

The Influence of Circulation Services Industry to Agriculture in the New Normal —Take Henan Province as an Example

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How to cite this paper: Yu, Y.P. (2019) The Influence of Circulation Services Industry to Agriculture in the New Normal—Take Henan Province as an Example. *American Journal of Industrial and Business Management*, 9, 2050-2063. <https://doi.org/10.4236/ajibm.2019.911135>

Received: August 14, 2019

Accepted: November 26, 2019

Published: November 29, 2019

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Abstract

The circulation services industry plays an important role in promotion of agriculture. The paper tests the influence of circulation services industry on agriculture through vector auto-regressive model based on the data of Henan province from 1995 to 2017. The results show that circulation services industry developments not only improve the agriculture level but also have a long-run equilibrium impression. Therefore, the circulation services industry should be dissolved in agricultural industry chain, furthermore, Henan province could become a strong agricultural province through developing vitality and high competitiveness of agriculture.

Keywords

Circulation Services Industry, Agriculture, VAR, Strong Agricultural Province

1. Introduction

The industrial system, production system and management system are the “three pillars” of modern agriculture. The modern agricultural production system focuses on improving agricultural productivity, while the modern agricultural management system focuses on improving agricultural production relations. Both jointly support the development of modern agricultural industrial system. to improve the overall competitiveness of agricultural level. However, the modernization of agriculture cannot only rely on agriculture itself, we must find new motives. From the practical experience domestic and overseas, it is a very effective way to promote agricultural modernization by the service industry [1]. Since the 1960s, the service industry has been playing an increasingly important role in the world economy. Grubel, H. G. (1989), a famous scholar, holds that producer

services are an important source of comparative advantage for economic organizations or new products [2]. As an important part of producer services, circulation services run through the production chain. In a broad sense, the circulation service industry refers to the service industry in the field of commodity exchange and finance field. In a narrow sense, the circulation service industry is limited to the socialized services [3], such as material storage, handling and packaging, to complete or assist the completion of pre-production, in-production and post-production operations. Circulation service industry is strongly external economic. For example, the innovation of transportation means and the improvement of transportation network can greatly reduce transaction costs, improve transaction efficiency, increase producer and consumer surplus, and promote the deepening of division of labor and the deepening of market.

Henan Province is a largely agricultural province with abundant grain resources. The province's total grain output has kept reaching new heights and has ranked first in the country for many years. It is an important production and output base for high-quality agricultural products in the country. By the end of 2016, the province's grain planting area was 10,286 thousand hectares, an increase of 0.2% over the previous year. Although there are achievements, at the present stage, there are still structural contradictions that need further improvements such as high inventory, insufficient supply, lagging deep processing and transformation, and poor circulation. From the perspective of international experience, service enterprises have a breakthrough role in shaping the core competitiveness of the agricultural industry chain. The service-led agricultural industry chain construction model has been proved to be the most suitable development model to the current informatization and global economic-integration competition. Due to the complexity of the service industry, the leading actions to the agricultural industry chain are also different. The circulation service industry can effectively introduce modern production factors into agriculture through service organization [4], which becomes an important way to transform the agricultural development mode, improve the efficiency of resource allocation, and enhance the quality and competitiveness of agriculture.

In terms of agricultural development and the role of the circulation industry, there have been quite a few articles that have been discussed and analyzed, but there are few studies on agricultural development in the circulation industry, and there are few precedents for empirical analysis through specific data. The purpose of this paper is to study the influence of the circulation service industry on agricultural modernization, and choose Henan Province as the research object, which is both representative and research significance. As a large agricultural province, Henan Province has not only profound impact on the economic development of the province [5], but also has important significance for agricultural development and economic development throughout the country. The research in this paper will use the data of Henan Province to answer three questions: 1) whether the circulation service industry has a relationship with agricul-

ture level; 2) whether the development of the circulation service industry is beneficial to agricultural income; 3) how the circulation service industry is integrated into agriculture.

This article consists of the following parts:

The first part is a brief description of the development of Henan agriculture, including the development history and development status of Henan agriculture.

Then, through the summary of Henan's agricultural development, the role of service industry in agricultural efficiency is inferred, and empirical analysis is used to verify. The third part will also focus on the source and measurement methods of the sample.

Finally, the conclusions and recommendations of this study are discussed based on the results of empirical analysis.

2. Development of Henan Agriculture

2.1. History of Modern Henan Agriculture

Since the founding of New China, Henan agriculture has followed the footsteps of national agricultural development and has undergone earth-shaking changes, gradually moving from a closed small-scale peasant economy to modern agriculture [6]. After the reform and opening, through a series of agricultural policies reforming, and with the help of natural geographical advantages, the status of Henan's agricultural economy has been stabilized, and the income of farmers and the quality of rural life have been further improved. After liberation, Henan's agricultural development is roughly divided into the following four stages (**Table 1**).

1949-1957 was the stage of rapid development of Henan agriculture. Under the background of land reform and agricultural socialized transformation, the major changes in agricultural production relations and agricultural cooperation were basically completed, and the province's agriculture went to the socialized road; from 1958 to 1978 was the tortuous period. During the period from 1958 to 1962, due to the influence of the people's commune movement, the "communist wind" and "floating wind" prevailed, and agricultural production declined drastically [7]. After three years of adjustment from 1963 to 1965, Henan Agriculture temporarily restored, but Henan agriculture was once again hit hard during the Cultural Revolution; from 1979 to 2001, the comprehensive development stage, a series of agricultural reforms such as the household contract responsibility system laid the foundation for the overall prosperity of the entire rural economy, and deepened the circulation system of agricultural products. The agricultural product market has been fully opened; from 2003 to the present, it is a new stage of agricultural development in Henan. Under the background of the system of strengthening agriculture and benefiting farmers and coordinating urban and rural development in the new era, Henan Province has developed from the province with insufficient food and clothing to the first agricultural university in China province.

Table 1. Stage and characteristics of Henan agriculture development.

Year	Stage	Background	Main Characteristics
1949-1957	Rapid Development	<ol style="list-style-type: none"> 1) Land Reform 2) Agricultural Socialist Reform 	<ol style="list-style-type: none"> 1) The farmer's land ownership system of "land for the tiller" has been realized, and the major changes in agricultural production relations have been completed. 2) Henan's agricultural cooperation has been basically completed, and the whole province's agriculture is on the road to socialism.
1958-1978	Tortuous and wandering stage	<ol style="list-style-type: none"> 1) Civil Commune Movement (1958-1962) 2) Three-year adjustment period (1963-1965) 3) Cultural Revolution (1966-1976) 	<ol style="list-style-type: none"> 1) "Communist wind" and "exaggeration wind" prevailed, together with natural disasters and other reasons, causing serious damage to agricultural production and a substantial decline in agricultural production. 2) The agriculture of Henan Province has been temporarily restored during the three-year adjustment period. 3) Henan's agricultural production and rural economy suffered heavy losses again during the "Cultural Revolution".
1979-2002	Overall development stage	<ol style="list-style-type: none"> 1) A series of agricultural reforms 2) Family contract responsibility system 	<ol style="list-style-type: none"> 1) Reforming the system of unified distribution and purchase of agricultural products and exploring the market-oriented rural reform laid the foundation for the overall prosperity of the rural economy. 2) From 1992 to 2002, we deepened the reform of the whole countryside, especially the reform of the circulation system of agricultural products, and improved the market system of agricultural products and factors. 3) After China's accession to the WTO, the market of agricultural products has been liberalized in an all-round way, and a pilot project of tax and fee reform in rural areas has been carried out.
2003-now	New pattern stage	<ol style="list-style-type: none"> 1) The Policy of Strengthening Agriculture and Benefiting Agriculture in the New Period 2) Systematic Framework for Overall Urban and Rural Development 	<ol style="list-style-type: none"> 1) "Agriculture, countryside and farmers" and "Document No. 1" have ensured food security, increased investment in agriculture, directly subsidized farmers, and abolished agricultural taxes in an all-round way. 2) In 2005, the agricultural tax was first exempted one year ahead of schedule, which ended the history of farmer's land tax payment in the Central Plains for more than 2000 years. 3) A series of innovations and reforms have transformed Henan Province from a province with insufficient food and clothing to the largest agricultural province in the country.

Resource: Based on LI Jinping (2015), WANG Yingjun (2010) and other literature.

2.2. Current Status of the Development of Henan Agriculture

In recent years, Henan's agricultural development has achieved many results. First, the added value of agriculture has increased year by year. In 2006, the added value of agriculture was 204.94 billion yuan, and the added value in 2017 was 433.149 billion yuan, achieving the result of doubling the value-added of Henan agriculture in more than a decade. Second, food production ranks among the top provinces and cities in the country. By 2015, the grain output of Henan Province had achieved 12 consecutive increases, ranking first in the country. In 2017, the total grain output was 119.464 billion kilograms, an increase of 538 million kilograms compared with 2016, which is the second highest production year in history. Third, farmers' income has made great progress. In 2006, the per capita net income of rural households in Henan Province was 3261.03 yuan, which increased to 12,719.18 yuan in 2017, an increase of 3.90 times. Recently, in

the first quarter of 2017, agriculture developed steadily. According to the preliminary calculation of the Henan Provincial Bureau of Statistics, the agricultural added value of the first quarter was 62.538 billion yuan, an increase of 3.7%. The per capita disposable income of rural residents was 3804.43 yuan, an increase of 8.8%, 0.7 percentage points higher than that of urban areas.

Despite the current agricultural development in Henan Province has achieved remarkable results, there are still problems. For example, the agricultural production mode in Henan Province is still dominated by small-scale farming, lacking in large-scale and specialized production; single agricultural products, lack of market competitiveness; out of production and sales, there is a phenomenon of partial oversupply of insufficient supply; urbanization promotes reduction of rural areas. There is cultivated land area, attracting a large number of rural young and middle-aged laborers into the city; low investment in science and technology, relatively backward production technology, resulting in food production being vulnerable to uncertainties such as weather; the implementation of preferential policies is not in place, and the original purpose of the agricultural policies are not fully realized.

3. An Empirical Analysis of the Influence of Circulation Service Industry on Manufacturing Efficiency

3.1. Sample Description

Based on the availability of data, this paper adopts the agricultural value-added of Henan Province to comprehensively and objectively reflect the development of agriculture. The circulation service industry includes wholesale and retail, transportation and warehousing and postal industry, but the relationship between transportation industry and agricultural development is more to be close [8], we take the volume of goods turnover (including railway freight turnover and road cargo turnover) to indicate the level of circulation service industry [9]. To emphasize the influence of other variables, we select human capital, rural income, agricultural policy and other factors as control variables. Education is an important condition for the formation of human capital [10] and one of the important factors to improve the efficiency of agricultural production [11]. This paper takes the graduates of ordinary colleges and universities in Henan Province as human capital; selects the per capita net income of rural households (yuan) to measure rural income; Expenditure (ten thousand yuan) measures government policy support for agriculture.

The samples were taken from time series data from 1995 to 2017, and the original data were derived from the Henan Statistical Yearbook. To eliminate the possible effects of heteroscedasticity, the article performs natural logarithmic processing on the data. After data preprocessing, NY represents the value-added of Henan agriculture, TR represents the circulation service industry, EDU represents human capital, LIV represents rural income, and GOV indicates policy support.

3.2. Measurement Method

Traditional measurement methods (such as structural methods such as simultaneous equation models) are models that describe variable relationships based on economic theory. Unfortunately, economic theory is not enough to provide a rigorous proof of the dynamic relationship between variables. To solve this problem, Christopher Sims first proposed the Vector Auto-Regressive VAR in 1980. The VAR model is the connected form of the autoregressive model, so it is called the vector autoregressive model. This model is not based on economic theory. In each equation of the model, endogenous variables regress the hysteresis values of all endogenous variables of the model to estimate the dynamic relationship of all endogenous variables. Assume that there is a relationship between them, if two independent vector regression models are established

$$y_{1,t} = f(y_{1,t-1}, y_{1,t-2}, \dots),$$

$$y_{2,t} = f(y_{2,t-1}, y_{2,t-2}, \dots).$$

You cannot get the relationship between two variables. If you take the form of simultaneous, you can establish a relationship between the two variables. The structure of the VAR model is related to two parameters. One is the number N of variables contained, and the other is the maximum lag order p .

Vector autoregressive model VAR can be used to predict the associated economic time series system, and analyze the dynamic impact of random disturbance on the variable system, and further explain the impact of economic shock on economic variables. The VAR expression with a lag order of p is:

$$y_t = A_1 y_{t-1} + A_2 y_{t-2} + \dots + A_p y_{t-p} + Bx_t + \mu_t.$$

Among them, y_t is a k -dimensional endogenous variable vector, x_t is a d -dimensional endogenous variable vector; μ_t is a k -dimensional error vector, A_1, A_2, \dots, A_p, B is a matrix of coefficients to be estimated.

3.3. Empirical Analysis

3.3.1. Unit Root Test

In order to avoid the pseudo-regression phenomenon, the time series data needs to be tested for stationarity before the vector autoregressive model estimation. The standard method for checking the sequence stability is the unit root test. The article uses the ADF test to investigate the stability of each variable. The specific test results are shown in **Table 2**.

It can be seen from **Table 2** that the original variable cannot completely reject the null hypothesis at the level of 5%. The partial variable after the first-order difference cannot reject the null hypothesis at the level of 5%, indicating that the sequence still has a unit root and is non-stationary. Therefore, the difference continues. After the second-order difference, the sequences NY, TR, GOV, LIV, and EDU reject the original hypothesis that there is a unit root at the 5% significance level, that is, the non-stationary sequence passes through the second-order differential stationary, which is the second order. A single sequence, I (2), so

Table 2. Statistical data collection.

YEAR	NY (Value-added of Agriculture)	TR (Freight ton turnover)	EDU (Graduates of Higher Education)	LIV (Income on Agriculture)	GOV (General budget on Agriculture)
	100 million yuan	100 million ton-KM	10,000 person	CNY	100 million yuan
1995	762.99	1538.82	3.76	1231.97	17.59
1996	937.64	1603.52	3.91	1579.19	21.12
1997	1005.55	1547.18	3.89	1733.89	23.47
1998	1068.58	1452.74	3.96	1864.05	25.71
1999	1120.14	1432.08	3.99	1948.36	28.39
2000	1160.22	1476.51	4.17	1985.82	34.19
2001	1234.34	1573.28	4.61	2097.86	36.94
2002	1246.44	1649.22	7.12	2215.74	44.77
2003	1239.70	1891.73	10.90	2235.68	47.92
2004	1692.79	2107.26	13.43	2553.15	65.99
2005	1892.01	2282.60	16.52	2870.58	82.28
2006	1916.73	2415.89	20.21	3261.03	111.34
2007	2206.18	2729.30	26.72	3851.60	152.51
2008	2630.21	5215.84	30.25	4454.24	209.59
2009	2726.29	6146.09	33.41	4806.95	361.60
2010	3192.82	7141.82	38.25	5523.73	399.19
2011	3421.09	8471.07	43.30	6604.03	480.48
2012	3654.20	9436.42	43.53	7524.94	551.73
2013	3913.47	7205.05	45.02	8475.34	629.85
2014	4089.88	7367.09	44.53	9966.07	661.94
2015	4154.41	6916.89	46.58	10,852.86	791.63
2016	4217.40	7336.28	48.69	11,696.74	807.06
2017	4310.55	8165.54	50.41	12,719.18	916.81

Resource: Henan Statistical Year Book.

each variable can be cointegrated.

3.3.2. Cointegration Test

Because the above sequence is a second-order single-order sequence, it indicates that there may be a cointegration relationship between the variables. In addition, the data selection period is 1995-2017, and the time span is up to 24 years. Further, the cointegration test can be performed to determine whether there is a long-term equilibrium relationship. From the test results in **Table 3**, there is a cointegration relationship between the variables at the level of significance of 5%.

Table 3. Stationarity test.

Variable	Data	Prob*	Stationarity
NY	LD	0.7691	I (2)
	FD	0.0016	
	SD	0.0000*	
TR	LD	0.9089	I (2)
	FD	0.0339	
	SD	0.0000*	
GOV	LD	0.9347	I (2)
	FD	0.5354	
	SD	0.0000*	
LIV	LD	0.9873	I (2)
	FD	0.0139	
	SD	0.0034*	
EDU	LD	0.6367	I (2)
	FD	0.3337	
	SD	0.0058*	

Note: LD indicates original data, FD indicates first order differential data, SD indicates second order differential data; I (2) indicates the variables are second order stationary.

3.3.3. Impulse Response

Before establishing the vector autoregressive model, we need to determine the optimal lag order. According to the AIC and SC criteria, we determine the variable lag order as the first order. Currently, the absolute value of the eigenvalue of the characteristic equation is less than 1, that is, in the unit. Within the circle, the model is stable. For the vector autoregressive model, the economic interpretation of the single parameter estimates is biased, while the cointegration analysis only indicates whether there is a long-term equilibrium between the agricultural and service industries. If the analysis of the unit changes in agriculture and service industries is caused by the internal linkages, the whole disturbance of the system and the combined response of the two to the disturbance must use the impulse response function in the model. The impulse response function is used to describe the dynamic impact of the impact of adding a standard deviation on the model disturbance term on the current and future values of the endogenous variable. We set the length of the response to 20 years. Among them, the abscissa indicates the length of the lag period of the impact, and the ordinate indicates the degree of response of the endogenous variable to the impact. The impulse response results are shown in **Figures 1-4**.

- **Figure 1** shows the impulse response of agriculture to the distribution service industry. It can be seen from the figure that after a positive impact on the distribution service industry in this period, agriculture reached its maximum in the third period and showed a wave of development. With the develop-

ment of time, the impulse response of agriculture has gradually stabilized, and the range has been reduced. This indicates that the circulation service industry and agriculture may have non-same frequency and dislocation status in the initial stage, and gradually stabilize in the later stage.

- **Figure 2** shows the impulse response of agriculture to human capital. The trend of impulse response with agriculture to the distribution service industry is basically the same, and it also shows a wave of development. The difference is that after a positive impact on human capital in the current period, agriculture reached its maximum in the third period, and the maximum value was higher than the maximum response of agriculture to the circulation service industry. As time progressed, the impulse response of agriculture began to stabilize at the beginning of the 15th period.
- **Figure 3** shows the impulse response of agriculture to rural income. Although

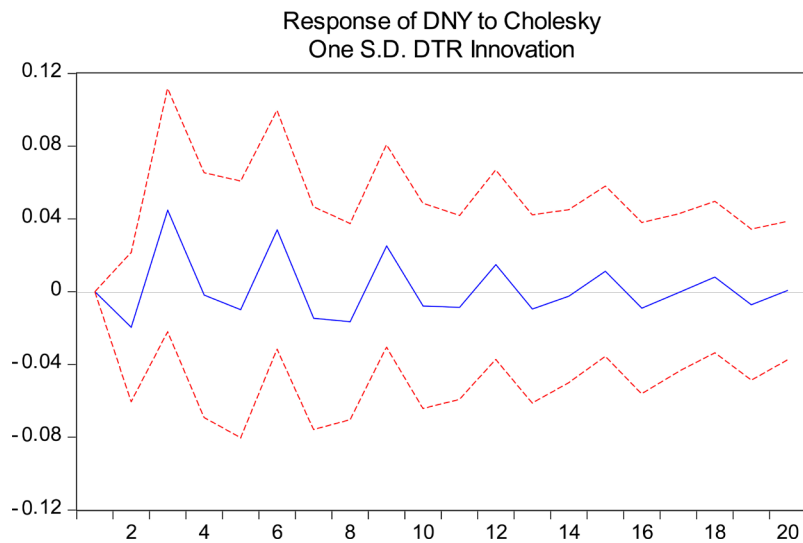


Figure 1. Agricultural impulse response to circulation service industry.

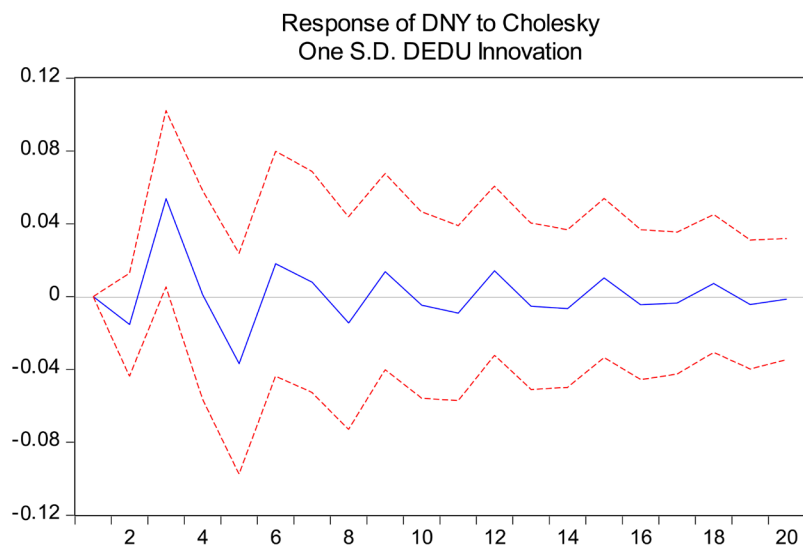


Figure 2. Agricultural impulse response to human capital.

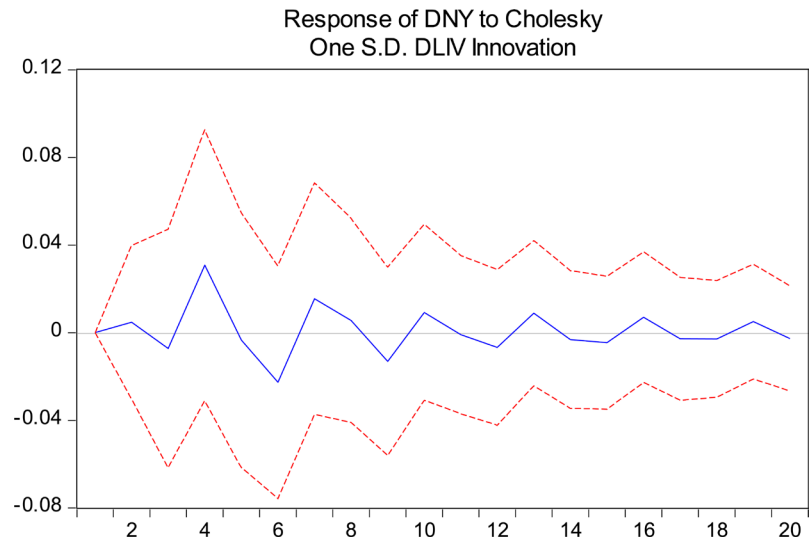


Figure 3. Agricultural impulse response to country income.

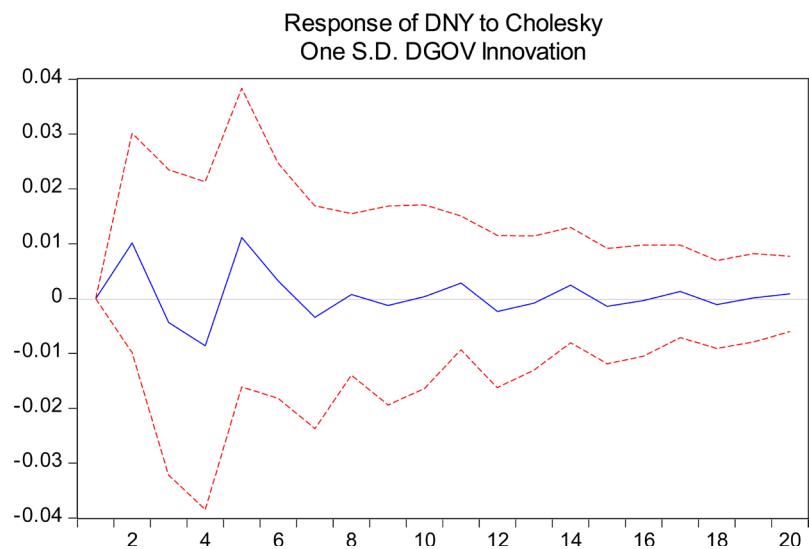


Figure 4. Agricultural impulse response to agricultural policy.

the impulse response trend of **Figure 3** also shows a wave of development. But the obvious difference with the former two is that after a positive impact on human capital in this period, agriculture responds positively and reaches its maximum in the fourth period. The impulse response of agriculture to rural income is contrary to the impulse response of agriculture to the circulation service industry and education.

- **Figure 4** shows the impulse response of agriculture to agricultural policy. **Figure 4** and **Figure 3** are basically the same in the initial stage. It can be seen from the figure that after a positive impact on agricultural policy in this period, agriculture reached its maximum in the fifth period, but the steady state began in the eighth period, which can be said to be the first to stabilize. This shows that agricultural policy and agriculture have strong interactions at the beginning, and the later effects gradually shrink to disappear.

3.3.4. Results of Variance Decomposition

The full name of variance decomposition is “predictive error variance decomposition”, which is used to analyze the contribution of structural impacts affecting endogenous variables. Based on the vector autoregressive model obtained above, this paper measures variance agriculture, circulation service industry, human capital, the composition of the impact of rural income and agricultural policies as shown in **Table 4**.

In terms of its own impact on promotion, Henan Province is the main factor driving its own change. Even in the 20th period, it has maintained a proportion of more than half (52.997%), but the trend is declining; overall, the contribution rate of circulation service industry and rural income to agriculture has gradually increased over time, and the contribution of the circulation service industry to agriculture has exceeded the contribution of rural income to agriculture. During the forecast period, the contribution rate of the circulation service industry to agriculture reached the maximum in the 19th period (18.506%), and the contribution rate of rural income to agriculture reached the maximum in the 20th period (7.776%). The contribution rate of human capital to agriculture increased rapidly in the initial period, and reached a maximum of 21.511% in the fifth period, and the subsequent contribution rate stabilized around 19%, indicating that the impact of human capital on agriculture may be insufficient in the later period. The impact of agricultural policies on Henan agriculture also reached its maximum (1.537%) in the fifth period, followed by a gradual slow decline, indicating that the long-term incentives for agricultural policies are not obvious as shown in **Table 5**.

4. Study Conclusion and Suggestions

The existing literature studies the interaction between producer services and agriculture, and often ignores the impact of the development of the circulation service industry on the manufacturing industry. In fact, as an important part of the producer service industry, the development of the circulation service industry has an important role in promoting agricultural efficiency. This paper examines the impact of the circulation service industry on agriculture based on a vector autoregressive model. Research and development: There is a balanced cointegration relationship between agriculture and circulation service industry in Henan Province. In the long run, the development of circulation service

Table 4. Co-integration test result.

Hypothesized No. of CE(s)	Trace Statistic	0.05 Critical Value	Prob.*	Max-Eigen Statistic	0.05 Critical Value	Prob.*
None*	161.5994	69.81889	0.0000	59.84407	33.87687	0.0000
At most 1*	101.7554	47.85613	0.0000	38.45901	27.58434	0.0014
At most 2*	63.29635	29.79707	0.0000	34.47985	21.13162	0.0004
At most 3*	28.81650	15.49471	0.0003	27.44870	14.26460	0.0003

Table 5. Results of variance analysis.

Period	S.E.	DNY	DTR	DEDU	DLIV	DGOV
1	0.0579	100.0000	0.0000	0.0000	0.0000	0.0000
2	0.1012	92.7453	3.7203	2.3105	0.2212	1.0028
3	0.1240	62.8849	15.5344	20.3035	0.4851	0.7921
4	0.1372	64.2023	12.7207	16.6058	5.4281	1.0431
5	0.1442	60.0112	11.9746	21.5114	4.9660	1.5368
6	0.1519	55.2965	15.7920	20.7892	6.6928	1.4295
7	0.1538	54.1461	16.3114	20.5511	7.5474	1.4441
8	0.1578	54.3592	16.5966	20.3735	7.2964	1.3743
9	0.1634	53.7229	17.8351	19.7024	7.4519	1.2876
10	0.1640	53.4337	17.9333	19.6399	7.7145	1.2786
11	0.1665	54.2064	17.6742	19.3594	7.4903	1.2696
12	0.1686	53.7136	17.9970	19.5721	7.4601	1.2572
13	0.1693	53.3561	18.1830	19.5302	7.6802	1.2505
14	0.1700	53.5447	18.0418	19.5064	7.6470	1.2602
15	0.1712	53.3417	18.2146	19.5841	7.6107	1.2489
16	0.1717	53.0784	18.3945	19.5469	7.7376	1.2426
17	0.1720	53.1487	18.3377	19.5285	7.7406	1.2445
18	0.1727	53.1170	18.4004	19.5396	7.7047	1.2383
19	0.1730	52.9661	18.5060	19.5324	7.7618	1.2338
20	0.1731	52.9970	18.4814	19.5114	7.7758	1.2344

Resource: Calculated by the data in **Table 2**, from Henan Statistical Year Book.

industry in Henan Province promotes the development of agriculture.

Based on the above analysis, we propose the following:

First, in the process of realizing modernization, it is necessary to fully develop the circulation service industry. By integrating agricultural resources, transportation resources such as railways and highways, and reducing transaction costs, the circulation service industry is fully embedded in agriculture, reshaping the agricultural product circulation industry organization model, and systematically re-engineering agricultural transaction circulation. We will create an “order-based” production and sales model that integrates agricultural products with production links, production, trading, distribution, and finance, and achieves “customization on demand”.

Second, focusing on consulting services, education and training, providing agricultural information technology consultation and professional knowledge training to farmers, and improving the overall quality of farmers, making them be the market players in the agricultural industrialization service system [12].

Third, integrate human resources, focus on creating an agricultural talent innovation platform, use investment and financial means to extend to the inter-

mediate circulation service industry [13], encourage universities and scientific research institutions to participate in agricultural construction, and provide strong professional technical services, experience and knowledge for agricultural development.

Fourth, taking the agricultural policy as the guarantee, through the circulation service industry to guide the financial support, tax incentives, financial subsidies and other preferential measures, and actively promote urban services to rural finance, logistics, marketing, information, research and development and other aspects [14].

Fifth, taking science and technology innovation as the driving force, under the new economic normal, reform and innovation run through all aspects of agricultural development, fully mobilize the innovation ability of major participating entities, and take the road of efficient [15] [16], safe and green agricultural development, from knowledge innovation, technological innovation to development. The reform and innovation of the model stimulate the further development of agriculture in the direction of modernization.

Sixth, with the goal of constructing a virtuous cycle development mechanism of modern agriculture and circulation service industry, we will take advantage of the development advantages of the circulation service industry to promote the realization of agricultural modernization, stimulate the vitality of agricultural development, and bring agriculture to market, specialization and industrialization, and enhance the agricultural industry. The overall competitiveness and sustainable development will realize the transformation of Henan from a large agricultural province to a strong agricultural province.

Last, it should be pointed out that, given the availability of existing statistical data in Henan Province, the article considers the variable of cargo turnover in the circulation service industry [17] [18]. The results show that the circulation service industry has a greater volatility in agriculture in the initial stage, which means that there are other mediation variables in the path of the circulation service industry to promote agricultural efficiency improvement [19]. Therefore, perfecting the data or optimizing the measurement indicators will be our follow-up work. On the other hand, the analysis of this paper does not consider the heterogeneity between the industries of the circulation service industry. This is also the direction that needs further exploration.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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