



Original Research Article

Attitude Towards Farming Career of Farmers' Heirs in Upper Northern Region of Thailand

*Supannika Lursinsap**, *Ruth Sirisunyaluck*, *Suraphol Sreshthaputra*, and *Juthathip Chalermphol*

Department of Agriculture Extension, Faculty of Agriculture Chiang Mai University, Chiang Mai 50200

ARTICLE INFO

Article history:

Received 6 August 2022

Received in revised form 4 November 2022

Accepted 10 November 2022

Published 08 December 2022

Keywords:

Farmers' heirs

Inheritance of farming career

Upper northern region of Thailand

ABSTRACT

The upper northern region of Thailand is one of the regions encountering the problem of farming decline due to the career unpopularity caused by a lack of motivation and insecure incomes. This situation reflects the scenario where most farmers' heirs increasingly pursue other careers rather than the farming career. This research focuses on these issues: (1) levels of attitude towards the farming career, (2) comparison of average attitude towards the farming career, (3) analysis of influential factors on the farming career. There are 519 sampled farmers from the upper northern region of Thailand involving in this study. The research is based on multi-stage sampling and Abraham Maslow's theory of hierarchical needs. With the discovered relevant attitude, a practical guideline to motivate farmers' heirs to continue the farming career can be recommended. Descriptive statistics, one-way ANOVA with F-test, and multiple regression analysis with Stepwise method were conducted for data analysis. The study found that farmers' heirs have highly positive attitude towards the farming career with $\bar{x}=4.32$. The maximum average attitude score is from the response to physiological needs and love and belonging needs with $\bar{x} = 4.41$. The next average attitude score is from the aspects of safety needs with $\bar{x} = 4.39$ and need of self-actualization with $\bar{x} = 4.25$, respectively. The minimum average attitude score is from esteem needs with $\bar{x} = 4.11$. The comparison of average attitude scores towards the farming career among three farmer groups (willing to inherit, unwilling to inherit, and unsure to inherit) classified by Donald Super's theory of vocational development indicates that there is no difference in terms of response to physiological needs. While the other average attitude scores are statistically and significantly different at the level of 0.05. There are 4 influential factors concerning the attitude of farming career. Three of them are positive, which are 3 positive factors of age, perception of news information ($p < 0.01$) and marital status ($p < 0.05$). But only one factor of male gender is negative ($p < 0.05$). The conclusion is that farmers' heirs have the attitude complying with the farming career which can respond to the physiological needs. A set of practical recommendations based on the discovered needs of Maslow's to encourage youngsters to pursue the farming career is also provided in this study.

* Corresponding author. Tel.: +66-81-861-3748.

E-mail address: supannika_lur@cmu.ac.th

INTRODUCTION

Presently, the number of farmers is declining throughout the whole world. Farming career, which concerns food production, belongs to one of four essential factors for sustaining life. The decline of farming career may cause the crisis of food shortage and inflation of food price around the world. The rationale behind the changes comes from the negative attitude of youngsters towards the inheritance of farming career from their families, which cannot secure their lives (Widiyanti, et al, 2018), (Pelzom, & Katel, 2017), (Kontogeorgos, et al, 2014), (Bezu, et al, 2014). Farming career has been pursued in Thailand for long time due to the plentiful land and appropriate geological location suitable for farming. In addition, the exported agricultural product from the country is among the top of world ranking (Office of the National Economic and Social Development Council, 2017). With these aspects, it leads to the development of country's farming sector to catch up with the rapid change of world situation and the enhancement of competitiveness of young working labor in terms of knowledge and farming skill to make the farming sector as important as the other sectors (Office of Agricultural research. 2020).

However, the number of farmers is continuously declining as a sequel of structural change in farming sector and current Thai social circumstances, which obviously impacts the country's food security. This reflects the fact that most farmers are small business, and they also possess a small piece of land. Furthermore, the size of farmland is trending downwards. According to the survey in the year 2017, it was found that 50% of farming families own the land for occupation less than 4 acres (National Statistical Office, 2018). From this discovery, there is considerable anxiety about the problem of pursuing the farming career in the upper northern region of Thailand, where the number of farmers and size of farmland ranked the second in the country. Besides, the region was also declared as the region of environmentally friendly agricultural extension. Especially for those organic farm and farm safety systems, the systems must encounter the challenging problems of unpopularity of pursuing farming career and the lack of motivation, due to insecure income consternation (Office Agricultural Economics. 2016). This implication is from the increase in farmers' heirs pursuing other careers rather than the farming career (Charoen, 2017).

From these emerging addressed problems, it is a necessity to study the factors and aspects influencing the decision of farmers' heirs to inherit or not to inherit the farming career from their families living in the upper northern region of Thailand. The studied motivations relevant to these effects are based on Maslow's (Maslow, 1943, 1970) hierarchical theory of needs covering the following 5 aspects: (1) physiological needs, (2) safety needs, (3) love and belonging needs, (4) esteem needs, and (5) need of self-actualization. To analyze the motivation factors, the sampled farmers are partitioned into 3 groups, which are willing to inherit, unwilling to inherit, and undecided to inherit, according to the concept of Donald Super's (Super, 1953) theory of vocational development. The result of study can be deployed as the background information for creating a guidance to encourage the good perspective and to enhance the motivation of farmers' heirs for career inheritance. Consequently, it will lead to the increase of farmers, the persistence of farming career in Thai society, and the

establishment of farming sustainability in the upper northern region in the future.

MATERIALS AND METHODS

Population and Samples

The studied population is the farmers' heirs in the upper northern region of Thailand. The method of multi-stage sampling was employed to collect a sample set, which consists of the following four steps.

- (1) Select 5 out of 8 provinces, which are Chiang Mai, Chiang Rai, Nan, Lamphun, and Mae Hong Son, by simple random sampling.
- (2) For each selected province in step 1, select 4 districts by simple random sampling.
- (3) For each selected district in step 2, select 4 subdistricts by simple random sampling. Based on the sampling method, there are totally 39,774 farmers' heirs. Unfortunately, this number is rather high for practically collecting the informative data. Thus, the technique of Taro Yamane (Yamane.T, 1973) was further applied to reduce the sample size of 39,774 with 95% confidence level to 396 samples. Since this research is supported by the grant from Agricultural Research Development Agency (Public Organization) in the year 2022, we enlarged the sample size to 519 to gain more informative data.
- (4) For each selected subdistrict, select farmers' heirs by purposive sampling.

Research Tool

The tool used is the questionnaire about the attitude towards the farming career of farmer's heir in the upper northern region, covering the following 5 aspects of Maslow's theory (Maslow, 1943, 1970): (1) physiological needs, (2) safety needs, (3) love and belonging needs, (4) esteem needs, and (5) need of self-actualization. Likert's scoring scheme (Likert, R. 1932) was adopted to evaluate each aspect, which are 5 = "strongly agree"; 4 = "agree"; 3 = "undecided"; 2 = "disagree"; 1 = "strongly disagree".

Evaluating the Questionnaire

The questionnaire was preliminarily tested with 30 samples whose attributes are similar to the attributes of actual samples. Then, Cronbach's alpha was applied to evaluate and analyze the reliability of the questionnaire. Total 17 questions have Crochbach reliability value $\alpha = 0.87$ which is higher than the threshold value of 0.75 (Prasitratasin, 2013). Hence, the questionnaire passed the test and could be used for collecting the data from the samples.

Data Analysis

The analysis has three phases and several statistical analysis methods were applied to analyze the data. The summary of each phase is as follows.

- (1) Analyzing the attitude level towards the farming career by applying descriptive statistics, including average value and

standard deviation. The following 5 levels are defined: 1.00-1.80 = strongly disagree; 1.81-2.60 = disagree; 2.61-3.40 = undecided; 3.41-4.20 = agree; 4.21-5.00 = strongly agree.

- (2) Comparing the average attitude score towards the farming career of farmers' heirs among three groups (willing group, unwilling group, and undecided) to determine the difference of average attitude level in each aspect by using One-way Analysis of Variance and also comparing the average of each group pair by LSD method to test the hypothesis with the significance level at 0.05 (Winitbanha, K. 2018).
- (3) Applying multiple regression analysis with Enter method to identify the primary independent variables motivating the farmers' heirs' attitude towards the farming career considered as the dependent factor. There are 12 independent variables which are (1) sex, (2) age, (3) length of study in the system, (4) marital status, (5) number of household members, (6) amount of household income from farming, (7) household debt, (8) amount of land held by the family, (9) availability of water sources for agriculture, (10) farming experience of the family, (11) number of agricultural tools and equipment in the family, and (12) perception of agricultural news and information. Pearson Product-Moment Correlation was adopted to analyze these 12 variables. None of independent variable pair has the Pearson correlation coefficient value larger than 0.7. This implies that the independent variables have no intercorrelation or there may be a multicollinearity condition satisfying the constraint of regression analysis.

From the sampled of farmers' heirs, the preliminary study found that (1) more than half of them (57.61%) are female; (2) the average age is 29.93 years; (3) the length of study in the formal educational system is 12.66 years; (4) more than half of them (56.54%) are single; (5) the average number of household members is 4.39; (6) the average amount of household income from farming is 84,086.13 per capita (about 67.44% of households have debts); (7) the average amount of land held by a family is 1.2 acres; (8) only 44.32% of households depend upon the availability of man-made water sources for agriculture; average years of farming experience of a family is 24.69; (9) the average number of agricultural tools and equipment in a family is 2.41 pieces; (10) the average level of perception of agricultural news and information is medium at = 3.24.

RESULTS AND DISCUSSION

Levels of Attitude towards Farming Career of Farmers' Heirs

The outcome of this study reflects the high agreement of attitude of farmers' heirs in the upper northern region to pursue the farming career at $\bar{x}=4.32$. Especially, there are two highest average attitude scores regarding the factors of physiological needs and love and belonging needs, with $\bar{x}=4.41$. The next lower average attitude scores concern the factor of safety needs with $\bar{x}=4.39$ and need of self-actualization with $\bar{x}=4.25$. The least average attitude score is the factor of Esteem needs with $\bar{x}=4.11$. The summary is in Table 1. The study indicates that farmers' heirs have the highest average attitude towards the farming career in the aspect of physiological needs. This implies that farming career can substantially support the human lifestyle, especially being the source of food production, housing construction, medicinal use,

and apparel making (Siegner *et al.* 2018). In contrast, the lowest average attitude towards the farming career is in the aspect of esteem needs, conforming to the report of 12th National Economic and Social Development Plan stating that farmers' offspring do not prefer to have a farming career because of lacking income stability assurance. The crisis makes the relocation of youngsters from farming sector to industrial and service sectors increased (Office of Agricultural Economics, 2016).

Comparison of Average Attitude towards Farming Career among Three Groups of Farmers' Heirs

The survey of opinions among three groups of farmers (willing group, unwilling group, and undecided group), after comparing the average attitude, concludes that any farmer's heir already inherited the farm career from the family has significantly different attitude towards the career from the attitude of any undecided heir at the statistical level of 0.05. But there is no attitude difference between the unwilling and undecided groups. For the other aspects, the following comparison of average attitude is summarized in Table 2. There are 5 noticeable aspects as follows.

- (1) The physiological needs of three groups are not significantly different regarding the impact of farming career on the factors of life subsistence. Obviously, it implies that their opinions are in the same direction of supporting human lifestyle and other living things, including the important goal of making a farming career for family living (Kaewkhata & Borisudhi, 2015).
- (2) For safety needs, the study revealed that farmers' heirs who inherited the farming career have higher average attitude towards the stability of making a career than that in the unwilling and undecided groups with a statistical significance at the level of 0.05.
- (3) For love and belonging needs, the study found that after adopting the farming career, farmers' heirs have higher average attitude towards love and belonging needs than those in the unwilling and undecided groups with a statistical significance at the level of 0.05.
- (4) For esteem needs, the study discovered that farmers' heirs inherited the farming career have higher average attitude towards the social recognition of farming career than those in the undecided group with a statistical significance at the level of 0.05.
- (5) For need of self-actualization, the study indicated that farmers' heirs inherited the farming career have higher average attitude towards the achievement in life after starting the career than those in the unwilling and undecided groups. In conclusion, the attitude towards the farming career of the undecided group is clearly lower than the attitude of the willing group. The finding confirmed the result reported by Borisudhi & Kaewkhata (Borisudhi & Kaewkhata, 2015). They reported that being recognized by the society, the difficulty of making the career and also maintaining the physical appearance are the exceptional factors obstructing the farmers' offspring from fully pursuing the farming career in the future. Furthermore, Sansanee Krajangchom and colleagues (Krajangchom, S. *et al.*, 2016) found that most of the farmers' heirs in Sanpatong district, Chiang Mai province who may inherit the farming career are both high school

students and university students. Unfortunately, they have unpleasant opinions on these aspects: the career is tiring; the career needs high endurance; risks of natural disaster and economic situation of having low income and debt from lending fund for starting the career may occur. However, the study revealed that those heirs in the unwilling and

undecided groups have no attitude difference in Safety needs, love and belonging needs, esteem needs, and need of self-actualization.

Table 1. Levels of attitude of farmers' heirs towards the farming career

Aspects of attitude towards the farming career (n=519)	\bar{x}	SD	level
1. Physiological needs	4.41	0.60	Strongly agree
2. Safety needs	4.39	0.54	Strongly agree
3. Love and belonging needs	4.41	0.52	Strongly agree
4. Esteem needs	4.11	0.54	Agree
5. Need of self-actualization	4.25	0.54	Strongly agree
Total	4.32	0.42	Strongly agree

Note: 1.00-1.80 = Strongly disagree; 1.81-2.60 = Disagree; 2.61-3.40 = Undecided; 3.41-4.20 = Agree; 4.21-5.00 = Strongly agree

Table 2. Comparison of the average attitude score towards the farming career of farmers' heirs.

Aspects of Attitudes	Willing group (n=365)	Unwilling group (n=39)	Undecided group (n=115)	F
1. Physiological needs	4.45±0.59	4.51±0.64	4.33±0.59	1.96 ^{ns}
2. Safety needs	4.43±0.54 ^a	4.44±0.40 ^{ab}	4.27±0.55 ^b	4.07 [*]
3. Love and belonging needs	4.47±0.51 ^a	4.28±0.49 ^b	4.28±0.50 ^b	7.91 ^{**}
4. Esteem needs	4.17±0.54 ^a	3.99±0.55 ^b	3.96±0.51 ^{bc}	7.53 ^{**}
5. Need of self-actualization	4.34±0.52 ^a	4.04±0.52 ^b	4.13±0.57 ^{bc}	10.57 ^{**}
Total score	4.37±0.42 ^a	4.24±0.36 ^{ab}	4.18±0.40 ^{bc}	9.67 ^{**}

Note: $\bar{x} \pm SD$, ns = no statistical significance, * = having statistically significant at 0.05, ** = having a statistical significance at the level of 0.01

CONCLUSIONS

The various variables based on Maslow's theory of hierarchical needs and Super's theory of vocational development which influence the attitude towards the inheritance of farming career for the farmers' heirs and the decline of farming career in the upper northern region of Thailand were discovered. This study reflects on the fact that farmers' heirs strongly agreed with the inheritance of farming career with the highest average attitude score of the physiological needs and the lowest score of the esteem needs. Moreover, the willing, unwilling, and undecided groups have no different average attitude scores of the response to factors of physiological needs. However, the heirs of willing group tend to have significantly higher average attitude score than those in undecided group at the statistical level of 0.05 in the aspects of safety needs, love and belonging needs, esteem needs, and need for self-actualization. There are 4 factors influencing the good attitude towards farming career of farmers' heirs with a statistical significance at the level of 0.01, which are being female, becoming older, entering working age, perceiving agricultural information from various sources. But the factor of having marital status has a statistical significance at the level of 0.05. A set of practical recommendations based on four aforementioned aspects to encourage youngsters to pursue the farming career is also provided in this study.

RECOMMENDATION

The outcome of this study indicates that farmers' heirs still have different opinions on the inheritance of farming career in the

following aspects of needs from Maslow's theory: safety needs, love and belonging needs, esteem needs, and need of self-actualization. Moreover, these 4 aspects have the average attitude scores less than the average attitude score of physiological needs. Therefore, to create a good point of view and to enhance the motivation for inheriting the farming career of all groups (willing group, unwilling group, and undecided group), federal organizations relevant to farming such as Department of Agricultural Extension, Department of Agriculture, or Community Development Department, also including Department of Local Administration and Private Development Agency, should integrate their efforts with academic institutes such as schools, universities, communities, and farmers' families to develop the positive mindset of farming career for the heirs in the following four directions.

- (1) Safety needs. There are three feasible recommendations as follows.
 - a) Assure the income or raise the higher value on agricultural products by selling newly invented products and value-added merchandise rather than just only raw agricultural products.
 - b) Provide the welfare benefit for the people having farming career equal to the welfare benefits in other careers.
 - c) Establish a fund for supporting young farmers to access the modern available farming technology.
- (2) Love and belonging needs. There are two feasible recommendations as follows.
 - a) Encourage the farming conglomerate or the activities of enhancing the happiness for the members in farming family and community bases.

- b) Create a project for supporting the opportunity of every group of people or all ages to make farming career as the main job or a sideline job.
- (3) Esteem needs. There are two feasible recommendations as follows.
- a) Encourage the concept development giving importance to farming career in terms of main food producer to nourish people and one of the sources of national income.
- b) Raise the importance of farming career and manifest it as the main career of Thai society equal to the other careers.
- c) Campaign for building gender diversity to give youngsters a chance to choose the farming career under the supportive agricultural access such as land, water supply, and technology etc.
- (4) Need of self-actualization. There are 3 feasible recommendations as follows
- a) Develop the principal concept of farming career to emphasize that this career has freedom, or any farmer can own a business.
- b) Convey the knowledge and skill which can support the farming career of youngsters so that they can be self-dependent and survive. The possible concentrated knowledge is economy and marketing, skill to cope with disaster, and happy lifestyle in a society of diversity and rapid change.
- c) Encourage an environmentally friendly farming to create an impressive image for farming career as the possibility to make a beautiful nature.

ACKNOWLEDGEMENTS

This study is fully supported by the grant from Agricultural Research Development Agency (Public Organization), Thailand in the fiscal year 2022.

REFERENCES

- Bezu, S., and Holden, S. (2014). Are rural youth in Ethiopia abandoning agriculture? *World Development*, 64, 259-272.
- Borisutdhi, Y. and Kaewkhata, C. (2015). Grounded Conditions Towards Farming as an Occupation by Farmers and Their Descendants. *Journal of Agriculture*, 31(2). 215 – 224.
- Charoen, K. K. (2017). Quality of life among organic agriculture farmers Chiang Mai Province. *Journal of Management Science Chiangrai Rajabhat University*, 12(1), 59-90.
- Kaewkhata, C and Borisutdhi, Y. (2015). Coping Strategy Approaches to the Persistence in Career with Farm Based of Farm Households: Grounded Theory Study. *Khon Kaen Agriculture Journal*, 43(3), 495-504.
- Kontogeorgos, A., Michailidis, A., Chatzitheodoridis, F., & Loizou, E. (2014). "New farmers" a crucial parameter for the Greek primary sector: assessments and perceptions. *Procedia economics and finance*, 14(2014), 333-341.
- Krajangchom, S., Auttarat, S., Srinurak, N. and Yasai, U. (2016). Factors Related to Motivation of Farmer's Descendants on Agricultural Inheritance in Sanpatong District Chiang Mai Province. *Journal of Agriculture*, 32(1), 29-38
- Likert, R. (1932). A technique for measurement of attitudes. *Archives of Psychology*, 140, 5-55.

- Maslow A.H. (1943). A Theory of Human Motivation, *Psychological Review*, 50 (370-396)
- National Statistical Office (2018). Agriculture Intercensal Survey Whole Kingdom.
- Office Agricultural Economics. (2016). Agricultural Development Plan During the 12th National Economic and Social Development Plan (2017-2021). Retrieved July 8, 2022 from: https://tarr.arda.or.th/static2/docs/development_plan2559.pdf
- Office of Agricultural research. (2020). Project on developing bachelor's degree for young farmers 2020-2021. Retrieved October 10, 2020 from: <http://www.arda.or.th/scholarship/>
- Office of the National Economic and Social Development Council. (2017). The 12th National Economic and Social Development Plan (2017-2021). Retrieved July 8, 2022 from: https://www.nesdc.go.th/ewt_dl_link.php?nid=6422
- Pelzom, T., and Katel, O. (2018). Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan. *Development, Environment and Foresight*, 3(2), 92-106.
- Prasitratasin, S. (2013). Applications of statistical methods in research. Bangkok, Samlada.
- Siegner, A., Sowerwine, J., & Acey, C. (2018). Does urban agriculture improve food security? Examining the nexus of food access and distribution of urban produced foods in the United States: A systematic review. *Sustainability*, 10(9), 2988.
- Super, D. E. (1953). A theory of vocational development. *American Psychologist*, 8(5), 185–190.
- Widiyanti, E., Setyowati, N., and Ardianto, D. T. (2018). Young generation's perception on the agricultural sector. In IOP Conference Series: Earth and Environmental Science (Vol. 200, No. 1, p. 012060). IOP Publishing.
- Winitbancha. K. (2018). Statistics for research. 12th ed., Bangkok, Sam Lada.
- Yamane, T. (1973). Statistics, An introductory Analysis. 3rd ed., New York, NY: Harter & Row.
-