Chapter 1

Introduction

Background and Significance of Research Problem

When the countryside prospers, the country prospers. The construction of rural digitalization is not only a practical need to encourage the inner power of rural development, promote the transformation of rural governance, and improve rural life services but also a strategic need to implement rural revitalization. This is of great significance for consolidating the foundation of digital China, expanding the channels for rural residents to increase their income, ensuring and improving rural people's livelihood, and promoting the integrated development of urban and rural areas. In January 2022, the Cyberspace Affairs Office of the CPC Central Committee and ten other departments issued the Action Plan for Digital Rural Development (2022-2025), which pointed out that the development of rural digital economy should be taken as a priority and urban and rural integration should be coordinated. The development of the rural digital economy is of strategic significance to promoting the integrated development of urban and rural areas, promoting the all-round revitalization of rural areas, promoting common prosperity, and resolving the problem of unbalanced and inadequate development. At present, the biggest shortcoming of rural revitalization is the digital countryside, and promoting the construction of the digital economy system is an important part of the construction n of the digital countryside. The integration ion of the digital economy into ecological agriculture and the construction and development of green countryside can help avoid the virtual expansion of financial capital and lead the rural economy to "move from virtual digital". Digital country based on digital economic technical information to realize realizing digitalization in production, governance, and, life in rural areas. This new economic form is conducive to greatly improving the informatization and intelligence of rural areas (Song, X., et al., 2020, p. 100481). We should fully recognize the new features and requirements of rural revitalization, seize the new opportunities and challenges in the development of the real digital economy, strive to open up new prospects for agricultural and rural development, and promote the comprehensive upgrading of agriculture, rural progress small-around development of farmers.

According to the Statistical Report on China's Internet Development (2022), by the end of 2021, the number of Internet users in China will reach 1.032 billion, including 284 million in rural areas. The Internet penetration rate has reached 73.0 percent nationwide and 57.6 percent in rural areas. The continuous advance of digitization also brings new opportunities for rural development. In 2018, the "No. 1 Document" of the Central Committee proposed for the first time to "implement the Digital rural strategy". In May 2019, the General Offices of the CPC Central Committee and The State Council issued the Outline of the Strategy for Digital Rural Development, making it clear that digital rural areas are the strategic direction of rural revitalization and an important part of building a digital China. In the process of building the digital rural information platform, we should strengthen the leading position of the government and constantly enhance the digital literacy of grassroots staff (Chetty, K., et al., 2018, p. 20180023). The No.1 Central Document in 2021 and 2022 repeatedly emphasized "vigorously promoting the construction of digital countryside" and expanding the application scenarios of big data in agriculture and rural areas.

The 14th Five-Year Plan period is an important strategic opportunity to promote the digital development of agriculture and rural areas, and the construction of a digital countryside conforms to the development trend of The Times. In the context of the implementation of the rural revitalization strategy, strengthening the deep integration of digital and rural revitalization not only provides strong support for rural construction but also is an important part of the implementation of comprehensive rural revitalization. The new generation of digital technology is penetrating rural areas, further promoting the transformation and development of rural modernization in all fields. According to the 2020 China Digital Transformation Study, the digitalization level of China's agricultural production process in 2019 reached 18.6%, including 16.2% for crop planting, 27.2% for cultivation, 19.3% for animal husbandry, and 15.3% for aquaculture. Although the digital level of agricultural production has been developed to a certain extent, the embedding of digital technology does not simply promote the advancement of agricultural technology, butt alspromoteses in the novation of technological formats and application modes. (Van de Vrande, V., et al., 2006, pp. 347-363)

At present, China's rural areas are gradually transforming to digital upgrading. With the deepening of the application of digital technology, agricultural production has changed from relying on human and physical strength to relying on intellectual computing power, and from experiential to digital transformation, and digital economy, digital society and digital government have become one of the key elements to

promote high-quality economic development. As a key area of high-quality economic growth, digital construction is gradually sinking into the countryside. According to data from the Ministry of Commerce, the number of rural Internet users has exceeded 250 million, and rural online retail sales have increased from 180 billion yuan in 2014 to 1.7 trillion yuan in 2019, an overall expansion of 8.4 times. In addition, the Outline of the Digital Rural Development Strategy issued by the General Office of the CPC Central Committee and The General Office of the State Council in 201y proposed to vigorously develop the rural digital economy, continue to promote the digital transformation of agriculture and focus on improving the high-quality development of the rural economy. By taking Internet technology as the foundation and information and data as important production elements, the digital economy ensures the continuous integration of the real economy and the digital economy, thus becoming an economic form with high independence and novelty. In the process of the continuous integration of agricultural technology and information, the digital economy has played a strong role in promoting it. Therefore, it is of great significance to fully explore the application of the digital economy for the restructuring of the traditional economy and the high-quality development of the economy.

Research Objectives

1. To study the components and factors for upgrading a rural tanned efficient digital society.

2. To analyze the components and factors for upgrading a rural tanned efficient digital society.

3. To develop a rural digital model for upgrading a rural tanned efficient digital society.

Research Hypothesis

The research on the evaluation index system of the construction of digital countryside should not only follow the general rules of the development of digital countryside, but also consider the development requirements and guidelines of relevant national policies on digital countryside, as well as the differences and instabilities in the construction process of digital countryside, and carefully study the relevant practical experience. Together constitute the basis of evaluation index system construction.

The price of technology and equipment to meet the requirements of digital rural construction informatization is generally high, and the financial support of construction mostly comes from national policy support enterprise funding, etc. However, due to the low overall efficiency of agricultural production in China, some small-scale production is difficult to recoup the cost. For farmers, the equipment investment needed to realize digital agriculture varies from 10,000 yuan to more than 100,000 yuan due to different sensors, etc. Only a few farmers with large production scale can recoup the cost earlier. At the same time, there are many kinds of digital agricultural production equipment in the market, and many farmers are not strong enough to distinguish them, so they are easy to fall into the misunderstanding of "the more high-end the equipment, the better", resulting in the waste of resources and the increase of costs.

China's rural e-commerce is developing rapidly. More and more people are beginning to pay attention streamingivestreaming of agricultural products, and the online sales of agricultural products are also rising rapidly. With the influx of online orders, some problems are gradually highlighted: the production cycle of agricultural products is long, the production time is relatively concentrated, not meet the real-time needs of users; At present, the online sales form is relatively simple, and the types of agricultural products suitable for online live delivery sales mode are less.

Influenced by various complex factors such as history and geography, the urban-rural digital divide has always existed in China. To solve the problem of the digital divide, we must twit from information infrastructure construction, talent introduction, ideological education, and other aspects. Since the implementation of the rural revitalization strategy, China has been actively promoting various works, and the digital divide between urban and rural areas is narrowing year by year. But work on the digital divide must be done in a step-by-step, region-specific way.

China is an agricultural country with a long history of agricultural production. However, the development of agricultural production and management mode is relatively backward, and most of them are small-scale cultivation. In recent years, although China has also vigorously promoted the integration of digital technology and the agricultural industry, most of them are concentrated in established agricultural industrial parks, and agriculture in many areas still follows the traditional inefficient production and sales methods. At the same time, affected by the location conditions, the agricultural development status of different regions is also very different.

At present, there are relatively few matching talents in China's digital agriculture, especially the lack of leaders with high knowledge levels in the rural e-commerce

industry, and the lack of elites in the new agricultural management team. With the continuous advancement of smart agriculture and the construction n of digital countryside, no need for the development of science and technology, but also talents with professional knowledge, innovative consciousness, and pioneering spirit.

Scope of the Study

This study delves into the conception and progress of digital transformation within rural areas, with the backdrop of rural revitalization initiatives. We reference several important policy documents like the No. 1 State document, the Opinions of the CPC Central Committee and The State Council on Implementing the Rural Revitalization Strategy, the Strategic Plan for Rural Revitalization (2018-2022), and the Outline of the National Informatization Development Strategy. These documents provide context and set the foundation for our research.

Using investigative research methods and case study analyses, we aim to systematically study the common challenges faced during digital transformation in rural areas. These studies are conducted, taking into consideration regional differences and the specific characteristics of individual regions.

Firstly, we outline the aim and significance of digital transformation in rural areas, referring to existing literature to establish a solid theoretical foundation for our study. We also detail the achievements in this area and the research methodologies deployed.

Secondly, we clarify relevant concepts and theoretical bases concerning digital transformation in rural areas and systematically delineate the internal logic between digital transformation and rural revitalization.

Thirdly, we discern the current state of digital transformation in rural areas through extensive social research. Data collected is sorted, categorized, and analyzed to identify existing challenges in implementing digital transformation in these areas. The causes for these issues are also analyzed and discussed.

Lastly, targeting the identified issues and capitalizing on the successes of pilot projects for rural digital transformation, we propose viable and targeted construction paths. These proposals encompass diverse aspects, including strengthening digital infrastructure, enhancing talent support, diversifying the rural digital scene, and promoting the development of a comprehensive digital transformation system. With these initiatives, we aim to contribute effectively to the digital transformation of rural areas.

Conceptual Framework

In the process of digitization of rural governance, grass-roots township governments manage and guide rural political, economic, and social development affairs, such as e-government, social security, and agricultural modernization, by formulating policies, establishing platforms, ms and releasing information. This process makes full use of digital tools to guide rural social organizations and third-party institutions and lead villagers to achieve village governance. At the same time, the data generated by each office is fed back to the grass-roots township government through rural social organizations, third-party institutions, village committees, es, and villagers, forming digital flow, feed, ack, and circulation to achieve the improvement of rural governance ability and governance level. The theoretical system and value logic of digitization of rural governance are studied to clarify the relationship between the subject and object of digitization of rural governance, so construct the structural framework of digitization of rural governance, and according to the framework, a multi-dimensional, operable, and comprehensive evaluation index system is established to achieve the goal of scientifically measuring the digitization level of rural governance. It provides an effective reference for optimizing the rural governance process, improving the rural governance system and imp, and improving the efficiency of rural governance.

H_1: Government policy for rural digital positively impacts to rural digital society ofSMEsE in China.

H_2: Government policy for the economy SMEs SME positively to rural digital societies SME in China.

H_3: The skill of population in rural postimpact impact to rural digital society of SME in China.

H_4: The rural SME economy positively impacts to rural digital society of SMEs in China.

H_5: Education of the population in rural positive impact on rural digital societies SME in China.

H_6: Rural digital technology positively impacts to rural digital society of SMEs in China.

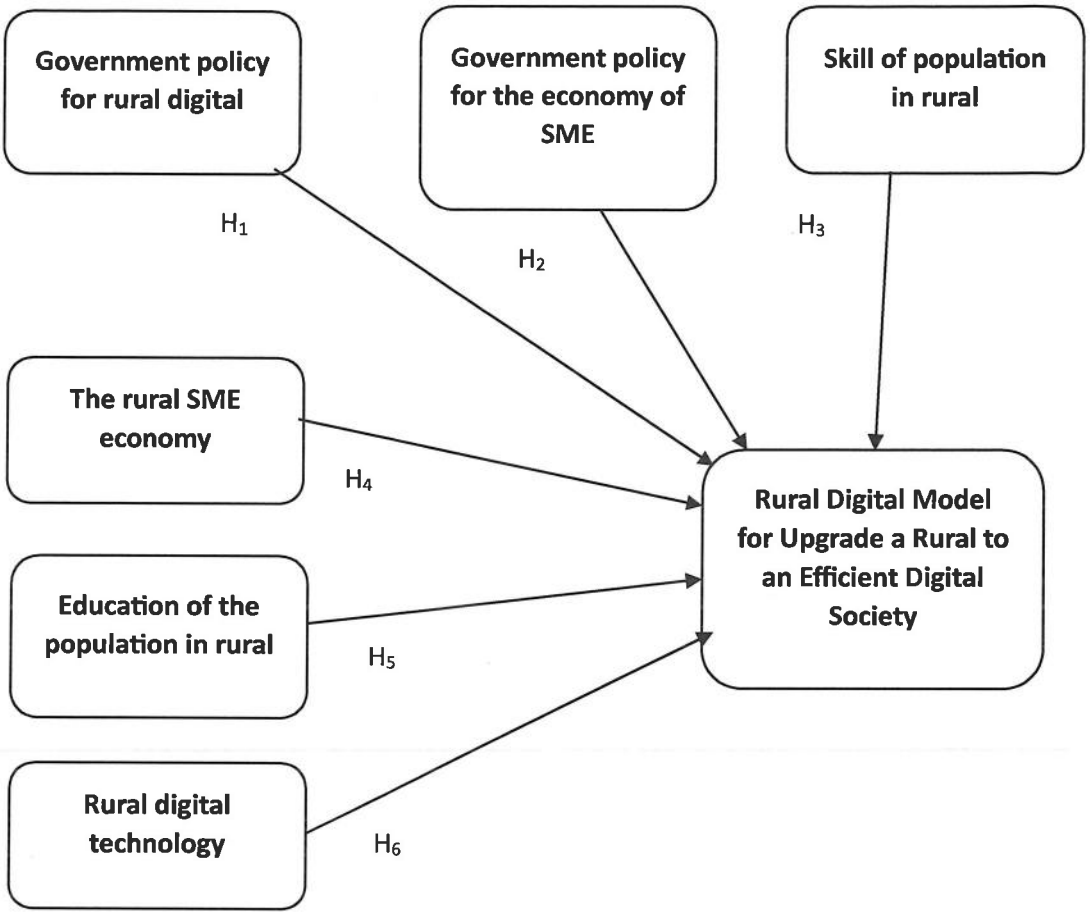

Figure 1.1 Conceptual framework

Digital rural governance is designed to meet the interest demands of different interest groups such as social organizations, enterprises, and farmers. According to the stakeholder theory, digital means to promote social governance can guide all kinds of decisions to balance the interest demands of different interests through the two-way flow of numbers, to achieve a multi-win-win governance situation. Therefore, in the process of data production, collection, processing, analysis, utilization, and feedback, the construction of the digital framework of rural governance mainly redistributes the responsibility and power of the governance subject and object, reconstructs the governance mechanism, forms a new pattern of efficient, scientific and democratic governance, and guarantees the new development of rural digital governance.

Definition of Terms

Rural revitalization: refer to implement the rural revitalization strategy and build a beautiful countryside, we should adhere to the strategy of giving priority to the development of agriculture and rural areas, establish and improve systems, mechanisms, and policies for integrated urban and rural development, and accelerate agricultural and rural modernization. We will improve areas of weakness in people's livelihood, and promote poverty alleviation in industries, education, ecology, and relocation. We will implement the policy of strengthening agriculture, enriching farms, and benefiting farmers, and the strategy of developing agriculture through science and technology agriculstabilizingbilize grain outpsafeguardingafeguard food security.

Rural governance system: refer to We will strengthen basic work in rural communities, improve the rural governance system that combines autonomy, rule of law, and rule of virtue, and strive to modernize the rural governance system and capacity.

Digital village: refers to the wide application of the Internet, Internet of Things and artificial intelligence technology, rural economic development, rural social governance, rural government affairs and public services, rural cultural development, farmers' living de, minds and so on have begun a comprehensive transformation to digital, rural social economic life and agricultural production and operation show the characteristics of networking, information, data, platform, and intelligence.

Digital government: Relying on the integrated intelligent public data platform, build a high-quality and convenient inclusive service system, a fair and equitable law enforcement and supervision system, an overall efficient operation management system, and a collaborative governance system with global wisdom, and form a new form of administrative management and government operation mode.

Digital Society: To meet the needs of the masses for a high-quality life and realize the modernization of social governance, by using the data, modules and appl, and applications related to social governance as the means, to provide the masses with a full chain and full cycle of diverse, equal and convenient social services, and to provide social administrators with a systematic, timely, efficient and open management mode. To form a fairer, safer, and better society in urban and rural areas.

Digital economy: A new economic form with data resources as the key production factors, modern information networks as the main carrier, integrated application of information and communication technologies, and all-factor digital

transformation as an important driving force, to promote efficiency improvement and economic structure optimization and upgrading.

Digital Village: By the overall requirements of a prosperous rural revitalization industry, ecological livecologicallylized village style, effective governance, and prosperous life, extensive application of networking, information technology, and digital, technology, and strive to promote the digital transformation of rural industry, human water, culture, ecology, and organization. Build an intelligent rural production, living, and economic space with data connectivity, service co-construction and sharing, and efficient and effective governance.

Platform: A computer software system, which can be a combination of several software systems, mainly to provide a development and operation environment for specific functional applications.

Expected Benefits

1. The rural vitalization strategy has further narrowed the gap between urban and rural areas.

2. Promoting the digital transformation of agriculture is the core task of the construction of digital countryside Business.