

# Interest and Intention for Farming of Farmers as the Key Factors of Adoption SLM in Thailand and Vietnam

Pham Anh Dung, Phastraporn Salaisook\*, Dinh Tran Ngoc Huy\*, Le Ngoc Nuong, Nguyen Thu Thuy, Le Thi Han and Dinh Tran Ngoc Hien

**Abstract:** Our study goal is to express Interest and intention for farming of farmers as the key factors of adoption SLM in Thailand and Vietnam. We Also find that economic, environmental and social factors have been changed farmers' livelihood and the way they farm by generating 3 main characteristics of farm structure and farm management practices as mentioned above. These findings lead to a number of policy recommendations for increasing SLMs adoption rate of the region and/or the country.

**Keywords:** Interest, Intention, Farming Structures, Farmers.

## INTRODUCTION

Our result confirms these studies above and in line with the study of Mariano et al. (2012), that positive factors influencing farmers' adoption of modern rice technologies and good management practices in the Philippines are education, machinery ownership, irrigation water supply, capacity-enhancement activities, and profit-oriented behavior while soil and nutrient deficiencies are impediments to their adoption. Extension-related variables have the biggest impact on technology adoption.

According to Asrat and Simane (2017), plots with SLM structure have to maintain at least 6 years for positive increasing of production at the end of the 6th year, while plot that implements the practices recently or plot that lacked of continuous maintenance do not show statistically significant increase productivity. Thus, the marginal benefit of sustaining the SLM practices increases over time at an increasing rate and SLM measures and maintenance of the structures are crucial to reap benefits from the practices. However, SLM practices implementation is labor intensive, and there is a trade-off with other agricultural activities.

Therefore, policy measures are required to incentivize implementation and maintenance of the SLM structures.

These challenges highlight the need of increasing the resource use efficiency and sustainability of production by improving practices which can reduce costs and increase profit while convincing the willingness to implement the package of SLM practice technologies of farmers by developing large scale farming project which the benefits are replicable over large areas. The development of these practices can lead to a more economically, environmentally and socially sustainably through an increase in income and a reduction in inputs and negative environmental impacts.

So we choose the topic: "Interest and intention for farming of farmers as the key factors of adoption SLM in Thailand and Vietnam".

## PREVIOUS STUDIES

Our finding is in line with the study of Stuart et al. (2018), the major's key challenges faced by rice farmers are labor shortage, increased input cost, reduced availability of water, and a degrading

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Pham Anh Dung, PhD, Apollos University, Montana, US. E-mail: dungphamster@gmail.com

\*Phastraporn Salaisook, Ministry of Agriculture and Cooperatives, Thailand. E-mail: st123457@ait.asia,

Orcid: <https://orcid.org/0009-0004-0664-7670>

\*Dinh Tran Ngoc Huy, School of Management, Asian Institute of Technology, Thailand. E-mail: St124679@ait.asia

Le Ngoc Nuong, PhD, Thai Nguyen University of Economics and Business Administration (TUEBA), Thai Nguyen, Vietnam.

Nguyen Thu Thuy, PhD, Thai Nguyen University of Economics and Business Administration (TUEBA), Thai Nguyen, Vietnam.

Le Thi Han, Master, Ho Chi Minh University of Banking, Vietnam.

Dinh Tran Ngoc Hien, BSc, Electrical Department, HCM University of Technology, Vietnam.

E-mail: Ngochienbk01@yahoo.com

environment. In Southern of Thailand, determinants of adoption of crop diversification by smallholder rubber producers were depended on the quantity of water, attendance at agricultural training, price fluctuations, savings, and schooling period.

(Longpichai, 2013). Moreover, Kersting and Wollni (2012) found that farmers are more likely to adopt if they are better educated and more experienced, and if they have access to female family labor, improved farming technology, and information and extension services support by organization and institution are vital to enable small-scale farmers to adopt the standard.

## METHODOLOGY

Authors mainly use statistical analysis combined with qualitative analysis (synthesis and inductive methods).

## MAIN FINDINGS

### Situation in Thailand

This study identified the SLMs that farmers currently implement according to 4 specific levels of implementation including: (1) do not know about the practice (s), (2) aware and do not willing to implement, (3) aware, and willing to implement, and (4) aware, already implemented. Out of 150 farms, there are 15 farms adopt all 11 practices while 47 farms do not adopt any practices. The data showed the different level of adoption and constraints to adopt of farmers in both qualitative and quantitative analysis. The practice that most of farmers adoption is adding animal dung for improving soil fertility (63%) while bio-pesticide (18%) are less adoption.

This study also identified the constraints, benefits, of adoption, as seen by farmers who adopt, aware and willing to adopt, aware not willing to adopt, and not aware. Also, in terms of farmers' choice of SLM innovation, all of the key interviews and all of the farmers in focus group mentioned that farmers concern about short term benefit of implementation including easy to implement, save time and labors, access to input material, see the good results in the short time of adoption. However, the results showed that farmers participating in training adopt more SLMs which means the efficient extension system is mainly positive influence on choosing of each practice

Age / (Years)	1986	1991	1996	2001	2006	2011	2016
15–59	95.67	94.76	92.83	91.13	89.12	87.07	81.18
60 and over	4.33	5.24	7.17	8.87	10.88	12.93	18.82
Total	100	100	100	100	100	100	100

Source: National Statistical Office, 2017

Figure 1: Age structure of Thai labor force 1986-2016 (%)

For the efficiency of SLM practices the results showed that many farmers are not convinced about the efficiency of several SLMs. For instant, adopting of compost takes time to produce and need a significant amount of raw materials and require a big quantity of compost (1 rai 1 ton for rice field) and more labors to implement. Alternatively, adoption of organic farming required many criteria such as buffer zone, water resource or organic fertilizer, etc. these required more time, labor and budget for adjusting farmland. These make farmers do not interesting, discouraging and giving up from SLM. Thus, if the technology or SLM practices bring farmers cost-benefits efficiency in term of saving time and labor, easy to adopt with using local raw materials, cost reduction, and increase yield, these practices are strongly agreed by key interviews and farmers that these increased adoption rates by farmers.

Above all, the country has been established ALC (882 district ALC) for solving the low rate of agricultural good management practices adoption. However, there almost no studies about farm structure and farm management practices that lead to SLMs adoption in the country.

Since there is no study of the characteristic of farm structure and farm management practices that lead to SLM adoption in the country, we cannot directly compare our finding with the previous study relating to SLMs of the country. In fact, according to all key interviews and field observation, the adoption rate of SLM by farmers in the village with ALC obviously sees much higher than the village without ALC. This can highlight the need to increase the number of ALC. We showed the reasons for adoption/ constraints of adoption and farmers' perception toward SLMs practices. This study can contribute to developing a better policy toward an increase in the adoption of SLM technologies, particularly for Thailand and generally for developing countries. This study has practical implications for the present and future of SLM and natural resource management and conservation promotion in Thailand.

### **Situation in Vietnam**

When talking about farmers, people often talk about: 1- Themselves; 2- Their family; 3- Their main livelihood; 4- Their living space; 5- Their social and socio-professional organizations; 6- Peasant class; 7- The alliance of workers - farmers - intellectuals and "stories" play a decisive role in the political position, economic status and social status of farmers.

In the types of agricultural production organizations and the ability to access resources for agriculture and rural areas, who are farmers or peasants, who are employees, and who are employees? tenant, who is the boss, who is the investor; or all of them, agricultural workers, in any form, as long as they participate in the agricultural production process, live mainly on agriculture and have agricultural products as output, are also considered is farmer?

Which organization is the real organization of farmers, the fulcrum for farmers, the trust and pride of farmers? Currently, in Vietnam there are two most popular organizations: the Vietnam Farmers' Association and agricultural cooperatives (Cooperatives). However, many farmers are still not interested in cooperatives, is it because they are haunted by the echoes of cooperatives in the 60s and 70s of the 20th century in the North or are there other reasons?

In fact, farmers are the people who suffer the most sacrifices and disadvantages in society. Who is the poorest class, suffering the most sacrifices and disadvantages in society? Farmer!

Therefore, we need a new, deeper, broader, and more comprehensive resolution on farmers to create a new era for Vietnamese agriculture and Vietnamese rural areas. Previously, we had Resolution No. 26-NQ/TW, dated August 5, 2008, of the Seventh Conference of the 10th Party Central Committee, "On agriculture, farmers, and rural areas" (referred to as the Resolution on Tam Nong). However, in the current period, the position of farmers in the Fourth Industrial Revolution (Industry 4.0) and the digital transformation period has changed a lot. (source: Tran Duc Vien, 2022).

### **Conclusion**

#### **Conclusion**

Adoption of organic farming required many criteria such as buffer zone, water resource or organic fertilizer, etc. these required more time, labor and budget for adjusting farmland. These make farmers do not interesting, discouraging and giving up from SLM. Thus, if the technology or SLM practices bring farmers cost-benefits efficiency in term of saving time and labor, easy to adopt with using local raw materials, cost reduction, and increase yield, these practices are strongly agreed by key interviews and farmers that these increased adoption rates by farmers.

This study can contribute to developing a better policy toward an increase in the adoption of SLM technologies, particularly for Thailand and generally for developing countries.

#### **Recommendations**

Interest and intention for farming of farmers are the key factors of adoption SLM practices.

Since nowadays, farming is mainly for old people and the young generation do not interest to adopt or adopt less farming in their career. This is the main causes of an agricultural labor shortage that becoming the major constraints of reducing the motivation, intention and important of farming. On the other hand, economic, environmental and social factors have been changed farmers' livelihood and the way they farm by generating 3 main characteristics of farm structure and farm management practices as mentioned above. These findings lead to a number of policy recommendations for increasing SLMs adoption rate of the region and/or the country. We highlight the essence of the effectiveness of agricultural extension system as a fundamental base of SLMs implementation. Besides that, the agricultural sector needs restructuring, in response to the changing in farm structure and management practices.

This needs policies to increase the agricultural labor force and increasing efficiency of SLMs practices, and developing standard SLM practices model of consult and farmer's model is required for being a model of learning for many farmers.



Figure 2: Farmer and Cultivation in Thai agriculture  
(source: Phastraporn Salaisook Thesis, 2019)

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