampling technique used is random sampling, namely the sampling of population members is carried out randomly by paying attention to the conditions in the population to be studied, each population has the same opportunity as the others to be selected as a sample member (Ferdinand, 2014).

### 3.5 Method of collecting data

The data used in this study, using secondary data and primary data. Secondary data is taken from statistical data of BPS Surabaya City Province East Java and from other reliable sources. The research theory study was also taken from several references from relevant previous research, from electronic data references and from Library references (Ghozali, 2015). While the primary data of the study uses data obtained from questionnaire data. The method of data collection is by using accidental sampling techniques (Ghozali, 2018).

### 3.6 Data Analysis Methods

Data analysis in this study uses a quantitative approach. Quantitative analysis is used to answer research problems by applying Partial Least Square (PLS) analysis (Hair & Brunsveld, 2019). PLS, as an alternative to Structural Equation Modeling which has a weak theoretical basis, can be used to confirm the theory (Hair et al., 2017). PLS is a method based on SEM (Structural Equation Modeling) and is used to handle complex relationships between variables, even with small sample sizes. The SEM method usually requires a minimum sample size of 100 (Ghozali & Latan, 2017).

### 3.7 Data Collection Instrument (Grid)

Table 1 shows the descriptions of the variables, indicators and item numbers.

**Table 1**
Research Instruments

| No | Variable | Indicator | Item No. |
|---|---|---|---|
| 1 | Social Media is a communication tool that supports various communication formats including text, images, and video, and supports real-time interaction between users (Kaplan and Haenlein 2014) | Engagement: The level of user involvement in social media activities, such as likes, shares, and comments. | SM1 |
| | | Content Generated: The volume and quality of content created and shared by users. | SM2 |
| | | Influence: The impact generated by activity on social media, such as increased visibility or reputation. | SM3 |
| | | Frequency of Usage: How often users access and interact on social media platforms. | SM4 |
| | | Interaction Quality: The type and depth of interactions taking place, such as one-way (e.g., status posts) or two-way (e.g., comments and replies) communication. | SM5 |
| | | Content Type: The type of content shared and consumed, such as text, images, videos, and links. | SM6 |
| | | Participation and Engagement: How active users are in participating in discussions, creating content, or collaborating with others. | SM7 |
| 2 | Big Data as very large and complex data that cannot be managed with traditional tools or methods (Viktor Mayer-Schönberger and Kenneth Cukier, 2013) | Volume: Refers to a very large amount of data. | BD1 |
| | | Velocity: Shows the speed at which data is generated, collected, and processed. | BD2 |
| | | Variety: Refers to the various types of data that exist, both structured (such as data in a relational database) and unstructured (such as text, images, videos, and sensor data). | BD3 |
| | | Veracity: which refers to the quality and accuracy of data. | BD4 |
| | | Value: which states that value is about the ability to gain valuable insights from the analyzed data. | BD5 |
| | | Variability: refers to fluctuations in data and the need to handle it consistently despite changes in data patterns and formats. | BD6 |
| 3 | Networking is an active and ongoing process that involves interactions between individuals or groups to build relationships that can provide benefits in the form of information, support, or business opportunities (Hargie and Dickson, 2004) | Relationship Quality: Measures the depth and strength of the relationship. | EN1 |
| | | Relationship Quantity: Measures the number of contacts in the network. | EN2 |
| | | Relationship to Resources: Measures the extent to which the network can provide access to required resources. | EN3 |
| | | Interaction Frequency: Measures how often interactions occur within the network. | EN4 |
| | | Network Diversity: Measures the diversity of relationships in a network. | EN5 |
| | | Network Power: Measuring how strong and influential a network is in a given context. | EN6 |
| 4 | Decision Quality is a decision that is timely and efficient, especially in stressful situations (Gary Klein, 2008) | Accuracy: How correct the decision is in the context of the available data and information. | DQ1 |
| | | Effectiveness: The ability of decisions to achieve set goals and solve existing problems. | DQ2 |
| | | Efficiency: How well decisions are made using available resources. | DQ3 |
| | | Stakeholder Satisfaction: The extent to which a decision meets the expectations and needs of the parties involved or affected. | DQ4 |
| | | Consistency: The ability of decisions to remain stable and consistent with existing policies or principles. | DQ5 |
| | | Adaptability: The ability of a decision to adjust to changing conditions or new information. | DQ6 |

## 4. Results

### 4.1 Outer Model Testing

PLS analysis begins by testing the Outer Model which measures validity through loading factors (Hair & Brunsveld, 2019). Indicators that have a loading factor value of less than 0.6 will be removed from the model (Hair et al., 2014). The results of the convergent validity test after the invalid indicators were removed can be seen in Table 2.

**Table 2**
Outer Model

| | Big Data | Decision Quality | Enhanced Networking | Social Media |
|---|---|---|---|---|
| BD1 | 0.719 | | | |
| BD2 | 0.710 | | | |
| BD3 | 0.862 | | | |
| BD4 | 0.934 | | | |
| BD5 | 0.880 | | | |
| BD6 | 0.895 | | | |
| DQ1 | | 0.701 | | |
| DQ2 | | 0.835 | | |
| DQ3 | | 0.705 | | |
| DQ4 | | 0.792 | | |
| DQ5 | | 0.780 | | |
| DQ6 | | 0.750 | | |
| EN1 | | | 0.842 | |
| EN2 | | | 0.888 | |
| EN3 | | | 0.801 | |
| EN4 | | | 0.791 | |
| EN5 | | | 0.886 | |
| EN6 | | | 0.897 | |
| SM1 | | | | 0.751 |
| SM2 | | | | 0.797 |
| SM3 | | | | 0.825 |
| SM4 | | | | 0.731 |
| SM5 | | | | 0.796 |
| SM6 | | | | 0.790 |
| SM7 | | | | 0.796 |

Source: Processed data, 2024.

The PLS analysis conducted begins with the Outer Model which measures the validity test with the loading factor. For indicators of each variable that are less than 0.6, the loading factor value will be dropped from the model. The results of the convergent validity test after invalid indicators are dropped from the model are in full in the table. Then a discriminant validity test was conducted. The Big Data value was obtained at 0.936; Decision Quality at 0.864; Enhanced Networking at 0.930; and Social Media at 0.892. So it can be concluded that the model has met discriminant validity.

**Table 3**
Construct Validity and Reliability

|  | Cronbach's Alpha | rho_A | Composite Reliability | AVE |
|---|---|---|---|---|
| Big Data | 0.915 | 0.936 | 0.933 | 0.702 |
| Decision Quality | 0.855 | 0.864 | 0.892 | 0.581 |
| Enhanced Networking | 0.924 | 0.930 | 0.941 | 0.726 |
| Social Media | 0.885 | 0.892 | 0.911 | 0.594 |

Source: Processed data, 2024.

According to Table 3, it can be seen that the Cronbach's Alpha value of all constructs is > 0.6, where the acceptable limit value of Cronbach's alpha is greater than 0.6 (Hair et al, 2011). Thus, all constructs have met construct reliability.

*4.2 Inner Model Testing*

The inner model describes the relationship between latent variables based on substantive theory. In evaluating the model using PLS, the first step is to look at the R-square value for each dependent latent variable. The results of the inner model test can be used to analyze the relationship between constructs by comparing the significance and R-square values of the research model (Ghozali & Latan, 2017).

**Table 4**
R-Squares Values

|  | R Square | Adjusted R Square |
|---|---|---|
| Decision Quality | 0.720 | 0.713 |
| Enhanced Networking | 0.883 | 0.881 |

Source: Processed data, 2024.

The R-square value of the Enhanced Networking variable of 0.883 in Table 4 shows that 88.3 percent of the Networking variable is explained by the Social Media and Big Data Utilization variables, while 11.7 percent is explained by variables outside the model. Likewise, the Decision Quality variable with an R-Square value of 0.720 means that 72 percent of its variability is explained by the Networking, Big Data, and Social Media Utilization variables, while 18 percent is explained by variables outside the model. The R-square value as shown in Table 4 is 0.883 and 0.720 which means moderate. The $Q^2$ value of structural model testing is done by looking at the $Q^2$ value (predictive relevance). To calculate $Q^2$, the formula can be used:

$$Q^2 = 1 - (1-R1^2)(1-R2^2) = 1 - (1-0.883)(1-0.720) = 0.967$$

The results of the $Q^2$ calculation show that the $Q^2$ value is 0.967. Based on Hair et al., (2012), the $Q^2$ value is used to assess how well the model produces the observed values and its parameter estimates. If the $Q^2$ value > 0, the model is considered good enough, while the $Q^2$ value < 0 indicates that the model has low predictive relevance. In this research model, the endogenous latent construct or variable has a $Q^2$ value > 0, so the predictions produced by the model are considered relevant

*4.3 Direct Effect Testing*

Hypothesis testing on the influence of the variables of Social Media Utilization, Big Data, Networking, Decision Quality is presented in Fig. 1. Hypothesis testing in the PLS method is carried out using simulations of each hypothesized relationship, in this case the bootstrap method is used on the sample. The bootstrap method also functions to minimize the problem of abnormality of the research data used. In this study, the T-table value with a significance of 5% has been previously determined, which is 1.657. All path coefficients have a statistical t value above 1.657.

**Table 5**
Direct Influence

|  | T Statistics | T Table | P Values | Information |
|---|---|---|---|---|
| Big Data → Decision Quality | 2.654 | 1.657 | 0.010 | Positive and Significant |
| Big Data → Enhanced Networking | 18.103 | 1.657 | 0.000 | Positive and Significant |
| Enhanced Networking → Decision Quality | 3.284 | 1.657 | 0.001 | Positive and Significant |
| Social Media → Decision Quality | 2.137 | 1.657 | 0.026 | Positive and Significant |
| Social Media → Enhanced Networking | 2.129 | 1.657 | 0.009 | Positive and Significant |

Source: Processed data, 2024.
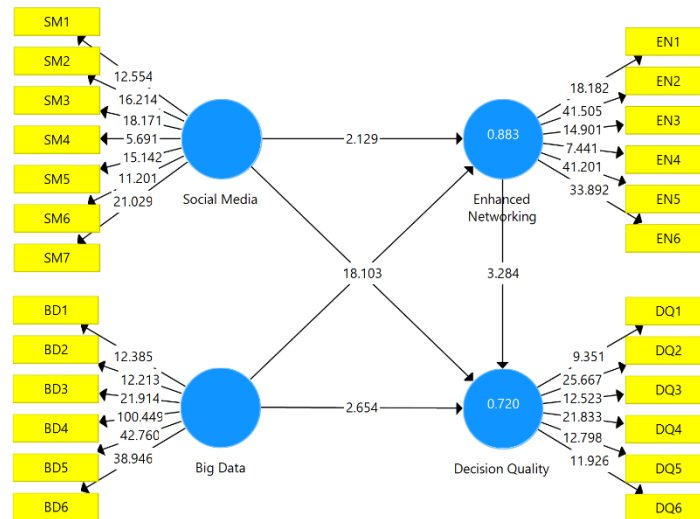
**Fig. 1.** t-Statistic Value of Path Analysis Model
Source: Processed data, 2024

The results of the path coefficient obtained in the first hypothesis between the Use of Social Media and Networking obtained a T Value Statistics As big as 2.129 ≥ 1.657 with a P-Value of 0.009 ≤ 0.05 significant, it is concluded that there is a significant influence between Social Media Utilization and Networking. A positive value on the path coefficient means that the better the Social Media Utilization, the better the Networking. The results of the path coefficient obtained in the second hypothesis between Big Data and Networking obtained a T value of Statistics As big as 18.103 ≥ 1.657 with a P-Value of 0.000 ≤ 0.05 significant, it is concluded that there is a significant influence between Big Data and Networking. A positive value on the path coefficient means that the better the Big Data, the better the Networking. The results of the path coefficient obtained in the third hypothesis between The Utilization of Social Media on Decision Quality obtained a T statistics Value of 2.137 ≥ 1.657 with a P-Value of 0.010 ≤ 0.05 significant, it is concluded that there is a significant influence between the Utilization of Social Media on Decision Quality. A positive value on the path coefficient means that the better the Utilization of Social Media, the better the Decision Quality. The results of the path coefficient obtained in the fourth hypothesis between Big Data and Decision Quality obtained a T Value Statistics As big as 2.654 ≥ 1.657 with a P-Value of 0.010 ≤ 0.05 significant, it is concluded that there is a significant influence between Big Data on Decision Quality. A positive value on the path coefficient means that the better the Big Data, the better the Decision Quality. The results of the path coefficient obtained in the fifth hypothesis between Networking and Decision Quality obtained a T Value Statistics As big as 3.284 ≥ 1.657 with a P-Value of 0.001 ≤ 0.05 significant, it is concluded that there is a significant influence between Networking and Decision Quality. A positive value on the path coefficient means that the better the Networking, the better the Decision Quality.

**Table 6**
Indirect Influence

|  | T Statistics | T Table | P Values | Information |
|---|---|---|---|---|
| Big Data → Enhanced Networking → Decision Quality | 2.986 | 1.657 | 0.003 | Positive and Significant |
| Social Media → Enhanced Networking → Decision Quality | 2.121 | 1.657 | 0.009 | Positive and Significant |

Source: Processed data, 2024.

From the results of the Specific Indirect Effects analysis on the sixth hypothesis using SmartPLSV.3.2.9 as in table 6 Specific Indirect Effects above, it was found that the Relationship between Social Media Utilization and Decision Quality through Networking mediation obtained a T statistics value = 2.121 ≥ 1.657, P-Value 0.009 ≤ 0.05 is positive. A positive value on the path coefficient means that the better the Utilization of Social Media, the better the Decision Quality through Networking. In addition, the results of the Specific Indirect Effects analysis on the seventh hypothesis using SmartPLSV.3.2.9 as in Table 6 Specific Indirect Effects above found that the Relationship between Big Data and Decision Quality through Networking mediation obtained a T Statistics value = 2,986 ≥ 1.657, P-Value 0.003 ≤ 0.05 is positive. A positive value on the path coefficient means that the better the Big Data, the better the Decision Quality through Networking.

## 5. Discussion

### 5.1  The Influence of Social Media Utilization on Networking

Based on the findings of the research results, the first hypothesis can be interpreted that the Utilization of Social Media can have a positive and significant influence on Networking in the Civil Service of Surabaya City, East Java Province. This means that the increasing Utilization of Social Media will increase Networking in the Civil Service of Surabaya City, East Java

Province. This research is confirmed by research conducted by Ajibade & Zaidi (2023); Alalawneh et al., (2022); Jiang et al., (2024); and Sumba Nacipucha et al., (2024) which states that the use of social media can significantly influence networking. In addition, the use of social media by government employees has a significant influence in increasing networking or professional networks (Pellegrino & Abe, 2023). Expanding Reach and Access to Information Social media allows government employees to expand their networks quickly and easily (Moughal et al., 2023). With platforms like LinkedIn, Twitter, or Facebook, employees can connect with colleagues, experts, and stakeholders across different agencies or regions (Ashraf et al., 2021). The reach of information becomes broader, allowing employees to gain deeper insights into policies or best practices from a variety of sources (Shafiq & Parveen, 2023). Improving Inter-Agency Collaboration Social media facilitates communication between employees across agencies, both at the local and national levels, which improves collaboration and coordination (Khan et al., 2021). Platforms like WhatsApp or Telegram are also often used by government employees to form more informal yet productive discussion groups. This allows employees to collaborate on formulating policies, sharing information, and resolving issues quickly without the need for intensive physical meetings (Ajibade & Zaidi, 2023). Facilitating Access to External Experts and Resources Through social media, government employees can more easily access experts, academics, or practitioners in related fields who are outside the bureaucratic environment (Xie et al., 2021).

This improves the quality and relevance of the information obtained, and enriches the perspectives in the decision-making process (Saeri et al., 2024; Suseno & Basrowi, 2023). Government officials can establish direct relationships with professional communities, both domestically and internationally, to gain new insights on important issues (Alalawneh et al., 2022). Increasing Participation and Transparency Social media not only helps in communication between employees, but also opens up a wider space for dialogue with the community (Song et al., 2023). Government officials can use the platform to share policy information, receive input from the public, and respond to public questions more openly (Nuryanto et al., 2024). This helps build networks with non-government stakeholders such as NGOs, academics, and local communities, resulting in more participatory and inclusive decisions (Abdulkareem et al., 2022). Supporting Professional Development Social media also helps government employees develop their skills and insights through continuous learning (Al Halbusi et al., 2024). Many training resources, seminars, or workshops are held virtually through social media, which provides an opportunity for employees to continue updating their knowledge and expanding their professional networks (Jiang et al., 2024). Accelerating the Spread of Information and Innovation Social media accelerates the process of disseminating information relevant to the work of government employees (Sarwar et al., 2023). Innovations or new approaches in public administration that have proven effective can be quickly shared through social networks, encouraging wider adoption across government organizations (Ramzan et al., 2023). Overall, the use of social media supports the improvement of government employee networking by expanding access to information, strengthening cross-sector collaboration, increasing participation, and supporting their professional development. However, this also requires attention to the ethics of use and data security so that the information shared remains safe and professional (Alhamami et al., 2023). This study provides the meaning that in an effort to improve Networking, it is also necessary to improve the Utilization of Social Media in the Civil Service of Surabaya City, East Java Province. If the Utilization of Social Media in Government can be improved, it will have a significant impact on Networking.

*5.2 The Impact of Big Data on Networking*

Based on the findings of the research results, the second hypothesis can be interpreted that Big Data can have a positive and significant effect on Networking in the Civil Service of Surabaya City, East Java Province. This means that the increasing Big Data will increase Networking in the Civil Service of Surabaya City, East Java Province. This research is confirmed by research conducted by D'Alberto & Giudici (2023); Himeur et al., (2023); Kaleem et al., (2023); and Rithani et al., (2023) which states that Big Data is able to significantly influence Networking. Other opinions also explain that big data has a significant influence in increasing networking among government employees (Kaleem et al., 2023). Networking here does not only include relations between employees, but also cross-agency collaboration, partnerships with external parties, and better interaction with the community (Bag et al., 2024). Big data provides access to a variety of sources of information in large quantities that are impossible to process manually (Lăzăroiu et al., 2022). This data covers a wide range of areas, from community behavior, policy trends, to cross-agency operational analysis .(Jain & Paikaray, 2024). Government officials can use this data to understand the needs and dynamics within their organization or other agencies, making it easier for them to collaborate and form stronger networks (Ali, 2024). Big data also facilitates cross-agency collaboration through analytics platforms that allow employees from various agencies to share data and information more efficiently (Alahmad et al., 2023). Big data provides in-depth analysis that helps government officials make more data-driven decisions, including determining networking strategies (Qi et al., 2023). With big data, employees can analyze information related to interaction patterns between employees, the most effective communication channels, and which agencies or individuals are most influential in the decision-making process (Agrawal et al., 2022). Thus, government officials can use this information to improve the way they build networks, both internally and externally (Bhatti et al., 2022). Big data can also predict future needs in cooperation, so that ASN can be proactive in building relevant relationships before those needs arise (Jum'a et al., 2024). Through big data analysis, government officials can understand dynamics outside government, such as social, economic, and political trends, which can be used to strengthen external networks (Calic & Ghasemaghaei, 2021). Data from social media platforms, public surveys, and news reports can be analyzed to identify population groups or sectors that the government needs to reach (Ashaari et al., 2021). Big data allows ASN to see public interaction patterns and community needs, which can then be integrated into their networking strategy (Dai et al., 2020). Big data also accelerates the process of knowledge exchange among government

employees, both at the central and regional levels (Song, 2024). With big data technology, employees can more easily access information relevant to their work and share analysis results with colleagues throughout Indonesia (Arshad et al., 2023). This helps build a strong knowledge network, where employees from different regions or agencies can share insights based on accurate and up-to-date data (Abkenar et al., 2021). Big data-based platforms such as the Electronic-Based Government System (SPBE) implemented in several countries also facilitate the exchange of information between agencies in a faster and more structured manner (Al-Jumaili et al., 2023). This system allows data generated from various agencies to be connected and accessible to other employees, which ultimately encourages the formation of a more effective work network (Ochuba et al., 2024). In the context of government, big data can also support increased networking at the international level (Mirzaei Somarin et al., 2018). Government officials who have access big data can analyze global information about public policies, geopolitical changes, and government initiatives in other countries (Li et al., 2024). This allows ASN to build relationships with government employees abroad or international organizations with a stronger knowledge base (Fosso Wamba et al., 2024). The influence of big data on improving networking among government employees is very significant, especially in terms of accelerating access to information, increasing the efficiency of cross-agency collaboration, and supporting smarter decision making (Chen et al., 2022). Through the use of big data, government officials can build stronger networks, both at national and international levels, and strengthen collaboration based on in-depth and detailed data (Mirzaei Somarin et al., 2018). This study provides the meaning that in an effort to improve Networking, it is also necessary to improve Big Data in the Civil Service of Surabaya City, East Java Province. If Big Data on Government Employees can be improved, it will have a significant impact on Networking.

## 5.3 The Influence of Social Media Utilization on Decision Quality

Based on the findings of the research results, the third hypothesis can be interpreted that the Utilization of Social Media can have a positive and significant influence on the Quality of Decisions in the Civil Service of the City of Surabaya, East Java Province. This means that the increasing Utilization of Social Media will increase the Quality of Decisions. This research is confirmed by research conducted by Ali & Shaiq (2023); Nikseresht et al., (2024); Suganda & Arrifianti (2023); and Todisco et al., (2021) which states that the Utilization of Social Media can significantly influence the Quality of Decisions. The use of social media by government employees, including State Civil Apparatus (ASN), has a significant influence on the quality of the decisions they make (Fontenot et al., 2024; Shokouhyar & Shahidzadeh, 2024). Social media allows government employees to gain quick access to the latest information, both from within and outside the country (Al-Rahmi et al., 2021; Ervinna et al., 2023). Through platforms such as Twitter, Facebook, and LinkedIn, ASN can follow public policy trends, regulatory changes, and global events relevant to their work (Gultom et al., 2024). With broader and real-time information, decisions taken can be more responsive to the latest conditions and developments (Ashraf et al., 2023; Cheng et al., 2024). Social media also functions as a communication channel between government officials and the public (Fontenot et al., 2024). Government employees can use social media to listen directly to aspirations, complaints, and input from the public regarding various public issues (Nuryanto et al., 2024). This community involvement provides a broader perspective and helps ASN to understand the impact of policies from the perspective of citizens (Almarri, 2024).

Social media facilitates communication and collaboration between government employees from various agencies and sectors (Nurhadi et al., 2023). With social media, ASN can share information, ideas, and solutions in dealing with complex problems more quickly (Junaidi et al., 2024b). This minimizes information silos and encourages more integrated and holistic decision making (Luo et al., 2024). Social media also increases the accountability of government officials in decision making (Shokouhyar & Shahidzadeh, 2024). Every policy or decision taken can be quickly disseminated and receive a response from the wider community (Nugroho & Angela, 2024). Criticism and input from the public on social media puts pressure on ASN to make more transparent, accountable and responsible decisions (Prastiwi et al., 2023). With social media, ASN can monitor public opinion and trends that develop in society (Chahdi et al., 2024). Utilizing data from social media can provide a clearer picture of people's preferences, concerns, or demands (Vieira et al., 2023). This allows ASN to conduct more in-depth analysis and better predictions regarding the impact of policies to be taken (Bisht & Pal, 2023). ASN can also utilize social media to develop their knowledge and skills through access to various online resources such as discussion forums, articles, research, and webinars (Romadhoni et al., 2023). This supports the improvement of ASN capacity in making better and knowledge-based decisions (Agyapong & Yuan, 2022). Overall, the use of social media can have a positive impact on the quality of government employee decisions by increasing access to information, encouraging community involvement, strengthening inter-agency collaboration, and increasing accountability and transparency (Rini, 2021). However, to maximize its benefits, it is necessary to increase digital literacy and better information management so that the decisions taken are truly high quality and on target (Ali et al., 2023). This study provides the meaning that in an effort to improve the Quality of Decisions, it is also necessary to increase the Utilization of Social Media in the Civil Service of Surabaya City, East Java Province. If the Utilization of Social Media in Government Employees can be increased, it will have a significant impact on the Quality of Decisions.

## 5.4 The Impact of Big Data on Decision Quality

Based on the findings of the research results, the fourth hypothesis can be interpreted that Big Data can have a positive and significant effect on the Quality of Decisions in the Civil Service of Surabaya City, East Java Province. This means that the

increasing Big Data will increase the Quality of Decisions. This research is confirmed by research conducted by Didas et al., (2024); Haverila et al., (2024); Khan & Fatima (2024); and Torre et al., (2022) which states that Big Data is able to significantly influence Decision Quality. Big data has become one of the key factors in improving the quality of decision making in the government sector (Hosen et al., 2024; Khong et al., 2023). Big data enables governments to make decisions that are based more on concrete evidence than on subjective assumptions or experiences (Khong et al., 2023). Government officials can access, analyze, and use large amounts of data from various sources, such as demographic statistics, economic data, and environmental data, so that decisions are made more accurate and relevant (Janssen et al., 2017). The use of big data enables the decision-making process to be faster and more efficient (Al-Okaily & Al-Okaily, 2024). Before the existence of big data technology, the process of analyzing large amounts of data required a lot of time and resources (Korayim et al., 2024). However, with advanced algorithms and analytical technologies, data can be processed in less time and provide faster insights to government officials (Lindebaum et al., 2024; Pansara, 2023). One of the main advantages of big data is its ability to predict and analyze future trends (Taherdoost, 2023). By analyzing patterns from existing data, the government can predict social, economic, and environmental developments (Abu-AlSondos, 2023). Government officials can use these predictions to design more responsive and adaptive long-term policies (Ghasemaghaei & Turel, 2023). Big data also plays a role in increasing transparency and accountability in decision making (Torre et al., 2022).

Government officials can use open data to share information with the public, so that people can monitor and evaluate decisions made by the government (Haverila et al., 2024). Accurate and widely accessible data enables more effective public oversight of public policies (Lindebaum et al., 2024; Pansara, 2023). Big data enables the government to understand the specific needs of different groups of people (Aseeri & Kang, 2023). Data obtained from various sources, such as surveys, transactions, and digital activities, allows governments to adjust policies or public services to be more relevant to each individual or group (Alganb & Alshahrani, 2023). This improves the quality of public services provided and ensures that decisions are more targeted. Through big data analysis, government officials can identify potential problems before they develop into crises (Khan et al., 2024)For example, analysis of economic and social data can help governments recognize signs of economic slowdown or potential social conflict (Khan & Fatima, 2024). With this information, the government can respond more quickly and create more effective mitigation policies (Franke & Hiebl, 2022; Liu et al., 2023). Overall, big data has a significant impact on improving the quality of decisions among government officials (Wang et al., 2024). By utilizing big data, the government can make more accurate, efficient, and proactive decisions, and can better respond to community needs. However, to maximize the potential of big data, investment is needed in technological infrastructure, human resource training, and appropriate regulations to protect data privacy and security (Chatterjee et al., 2023; Ragazou et al., 2023). This study provides the meaning that in an effort to improve the Quality of Decisions, it is also necessary to improve the quality of Big Data. If Big Data on Government Employees can be improved, it will have a significant impact on the Quality of Decisions.

## 5.5 The Influence of Networking on Decision Quality

Based on the findings of the research results, the fifth hypothesis can be interpreted that Networking can have a positive and significant influence on the Quality of Decisions in the Civil Service of Surabaya City, East Java Province. This means that the increasing Networking will increase the Quality of Decisions. This research is confirmed by research conducted by El Jaouhari et al., (2023); Neiroukh et al., (2024); Nikseresht et al., (2024); and Virmani et al., (2023) which states that Networking is able to significantly influence Decision Quality. Networking, or building a work network, plays a major role in increasing collaboration and information exchange between individuals and agencies (Arjang et al., 2024; Virmani et al., 2023). In government employees, increased networking can have a significant impact on the quality of decisions taken (Saflor et al., 2024). Good networking allows government employees to access information from various sources quickly and in a timely manner (Razavi Hajiagha et al., 2022). Through relationships with co-workers, experts, or other agencies, employees can obtain more diverse data and input (Lissillour et al., 2023), so that the decisions taken become richer in perspective (Farida et al., 2024; Liu et al., 2024). Effective networking encourages collaboration between various government agencies or even the private sector and civil society (Mohammed & Yaqub, 2024). This cross-agency collaboration enables more holistic integration of information and reduces the risk of decision-making that only considers a single or sectoral perspective (Huda, 2023). Government employees who are active in networking are often exposed to new knowledge and experiences from colleagues or other agencies (Moch, 2024). Through informal discussions, seminars, or professional forums, they can learn new approaches that have been successfully applied elsewhere (Tursunbayeva et al., 2017).

This knowledge can be applied in a local context to improve the effectiveness of decisions taken (Al-aloosy et al., 2024; Singh & Gupta, 2024). With strong networking, government employees can respond to changing situations more quickly (Wang et al., 2024; Wawak et al., 2023). Information from the network can provide early warning signals about potential problems or opportunities that may occur, so that decisions can be taken more quickly and in a timely manner (Main et al., 2024). Extensive networking also allows government officials to involve more stakeholders in the decision-making process, including the community, the private sector, and non-governmental organizations (Gallegos et al., 2024; Wang & She, 2024). This greater involvement of stakeholders results in decisions being made that are more representative, because they take into account input from various parties affected by the decision (Jalali et al., 2022; Jordão & Novas, 2024). Increased networking has a very significant positive influence on the quality of decisions made by government employees (Xing et al., 2024). With a broad network, government employees have better access to information, more productive collaboration, and increased transparency

and innovation (Singh et al., 2024). All of these factors contribute to better, more data-driven decision-making that is more responsive to the needs of the Community (Jordão & Novas, 2024; Tariq et al., 2024). This study provides the meaning that in an effort to improve the Quality of Decisions, it is also necessary to improve Networking in the Civil Service of Surabaya City, East Java Province. If Networking in Employees can be improved, it will have a significant impact on the Quality of Decisions.

*5.6 The Influence of Social Media and Big Data Utilization on Decision Quality through Networking*

Based on the findings of the research results, the sixth and seventh hypotheses can be interpreted that the Utilization of Social Media and Big Data can have a positive and significant effect on the Quality of Decisions through Networking in the Civil Service of Surabaya City, East Java Province. This means that through Networking mediation, the Utilization of Social Media and Big Data has a significant positive impact on the Quality of Decisions in the Civil Service of Surabaya City, East Java Province. The findings of this study indicate that Networking significantly improves Decision Quality by moderating the relationship between Social Media Utilization and Big Data on Decision Quality in Civil Servants of Surabaya City, East Java Province. This also shows how Networking in Civil Servants of Surabaya City, East Java Province can significantly influence the relationship between Social Media Utilization and Big Data on Decision Quality, and the type of mediation carried out is partial mediation, with the type of competitive partial mediation can have an impact both directly and indirectly on Decision Quality in Civil Servants of Surabaya City, East Java Province. This shows that the independent variable has a strong ability both directly and indirectly on the dependent variable, and competitive partial mediation occurs if the coefficient is positive. Through the increased use of Social Media and Big Data, Networking can be significantly improved. The resulting quality of decisions can bring broad benefits, such as increased public satisfaction, reduced operational costs, efficient use of resources, and increased effectiveness of public services as a whole. Therefore, it is important for the government to pay attention to the use of Social Media and Big Data in order to achieve quality decisions through optimal operational performance.

## 6. Conclusion

The purpose of this study is to analyze the Influence of Social Media and Big Data Utilization on Networking and its impact on Decision Quality in Civil Servants of Surabaya City, East Java Province, Indonesia. Based on the discussion of the findings in this study, it can be concluded that the Utilization of Social Media and Big Data directly has a positive and significant effect on Networking in Civil Servants of Surabaya City, East Java Province; in addition, the Utilization of Social Media, Big Data and Networking directly has a positive and significant effect on Decision Quality in Civil Servants of Surabaya City, East Java Province; Networking is able to mediate the Utilization of Social Media and Big Data on Decision Quality in Civil Servants of Surabaya City, East Java Province, Indonesia. So it can be concluded that in an effort to improve the Quality of Government Employee Decisions in Indonesia, important factors that must be improved include the Utilization of Social Media, Big Data, and Networking.

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