

BAB I

INTRODUCTION

1.1 Background

As science and technology continue to advance at an accelerating rate, Indonesia continues to implement a variety of innovations of technology into its government system and functions, which are also evolving. The significance of communication and information technology is progressively growing across all spheres of human existence. The notion of an intelligent city, also referred to as a smart city, is beginning to emerge as a strategic approach to urban planning, mirroring the accelerated advancements in technology. Through providing indicators based on information and communication technology that are applicable throughout the region, the smart city concept transforms the city into a highly developed modern center. The smart city concept has commenced its extensive adoption in major urban areas to facilitate prompt and precise information retrieval for citizens (Surya 2021).

The components of a smart city are government, technology, society, and the environment. An endeavor to revolutionize public services is the e-service concept, which integrates technology into public services within the framework of a smart city. Smart environment, smart people, and smart governance pertaining to participation are the primary components of a smart metropolis. Implementing intelligent and efficient infrastructure revitalization measures in order to maintain and improve the quality of life for the city's inhabitants.

Starting building e-government in order to establish a smart city, beginning with the most straightforward technology to support a smart city.

Public services serve as a significant metric for evaluating the performance of the central and regional governments. The government is an entity that employs technology to fulfill its responsibility of overseeing and delivering high-quality public services, particularly in the era of the 4.0 revolution (Mutiarin, Sudiro, and Misran 2021). Smart cities are an element of urban governance that aims to foster community and government-to-government communication through the implementation of innovative technologies and networks (Pramesti, Kasiwi, and Purnomo 2020). The provision of public service serves as a framework through which the government executes the virtues of sound governance by ensuring that the efficacy of its own operations is utilized to meet the community's public service requirements. The proliferation of information and electronic technology-driven public service advancements has commenced to expand significantly across multiple regions (Ikrimah 2021).

The government undertakes development initiatives in numerous areas pertaining to the public service system and in government agencies located in the regions, with the aim of ensuring that these entities effectively execute their responsibilities and functions in alignment with contemporary developments. Bureaucratic reform constitutes a mode of innovation within government agencies. Bureaucratic reform, as viewed through the lens of public administration, entails implementing administrative reform, which is defined as

an effort to enhance the bureaucratic process in order to improve public service (Nurjanah, F, and Kasiwi 2021). The government has implemented electronic-based government in an effort to increase the efficacy and efficiency of services, as outlined in Presidential Regulation No. 95 of 2018 on Electronic-Based Government Systems. This is one form of innovation employed by the government to reform bureaucracy. The utilization of electronic-based government systems, commonly referred to as e-government, involves the application of communication and technological services to enhance the quality of public services (Muhammad 2021).

The primary objectives of e-government are to increase public confidence in government services, particularly bureaucracy, by fostering greater efficiency, effectiveness, transparency, and accountability in government administration. According to Indrajit in Ramadhan (Muhammad 2021), the advantages derived from the adoption of e-government encompass enhancing the caliber of government services provided to stakeholders in terms of efficiency and effectiveness, substantially diminishing overall administrative expenditures, and establishing an innovative a community environment which can quickly and accurately handle various problems in accordance with global developments and prevailing trends. Implementing a smart city program is one method by which electronic-based government (e-government) can be implemented. Integrated with the internet network, the smart city program in issue is a system for the development of municipalities. By enhancing global information infrastructure, fostering greater citizen participation, and

introducing novel services, e-governance offers fresh prospects for enhancing the caliber of government (Mariano 2019).

The implementation of E-Government in Indonesia has commenced through the release of Presidential Instruction No. 3 of 2003. This directive outlines the specific obligations of government entities at both the federal and regional levels, while also highlighting the significance of online government services inside the country. The advancement of e-government entails the implementation of electronic systems in government administration with the aim of enhancing the efficacy and efficiency of public service delivery. The implementation of e-government has led to the reorganization of management systems and work processes within the government sector, with a focus on maximizing the utilization of emerging information technology. The implementation of INPRES No.3 has facilitated the development of fundamental applications, including e-billing, e-procurement, and e-reporting, which have the potential to be employed across all government websites (Dwika 2016).

One of the characteristics of smart cities explained by Giffinger (2007) through one of his writings about smart cities in a number of large cities in Europe, which can illustrate the city's ability to manage its potential in solving a problem, namely the smart economy. Smart economy is one way to manage the economic sector intelligently, which aims to create an ecosystem in the economic sector in regions that face challenges during times of disruption that require speed in adapting. Smart economy can also mean a good economic level, utilizing the natural resources and potential of the city efficiently and effectively.

Economic growth is one indicator to measure the level of development in an area in a certain time period so that it can increase people's income and welfare overall (Umam and Mafruhah 2022).

The smart economy concept involves a system for forming innovation clusters and togetherness between companies, research institutions, and citizens in efforts to develop, implement, and even continue to promote innovation through networks. Smart economics develops an economic network based on a cooperative model of production, distribution, and consumption. The smart economy concept has several characteristics, where a city that implements a smart economy is able to apply innovation and economic knowledge to increase productivity effectively and efficiently. As well as being able to implement economic learning, carry out digital economic activities, and be able to compete globally (Wahyuni Arsyad et al. 2022).

Modern technology developments have an impact on Indonesia's payment system, potentially reducing the time and effort needed to make payments. Globally, the existence of information technology has altered people's lifestyles, particularly in the areas of financial traffic, trade in commodities and services, and communication. The global community's use of digital payment methods for transactions has changed as a result of the internet's widespread adoption and the capabilities of gadgets. The advent of digitalization has led to a heightened level of public consciousness regarding the advantages associated with digital payment systems. The public has become more familiar with digital payments since the Covid-19 event forced some to work from home. There is an

optimistic outlook regarding the potential of digital payment technology to revolutionize the financial sector through the provision of appealing attributes such as user-friendliness, convenience, and expedited payment processing (Lestari et al. 2021).

The development of payment systems never stops in this day and age, electronic money is well-known. The payment system that does not include physical currency is commonly referred to as digital payment. In the context of Indonesia, digital payment has emerged as a convenient solution for individuals in their hectic daily routines. In contemporary times, a wide range of payment requirements can be fulfilled through the utilization of diverse payment methods such as debit cards, credit cards, mobile banking, electronic banking, PayPal, prepaid cards, and other similar options. One advantage of utilizing electronic money for transactions is the potential to enhance convenience and expediency in conducting financial exchanges. Digital payment applications have gained significant popularity among the general population. Various examples of these programs, such as OVO, Go-Pay, and Dana, are frequently used and widely available within the community. This payment program is used to streamline transactions for a variety of purposes, including online motorbike taxi payments, phone and electricity bill payments, PDAM payments, electricity payments, and many more taxes (Sam'un Jaja Raharja et al. 2020).

The smart city program in Indonesia was first launched on November 15, 2017. After this smart city program began to be intensified in Indonesia, Tulungagung Regency began to implement and implement electronic-based

government as stated in Tulungagung Regent Regulation No. 59 of 2022 concerning "implementation of an electronic-based government system electronics in the Tulungagung Regency government environment" which was established with the aim of providing references, guidelines and guidelines for implementing electronic-based government systems within the Regional Government. E-Government is implemented with the principles of effectiveness, integration, continuity, efficiency, accountability, interoperability, and security (BPK 2022).

East Java is divided into 29 districts and 9 cities with all district and city governments having implemented e-Government as a form of innovation renewal for the community (Novitasari 2018). There is the implementation of e-government in the context of realizing a smart city in the Regional Government of Tulungagung Regency in providing this public service innovation through the launch of the Tulungagung pay application. Easy and fast access to payments is currently people's dream, so many people use non-cash payments in every transaction. Seeing current technological developments, the Tulungagung Regency Government (Pemkab) through PT BPR Bank Tulungagung (Perseroda) has issued a digital financial system product called Tulungagung Pay. PT BPR Bank Tulungagung also collaborates with a third party as a vendor for issuing e-money and SpeedCash, namely PT Bima Sakti Multi Sinergi.

In Arahjatim (Danang 2022) it was explained that on August 8, 2022, the Tulungagung Regency Government carried out the first soft launch of the digital financial system which was inaugurated directly by the Regent of Tulungagung.

The government is collaborating with the PT BPR Tulungagung which is aimed at providing convenience for financial transactions. Tulungagung Pay is an application for paying or purchasing Biller services electronically using SpeedCash Electronic Money created by PT Bimasakti Multi Sinergi as the publisher of SpeedCash electronic money. In accordance with Tulungagung Regency Regional Regulation (PERDA) Number 13 of 2018 concerning regional limited liability companies, BPR Tulungagung states, "that in order to encourage accelerated growth and development of the regional economy and increase regional original income, it is necessary to improve banking services," in which the People's Credit Bank (BPR) Tulungagung which is called PT BPR Bank Tulungagung (Perseroda) is a Tulungagung Regional Owned Business Entity whose capital is partially owned by the region.

The launch of the Tulungagung pay application, which is a non-cash payment application, makes online purchases and transactions easier, such as making electricity token payments, purchasing credit, paying telephone bills, purchasing plane tickets and train tickets, paying taxes, and many other functions in the Tulungagung pay application. Small and Medium Enterprises (SMEs) in Tulungagung can also register their businesses on the Tulungagung Pay application to get QRIS scan-based payment services. It is hoped that with this QRIS, Micro, Small, and Medium Enterprises (MSMEs) can easily develop their trade innovations by utilizing technology through the Tulungagung Pay Application. The Tulungagung Pay application can be used by people outside Tulungagung for payment transactions via QRIS. Users of the Tulungagung Pay

application are individuals or legal entities, who have previously registered with the Tulungagung Pay application which can be obtained via the Google Play Store or via the Tulungagung Pay website. Of course, this application can not only be used by the people of Tulungagung Regency but can be used by people outside Tulungagung Regency by simply downloading the application and then registering first.

The reason for choosing this problem is that this topic is interesting to research because Tulungagung Regency was the first to launch this electronic payment application to meet the needs of the community in this digital 4.0 era. Therefore, it is necessary to conduct research on this matter to find out how to implement the Tulungagung pay application in the context of implementing e-government for the realization of a smart city. This research can be used as a reference for the Tulungagung Regency Regional Government in evaluating the performance of the Tulungagung Pay application, whether it is running as desired or not.

1.2 Research Question

Looking at the things described in the background, a problem is formulated, namely:

1. To what extent has the implementation of the Tulungagung Pay application in Tulungagung Regency gone as desired by the Tulungagung Regency Government?
2. What factors influence the success and challenges to implementing of the application?

1.3 Research Objective

Based on the background and problem formulation above, this research aims to:

1. To see and analyze the implementation of the Tulungagung pay application in the realization of a smart city.
2. To analyze the success factors and challenges to the implementation of the Tulungagung pay application in Tulungagung Regency.

1.4 Research Benefit

The expected benefits of this research from the entire series of research activities and research results are as follows:

1. Theoretical Benefits

It is hoped that this research can provide scientific contributions in the fields of social and political science. Apart from that, this research can add source material for Government Science, especially studies regarding matters related to the implementation of smart cities.

2. Practical Benefits

i. For Students

For students, the benefits of this research are to add, deepen, and expand knowledge regarding technology-based public service innovation in the realization of smart cities and can be used as a reference for further research related to smart cities.

ii. For Lecturers

For lecturers or educators, this research is useful as data and information regarding technology-based public service innovation as the embodiment of a smart city in completing final assignments.

iii. For Readers

For readers or the public, this research is expected to provide input so that readers or the public can know and apply the digital payment application for their daily needs.

iv. For Government

For the government, this research is useful as reference material to review how the smart city program is implemented through the launch of the Tulungagung pay application in the context of realizing a smart city. It can be used as a reference to further improve the quality of service to the community to support community needs in this era of technology 4.0.

1.5 Literature Review

Previous research is the basis for research as a reference in enriching theory in research. Previous research can also help in providing studies that are in line with the research being conducted so as to increase insight and guide the direction in which the research is formulated. This research focuses on analyzing the implementation of the Tulungagung Pay application to create a smart city by the Regency Government in collaboration with PT Bank Perkreditan Rakyat Tulungagung.

This research uses program implementation theory by Charles O. Jones in the digital innovation journal in implementing the use of the SISKEUDES application which explains that program implementation is one component in a policy to achieve goals. Program implementation is the steps in implementing an activity in an effort to achieve the goals of the program. Policy implementation consists of three main activities that are very important, namely organization, interpretation, and application (Nadaa and Priyanti 2023). Based on this theory, things are relevant to the research topic of implementing the Tulungagung Pay application to achieve the welfare of the people of Tulungagung Regency. From several previous studies, several research titles were found that were relevant to the title formulated by the researcher. However, the researcher only took a few references which were used as study material in compiling this research. The following are some previous research from theses and journals related to this research:

1. Research conducted by Debrina Nada and Evi Priyanti in 2023 entitled "Digital innovation in implementing the use of the SISKEUDES application" discusses the application of a financial management system designed by the Ministry of Home Affairs together with the Financial and Development Supervisory Agency which is useful in facilitating the performance of village officials in the village financial reporting process with the application name SISKEUDES (Nadaa and Priyanti 2023).
2. Research conducted by Ralf Martin Soea 1 and Olga Mikheeva in 2017 entitled "Combined Model of Smart Cities and Electronic Payments"

discusses the relationship between smart cities and electronic payments by looking at countries in East Asia consisting of Singapore and Hong Kong, as well as Northern Europe consisting of Tallin and Helsinki. These two cities have a high level of digitalization. The relationship between smart cities and electronic payments can be a useful tool for analyzing the level of city intelligence. Digitalization of payments alone is not enough and is a necessary condition for realizing smart cities (Soe and Mikheeva 2017).

3. Research conducted by Dini Amalia et al in 2022, entitled "Implementation of a Smart City in the City of Surabaya" which discusses the Surabaya City Government supporting and educating the people of Surabaya to build a smart city management system. The smart city concept used by the Surabaya City Government is to deliver programs that stimulate the community and enable them to have a synergistic impact in providing intelligent human resources. The large number of people in the city of Surabaya who are technologically literate provides an opportunity to be able to implement the smart city concept through several policies and development programs (Amalia and Dkk 2021).
4. Research conducted by Olivia Tyas Ardianti in the year 2020 entitled "Analysis of Regional Tax Service Innovation through the EPPSON Application (Electronic Regional Tax Payment Solo Destination Application) in the City of Surakarta" discusses the success of public

service innovation through the EPPSON application to make it easier for the people of Surakarta City to get regional tax services, but the development of tax service innovation has not gone well due to the lack of human resources who understand IT. So, the government must improve the quality of human resources to be able to develop tax service innovations to make them even better (Tyas 2020).

5. Research conducted by Jefry Trantang et al in 2017 entitled "Development of Digital Payment Systems in the Era of Industrial Revolution 4.0 in Indonesia" which discusses technological advances in the digital economic era (industrial revolution 4.0), especially in the increasingly rapid development of digital payment systems. The presence of a digital payment system does not mean eliminating the existence of cash, but the existence of this digital payment system can minimize the occurrence of inflation due to the large amount of money circulating in society (Tarantang et al. 2019)
6. Research conducted by Sa`mun Jaja Raharja et al in 2020 entitled "Digital Payment as an Enabler for Business Opportunities: Go-Pay Case Study" discusses the Go-Pay application opening up business opportunities that function as a digital payment solution and opens new economic opportunities. The Go-Pay application allows consumers and traders to enter a wide market and provides access to various corners of the market. The existence of digital payments is a solution for

consumers and traders to use technology to buy and sell goods and services (Sam'un Jaja Raharja et al. 2020).

7. Research conducted by Yasinta Maulida Rohmah and Nila Tristiarini in 2022, entitled "The Influence of the E-Money Payment System in the Digital Era in the Midst of the Covid-19 Outbreak: Case Study in Semarang Community" which discusses the spread of the Covid-19 virus which requires people keep their distance from each other, and this affects the use of electronic money causing people to no longer use cash. This research explains the benefits of convenience and the security and risk effects of electronic payment systems in the digital era amidst the COVID-19 outbreak (Rohmah and Nila 2021).
8. Research conducted by El Syabrina et al in 2022, entitled "Readiness to Implement a Non-Cash Waste/Cleaning Service Levy (RPP/K) Payment System" which discusses the Pekanbaru City Government optimizing the Waste/Cleaning Service Levy (RPP/K) through the non-cash payment system. Readiness The Pekanbaru City Government has succeeded in implementing a non-cash RPP/K payment system, but in implementing the payment system, community readiness needs to be increased further through gradual socialization (Syabrina and Dani, Risqiana, Afriyanni 2022).
9. Research conducted by Dessy Novitasari in 2018, entitled "Elements of E-Government Success in the Implementation of E-Retribution at the Blambangan Market, Banyuwangi Regency" which discusses market E-

Retribution which is an e-Government application by the Banyuwangi Regency Government as a public service innovation to the community or traders throughout the Banyuwangi Regency Regional Market. This e-Retribution is one of the public service innovations for the process of receiving and paying market levies which is carried out electronically by the Banyuwangi Regency Government. E-market levies are a product of collaboration between PT Bank Jatim and Banyuwangi Regency Government agencies (Novitasari 2018).

10. Research conducted by Elena Popova and Olges Cernisevs in 2023 entitled "Smart City: Sharing of Financial Services" which discusses various services in digital payment operations to achieve the main performance indicators of smart cities. The smart city indicator in Rome is assessed based on the possibility of achieving it by implementing shared financial services. Shared financial services enable smart cities to achieve their indicators in the smart economic and smart city mobility subsystems (Popova and Cernisevs 2023).

11. Research conducted by Nasrullah in 2018 entitled "Implementation of Electronic Government in Realizing Good Governance and Smart City (Case Study: Makassar City Government)" which discusses the implementation of e-government in cities as one form of the smart city program as a concept in completing good and competent governance, so as to optimize the use of information and communication technology (ICT) systems in e-Government systems. The aim of this

implementation is to create an effective, efficient, transparent, and accountable work environment (Nasrullah 2018).

The equation of this research with the research that has been done is that the Government has started using digital payment applications to realize the concept of smart city. The research is also to find out how the digital payment application issued by the government is related to the realization of smart cities. The existence of digital payment applications plays an important role in the survival of society. This research also focuses on how the Government's efforts to realize a city into a smart city by using digital payment applications as an innovation in the economy.

The difference between research conducted by researchers and other studies is that researchers focus on the community around the Tulungagung Regency Government. If the research focuses on the development of the payment system in city, then the researcher will focus on the efforts made by local government and related agencies to realize a smart economy which is one of the concepts of realizing a smart city. In this study, researchers will describe how PT BPR Bank Tulungagung and the Regency Government realize smart cities, especially in smart economy by issuing the Tulungagung Pay digital payment application and the impact of the policy implementation felt by the people in Tulungagung Regency. Therefore, the novelty of this research is to analyze the implementation of the Tulungagung Pay application program in Tulungagung Regency, and whether the implementation has gone well for the community or not in realizing a smart city.

1.6 Theoretical Framework

1.6.1 Public Policy

The term "policy" generally refers to an actor's or a group of actors' actions within a particular field of endeavor.

Public policy, according to Charles O. Jones (Agustino 2006), is made up of the following elements:

1. The desired goal
2. Plans, specific meaning to achieve goals
3. Program, authorized effort to achieve goals
4. Decisions, namely actions to determine goals, make plans, implement and evaluate programs
5. Effects, namely the consequences of the program (whether intentional or unintentional).

Public policy, according to Thomas R. Dye in (Agustino 2006) is whatever the government chooses to do or not to do. Dye also explained that if the government wants to do something, it must have a goal (object) and produce change. Dye also explained that it is government policy to do or not do something.

According to Eystone (1971:18) in the book Policy Analysis, public policy is the relationship of a governmental unit to its environment. Meanwhile, according to Wilson (2006:154), public policy is the actions, objectives, and pronouncements of governments, in particular the steps they

take (or fail to take) to implement them and the explanations they give for what happens (or does not happen).

In the philosophy of public policy, public participation is mandatory in formulating policies in a democratic country. Law no. 32 of 2004 concerning Regional Government article 45 states that DPRD members have the authority to listen to, accommodate, collect, and follow up on community aspirations. Article 139 confirms that the public has the right to provide oral or written input in the context of preparing or discussing draft regional regulations. people's right to freedom of expression and participation in the formulation of local public policies, with the goal of ensuring that these policies uphold social justice and avoid causing controversy. Therefore, especially in a democratic nation, the process of formulating public policy starts with and is carried out by, the people (Suaib 2016).

Public policy can be defined as an arrangement of program plans, activities, decisions, acts, and attitudes carried out by the parties (actors) as steps toward solving the issues encountered. According to public policy theory, a government policy is created to address the issues that society faces. Through government-created policy products, the public policy seeks to promote community welfare (Tahir 2018).

1.6.2 Implementation Public Policy

Public policy can be defined as an arrangement of program plans, activities, decisions, acts, and attitudes carried out by the parties (actors) as steps toward solving the issues encountered. According to public policy theory, a government policy is created to address the issues that society faces. Through government-created policy products, the public policy seeks to promote community welfare (Tahir 2018).

1) Organization

Organization is the formation or rearrangement of resources, units, and methods in order for policies to produce results or have an impact. Organizing activities are efforts to determine and reorganize resources, units, and methods that lead to efforts to realize or realize policies into results that are consistent with the policy's goals and objectives. Organizations can be linked to determining existing work units, and the division of tasks of each organizational unit in the form of human resources, finances, and infrastructure within the organization in relation to policy implementation.

2) Interpretation

Policies are plans and influences that are appropriate and can be accepted and implemented. Interpretation activities are activities that explain the substance and policy in operational and understandable language so that the policy's substance can be implemented and accepted by policy actors and targets. Public understanding is

determined not only by the policy's content, but also by its approach, delivery, and implementation. Interpretation in relation to policy implementation conveys a thorough understanding of the policy's goals and objectives in order to assist in carrying out assigned policy-related tasks.

3) Application

Application is a dynamic process where the implementers or officers are directed by program guidelines and standards.

Implementation activities are those that involve putting policies into practice, whether they are carried out by government agencies or by parties designated by the policy. The stage of policy implementation is crucial. After two valid policies have been issued, policy implementation is an activity that becomes evident and involves managing inputs to produce outputs and outcomes for society. An output is a direct policy outcome that is anticipated to occur. Results are typically visible shortly after the policy is put into effect. In the meantime, consequences are the expected effects of policies that follow the release of the policy output. Results are typically assessed after a prolonged period of output release (Suryono 2018).

1.6.3 Smart City

The concept of a smart city can be understood by looking at and summarizing the appropriate smart city qualities that are common from many sources. A smart city is a city design that incorporates technology to

improve daily life. A smart city can meet the needs of today's people who wish to improve their lives and health.

According to Boyd Cohen (2014) in (Hasibuan and Sulaiman 2019), "Smart cities use information and communication technology (ICT) to become smarter and more efficient in the use of resources, produce cost and energy savings, improve services and quality of life, and reduce environmental footprints, all of which support innovation and a low carbon economy." The smart city concept emerged at a time when the entire globe was experiencing one of the greatest economic crises."

The early concept of a smart city was "information city," or the use of ICT as the primary medium for constructing a smart city. A city that is linked between physical infrastructure, technology infrastructure, social infrastructure, and business infrastructure in order to provide community services based on technological infrastructure. There are several supporting indicators in realizing a smart city (Agustina 2017), namely:

1. Smart Governance

The implementation of excellent governance is contingent upon the presence of smart governance. paradigm system and process of development and governance that places a strong emphasis on the values of efficiency, results, clean, responsible, and competitive government, along with the principles of humanism, democratic justice, participation, transparency, professionalism, and accountability. One

aspect of Smart Cities that focuses on government governance is Smart Governance. All of the prerequisites, standards, and goals for the process of community and government empowerment and involvement are included in smart governance.

2. Smart Environmental

A smart environment is one that is capable of providing comfort. Resource sustainability, physical and non-physical beauty, visual or not, for society and the public. A smart environment is one that is clean and well-organized. A variety of applications and computers in the form of Sensor Networks and Wireless Sensor Networks, computer networks (including wireless networks and Cloud Computing-based networks), artificial intelligence, database systems, mobile computing, operating systems, parallel computing, and recognition (face recognition, image recognition) are required to realize a Smart Environment.

3. Smart People

Smart people are the primary goal that must be met in order to realize a Smart City. This section/dimension contains parameters for the human creative process and social capital. If society's condition has improved, the groundwork for constructing a smart city will be laid. The form of smart city application in one or several areas of life in the city/region concerned will be successful with the participation of smart local communities so that they are able to know the benefits that will be

obtained and how to manage and develop the smart city to create a better life order and quality of public services better.

4. Smart Economy

One of the regional foundations is the economy. A region's economic management should be improved and digitized. The economy is not only concerned with the provision of products and services, but also with innovation, competitive ability, education, and entrepreneurship. One of the most essential aspects of Smart City implementation that we aim to accomplish in Indonesia is Smart Economy. This is owing to the large population and potential in the form of Natural Resources and Human Resources, hence the Indonesian economy will grow swiftly if managed properly.

5. Smart Living

In Smart Living, there are requirements, criteria, and objectives for a better and smarter quality of life and culture management process. To realize Smart Living, there are three things that must be fulfilled, namely:

- a. Appropriate educational facilities using information technology for the community (education facilities).
- b. Using information technology to effectively and attractively provide amenities, infrastructure, and information connected to regional tourism potential (touristic attraction).

c. Adequate information technology infrastructure (ICT Infrastructure), so that all public facilities and services can function properly with the help of computerization and information technology.

6. Smart Mobility

Smart mobility is the management of city infrastructure with an integrated management system that is oriented to ensure alignment with the public interest. Smart mobility is a component or dimension of Smart City that focuses on transportation and community mobility. There is a smart transportation and mobility process in smart mobility, so it is hoped that public services for better transportation and mobility will be created, as well as common transportation problems such as traffic jams, traffic violations, pollution, and others.



Figure 1. 1 Smart City Component

Source: (Rizkinaswara 2020)

This research will focus on one indicator of a smart city, namely the smart economy. The development of the Smart Economy is a manifestation of the demands of today's changes. An era where economic activities can win competition is an economy characterized by four indicators such as simpler, cheaper, accessible, and faster. These four indicators can be achieved by mastering information technology and internet technology.

Smart economy is a district concept that is able to use human resources, social capital, and modern telecommunications infrastructure to realize sustainable economic growth and high quality of life, with wise resource management through the government based on community participation and there are seven indicators for achieving a smart economy. The seven indicators and supporting facilities that can be provided to support the district in achieving a smart economy are the spirit of innovation and creativity, entrepreneurship, the city's distinctive image and character, productivity, a flexible labor market, connectivity with the international world, and the ability to transform.

Smart economy is one component of a smart city. The concept of a smart city is a city that is able to use human resources, social capital, and modern telecommunications infrastructure to realize growth and the economy of society in the digital era, like today. The smart economy has variable components and indicators (Wahyuningsih, Kurniawan, and Prasetyo 2024), namely:

1. Industry, competitiveness of integrated competitive regional industries (primary, secondary, and tertiary industries). Building regional industrial competitiveness in certain leading industrial sectors that are integrated between primary industry (for example agriculture, fisheries, animal husbandry, etc.), secondary industry (for example manufacturing, processing, packaging, etc.), and tertiary industry (for example regional product markets). Building a creative economy industry by creating a conducive climate that supports the development of new entrepreneurs, including by preparing a creative industry master plan. Increasing innovation, access, competitiveness, and networking of cooperatives and micro businesses.
2. Welfare, community welfare, absorption of the workforce, and community economic empowerment. Building a creative economy industry by creating a conducive climate that supports the development of new entrepreneurs, including by preparing a creative industry master plan.
3. Transaction, digital finance towards a cashless, bankable society, and a digital economy encouraging the e-commerce and marketplace industries. Expanding the use of electronic commerce (e-commerce) which supports the development of an entrepreneurial climate in the City Region. As well as organizing the management of traditional markets and modern markets based

on data and information technology which makes it easier for buyers and sellers to obtain information and make transactions.

1.6.4 Digital Payment

Digital or electronic payments are those that are made online or through the Internet. The purpose of electronic payments is to facilitate user payments. The digital payment method discussed below is characterized by its non-cash nature, allowing for transactions to be conducted in many locations. The presence of electronic payment systems facilitates the process of conducting long-distance transactions for users. You can use an electronic gadget, service, or program that enables you to offer these services in online transactions. Digital payment users will have the convenience of conducting transactions in a highly practical, efficient, and secure way, enabling them to perform transactions without the need for physical cash or visiting specific payment locations (Mulyana and Wijaya 2018).

There are indicators in Digital Payment according to Michael Agustio Gosal and Nanik Linawati 2008 in journal (Diniah, Rosmanidar, and Fitrianova Andriani 2023), namely:

1. Perceived Ease of Use, perceived ease of use is the level to which a person believes that information technology is easy to understand. Perceived ease of use will reduce a person's time and energy in studying information technology. This comparison of ease provides an indication that people who use the new system work more easily than people who use the old system. Users believe that information technology is more

flexible, easy to understand, and easy to operate, which are characteristics of ease of use.

2. Perceived usefulness, consumers can use digital payments once they believe that using a system like this can increase their savings or increase efficiency in the way they carry out various transactions. The greater the benefits provided, the greater the consumer's desire to spend on products or services using mobile payment. Several previous studies have proven that perceived usefulness has a positive influence on the intention to use mobile payment services.
3. Perceived Credibility, perceived credibility is defined as consumers' assessment of privacy and security issues using digital payments. The higher the level of credibility of a technology, the greater the intention to use digital payment services.
4. Behaviour Intentions, the intention to use mobile payments due to factors of benefit, convenience, credibility, and social influence encourages someone to use mobile payment services more often to make it easier for someone to make transactions and encourage someone to use more of their money.

In carrying out payment transactions using electronic payments, there are several benefits to be gained (Kartika 2023), namely:

1. Transactions become easier and more practical
2. Transactions are safer
3. Convenience in transactions

4. Transaction speed
5. Can be used for various services

Apart from the advantages of using digital payments, there are also disadvantages of digital payments, namely the use of digital wallets, namely the need for public awareness about digital wallets. This is because there are still many people who do not know and understand its use. Digital wallets also cannot completely eliminate the use of physical money because there are still many shopping places that use physical money as payment in anticipation of digital wallet services experiencing disruption. Limited infrastructure is also a weakness of digital wallets because not all shopping places provide digital payment facilities.

1.7 Framework of Thinking

A thinking framework is a conceptual model of how theories relate to various factors that have been identified as significant issues, according to Sugiyono (2014:283) in Jurnal (Sakaran 2017). The relationship between the variables under study will be theoretically explained by a sound framework of thought. The framework attempts to give researchers a way to think.

The research thinking framework is expected to provide a way for the research thinking process so that it can achieve the expected research objectives. Figure 1.2 shows a conceptual framework based on the research title raised by the researcher as follows:

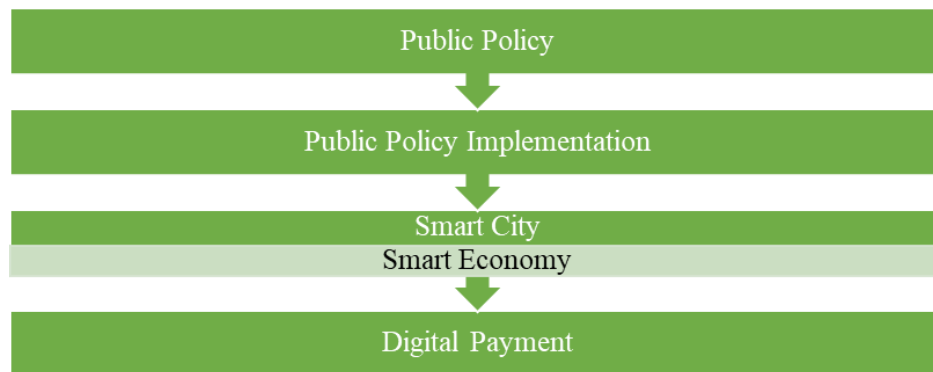


Figure 1. 2 Research Thinking Framework

Source: processed by researchers, 2023

1.8 Conceptual Definition

1.8.1 Public Policy

According to Thomas R. Dye (Agustino 2006), public policy is everything the government decides to do or not do. Dye added that any action taken by the government needs to have a purpose or target and result in change. Dye added that government policy dictates what can and cannot be done. Communication, resources, disposition, and bureaucratic structure are some of the variables that affect implementation (Sukarman and Sugiar 2017).

1.8.2 Public Policy Implementation

Implementation is a way for a policy that has been set to achieve its goals. Charles O. Jones (1996:166) in (Agustino 2006) stated regarding policy implementation, namely that implementation is a series of activities or activities to carry out a program which is intended to cause certain effects,

where implementation consists of three main activities which are very important, namely organization, interpretation, and application.

1.8.3 Smart City

The definition of a smart city according to Boyd Cohen (2014) in (Hasibuan and Sulaiman 2019) "Smart Cities use information and communication technology (ICT) to become smarter and more efficient in the use of resources, produce cost and energy savings, improve services and quality of life, and reduce the environmental footprint all supports innovation and a low-carbon economy.

One of the regional foundations is the economy. A region's economic management should be improved and digitized. The economy is not only concerned with the provision of products and services, but also with innovation, competitive ability, education, and entrepreneurship. One of the most essential aspects of Smart City implementation that we aim to accomplish in Indonesia is Smart Economy.

1.8.4 Digital Payment

Digital or electronic payments are those that are made online or through the Internet. The purpose of electronic payments is to facilitate user payments. This digital payment can be made anywhere and is not reliant on cash. Long-distance transactions may be simpler for users now that electronic payments are available.

1.9 Operational Definition

According to Sugiyono in Sugiarto (2016:38), an operational definition is a comprehensive set of guidelines that specify what needs to be understood and changed to minimize purchases. Operational definition in a research variable is any attribute, characteristic, or value from an experiment or activity that has been determined by researchers to be studied and then used for analysis (Sugiyono, 2015).

Table 1. 1 Operational Variable Definition

Variable	Indicator	Parameter
Smart Economy	Industry	In industry indicators, the Tulungagung Pay application acts as a digital payment application provider. In this case, PT BPR Bank Tulungagung facilitates the SMEs it supports to register their businesses in the Tulungagung Pay application. The existence of the Tulungagung Pay application is used to realize the digitalization of IKM.
	Welfare	PT BPR Bank Tulungagung provides capital loans for prospective SMEs at low interest rates.
	Transaction	In the transaction indicator, digitalization of the payment system which makes it easier for buyers to make non-cash payments, PT BPR Bank Tulungagung provides QRIS code facilities for MSMEs who register their businesses in the Tulungagung Pay application. SMEs can also monitor a summary of their financial transactions.
Digital Payment	<ol style="list-style-type: none"> 1. Perceived of Use 2. Perceived Usefulness 3. Perceived Credibility 4. Behaviour Intentions 	The Tulungagung Pay application makes it easy for the people of Tulungagung Regency to carry out financial transactions quickly and practically. Apart from that, the Tulungagung Pay application can also be used by MSME/IKM players to register their business to obtain a QR code.

1.10 Research Methodology

1.10.1 Types of Research

Research is a method of study in which a problem is thoroughly investigated by someone to obtain the proper solution for the problem under study. This kind of research is a valuable research method that gives researchers options for choosing which research procedures to conduct.

The type of research carried out was qualitative research using a descriptive approach. This descriptive approach provides a real picture of a particular condition in the relationship between phenomena that occur regularly and actually. In general, qualitative research, according to Creswell, is research that is descriptive and tends to use analysis in the form of written or spoken words from people and observable behavior (Creswell 2014).

Meanwhile, according to Sugiono (Fiantika, Ambarwati, and Maharani 2022), the qualitative method is a research method to investigate, discover, describe, and improve the quality or characteristics of social impacts that cannot be explained, carved, or described using quantitative methods. Therefore, qualitative research methods are researched to explore phenomena supported by empirical data that describes scientific events.

1.10.2 Research Location

The location in this research is the location where the researcher will conduct research to obtain the data or information needed to answer

the research problem. This research took place in the Tulungagung Regency area. The researcher chose this research location because Tulungagung Regency is one of the regencies in East Java which also produces electronic payment products through an application that is managed by the Regency Government in collaboration with PT Bank Perkreditan Rakyat Tulungagung.

1.10.3 Type of Data

The data source in this research is the subject of the data obtained by the researcher. In this research, the author used primary and secondary data sources, as follows:

1. Primary Data

Primary data is data that refers to information obtained firsthand by researchers relating to variables of interest for the specific purpose of the study. Primary data can be the opinions of subjects (people) individually or in groups. This primary data can be collected using observation and interview methods. This data must be sought through sources or in terms of respondents, namely people who we use as research objects or people we use as a means of obtaining information or data.

This primary data was obtained from the results of interviews with the research object, in this case, PT BPR Bank Tulungagung as the respondent which provides services to the community and coordinates with the Tulungagung Regency Government which is implementing the

smart city in Tulungagung Regency. As well as interviews conducted with the public to find out how the public responded to the Tulungagung Pay application. Meanwhile, observations were made in the implementation of the Tulungagung pay application.

In this research, researchers obtained data by combining observation, listening, and asking questions to the public or customers who use the Tulungagung Payment application, PT BPR Bank Tulungagung, and the Tulungagung Regency Economic and Natural Resources Service.

Table 1. 2 Data Collection Techniques and List of Informants

Data Collection Technique	Interviewers
Interview	The community and PT BPR Bank Tulungagung customers who use the Tulungagung Pay application
	Director of Business and Operations at PT BPR Bank Tulungagung
	Economy and Resources Section Staff

2. Secondary Data

Secondary data is data that refers to information collected from existing sources in previous research that has been carried out. Secondary data obtainable from company records or documentation, government publications, industry analysis by the media, websites, scientific journals, and articles from the internet related to the research conducted.

In this research, researchers used data from the Tulungagung Regency Government in the form of Regional Regulations related to PT BPR Bank Tulungagung and data from the Central Statistics Agency.

Table 1. 3 Data Collection Techniques and Data Types

Data Collection Technique	Type
Document	Regulation of the Regent of Tulungagung Regency
	Population Data of Tulungagung Regency
	Data of PT BPR Bank Tulungagung

1.10.4 Data Collection Technique

Data collection techniques according to Sugiyono (2016: 309) state that "data collection is carried out in natural conditions, primary data sources, and relies more on participant observation, in-depth interviews, and documentation" (Wulan 2023). The types of data collection carried out in this research were interviews and documentation. It is hoped that this type of data collection can complement each other so that the information provided is in accordance with the research.

1. Observation

According to (Sugiyono, 2018) observation is a data collection technique that has specific characteristics when compared to other techniques, namely interviews and questionnaires. Questionnaires and interviews always involve communication with people, while observation is not limited to people, but also other natural objects. In

terms of the data collection process, observation can be divided into participant observation and non-participant observation. In terms of instruments used in observation, it can be divided into structured and unstructured observation (Morissan 2017). In this observation, the author is involved with the daily activities of the person being observed or used as a source of research data. In participant observation, the data obtained will be more complete.

This research observation was carried out in October 2023- November 2023 in Tulungagung Regency. In this research, researchers observed directly and created an observation framework first to observe how the Tulungagung Pay application was implemented in realizing a smart city in the Tulungagung Regency.

2. Interview

One of the methods for gathering data is conducting interviews, which is the second method. According to the opinion of Sugiyono (2017:231) in the journal (Prawiyogi et al. 2021) an interview is a meeting of two people to exchange information and ideas through questions and answers so, that meaning can be constructed on a particular topic.

While data from interviews cannot be obtained through observation, interviews were conducted with the intention of gathering opinions, information, and data for this research that will be helpful in delving deeper into everything that occurred. Interviews are a favorite

methodological tool for qualitative research. Denzin and Lincoln (2009:5004) explain:

1. Structured Interview

Structured interviews refer to a situation when a researcher asks each respondent a series of temporal questions based on certain or limited answer categories.

2. Unstructured Interview

Unstructured interviews are free interviews where the researcher does not use an interview guide that has been arranged systematically and completely for data collection, the guide used is only an outline of the problems to be asked.

The interview stages consist of:

- a. Determine who will be interviewed
- b. Prepare for interview, this stage includes introducing the characteristics of all research subjects
- c. Initial movement, this stage shows the start of research activities which begins with a kind of "warming up" namely asking questions that are "grand tour" in nature.
- d. Conduct interviews and maintain them to be productive, where the questions asked are more specific.
- e. Stopping the interview and getting a summary of the results of the interview, means that you have to summarize all the things said by the respondent and check again with the respondent concerned,

perhaps the respondent concerned still wants to add something to confirm what has been confirmed.

In this research, the researcher used planned-unstructured interviews and conducted direct interviews, where the researcher had made a clear interview plan, but did not use a standard format and sequence. Researchers have also prepared topics and a list of questions before the interview activity is carried out. The questions have been prepared by the researcher, but often in reality, the questions are modified and changed according to the field setting.

The aim of the researcher in using unstructured interviews is to establish closeness with the respondent so, that the respondent does not conceal the true situation and makes the respondent feel comfortable answering the questions asked by the researcher. This method will get more spontaneous and honest answers from respondents. In the interview activity, the researcher will use books and writing tools to take notes and summarize the results of the interview.

The actors who are sources in this research are the community and customers of PT BPR Bank Tulungagung, users of the Tulungagung Pay application and PT BPR Tulungagung as a service provider to the community in collaboration with the Tulungagung Regency Government in efforts to create a smart city.

Table 1. 4 List of Interviewers and Positions

No	Interviewer	Position
1	Mr. Arif Effendi, S.IP, MM	Economy and Resources Section Staff
2	Mr. Hadi Wijaya, SP	Director of Business and Operations at PT BPR Bank Tulungagung
3	Mr. Agri	Operational Staff for Tulungagung Pay Application Development PT BPR Bank Tulungagung
4	Mrs. Sari	Tulungagung Regency Community
5	Ms. Titin	Tulungagung Regency Community
6	Ms. Zika	Tulungagung Regency Community
7	Mrs. Nurul	Tulungagung Regency Community
8	Mrs. Susi	Tulungagung Regency Community
9	Mr. Gito	Tulungagung Regency Community
10	Mr. Andri	Tulungagung Regency Community

3. Documentation

Documentation is a data collection technique by taking data from documents, archives, newspapers, the internet, journals, and articles that are appropriate to the problem being studied. The purpose of documentation is to help the data obtained by the author to be valid. At this stage, the author collected data on documentation through articles, journals, and administrative documents owned by the Tulungagung Regency Government. Apart from that, the author also collected data regarding regulations made by the Tulungagung Regency Government No. 13 of 2018 regarding the regional company BPR Tulungagung.

The documents used were obtained from the internet such as news and government websites. Apart from that, the author also requested data from the Tulungagung Regency Government and PT BPR Bank Tulungagung. Documents can also come from Tulungagung government agencies, Thesis, etc.

Table 1. 5 Data Collection Techniques and Data Types

Data collection technique	Type
Document	Tulungagung Regency in figures for 2021-2023
	Tulungagung Regency in figures for 2020-2023
	Tullungagung Regency RKPD 2023
	Tulungagung Regency Government No. 13 of 2018 regarding the regional company BPR Tulungagung.

1.10.5 Data Analysis Technique

Data analysis techniques are the process of systematically searching and compiling data obtained using various data collection techniques such as observation, interviews, and documentation by coordinating data and selecting what is important to study, as well as making conclusions so that it is easy to understand. Data analysis techniques in qualitative methods have 4 stages, namely data collection, data reduction, data presentation, and drawing conclusions.

According to Bogdan and Biken (Pahleviannur et al. 2022), data analysis is an effort to systematically compile, select, and manage data that has been obtained from the findings in a complete and understandable

manner. Meanwhile, according to Miles and Huberman (2014) in Sugiyono's in (Shinta Sari, Nurkamto, and Rochsantiningsih 2020) data analysis is divided into three streams of activities that occur simultaneously. The three flows are:

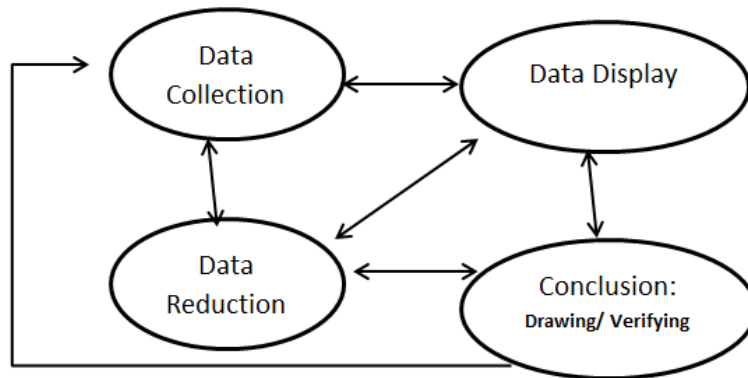


Figure 1. 3 Components in Data Analysis

Source: (Shinta Sari et al. 2020)

1. Data Reduction

Reducing data is summarizing, picking the most important information, concentrating on details that are pertinent to the research question, searching for themes and patterns, and eventually producing a more lucid image that facilitates the collection of additional data. Data reduction is a form of analysis that sharpens, categorizes, directs, removes what is not necessary and organizes it so that conclusions can be drawn. Writing data reduction is carried out on primary and secondary data, especially on the results of primary data in the form of interviews and observations. In this stage, the researcher selects and sorts the data

that has been obtained from the interview process, observations and others from related parties involved in implementing the Tulungagung application, namely the community and customers of PT BPR Bank Tulungagung, PT BPR Bank Tulungagung and the Economic and Natural Resources Department which is the agency. in collaboration with the Tulungagung Pay application.

The data selection process was adjusted to the needs and objectives of the research, namely to find out about the success factors and challenges in implementing the Tulungagung Pay application. The type of research carried out was qualitative in nature with data collection through an interview and observation process. After that, the data results from interviews and observations were identified to facilitate the process of presenting data and drawing conclusions.

2. Data Presentation

Data presentation is one of the qualitative data analysis techniques. Data presentation is an activity when a collection of information is compiled, so as to provide the possibility of drawing conclusions. The form of presenting qualitative data is in the form of narrative text (in the form of field notes). In the data presentation stage, the data obtained in the data reduction process is then categorized into primary and secondary data. Then the data is arranged and presented according to its categories. The next

step is to analyze the data to draw conclusions and get the desired results, namely knowing how far the implementation of the Tulungagung Pay application is going, and find out what success and challenges factor the implementation of the Tulungagung Pay application.

3. Conclusion

Drawing conclusions is a stage for understanding or looking for regularities, patterns, or cause-and-effect flows from the data obtained as a basis for making conclusions in research. In line with the opinion of (Miles & Huberman), that the analysis process is not carried out once, but is carried out several times according to the stages of reduction, data presentation, and drawing conclusions during the research period. This aims to obtain valid data. After the research data has been verified accurately, conclusions can be drawn based on the research results found in narrative form. Therefore, using qualitative research methods with the research flow described above, this research is expected to provide a comprehensive understanding regarding the implementation of the Tulungagung Pay application.