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Development of Shao Guan Agricultural Socialized Service System under Dual Circulation Strategy

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Abstract

The agricultural industry's competitiveness has become increasingly vital as global uncertainty grows. China proposed the dual circulation plan to achieve competitiveness resiliency in May 2020, which intends to enhance supply-side structural reforms. Empirical studies are rare in the early stages of national policy implementation, and most articles are conceptual. To close the empirical gap, this research performs a survey of important stakeholders, consisting of Shao Guan's agricultural college, agricultural associations, businesses, and e-commerce associations. For empirical validation, it uses structural equation modeling (SEM). The findings show that environmental, structure and system, productivity, core competency, the promotion effect of agriculture, and dual circulation consequences play significant roles in explaining agriculture socialization service performance as measured by its development level, thereby assisting agricultural development and satisfaction.

Keywords: *Dual circulation strategic, Agricultural socialization service system, Influence factors*

1. Introduction

For a long time, China's agricultural development could not keep up with the speed of other industries, and there were disparities in comparison to industrialized countries. The most important social reason, in addition to the technical issues, is the ineffective agricultural socialization service system. China has never been complacent in its pursuit of national policies that can provide competitive advantages in global industry development. A continual set of "five-year plans" provides policy continuity in line with global trends, ensuring the Chinese economy's unwavering resilience (Javed et al., 2021). On May 14, 2020, a meeting of the Standing Committee of the Political Bureau of the Central Committee was proposed for the first time, at a time of increased uncertainties in the global political and economic order, rising protectionism and de-globalization,

as well as greater external risks and challenges, that China must deepen supply-side structural reforms, fully exploit its large-scale market advantages, and domestic demand potential, as noted in Chang (2022). As a result, the "dual circulation" national strategy was developed and promptly adopted across the country.

Shao Guan, China is the target for this study. Agriculture is one of Shao guan's ten important industries, however, agricultural modernization is limited. China's dual circulation development strategy was announced in 2020 (Javed et al., 2021), and Shao guan is a contender for Guangdong's modern agriculture socialization service pilot. As a result, researchers and policymakers must devise strategies to encourage the growth of the Shao guan agricultural socialization service system. Shao guan's agricultural socialization serviceability is currently weak and non-functional, and market competitiveness is lacking. The macro-environment of Shao guan's agricultural development has changed since the dual circulation plan was implemented. Agriculture's policies, positioning, operations, and commodity sales have all altered dramatically. Recognizing the complexity of the development elements affecting the socialized agricultural service system, the following research objectives are established:

To identify the factors that will significantly influence Shao guan's agricultural socialization service system, and use structural equation modeling to present a logical structure of the relationships of the factors that explain the performance of the agricultural socialization services.

2. Literature Review and Related Research

In the early stages of implementing the dual circulation method, research focuses primarily on concept development, theoretical connotation excavation, and theoretical evolution. According to Dong and Li (2020), a smooth domestic circulation is the foundation of dual circulation, and a smooth international circulation plan gives support and assurance. Three chains and four elements, according to Pu and Yang (2020), define the key notion of "dual circulation": The four factors of labor, land, capital, and technology can be more robustly integrated into the economic system by linking the three chains of industrial chain, supply chain, and innovation chain. Notably, the supply-side structural reform is inextricably linked to the dual circulation development plan (Xu, 2020). To achieve supply and demand balance in the entire economic field, the dual circulation method employs supply and demand relationships in the four links of production, distribution, distribution, and consumption (Xu, 2020). Part of the reasons China employs a dual circulation approach, according to Yu (2020), are the hazards of China-US trade relations, the stalling of multilateral economic and trade cooperation, and the new problems of breaking up existing global value chains. Many scholars, such as Guo (2020), Liu (2020), and Huang (2021), have conducted relevant research on the dual circulation strategy, and their findings provide theoretical support for further research into the development of agricultural socialization services under the dual circulation development strategy.

Liu, Niu, and Zou (2021) proposed some strategies to increase the efficiency of China's manufacturing sector based on a complete assessment of the expansion of China's manufacturing industry under the dual circulation strategy. These policies provide useful information for agricultural research. Recognizing the issue of agriculture's "dual circulation" development, Zhong et al. (2021) proposed development solutions such as market integration, factor integration, subject

docking, science and technology empowerment, and policy reform. Dong and Meng (2021) provide policy bases for boosting the international competitiveness of China's AI industry under the dual circulation development plan using an assessment index system based on the diamond model. Dong and Meng (2021) use principal component analysis to look at the AI difficulties in China, the United States, the United Kingdom, Germany, India, and other nations. He and Yang et al. (2021) look at the toughness of China's agriculture industrial chain under "dual circulation" development and find that resilience can be improved by strengthening advantages, extending the chain, expanding the scope, strengthening weak links, creating contact points, and making the industrial chain back up.

Zhang and Bi (2021) propose some strategic concepts and reform actions to overcome substantial constraints that are preventing China from speeding the creation of its domestic industrial chain circulation system. Zhang (2021) also investigates the course and effectiveness of cross-border e-commerce for agricultural products to promote a dual circulation strategy. The trade pattern and competitiveness of China's key non-ferrous metal resources are examined by Xu et al. (2021). Huang and Wu (2021) investigate the evolution of China's manufacturing industry's foreign trade pattern in the context of dual circulation. Literature in theoretical and empirical sectors is scarce due to the short duration of the dual circulation method.

Concepts and characteristics, theoretical connotation and building methods, industrial efficiency evaluation, and other areas of the content are among the primary successes in agriculture socialized service system research. Agricultural socialization service is an inherent aspect of the agricultural management body, according to Cao et al. (2021) and Huang and Fu (2015), and its concept and connotation should modernize the agricultural sector.

As a result, academics must figure out what characteristics contribute to good agriculture socialization service. The research is still in the early stages of development, and this study adds to the information base. As a prelude, Cao and Guo's (2017) proposes an index evaluation for comparing the development level of agricultural socialized service systems in different parts of China, and provide some recommendations for establishing agricultural socialized service systems.

Different areas in China have vastly different states of development in the agriculture socialization services. In Sichuan Province, there are resource limits and competitive advantage difficulties that may stymie the establishment of a modern agricultural socialized service system (Wang, 2010). To Shao guan, a prefecture-level city in the northern Guangdong province in China, the agriculture socialization service and state of contribution to the agriculture industry has not been systematically and empirically studied, and this study aims to fill.

Competitiveness will remain a challenge unless agricultural socialization services commit to addressing backward technologies and combining resources to boost agricultural productivity (Zhou, 2016), which includes technological innovation (Jiang and Liu, 2012). According to the preceding studies, the key to realizing China's agricultural modernization under the "dual circulation" development plan is to build the agricultural production system with the concept of a system in mind. Various technologies have been incorporated for strengthening China's agricultural production system, such as developing climate-smart agricultural systems (Xin and Tao, 2021), but none, from the database of Scimedirect.com and Emerald.com, have focused on

the agricultural socialization service systems. Thus, as inferred from the aforementioned literature review in the context of agriculture socialization services, this study proposes six hypotheses:

H1. Environmental factors affect the Shao guan agricultural socialization service system.

H2. System structure factors influence the agricultural socialization service system in Shao guan.

H3. Productivity level has an impact on the Shao guan agricultural socialization service system.

H4. The core competence impacts the Shao guan agricultural socialization service system.

H5. The promoting effect of the service system has an impact on the agricultural socialized service system in Shao guan.

H6. Dual circulation outcome influences the Shao guan agricultural socialization service system.

Although specific empirical evidence is yet to exist for the six hypotheses, there are some fundamental theoretical and empirical premises for the hypotheses. Market and political environments have been shown to influence the export competitiveness of agricultural products and agricultural sustainability in China (Long, 2021). In Salman and Al-Omari (2022), agricultural companies need to be situated in a competitive environment for success. In short, according to Michael Porter's five force analysis, a favorable environment, especially the industry, and the market, would lead businesses to have the opportunistic spaces for developing factors of competitive advantage (Lakotta, 2020). Thus, H1 is assumed that a favorable environment (policy, market, industry) would significantly influence the behaviors of Shao guan's agricultural socialization services that aim to create a competitive edge for the agricultural industry. Accordingly, the structure and systems of the service systems, just like that of China's Belt and Road initiatives (Zhou and Tong, 2022), should also be prioritized, as noted in the second hypothesis H2. Similarly, by the same token, without a sound system and structure, business entities would not be sustainable (SgROI, 2022). In addition, a good system and structure of competitiveness would also be highly associated with productivity of the production, which yields cost advantage (SgROI, 2022), leading to farmer income increase and many other advantages (Gafaro and Pellegrina, 2022), as represented by the overall evaluation performance of the agricultural socialization services. Thus, the third hypothesis H3 is assumed.

Furthermore, to achieve sustainable advantage, organizations need to integrate and exploit resources and transform them into competencies that can lead to innovative ideas and business model transformation, and render the supply chain flexible (Burin et al., 2020), which is what the agriculture socialization service system needs to develop. Resource dependence and core competence are the two inseparable strategies any organization that want to succeed sustainably should be committed (Banerjee, 2003). Thus, hypothesis H4 is assumed. Lastly, positive consequences represented by the ability to promote enterprise income, production efficiency, cost reduction of agricultural production (H5), and the positive effect of the dual circulation strategies (H6) are the two result- or goal-oriented drivers that can significantly motivate further development of the socialization services. Research has shown that goal orientation and

achievement can reduce the anxiety level of the stakeholders, and thus, increase their level of satisfaction and motivation, such as in education (Salimi, Mirian, and Younesi, 2022).

3. Research Methodology

This study uses the questionnaire survey method and the structural equation model (SEM) method for empirical research. SEM is a robust multivariate technique used to test the hypotheses presented in the pre-established relationship structure (Shah, Zala, and Desai, 2022).

3.1 Questionnaire Design

The questionnaire survey comes from the model designed in this study and refers to the relevant research results of other scholars. The difficulty of the questionnaire design in this study is mainly reflected in the questionnaire design and questionnaire survey. First, developing the agricultural socialization service system in Shao guan under the dual circulation strategy is an industrial economic problem. The questionnaire survey method is a micro research method, leading to determining the specialized treatment that can match the research method with the research problem. Secondly, to answer how to design the questionnaire to obtain reliable and effective research data, this study resolves to consult the subject experts. Considering that the questionnaire items are mainly subjective opinions, feelings, and satisfaction, the questionnaire options will mainly use the Likert five-level scale. The questionnaire items are set up in Table 1.

Table 1: Questionnaire

| Factors | Component | Item | Questionnaire questions |
|-----------------------|--|--------|--|
| | index | number | |
| | Personal information | A1 | Are you engaged in agriculture-related work? |
| | | A2 | What position do you hold in the enterprise or structure? |
| | | A3 | Do you live or work in Shao guan? |
| Environmental factor | Policy environment | B1 | What do you think of the policy environment of Shao guan agricultural socialized service system? |
| | Market circumstances | B2 | What do you think of the market environment of Shao guan agricultural socialized service system? |
| | Industry environment | B3 | What do you think of the industry environment of Shao guan agricultural socialized service system? |
| Systems and Structure | Reasonable structure of the architecture | C1 | Do you think the structure of Shao guan's socialized service system is reasonable? |
| | Industrial chain integrity | C2 | Do you think the Shao guan agricultural socialization service system industry chain is complete? |

| | | | |
|-------------------------------------|---|----|---|
| | The types of institutions | C3 | Do you think Shao guan agricultural socialization the service organization is complete? |
| Productivity level | Technical level | E1 | How do you think of Shao guan agricultural socialization service technology level? |
| | Practitioner quality | E2 | What do you think of the quality of agricultural socialization service practitioners in Shao guan? |
| | Science and technology level | E3 | What do you think of the scientific and technological level of agricultural socialization service in Shao guan? |
| Core competence | Resource integration capability | F1 | What do you think of the resource integration ability of Shao guan agricultural socialization service? |
| | Innovation ability | F2 | What do you think of the innovation ability of agricultural socialization service in Shao guan? |
| | Industrial integration | F3 | What do you think of the integration degree of Shao guan's agricultural socialized service system and other industries? |
| The promotion effect of agriculture | Increase agricultural income | G1 | Do you think the agricultural socialization service system has increased the enterprise income? |
| | Improve the efficiency of agricultural production | G2 | Do you think Shao guan agricultural socialization service system has improved agricultural production efficiency? |
| | Reduce agricultural production costs | G3 | Do you think the Shao guan agricultural socialization service system reduces the cost of agricultural production? |
| The effect of the dual circulation | | H1 | Does the dual circulation strategy promote the development of agricultural socialization service organization in Shao guan? |
| | | H2 | Does the dual circulation strategy improve the environment of the agricultural socialization service system in Shao guan? |
| | | H3 | Whether the dual circulation strategy has optimized Shao guan's agricultural socialization service system structure? |
| | | | Has the dual circulation strategy improved Shao |

| | | | |
|--------------------------|----------------------|----|---|
| | | H4 | Shao guan's productivity level of the agricultural socialized service system |
| | | H5 | Has the dual circulation strategy improved the core ability of agricultural socialized service institutions |
| | | H6 | Has the dual circulation strategy improved Shao guan's agricultural industry promotion effect? |
| Comprehensive evaluation | Level of development | Y1 | What do you think of the development level of Shao guan agricultural socialized service system? |
| | Role evaluation | Y2 | Do you think Shao guan agricultural socialized service system has promoted agricultural development? |
| | Service satisfaction | Y3 | Are you satisfied with the socialized agricultural service in Shao guan? |

3.2 Data Collection

Due to the strong professional characteristics of the research problems, the respondents were selected as agricultural practitioners, mainly including agricultural entrepreneurs, senior managers of agricultural enterprises, agricultural technical experts, and public officials in the agricultural departments of government organs. The questionnaire is distributed on the Internet: first, the questionnaire is published on the questionnaire network, and then use Wechat and QQ send the questionnaire link to the respondents. The respondents click the link or scan the QR code to complete the questionnaire, and each IP is limited to one participant.

The questionnaire survey was conducted from December 20, 2021, to January 20, 2021, lasting 30 days. A total of 699 questionnaires were issued, 327 were recovered, and 216 valid questionnaires were performed using statistical methods. Table 2 had shown the sampling design and data collection result. From the perspective of structural equation modeling (SEM), which this study had 23 observed variables, and by adapting criteria from Hair et al. (2006) for sample sizes ranging from 5 to 10 sample size for each observable variable, 216 is judged sufficient.

Table 2: Questionnaire distribution and recovery

| Questionnaire distribution channel | Composition of the respondents | Number of questionnaires distributed | Retrieve | Effective questionnaire |
|---|--|--------------------------------------|------------|-------------------------|
| Shao guan college of agricultural We Chat group | Teachers and researchers of agriculture-related majors | 38 | 26 | 17 |
| Shao guan agricultural association, We Chat group | Agricultural entrepreneurs, the relevant personnel of the research institute | 156 | 126 | 85 |
| Shao guan entrepreneurship association | Entrepreneurs in various industries | 378 | 118 | 81 |
| Shao guan e-commerce association We Chat group | Mainly for agricultural products e-commerce practitioners | 127 | 57 | 33 |
| Total | 699 | 327 | 216 | |

4. Results

4.1 Reliability and Validity Assessment

Reliability analysis of the collected data was first performed to verify the credibility and reliability of the data collected by the questionnaire. The questionnaire item involves six factors, and each factor has 3-7 measurement items, measured on a Likert scale to collect the subjective evaluation of the respondents. Given Cronbach's alpha in exceeding the 0.80 minimum threshold, in Tables 3 and 4, the measurements are considered very reliable.

Table 3: The Cronbach α coefficient

| The Cronbach α coefficient | Standardized Cronbach α coefficients | number of terms | sample number |
|-----------------------------------|---|-----------------|---------------|
| 0.967 | 0.971 | 28 | 216 |

Table 4: The Cronbach α coefficient of each item

| Influencing factor | variable | Items | Item has deleted the Cronbach α coefficient | The Cronbach α coefficient |
|--|--|-------|--|-----------------------------------|
| environmental factor (R1) | Policy environment | B1 | 0.890 | 0.892 |
| | market circumstances | B2 | 0.887 | |
| | Industry environment | B3 | 0.883 | |
| Architecture (R2) | structural rationality | C1 | 0.833 | 0.893 |
| | Industrial chain integrity | C2 | 0.841 | |
| | The types of institutions | C3 | 0.872 | |
| Productivity level(R3) | technical level | E1 | 0.861 | 0.879 |
| | Practitioner quality | E2 | 0.845 | |
| | Science and technology level | E3 | 0.932 | |
| c core competence(R4)) | Resource integration capability | F1 | 0.932 | 0.940 |
| | innovation ability | F2 | 0.921 | |
| | Industrial integration | F3 | 0.892 | |
| The auxo (promotion) effect of agriculture(R5) | Increase agricultural income | G1 | 0.896 | 0.901 |
| | Improve production efficiency | G2 | 0.861 | |
| | Reduce agriculturally production costs | G3 | 0.961 | |
| The effect of the dual circulation(R6) | | H1 | 0.951 | 0.965 |
| | | H2 | 0.961 | |
| | | H3 | 0.963 | |
| | | H4 | 0.949 | |
| | | H5 | 0.950 | |
| | | H6 | 0.953 | |
| comprehensive evaluation(R7) | level of development | Y1 | 0.923 | 0.945 |
| | Role evaluation | Y2 | 0.920 | |
| | Service satisfaction | Y3 | 0.931 | |

In addition to reliability assessment, the questionnaires were subjected to exploratory factor analysis (EFA) using the principal component analysis method, with Varimax variance orthogonal rotation in supporting the seven variables considered for the agricultural socialization service system development. Exploratory factor analysis provides strong construct validity evidence. The test requires first to ensure sampling adequacy, which KMO of 0.942 meets the minimum threshold of 0.80, and the Bartlett spherical test has a significant P-value of 0.000, given in Table 5.

Table 5: Exploratory factor reduction sampling adequacy

| The KMO test and the Bartlett's test | | |
|---|------------------------|--------------|
| KMO | | 0.942 |
| The Bartlett Sphericity Test | Approximate chi-square | 3878.517 |
| | df | 190.000 |
| | p | 0.000*** |

Note: ***, ** and * represent the significance levels of 1%, 5% and 10%, respectively

Table 6 shows the respective questionnaire items fitting (loaded) perfectly into each factor that corresponds to the variables of this study given in Table 4. The loading for each measurement item is above the minimum threshold of 0.50. Thus, construct validity is assured.

Table 6: Factor load coefficient after exploratory factor rotation

| | factor 1 | factor 2 | factor 4 | factor 5 | factor 6 | factor 7 | factor 8 |
|----|----------|----------|----------|----------|----------|----------|----------|
| B1 | 0.853 | | | | | | |
| B2 | 0.875 | | | | | | |
| B3 | 0.691 | | | | | | |
| C1 | | 0.804 | | | | | |
| C2 | | 0.865 | | | | | |
| C3 | | 0.798 | | | | | |
| E1 | | | 0.698 | | | | |
| E2 | | | 0.694 | | | | |
| E3 | | | 0.842 | | | | |
| F1 | | | | 0.767 | | | |
| F2 | | | | 0.762 | | | |
| F3 | | | | 0.685 | | | |
| G1 | | | | | 0.827 | | |
| G2 | | | | | 0.579 | | |
| G3 | | | | | 0.763 | | |
| H1 | | | | | | 0.81 | |
| H2 | | | | | | 0.753 | |
| H3 | | | | | | 0.619 | |
| H4 | | | | | | 0.789 | |
| H5 | | | | | | 0.597 | |
| H6 | | | | | | 0.781 | |
| Y1 | | | | | | | 0.869 |
| Y2 | | | | | | | 0.814 |
| Y3 | | | | | | | 0.776 |

4.2 Structural Equation Analysis

In order to further analyze the influence of various factors on Shao guan agricultural socialization service system and the overall structure of logic, this study uses structural equation modeling (SEM) for analysis. Structural equation modeling (SEM) analysis is a robust statistical data analysis method, which assesses the measurement model, the regression paths, and the model-fitting indexes. The regression coefficients for the factors are given in Table 7.

Table 7: The SEM path coefficients

| X | → | Y | SE | p | standardized regression coefficient |
|-------------------------|----------|--------------------------|-----------|----------|--|
| environmental factor | → | Systems and structure | 0.128 | 0.097 | 0.167 |
| environmental factor | → | Productivity level | 0.123 | 0.000 | 0.419 |
| environmental factor | → | core competence | 0.157 | 0.000 | 0.395 |
| environmental factor | → | Auxo (promotion)-action | 0.116 | 0.000 | 0.567 |
| environmental factor | → | comprehensive evaluation | 0.131 | 0.525 | 0.063 |
| Systems and structure | → | comprehensive evaluation | 0.117 | 0.000 | 0.614 |
| Productivity level | → | Systems and structure | 0.100 | 0.658 | 0.041 |
| Productivity level | → | comprehensive evaluation | 0.099 | 0.046 | 0.078 |
| core competence | → | architecture | 0.083 | 0.000 | 0.614 |
| core competence | → | Productivity level | 0.067 | 0.000 | 0.630 |
| core competence | → | comprehensive evaluation | 0.106 | 0.039 | 0.088 |
| Auxo (promotion)-action | → | architecture | 0.073 | 0.048 | -0.109 |
| Auxo (promotion)-action | → | Productivity level | 0.075 | 0.117 | -0.096 |
| Auxo (promotion)-action | → | core competence | 0.105 | 0.283 | -0.075 |
| Auxo (promotion)-action | → | comprehensive evaluation | 0.076 | 0.662 | -0.024 |
| dual circulation | → | environmental factor | 0.075 | 0.000 | 0.761 |

| | | | | | |
|------------------|---|-----------------------------|-------|-------|--------|
| dual circulation | → | architecture | 0.096 | 0.005 | 0.212 |
| dual circulation | → | Productivity level | 0.098 | 0.292 | -0.089 |
| dual circulation | → | core competence | 0.134 | 0.000 | 0.447 |
| dual circulation | → | auxo (promotion)- action | 0.107 | 0.794 | 0.029 |
| dual circulation | → | comprehensive evaluation | 0.098 | 0.024 | 0.090 |

The structural equation model (SEM) fitting was evaluated to verify that the model met the theoretical requirements. To quantify the effect of model fitting, validation indicators are needed to be evaluated, and six indicators including χ^2 , df , p , CFI, NFI, and IFI are selected. Through the fitting analysis of the model, the critical value of the validation index, that is, the coefficient meets the corresponding index, requires $p > 0.05$, $CFI > 0.9$, $NFI > 0.9$, and $IFI > 0.9$. In Table 8, except for NFI slightly less than the critical value, other indicators have passed the test, which shows that the model of the agricultural socialization service system constructed meets the theoretical requirements. In sum, the SEM model shown in Figure 1 is a robust fit, and thus indicates a logical structure of the relationship of both the causal and effect relationships to guide Shao guan prefecture-city of Guan dong, China towards perfecting their agriculture socialization service systems.

Table 8: Model tests

| Fit the index | Fitting coefficient (value) | Index evaluation critical value | Fit evaluation |
|---------------|-----------------------------|---------------------------------|----------------|
| χ^2 | 565.427 | N/A | pass-through |
| df | 217 | N/A | pass-through |
| p | 0.05 | >0.05 | pass through |
| CFI | 0.931 | >0.9 | pass through |
| NFI | 0.893 | >0.9 | not go |
| IFI | 0.931 | >0.9 | pass through |
| overall model | N/A | N/A | pass-through |

The SEM path analysis of the causal and effect structure of the Shao guan agricultural socialized service systems is shown in Figure 1.

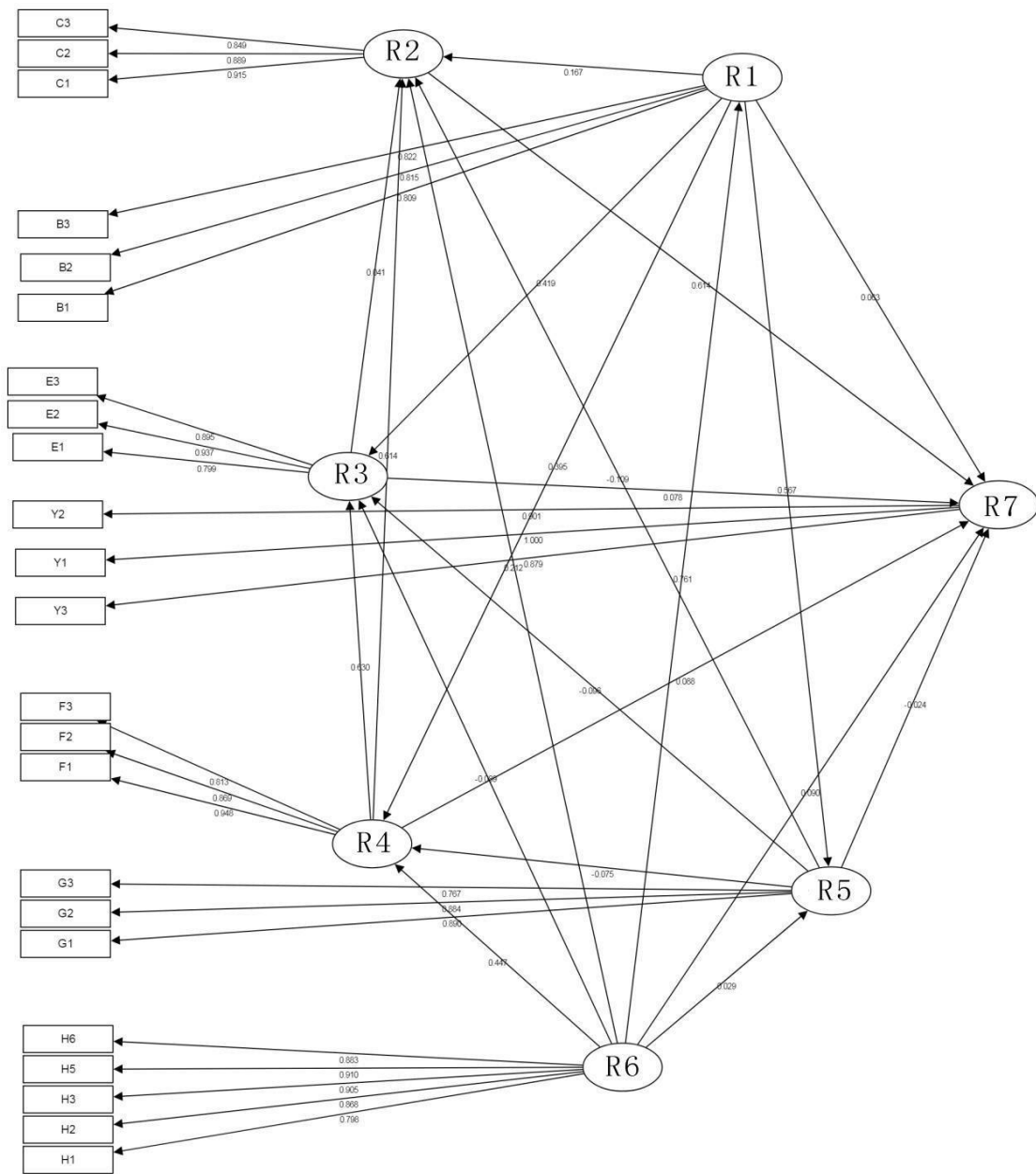


Figure 1: Path coefficient diagram

Note: R1 = Environmental factor, R2 = Systems and structure factor, R3 = Productivity, R4 = Core competency, R5 = Promotional effect, R6 = dual circulation strategy, R7 = the overall evaluation of the agricultural socialization service performance.

5. Discussion and Conclusion

5.1 Discussion

As demonstrated by the path coefficient of 0.614 in the SEM, system, and structure, which relates to the rationality, wholesomeness, and integrity of the agricultural socialization service chain, is the key predictor for agricultural socialization services. Environmental, productivity, core competency, and dual circulation result perceptions have path coefficients of 0.063, 0.078, 0.088, and 0.09, respectively, and are also important in influencing the socialization services performance as measured by the ability to improve agricultural industry competitiveness, service level, and satisfaction. The sole non-significant predictor of agricultural socialization services is the promotion ability of agricultural socialization services. In other words, the increase of agricultural income, improvement of production efficiency, and reduction of agricultural production cost have not reached the degree to generate the favorable level of overall evaluations that meets the performance expectation of the agriculture socialization services. The SEM demonstrates that it will be unable to readily use the functions of the environment, productivity, core competency, and dual circulation result, without the quality of the socialization service system and structure, as shown by the following paths:

- The Path coefficient between environment and systems and structure at 0.167;
- The path between productivity and systems and structure at 0.041);
- The path between core competency and systems and structure at 0.614);
- The path between dual circulation strategy and systems and structure at 0.212.

Each socializing service driver is described in the context of dual circulation, as this study concluded: First, there are two significant predictors of core competency: environment (path at 0.395) and dual circulation outcome (path at 0.447). Core competencies are required in several sectors. Shao guan requires specialized socialization services to help the industry integrate resources, provide intellectual support for creativity, and ensure tight interaction with agricultural development. The political, market and industrial environments must be addressed through agriculture socialization services. With a path coefficient of 0.761, the dual circulation outcome has a considerable motivation for influencing the role of the political, market, and industrial environment, which shares a need for a strategy to have a convincing goal (Benra et al., 2022).

Second, to increase agricultural productivity, core competency (path coefficient 0.630) and environmental support (path coefficient 0.419) should be emphasized, which shares the concepts advocated in the resource-advantage theory of competitive advantage (Pontinha, Wagner and Holdford, 2021) and innovation as a dynamic aspect of core competency (Foucart and Li, 2021).

Third, a favorable political, industrial, and market environment has effectively increased enterprise income, production efficiency, and decreased agriculture production costs (path coefficient of 0.567), sharing the role of industry and environment that Professor Michael Porter at Harvard Business has been advocating to impact on organization's business competitive advantages (1979; 1980; 1985; 1990; 1991).

Finally, the dual circulation result is the single factor that has an impact on all other variables studied, including the environment (path 0.761), systems and structure (path 0.212), core competency (path 0.446), industry and farmer income production (path 0.029), and overall evaluation result (path 0.090). This is a significant finding, which implies that the result- or goal-oriented driver can significantly motivate the further development of the socialization services. Research has shown that goal orientation and achievement can reduce the anxiety level of the stakeholders, and thus, increase their level of satisfaction and motivation, such as in education (Salimi, Mirian, and Younesi, 2022).

According to the findings, contemporary agriculture is modifying traditional agriculture to develop productive forces further, and this transformation cannot occur in isolation. Agriculture development demands the participation and cooperation of different sectors of society in addition to the government and agricultural research and education departments. Agriculture has always served the development of industry and cities in Shao guan, which has a long history as an industrial city. Agriculture in Shao guan has long been backward due to this economic framework. This study found that developing Shao guan's agricultural socialization service system is beneficial to changing Shao guan's agricultural production mode and increasing agricultural productivity. Shao guan agriculture, in particular, must have higher standards for the agricultural socialization service system to integrate into domestic and foreign markets under the dual-cycle growth model.

This study reveals that the dual circulation method must have an impact on other elements such as core competency, productivity, systems and structure, and the environment to effectively boost farmer income and agricultural competitiveness. Establishing and improving modern agriculture's socialized service system is thus an important auxiliary step for Shao guan under the dual-cycle plan. Shao guan can bring smaller farmers into socialized large-scale production, improve production and operations, and reduce market risks, all while boosting the growth of modern agriculture. Considering Shao guan's rural people-land interaction, considerable urban-rural contrasts, imbalanced productivity levels among areas, and future development trends and conditions, Shao guan's agricultural socialization service system should maintain systems and structural integrity. Furthermore, this research found that the most important predictor of overall performance rating in agriculture socialization services is systems and structure.

5.2 Conclusion

The major purpose of the agricultural socialization service system, on which this research is focused, is to increase agricultural production efficiency. The production efficiency of society has increased as a result of the constant development of society, which also applies to agriculture. Agricultural production technology and input components in the agricultural production process have improved agricultural production efficiency. The presence of the service industry may encourage agricultural farmers to focus more on production. Given the scarcity of empirical research, this study succeeds in proposing a model that identifies the environment, promotion, productivity, core competency, and dual circulation strategy as major factors in the overall performance of agriculture socialization services. This study also exposes some minor features; for example, systems and structure have an important role in mediating other variables, and the dual circulation method has an impact on all other variables. Furthermore, though causal factors

such as environmental support, systems and structural integrity, productivity and core competencies are vital for the agriculture socialization service performance, this study brings to the attention of goal orientation or outcome centrality as well, as manifested by the roles the promotion effect of agriculture and the dual circulation effect.

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