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**The research on the influential elements and
pathways of Chinese agricultural digitization -
the Case Study from Xinjiang and Jiangsu
Province**

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ABSTRACT

From year 2000 to 2020, agricultural digitalization has become a trend in many Chinese regional developmental schemes. Meanwhile, the mechanism of action on the traditional Chinese agricultural system, value chains, and rural economy is not clear. New rural infrastructure, precision agriculture tools, mobile internet, and artificial intelligence are changing the methodology, efficiency and transparency of agricultural production. Many research institutions, companies, framers, government officers, policy makers tend to deeply understand Chinese agricultural digitalization. However, studies on Chinese agricultural digitalization are still immature, especially for the mechanism of the agricultural modernization practice. Due to limited perspective of theoretical research and lack of empirical support, existing conclusions are imperfect to some extent.

This research has summarized and sorted out the theory of influence mechanism of Chinese agricultural modernization process. Against the background of Chinese agricultural modernization and digitalization, this thesis reviewed induced innovation model, innovation diffusion theory, classical growth theory, agricultural development theory. In Chinese agricultural practice, this research has reviewed modernization of rural organizations in China, agricultural digitalization, rural economic organizations to summarize the influence factors of Chinese agricultural practice.

This research has filled the vacancy of dynamic models of China's agricultural digitalization. This thesis has defined the classification of, setting up a study model containing four activities of agriculture modernization. Data was collected from Chinese agriculture modernization practice in Xinjiang province and Jiangsu province and important influencers, and the results proved models established in this research was rational. This thesis has studied the impact of current information technology development on productivity, its composition and impact in the national economy.

This research has made amendment to Chinese agriculture modernization scale and Chinese agricultural digitalization scale and proved their applicability in the background of Chinese agriculture modernization. Quantitative data of this research is collected from rice plantation in Jiangsu province and cotton plantation in the Xinjiang Uygur Autonomous Region. In combination with related theories, a four-dimension scale is

formed for Chinese agricultural digitalization and Chinese agriculture modernization respectively.

In conclusion, this research puts forward and proves the relation model of Chinese agricultural digitalization against the background of Chinese agricultural modernization.

Key Words: Agricultural Digitalization, Agricultural Modernization, Chinese Rural Technology Development Model

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