

How does the Identification of China-NIAHS Affect the County Economy?

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Motivation

As a pioneer in agricultural cultural heritage protection, China has implemented national identification since 2012. By 2023, 188 China National Important Agricultural Heritage Systems (China-NIAHS) have been identified across 31 provinces, covering over 200 counties and significantly activating the local economy. This identification not only protects and inherits traditional agricultural knowledge and technology but also attracts tourists and cultural enthusiasts, enhancing regional climate resilience and farmers' willingness to develop tourism, positively impacting local economic development. However, the development of county-level economies, as an open system centered on county towns, linked by villages, and with rural areas as its hinterland, is still constrained by multiple factors such as infrastructure, market promotion, and regional economic disparities. Against this backdrop, the specific role, impact, and mechanism of the identification of China-NIAHS in county-level economic development need further exploration. **This paper aims to analyze the economic effects and mechanisms of China-NIAHS identification on Chinese county-level economies, explore its economic value, and promote the sustainable development of these agricultural heritage systems.**

Estimation Strategy

Methodology: The identification of agricultural cultural heritage is primarily based on its inherent characteristics, such as historical longevity, cultural uniqueness, and ecological diversity, which can be regarded as a **quasi-natural experiment**. This paper adopts the **staggered DID model**, selecting 153 counties that had been identified as China-NIAHS sites by 2021 as the treatment group, and the remaining 204 counties without identification as the control group. The benchmark regression model for this paper is set up as follows:

$$\ln GDP_{it} = \alpha + \gamma CAHS_{it} + X_{it}'\beta + \mu_i + \tau_t + \epsilon_{it} \ln GDP_{it} = \alpha + \gamma CAHS_{it} + X_{it}'\beta + \mu_i + \tau_t + \epsilon_{it}$$

Mechanism: The identification of agricultural cultural heritage endows counties with a unique cultural brand, enhancing the quality and added value of agricultural products. It also boosts county popularity and attractiveness, attracts tourists, fosters industries like rural tourism, and elevates overall county economic competitiveness. This paper explores the specific impact mechanisms of China-NIAHS on county economic development through two pathways: **Increasing agricultural product Value Added (VA) and promoting tourism.**

Estimation Results

Table1 Descriptive Statistics

Variable	Description	Mean	S.D.	Min	Max
<i>Gdppp</i>	GDP per capita (Yuan/person)	30765.41	40031.53	178	748088.3
<i>CAHS</i>	Dummy for the identification of China-NIAHS	0.013	0.114	0	1
<i>Pcap</i>	Physical capital stock (10,000 Yuan)	1022897	1670317	106.74	5.78E+07
<i>Hcap</i>	Human capital stock (10,000 Persons)	93.14	4070.46	0.6	391829
<i>Budget</i>	local fiscal general budget expenditure (10,000 Yuan)	205145.3	325566.6	132	1.34E+07
<i>Saving</i>	balance of savings (10,000 Yuan)	892735.4	1546425	6	3.58E+07
<i>Tel</i>	telephone users	62953.18	82055.95	13	5238172

Table2 Estimation Results

Variable	Full Sample	Sample without municipal districts
<i>CAHS_{it}</i>	0.0474** (0.0216)	0.0493** (0.0229)
$\ln(Pcap_{it})$	0.1387*** (0.0055)	0.1408*** (0.0059)
$\ln(Hcap_{it})$	-0.6351*** (0.0524)	-0.6716*** (0.0057)
$\ln(Budget_{it})$	0.1990*** (0.0156)	0.2017*** (0.0172)
$\ln(Saving_{it})$	0.1125*** (0.0147)	0.1186*** (0.0160)
$\ln(Tel_{it})$	0.0036 (0.0056)	0.0011 (0.0060)
County FE	Yes	Yes
Year FE	Yes	Yes
R ²	0.6689	0.6589
Obs	36605	33001

Table3 Mechanism Estimation Results

Variable	Increasing VA of Agri-products	Promoting County Tourism
<i>CAHS_{it}</i>	0.0290(0.0305)	0.07883*** (0.0303)
R ²	0.6692	0.6681

Table4 Effects on Diffrent Industries

Variable	1st Industry	2nd Industry	3rd Industry
<i>CAHS_{it}</i>	0.0128 (0.0108)	0.0857*** (0.0185)	0.0342*** (0.0121)
R ²	0.6216	0.7936	0.8379

Table5 Effects on Diffrent locations (Economic Dev. Level)

Variable	East	Middle	West
<i>CAHS_{it}</i>	-0.0759* (0.0405)	-0.1136** (0.0520)	0.1596*** (0.0377)
R ²	0.6679	0.6682	0.6658

Conclusion and Suggestion

Conclusion: The identification of China-NIAHS can significantly promote counties' per capita GDP growth. Compared to non-identified counties, **those with China-NIAHS have seen their per capita GDP increase by approximately 4.7%**. Further analysis reveals that **this economic boost is primarily achieved through accelerating the development of local tourism resources**, which subsequently drives the growth of manufacturing and service industries. However, **the direct impact on increasing agricultural value-added is not yet evident**. Additionally, this effect is more pronounced in the relatively underdeveloped and less prosperous western regions of China.

Suggestion: To enhance the driving effect of China-NIAHS on county economies, the following strategies can be considered: integrate modern agricultural technology to explore economic potential; strengthen protection and inheritance to ensure sustainability; promote integration with rural tourism to expand agricultural functions; increase policy and capital investment to provide impetus; enhance public awareness and participation to make it well-known.