

## CHAPTER 3

### METHODOLOGY

The research on “Roles of farmer housewife in decision making concerning farming through sufficiency economy, Chiang Mai province” has methodology that included objectives of the study, research design, population and sampling group, instrumentation for data collecting, measurement of variables, content validity and reliability of research instrument, data collection and data analysis. The details of which are as follows:

#### 3.1 Objectives of the study

This study was aimed to investigate the following:

- 3.1.1 Roles of farmer housewives in decision making on doing the sufficiency economy farming.
- 3.1.2 Factors related to roles of farmer housewives in decision making on doing the sufficiency economy farming.
- 3.1.3 Impacts of housewives in decision making on doing the sufficiency economy farming on a better standard of living of farmer families.

#### 3.2 Research design

The research on “Roles of farmer housewife in decision making concerning farming through sufficiency economy, Chiang Mai province” is a correlational research which Creswell (2008: 356) states that correlational research design is to predict and explain relation between variables. This type of research provides the analyzed statistical relation in order to explain and measure levels of relation and connectivity between 2 or more variables.

Trimonkolkul and Chatraporn (2000: 77-78) explains that correlation research is another method of research among descriptive research which focuses on observing and describing the behavior of a subject without influencing it in any way. The

correlation research does not find the answer in causal relationship but emphasizes on finding descriptive conclusion or predicts trend, rather than jumping to conclude what make an affect. The correlation research is widely accepted and applied in social sciences. In light of education, this method of research is used to explain or predict relation between expected behaviors of learners related to component variables in arranging a successful education. This method of research is beneficial to make a better comprehension of behaviors, or help predict trend of such behaviors.

### 3.3 Population

**3.3.1 The target populations** in this study are housewives in farmer's household in Chiang Mai province which consists of 24 districts including 195,598 household farmers (Information technology service center, 2006).

#### 3.3.2 Sample group

The sample size is 375 farmer housewives calculated by using the formula of Taro Yamane (1967) (as cited by Prasitratthasin, 2001). Multi – stage sampling technique will be used as follows:

**Stage 1** Classification of districts in Chiang Mai province in terms of geographic conditions.

Table 3 District in Chiang Mai province divided by the geographic conditions

Direction	District in Chiang Mai province
Center	Muang Chiang Mai
North	Mea-ai, Meataeng, Chaiprakarn, Fang, Chiangdao, Mearim
South	Om koi, Chomtong, Hod, Sanpatong, Hangdong, Doitao, Doilo
East	Doisaket, Sansai, Sankamphaeng, Saraphi, Phrao, Meaon
West	Maejam, Meawang, Samoeng, Wianghaeng
	Total 24 districts

**Stage 2** Selection of districts of each direction. Forty percent of the districts will be obtained by random sampling.

**Stage 3** Forty percent of sub – districts of the districts in step 2 will be selected by random sampling.

**Stage 4** Forty percent of the villages of sub – district in step 3 will be selected by random sampling.

**Stage 5** Forty percent of the households of the villages in step 4 will be selected by random sampling (6,112 households).

Thus, 6,112 households will be used for sampling frame in this study. Then, the size of sample group will be determined by using the formula of Taro Yamane for finding a number of samples.

n = size of sampling group  
 N = size of the entire population  
 e = acceptable deviation error in the sampling  
 (in this research, the researcher allows  
 deviation in the sampling process at 5%)

$$n = \frac{N}{1 + Ne^2} = \frac{6,112}{1 + 6,112 (.05)^2} = 375$$

The number of samples is 6 percent of population in the sampling frame.

$$6,112 \text{ households} = 100\%$$

$$375 = \frac{375 \times 100}{6,112} = 6.135 = 6\%$$

**Stage 6** The 375 household samples (6 percent) are obtained by simple random from sampling frame, as shown in figure 4

In conclusion, the sample group obtains by using multi – stage sampling is shown in figure 4.

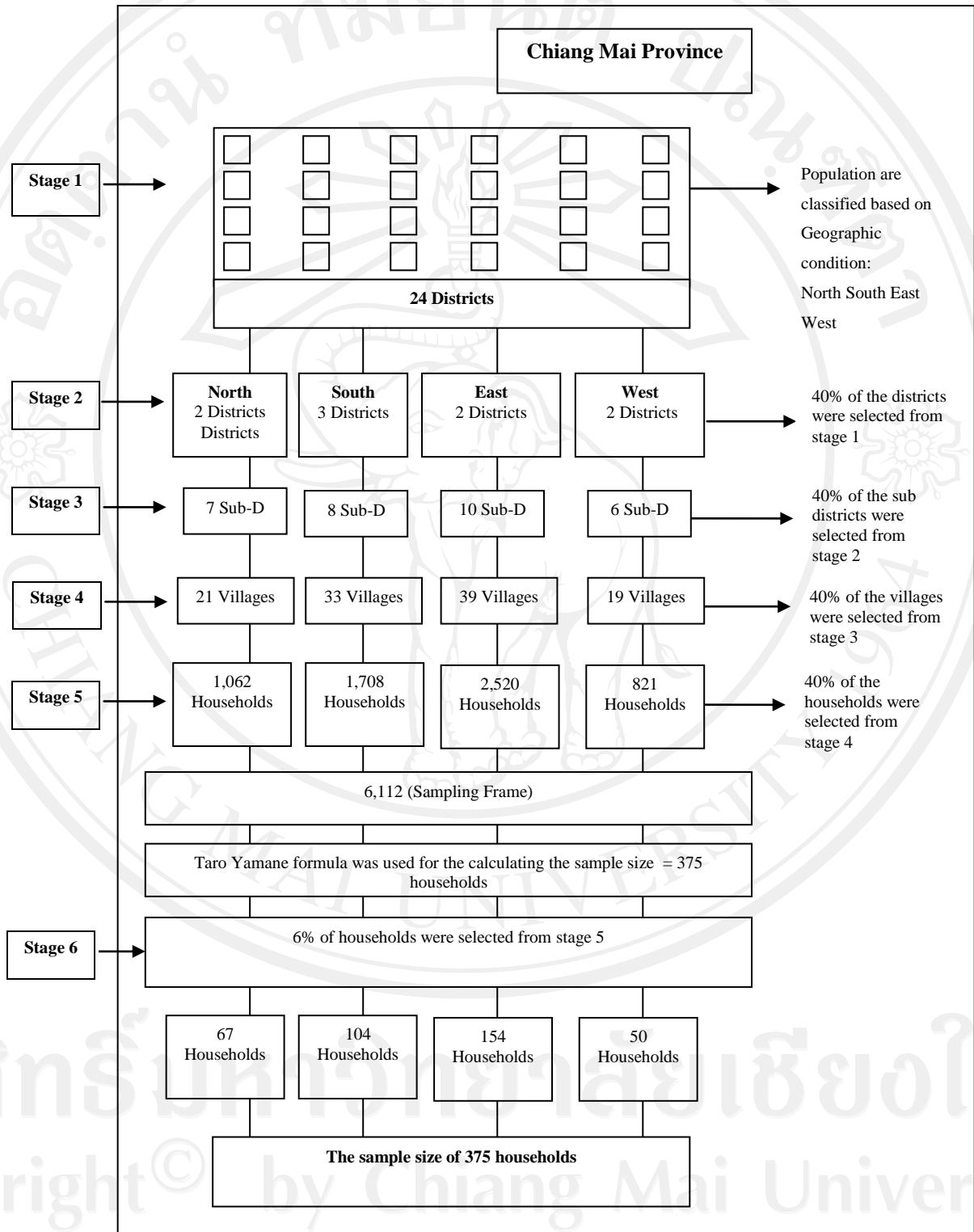


Figure 4 Multi-stage Random Sampling

### 3.4 Instrumentation for data collecting

In this study, data would be collected through the used of questionnaires. The questionnaire comprises close-ended questions and open-ended questions. The questionnaire consists of 5 parts as follows:

- Part 1** Data about general socio-economics background of farm housewives and families
- Part 2** Questions concerning roles of farm housewives in the decision making on doing the sufficiency economy farming
- Part 3** Questions about household agricultural activities in accordance with the sufficiency economy farming
- Part 4** Questions about household well-being regarding the sufficiency economy farming
- Part 5** Questions about problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

#### 3.4.1 Research instrument development

Research instrument development:

- 1) Review literatures related to the research title to study method, theories and research summaries, in order to be used in conceptual framework.
- 2) Determine scope and research questions in concordant with the conceptual framework and objective of the research.
- 3) Present the instrument, that is conducted, to the thesis advisor for examination and comment, and improves the instrument as suggested by the thesis advisor.

#### 3.4.2 Details of research instrument

Instrument used in this research is mainly a questionnaire which consists of 5 parts as follows:

**Part 1** – General socio-economics background of farmer housewives and families consists of 14 variables such as age, education of farmer housewives, education of farmer husband, number of family members, agricultural workforce, period of marriage, number of children, income of farmer housewives, income of agricultural families, immigration, group membership, economic roles of household,

power relation and level of sufficiency economy acknowledgment from various sources which is the close-ended questions with multiple choices and open-ended questions with fill-in blank.

Questions regarding household economic roles of farmer housewives apply a multiple choice of levels of household economic role of farmer housewives, which are 5 levels (adopted from Likert's scale), how much household economic role the farmer housewives take as follow:

- |   |   |           |
|---|---|-----------|
| 1 | = | Very low  |
| 2 | = | Low       |
| 3 | = | Moderate  |
| 4 | = | High      |
| 5 | = | Very high |

Questions regarding power relation (patriarchy) apply a multiple choice of levels of regular treat or standings of farmer housewives, which are 5 levels (adopted from Likert's scale), how much the farmer housewives are satisfied with levels of regular treat or standings of farmer housewives as follows:

- |   |   |           |
|---|---|-----------|
| 1 | = | Very low  |
| 2 | = | Low       |
| 3 | = | Moderate  |
| 4 | = | High      |
| 5 | = | Very high |

Questions regarding level of sufficiency economy acknowledgment from various sources apply a multiple choice, which are 5 levels (adopted from Likert's scale), how much the farmer housewives acknowledge the sufficiency economy from various sources as follows:

- |   |   |           |
|---|---|-----------|
| 1 | = | Very low  |
| 2 | = | low       |
| 3 | = | Moderate  |
| 4 | = | high      |
| 5 | = | Very high |



**Part 2** – Questions regarding roles of farmer housewives in decision making on doing sufficiency economy farming comprise of 5 aspects such as moderation (6 items), reasonableness (5 items), self-immunity (5 items), knowledge (6 items) and morality (8 items).

Those questions apply a multiple choice of level of roles of farmer housewives in decision making on doing sufficiency economy farming, which are 5 levels (adopted from Likert's scale), how much farmer housewives take a role in making decision as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

**Part 3** – Questions regarding doing agricultural activities in accordance with the sufficiency economy farming of the families consist of 4 aspects such as man (5 items), money (5 items), material (4 items) and management (12 items). Those questions apply a multiple choice whether farmer housewives operates agricultural activities according to sufficiency economy, as well as the reason why they do not operate agricultural activities according to sufficiency economy.

**Part 4** – Questions regarding well-being of farmer families according to sufficiency economy farming consist of 5 aspects such as sanitation (5 items), working (5 items), income (4 items), family life (6 items) and environment in making a living (5 items). Those questions apply yes-and-no choice.

**Part 5** – Questions regarding problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming consist of 11 items by applying a multiple choice of levels of problems and obstacles, which are 5 levels (adopted from Likert's scale), as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High

5 = Very high

From the questions set in questionnaire, it shows congruence of variables, factors, objectives of the research and component factors of conceptual framework as shown in Table 4 as follows:

Table 4 Congruence of factors, research objectives, variables and questions in questionnaire

Factors	Objectives of the research	Variables	Item no. in questionnaire
			<u>Part 1</u>
1. General socio-economics background of farmer housewives and families	No. 2	- Age	Item 1
		- Education of farmer housewives	Item 2
		- Education of farmer husband	Item 4
		- Number of family members	Item 5
		- Agricultural workforces	Item 6
		- Period of marriage	Item 7
		- Number of children	Item 8
		- Income of farmer housewives	Item 9
		- Income of farmer families	Item 10
		- Immigration	Item 13
		- Group membership	
		- Sufficiency economic acknowledgement from various sources	



Table 4 Congruence of factors, research objectives, variables and questions in questionnaire (Continued)

<b>Factors</b>	<b>Objectives of the research</b>	<b>Variables</b>	<b>Item no. in questionnaire</b>
2. Household economic :	No. 2	- Household economic roles of farmer housewives	<u>Part 1</u> Item 11 (consisting of 10 sub-items)
3. Power relation	No. 2	- Power relation (patriarchy) in the families	<u>Part 1</u> Item 12 (consisting of 19 sub-items)
4. Roles of farmer housewives in decision making on doing sufficiency economy farming	No. 1	Roles of farmer housewives in decision making on doing sufficiency economy farming - moderation - reasonableness - self-immunity - knowledge - morality	<u>Part 2</u> Item 1 - 6 Item 7 - 11 Item 12 - 16 Item 17 - 22 Item 23 - 30
5. Household agricultural activities in accordance with the sufficiency economy farming	No. 3	Household agricultural activities in accordance with the sufficiency economy farming - Man - Money - Material - Management	<u>Part 3</u> Item 1 - 5 Item 6 - 10 Item 11 - 14 Item 15 - 26

Table 4 Congruence of factors, research objectives, variables and questions in questionnaire (Continued)

<b>Factors</b>	<b>Objectives of the research</b>	<b>Variables</b>	<b>Item no. in questionnaire</b>
6. Well-being of farmer families according to sufficiency economy farming	No. 3	Well-being of farmer families according to sufficiency economy farming - sanitation - working - income - family life - working environment	<u>Part 4</u>  Item 1 - 5 Item 6 - 10 Item 11 - 14 Item 15 - 20 Item 21 - 25
7. Problems and obstacles in doing agricultural activities according to sufficiency economy farming	No. 2	Problems and obstacles in doing agricultural activities according to sufficiency economy farming	<u>Part 5</u> Item 1-11

### 3.5 Measurement of variables

Data analysis consists of 16 variables. Measurement and calculation for each of following variables as follows:

- 1) Ages of farmer housewives is collected due date of making a questionnaire range (the unit “years” is applied) from 20 – 78 years.
- 2) Education level of farmer housewives (the unit “level” is applied) ranges between uneducated levels to higher than a bachelor degree.
- 3) Education level of husband (the unit “level” is applied) ranges between uneducated levels to higher than a bachelor degree.
- 4) Number of family members of farmer housewives (the unit “people” is applied) ranges from 2 to 8 people.

- 5) Number of agricultural workforces of each family (the unit “people” is applied) ranges from 1 to 6 people.
- 6) Period of marriage of farmer housewives (the unit “year” is applied) ranges from 1 to 61 years.
- 7) Number of children of farmer housewives (the unit “people” is applied) ranges from 0 to 7 people.
- 8) Income of farmer housewives (the unit “Baht” is applied) ranges from 0 to 400,000 Baht.
- 9) Membership, which farmer housewives is allowed to answer more than 1 choice, measures number of membered farmer housewives (the unit “number of group” is applied).
- 10) Household economic roles of farmer housewives are measured by using weight mean score from sub-questions in Item 11 (Part 1) of the questionnaire. Each respondent shall rate their opinion towards levels of role taking from 1 – 5 according to Likert’s scale as follows:
 

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

Weight mean score of this variable range from 1 to 5.

- 11) Sufficiency economic acknowledgement from various sources is measured by using weighted mean from sub-questions in Item 13 (Part 1) of the questionnaire. Each respondent shall rate their opinion towards levels of acknowledgement from 1 – 5 according to Likert’s scale as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

Weighted mean of this variable is from 1 to 5.

12) Power relation (patriarchy) is measured by using weighted mean from sub-questions in Item 12 (Part 1) of the questionnaire. Each respondent shall rate their opinion towards levels of regular treat from 1 – 5 according to Likert's scale as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

Weighted mean of this variable is from 1 to 5.

13) Factors regarding problems and obstacles in agricultural activities according to the principle of sufficiency economy are measured by using weighted mean from the questions in Part 5 of the questionnaire. Each respondent shall rate their opinion towards levels of problems and obstacles from 1 – 5 according to Likert's scale as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

Weighted mean of this variable is from 1 to 5.

14) Roles of farmer housewives in decision making on doing sufficiency economy farming is measured by using weighted mean from the questions in Part 2 of the questionnaire consisting of 5 aspects such as moderation (6 items), reasonableness (5 items), self-immunity (5 items), knowledge (6 items) and morality (8 items). Each respondent shall rate their opinion towards levels of decision making from 1 – 5 according to Likert's scale as follows:

1	=	Very low
2	=	Low
3	=	Moderate
4	=	High
5	=	Very high

Weighted mean of this variable is from 1 to 5.

15) Household agricultural activities in accordance with the sufficiency economy farming are measured by total score to find out whether farmer housewives do agricultural activities according to the principles of sufficiency economics. In part 3 of the questionnaire, the questions concern about man (5 items), money (5 items), material (4 items) and management (12 items). The respondent who answers “Yes” to the question is equivalent to 1 point. On the other hand, the respondent who answers “No” to the question is equivalent to 0 point.

16) Well-being of farmer families according to sufficiency economy farming is measured by total score to find out whether agricultural families have well-being according to the principles of sufficiency economics. In part 4 of the questionnaire, the questions concern about 5 aspects as follows: sanitation (5 items), working (5 items), income (4 items), family life (6 items) and environment in making a living (5 items). All of them are yes-and-no questions. The respondent who answers “Yes” to the question is equivalent to 1 point. On the other hand, the respondent who answers “No” to the question is equivalent to 0 point.

### **3.6 Content validity and reliability of research instrument**

For the quality of research instrument, the researcher checked the instrument consist of content validity and reliability such as:

#### **3.6.1 Content validity**

In order to check whether the questionnaire that is conducted is able to measure as expected and cover the scope, the researcher submit it to thesis advisory committees for their consideration to check for the content validity. Then the

improvement can be made as the advisory committees has instructed before testing it in an actual field.

### 3.6.2 Reliability

The questionnaire that is already approved by the thesis advisory committees shall test with farmer housewives who share similar characteristic, but not the target population 20 people, and find out reliability of the questionnaire by using Alpha Coefficient in pursuant of the method of Cronbach (1951) referred by Edward G. C. and Richard A. Z. (1979: 44) by using SPSS for Windows. It appears that Part 1, Item 11 regarding household economic role of farmer housewives, Part 1, Item 12 regarding power relation (patriarchy), Part 1, Item 13 regarding sufficiency economic acknowledgement from various sources, Part 2 regarding roles of farmer housewives in decision making on doing sufficiency economy farming, and Part 5 regarding problems and obstacles in agricultural activities according to the principle of sufficiency economy have Cronbach's Alpha Coefficient as follows:

Part 1 Item 11	has Cronbach's Alpha Coefficient equivalent to	.836
Part 1 Item 12	has Cronbach's Alpha Coefficient equivalent to	.726
Part 1 Item 13	has Cronbach's Alpha Coefficient equivalent to	.775
Part 2	has Cronbach's Alpha Coefficient equivalent to	.723
Part 5	has Cronbach's Alpha Coefficient equivalent to	.865

## 3.7 Data collection

### 3.7.1 Data sources

In this research, the researcher has collected the data from 2 major sources as follows:

- 1) Primary data is acquired by asking 375 farmer housewives in Chiang Mai Province by questionnaire.
- 2) Secondary data is acquired from academic papers including as well as websites of related organizations to use as supporting data and compare the research result.

### 3.7.2 Data collecting method

This research stipulates farmer housewives as a unit of analysis, totaling 375 people. Personal interview of farmer housewives was primarily conducted



by the researcher while some parts were carried out by the assistant. However, the researcher has deliberately brought all questions in the questionnaire into the assistant's focus before actually collecting the data. The data collection was conducted from November 2010 to May 2011.

### 3.8 Data Analysis

This research is a correlational research design to answer the research problems as follows:

1. How much role do farmer housewives take in the process of decision making on doing the sufficiency economy farming?
2. What factors influencing decision making to do agriculture in accordance with sufficiency economy?
3. What factors influencing to farmer housewives to do agriculture in accordance with sufficiency economy?
4. Does decision making of farmer housewives to do agriculture in accordance with sufficiency economy affect the well-being of agricultural families?

The researcher has put 3 null hypothesis into the test as follows:

H<sub>0</sub>-1: None of variable results to be statistical significantly relate or conjointly explain or predict variability of decision making of farmer housewives to do agriculture in accordance with sufficient economics.

H<sub>0</sub>-2: None of variable results to be statistical significantly relate or conjointly explain or predict variability to do agriculture, in accordance with sufficient economics, of farmer housewives.

H<sub>0</sub>-3: Decision making to do agriculture, in accordance with sufficient economics, of farmer housewives is not related to well-being of agricultural families with statistical significance.

For the analysis of the data gained in order to answer the 4 research questions, the researcher used SPSS for Windows as follows:

1<sup>st</sup> research question. Analysis of roles of farmer housewives in decision making on doing sufficiency economy farming by using descriptive statistics such as

frequency, percentage, mean, standard deviation, maximum and minimum to analyze general socio-economics background of farmer housewives and families, and weight mean score is used to measure levels of roles of farmer housewives in decision making on doing sufficiency economy farming by comparing with the following criteria.

Mean	1.00 – 1.80	points	means	Very low
Mean	1.81 – 2.60	points	means	Low
Mean	2.61 – 3.40	points	means	Moderate
Mean	3.41 – 4.20	points	means	High
Mean	4.21 – 5.00	points	means	Very high

2<sup>nd</sup> research question. Analysis of factors influencing roles of farmer housewives in decision making on doing sufficiency economy farming or proving  $H_0 - 1$ , the researcher applied multiple regression analysis to find out related variable or conjointly explain or predict variability of dependent variable (roles of farmer housewives in decision making on doing sufficiency economy farming) as Prasitratthasin (2001) explained that *“regression analysis is the popular technique because of its special properties that is able to study influence of many and single independent variables related to dependent variables. The major objective of multiple regression analysis is to prove the assumption concerning relation between dependent variable and independent variables by controlling all other variables to see how much each independent variable relates to dependent variable.”*

3<sup>rd</sup> research question. Analysis of factors influencing farmer housewives' decision making on doing sufficiency economy farming or proving  $H_0 - 2$ , the researcher applied multiple regression analysis.

4<sup>th</sup> research question. Analysis of factors related to well-being of farmer families according to sufficiency economy farming or proving  $H_0 - 3$ , the researcher applied multiple regression analysis.