The Information Agriculture Development Strategies Research in Hunan Province Based on SWOT Analysis

Heng-yi ZHANG¹, Zheng CHEN²,* and Kuai-kuai ZHOU³

¹School of Business, Central South University of Forestry and Technology, Hunan Province, China
²School of Computer and Information Science, Hunan Institute of Technology, Hunan, China
³College of Computer and Information Science, Central South University of Forestry and Technology, Hunan, China

*Correspondence author

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Abstract. This article focuses on the development of Hunan information agriculture by using SWTO analysis model. This article analyses the initial strengthens, weaknesses and external chances, threaten of the development of Hunan information agriculture. The article also raised the importance strategies of how to develop information agriculture and how to choose suitable development methods in order to provide references for government’s decision.

Introduction

1. Strengths: (1) Basic facility of internet; (2) Technology; (3) Economy; (4) Geography.
2. Weaknesses: (1) Low level on internet; (2) There are few talents in agriculture information field; (3) Agriculture information service system is immature; (4) The ways of release agriculture information and acceptance are in a low level.
3. Opportunities: (1) The government should focus on developing agriculture information; (2) The information of agriculture will be better in policy of “Digital Hunan”.
4. Threats: (1) The sense of information is weak; (2) The shortage of construction funds; (3) The usage of agriculture information in a low level; (4) The government cannot play an important role in agriculture information.

SO strategy (Incline strategy): The government concentrates on developing agriculture and the information of agriculture with proper policies. They plan to make progress in agriculture information and allocate resource to achieve the goal of the information of agriculture at a fast speed in Hunan province. Because there are good conditions, including good facility of internet sites and good economy in agriculture.

WO strategy (Solutions): There will be more funds in investing basic information service system, more people will be trained in agriculture information field, and collect all kinds of resource. Then, there are more opportunities which we could get.

ST strategy: We have to strengthen the promotion of basic technology by constructing the standardisation district to make surrounding farmers receive agriculture which is improved.

WT strategy: We have to learn and conclude international agricultural experience which is from developed country. And we also should insist on develop all round, carry out separately, focus on key point strategies.

SWTO Analysis of Hunan Information Agriculture

The Analysis of Strengths

The network infrastructure is the first strength. The LAN circuits almost cover every country and city in Hunan province, and the internet information is becoming the significant basic facilities in the development of a society.
Science and technology is the second strength. The science and technology of agriculture is fairly high in Hunan province. The science and technology of agriculture, education and network expanding have some scales. For now, there are 106 independent agriculture research institutes and other institutes where are in each university and college. There institutes provide more than 5000 scientific and technical personnel and help to train more than 1 million technical personnel.

The third strength is finance. In 2015, the GPR of Hunan province has been reached 2904.72 billion Yuan which like-to-like grew 8.6%, which enter the national top ten.

Agriculture development has a locational strength because Hunan is not only located in the middle of south-eastern coastal economic development area but also in the middle of interior area. It means that Hunan has carrying on the east, ushering in the west, linking north and south locational strength.

The Analysis of Weaknesses

The first weakness is the low level of information in the grass-roots level. It lacks the equipment of information collecting, processing, transforming and scientifically managing information staff in the grass-roots organizations. The whole network system is not safe and healthy. The accuracy and reliability of primary information sources are relatively poor because it lacks information serve agents, thus, much fake information brings huge lose to farmers and agriculture.

The second weakness is the lack of information agriculture professional personnel. Information development need a huge amount of various classed personnel staff. However, there are not only few information professional staff but also uneven distribution of high level staff.

The third weakness is the not standardizing of information agriculture service system. From the whole network structure, province, municipal city, district and town has to build stations, purchase machines and join in the internet with the same requirement. In the administrative division to low level repeated construction of network system construction. At the same time, the level of unifying and standardizing information agriculture is not high enough.

The Analysis of Opportunities

Firstly, every town government actively set forth programmes to improve the development of information agriculture. 2008 central document stressed that actively promote rural informatization, integration of resources. In recent years, Hunan province has issued a decision of the CPC Hunan Provincial Committee, Hunan Provincial People's Government on speeding up the construction of new socialist countryside (Hunan [2006]4), Hunan province informationization development program (2005–2020) (Hunan [2005]11), forwarding the Provincial Information Industry Department and other departments and units on the joint promotion of rural information on the views of the notice (Hunan, [2007]111, etc.

Secondly, “digital Hunan” offers the strong backing on development of information agriculture. Hunan government set a document “The outline of Hunan information development” mentioned that Hunan province will build as a digital province until 2020. In this development, resources organizing would begin with government resources organizing then lead society and other companies to participant. During the resources organizing process, the government would gradually advance the digital Hunan process. It also combines the GPS, RFID and GIS technologies to exactly positioning agriculture procedure and circulation as well as monitors the environment of agriculture procedure, agricultural pollution and the quality of farm products. Digital agriculture and information agriculture are mutually complementary and provide good opportunity to apply information agriculture in Hunan province.

Thirdly, national policy provide safeguard for science and technology service system in countryside. In the beginning of 2005, Central Document No.1 especially emphasized “accelerate agriculture technology spreading system”, claimed that the government need to accelerate the reform in intensifying the public functions and be flexible of the service as well as emphasized the technological spreading work and financial ensuring in every class. It also required that related
department need to come up with constructive advices and put “agriculture, rural areas and farmers” at the top position at the same time.

The Analysis of Threatens

(1) Farmers have little awareness of information. The small scale produce model let farmers be used to cultivating through their own experiences. Thus, they lack the reorganization of knowing the importance of information. And, farmers are not able to analyze, select and release information on the internet because they are limited by their less economy and culture ability. Thus, the mainly serving for farmers’ information cannot be used fully because carriers are lack as well. It also makes information agriculture process become more difficult.

(2) The financial lake of stage building. Each area does not use their activeness when build the information agriculture. They rely on the allocating money from superior department. This is a usual phenomenon. Moreover, some places divert the building money to any other purposes. And, the superior financial help is limited, thus, many information agriculture programs cannot start or continue. The information agriculture tasks in humans is fairly tough.

(3) The information use cannot reach a high level. However, many towns in Hunan do not have advanced information and work strategies now, so that the farmers rarely can receive high quality agriculture information resources. They also cannot update the information, analyze information immediately. Moreover, in the useful information, much of them observe the form rather than content.

The Analysis of SWTO Combination Strategies in Hunan Information Agriculture Building

SWTO analysis is matching the internal strengths and weakness with external opportunities then forming a reasonable strategy.

There are four selected strategies: SO, WO, ST and WT. SO is a kind of strategy that use internal strengths and external opportunities. WO is using external opportunities to cover or be a complementary element when there is weakness in the internal. ST is using internal strengths to avoid or reduce the external threaten.

Combination Analysis Graph

There are S, W, O and T four variables in the semi-axis to form a four-dimensional form of axis. Thus strategy choosing mainly emphasizes the strengths and grasps opportunities and try to reduce the weakness influence and threaten. And the choice need to be located at first quadrant. (see Figure 1).

Optimizing Combine Strategies then Make a Reasonable Decision

(1) The strength of Hunan information agriculture development—SO strategy. SO strategy is an ideal strategy model. Through the strength analysis of Hunan information agriculture, the internet base facilities, advanced technology, good financial condition and good geographic location are powerful strengths for developing information agriculture.

(2) The weakness of Hunan information agriculture development—WO strategy. WO strategy combination is changing weakness then obtain strength. According to the analysis of W in Hunan province, there are some obvious weakness in the information agriculture development. Combining with the analysis, there are some external opportunities that can complement the weakness. For example, national strategies for solving “agriculture, rural areas and farmers” problems and offer safeguarding of rules and finance. Moreover, Economic Globalization, information and entering in WTO bought many external opportunities to increase the quality of population, enhance farmer’s marketing awareness and improve their abstract ability in order to complete the weakness of less information, lack of technical staff and information service lack in the grass roots in the countryside.
(3) The strength of Hunan information agriculture development—ST strategy. ST strategy is using internal strengths to avoid or reduce the influence from external threaten. The analysis of T shows that threatens of Hunan province information agriculture building do not need to guard against for now. But, the potential risk and negative influence is existing. Combining with the analysis of S, we can use these strengths to avoid and reduce the negative influence. For instance, we can use the base internet facilities to relieve the external threatens when building the information agriculture. We can use financial strength to increase our agricultural competition and this strength can usefully avoid the financial lack when the building is processing.

(4) The weakness of Hunan information agriculture development—WT strategy. WT strategy aims to decrease internal weaknesses and avoid the external threatens. It needs to analyze every aspects and make full use of strengths and useful external environment to reduce the weaknesses and avoid harmful conditions. Through the analysis of strengths and threatens of Hunan information agriculture development, we thought that the development should have a model creation. Fully using external opportunities to reach the goal.

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Zhang Hengyi (1991-), male, Jishou Hunan, Central South University of Forestry and Technology business school master's degree students, mainly engaged in the study of forestry ecological economy.

Zhou Kuai’kuai (1994-), female, Chenzhou Hunan, Central South University of Forestry and Technology, School of computer and Information Science Master's degree students, mainly engaged in Information Engineering Management research.

Chen Zheng (1988-), male, Hunan Changning, master lecturer, Institute of computer science and Information Engineering College of Hunan, mainly engaged in the research of information engineering management. The fragmentation in Administration promotes low-level redundant construction of the network system.

References


