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Is Willingness for Organic Agriculture Practice Adequate and Well-supported? Evidence from China Based on AMO Theory

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Abstract: The Chinese government is promoting and publicizing organic farming to address the environmental problems that arise from using chemical materials in agriculture. Nevertheless, these promotions and propaganda are impractical at the current stage, and the willingness to adopt organic farming by farmers is unrevealed. This paper aims to investigate the main factors influencing the adoption of organic farming by developing a scale and conducting interviews through AMO theory. Twenty self-owned agribusiness owners from Anhui province were selected in our study, seven of whom were given in-depth interviewed and 13 of whom were given designed questionnaire. Through the research, we found that the participants had limited interest in organic agriculture and consistently believed that organic farming in China is only a public stunt. Participant indicates that the company's agriculture is not technologically advanced enough, and the cultivation method is mainly manual. The market for organic products is also quite scarce, and the willingness of consumers to buy organic products is extremely low. The reputation and certification process of organic certification organizations need to be improved.

Keywords: AMO theory, organic agriculture, farmer's willingness, green production

1. Introduction

Nowadays, organic agricultural products are attracting extraordinary consumer attention regarding the analysis of organic farming development prospects and the food safety issue. People are beginning to pay more attention to food safety and obtain safer and healthier products. Organic food has become the table of high-end consumers and a healthy way of life. Many companies are getting involved in agriculture and are selling organic produce by obtaining organic certification.

Organic agriculture is practiced on more than 22 million hectares of land in over 100 nations. In China, there is a greater opportunity for the growth of organic agricultural goods. Organic food sales in China account for just 0.02 percent of overall food sales, which is 100 times less than the domestic consumption of organic food in wealthy nations, which is 2 percent [1].

Although organic farming is more sustainable than conventional farming, it poses a danger to food production [2], resulting in a different perception of the practice. In contrast, traditional agriculture may significantly boost crop yields using just a large number of chemicals such as fertilizers, pesticides, herbicides, and insecticides. Therefore, accomplishing the objective of businesses to raise

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agricultural yields and revenue. However, organic farming production will avoid environmental costs that no one incurs, such as the eutrophication of water bodies caused by excessive fertilizer pollution from conventional agriculture; therefore, reasonable organic farming production reduces environmental pollution directly by increasing production costs. This suggests that organic agriculture may provide fewer negative externalities than conventional agriculture [3]. For businesses, revenue is the primary issue, and the primary variables of organic farming profitability are crop yield, labor, total expenses, the price premium for organic goods, and potential income loss during the organic conversion. If there is a price premium, organic agriculture provides a much larger profit and return on investment than conventional agriculture [4]. Crowder compared the economic returns of organic and conventional farming [5]. This report summarized the findings of a 40-year study of 55 plant species across five continents. Organic farming is substantially more lucrative than conventional farming when actual premiums are considered. In addition, the cost-benefit ratio is superior to traditional agriculture. Without the premium for organic goods, organic farming has a much lower net present value than conventional farming. Therefore, the decision between organic and conventional agriculture is not a simple choice for business managers and might have a direct impact on the company's future growth.

This article will use the AMO (Ability, motivation, and opportunity) theory to analyze the willingness of Anhui agribusiness owners to participate in organic farming and to discover the challenging condition obstacles [6]. The remainder of this article consists of a brief literature review, methodology, data analysis, and case-specific discussions. The conclusion and recommendations will be presented at the end of this article.

2. Literature Review

2.1. Willingness to Adopt Organic Farming

In contrast to conventional agriculture, organic farming seeks to enhance natural processes and plant nutrition while preserving soil and water resources. Organic farming removes agrochemicals and reduces other external inputs to help the environment and farm finances [7]. Organic agriculture is an environmentally better alternative to traditional agriculture [8]. Customers are more inclined to purchase organic products, and organic farmers often get a higher price premium [9]. Moreover, empirical evidence reveals that organic farmers often have lucrative margins [10].

Several studies have been conducted on the adoption of organic farming. Ahmad used a preliminary questionnaire to examine respondents' knowledge [11], awareness, motivation, and attitude toward agricultural practices and organic farming. According to the study's results, farmers' motivation and ideas in organic farming, social attitudes, ecological attitudes, and participation in extension activities are the critical determinants of smallholder farmers' desire to adopt organic farming.

The research by Dalmiyatun investigated the desire of farmers to plant organic rice in three unique regions and showed that motivation is related to social criteria such as age [12], land size, education, and farming experience. The results revealed that farmers who opted for organic agriculture developed knowledge via experience and ran their agricultural businesses based on their farming skills. The earnings of organic rice farmers were higher than those of conventional rice producers.

2.2. AMO Theory

By using AMO theory, we will investigate and explain the desire of local agribusinesses to participate in organic farming. Appelbaum initially suggested the AMO theory [6], as shown in Figure 1. AMO theory has been extensively accepted within the field of human resource management to explain the complicated link between how people are managed and subsequent performance results. A commonly

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held belief is that some combination of an individual's talents, motives, and opportunities may yield a measure of performance [13].

The AMO theory may also be used to investigate the behavioral processes between people management efforts and possible performance gains [14], which is why the AMO theory was used to study the adoption of organic farming. The majority of local farmers in Anhui province are smallholders, and their conduct as company leaders reflects that of the whole enterprise [15].

The primary objective is to assess farmers' readiness to utilize organic farming and, more crucially, their conduct since the behavior of farm owners is symbolic of the organization's behavior in terms of organizational behavior research. As managers, they will substantially affect the company's success and the performance of the employees [16].

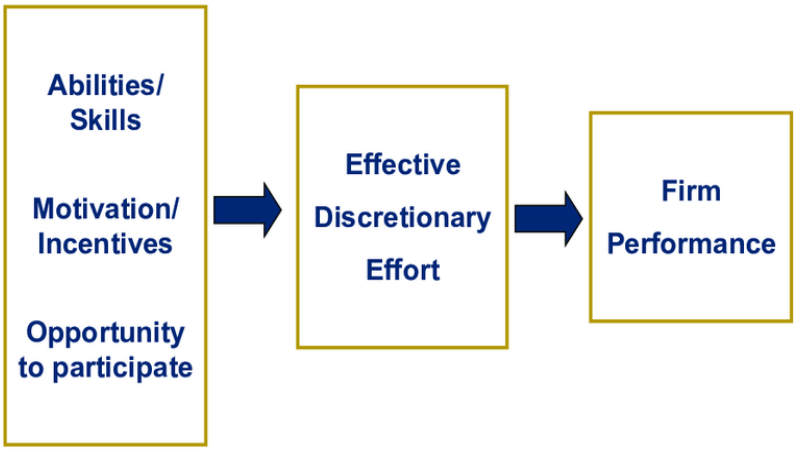

Figure 1: AMO- theory [6].

3. Methodology

3.1. Participant

The participant in this research is owners or managers of agricultural firms in Anhui. All of the businesses are self-owned. The firms' output consists mainly of manual farming.

Anhui firms were chosen for interviews because Anhui is located in the hinterland of east China, near the sea and rivers, with obvious location advantages, rich agricultural resources, and a large proportion of agricultural products, making it a typical agricultural province. We had access to these business owners because of the help of the CRSTA (China Rural Special Technology Association). With the help of the organization's members, we invited nearly 50 companies that met the relevant criteria, and 20 companies accepted our invitation. Seven of the business owners accepted in-depth interviews and 13 owners accepted a short questionnaire.

3.2. Procedure

During July to August 2022, with the help of CRSTA organization members, we began approaching business owners to conduct interviews. Before the interviews, we informed the participants that the results of the interviews were recorded and received a promise that the data we answered would be used for academic research only and that the content of the answers filled in would have no impact on their academic reputation. The participant made it clear that his or her legal obligation was to answer the interview truthfully. In-depth interviews were conducted, and we saved the call records through the saving function of the WeChat phone. For the questionnaire, we used the WeChat chat function, and the participant gave his or her answers and insights within the required one hour.

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3.3. Instrument

According to the AMO theory, the scale was designed and adapted from previous works from three perspectives of ability, motivation, and opportunity. Detailed scale is shown in Table 1.

Table 1: Scale of ability, motivation, and opportunity.

Ability	A1. Level of understanding of farming policies	[17]
	A2. Experience in organic farming and whether the company has been involved in organic certification	
	A3. The impact of organic farming on your business management allows participation in organic production on your business and the income of your company members	
	A4. What type of business the farm belongs to: sole proprietorship, partnership, family business, non-family business or cooperative	
	A5. Which sales route the business chooses: roadside stores, farmers' markets, regional agents, restaurant or other retailer sales, the Internet	
	A6. Relationship among total production costs, cash wages, total labor expenses, and insurance costs	
Motivation	M1. Availability of local organic food markets, willingness of consumers to buy organic products	[12]
	M2. Age and experience in the company affects the attitude towards farming	
	M3. Gender in business impact on work attitude and efficiency of farming	
	M4. Scientific-technical and equipment aspects impact farmers' desire to engage in business agriculture	
Opportunity	O1. Companies' farming regarding the lack of mechanical physical control conditions	[11]
	O2. Companies' farming regarding the lack of conditions of biological control	
	O3. Lack of promotion and policy support for organic farming	

4. Discussion

The opinions and replies of the twenty participants towards organic agriculture were similar. The result shows participants have little interest in organic farming and agree that it is only a publicity ploy in China. Detailed findings are shown as followings.

In terms of ability, we found that the firms' organic agricultural procedures were not technologically advanced enough. Participants responded that they mainly engage in manual agriculture and do not match the organic agricultural criteria regarding fertilizer and pest control.

In terms of motivation, participants revealed that consumers' green buying behavior is insufficient [18], resulting in no price rise for organic items. Participants complained about the poor reputation of certifying organizations, which is the primary reason customers do not identify organic agricultural goods. Secondly, Government subsidies are quite inadequate, and participants stated that local organic subsidies for companies do not meet the losses from declining production. Thirdly, the farmers' awareness of corporate social responsibility records (CSR) was poor. According to the participant's description [19], companies are more concerned about profits and business development than environmental issues, which they mainly consider to be the government's responsibility.

In terms of opportunities, the organic market in Anhui is quite limited. Commonly supermarkets like Wal-Mart, Carrefour, and other supermarkets rarely set up special counters for organic products,

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so organic products are not sold in supermarkets. As a result, agricultural firms tend to sell their organic products through regional agents, restaurants or retailers, or the Internet to other regions.

Organic certifying organizations lack the capacity to undertake exhaustive testing. Some participants reported problems with organic fertilizers, including chicken manure, chicken feed additives, and chicken excrement, which are not organic fertilizers. Certified organic fertilizers from unknown sources are not organic fertilizers. Since organic fertilizer requirements cannot be guaranteed, no one can ever ensure that the crops we produce are genuinely organic. There are now over 30 certifying organizations on the market, the majority of which are independent; interviews have indicated that certification may be obtained for a fee. According to the participant's description, some organizations have even pulled companies from certification in order to complete the required food certification targets, even if the standards are not met.

Notably, individuals with a bachelor's degree have a greater propensity to manufacture environmentally friendly goods. However, they have attempted organic farming but have kept it small or ceased expanding due to decreased productivity.

5. Conclusion

The article aims to explore the reasons behind farmers' reluctance to embrace organic farming via the AMO theory, and we discovered that organic farming is very incompatible with the existing situation of Chinese agriculture. The article begins by discussing the concept of organic farming and some research on the adoption of organic farming. Then, information and opinions are gathered via interviews and surveys. Finally, the conclusion is explored regarding ability, motivation, and opportunity. Based on existing research, this paper concludes that China cannot achieve standard organic farming at this stage and that existing organic standards and certifications are mainly substandard. The current state of supply of agricultural products in China and the extent of agricultural equipment in aggregate also dictate that the pursuit of organic is unrealistic within a certain period. Therefore, the low willingness of farmers to do organic farming is the result of the current agricultural development stage.

The study still has some limitations that can be further investigated, and suggestions for future directions can be made. We only conducted a regional study, and the sample may be biased. There is still a gap between China's stage of agricultural development and that of developed countries, so this can only represent the short-term situation in the Anhui region at the current time. Since we only researched through AMO theory, we may have missed some variables, for example, Rajiani included employee training and innovation within the firm as variables in his study of AMO theory, which are aspects not included in this paper [20].

China's current agricultural progress does not reach the level of organic farming, and organic farming is not an essential component of current goals. Instead of focusing on organic agriculture, it is necessary to adopt measures to boost arable land protection and agricultural equipment support to guarantee the consistent implementation of the arable land protection subsidy policy. It is more important to be concerned about safeguarding food security, productivity, and farm owners' incomes. For organic agriculture, increasing the authority of certification may boost the public's desire to purchase organic goods, which will also aid in the growth of organic agriculture in China in the long run.

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