

CHAPTER 4

RESULTS

The research on “Roles of farmer housewife in decision making concerning farming through sufficiency economy, Chiang Mai province” was an analysis of the data primarily gained from the sampling group of 375 farm housewives to answer the 4 research questions as follows:

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

The data analysis in this part was to test the 3 null hypotheses as follows:

H₀-1: 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.

H₀-2: 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.

H₀-3: 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.

The questionnaire was applied as an instrument in collecting data. The data gained was then analyzed by a computer program called SPSS for Windows. And the summary of the said analysis was presented by using descriptive tables which were divided into 8 parts as follows:

- Part 1** General socio-economics background of farm housewives and families
- Part 2** Roles of farm housewives in the decision making on doing the sufficiency economy farming
- Part 3** Household agricultural activities in accordance with the sufficiency economy farming
- Part 4** Household well-being regarding the sufficiency economy farming
- Part 5** Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming
- Part 6** Analysis of factors related to roles of farm housewives in the decision making on doing the sufficiency economy farming
- Part 7** Analysis of factors related to household agricultural activities in accordance with the sufficiency economy farming
- Part 8** Analysis of factors related to household well-being regarding the sufficiency economy farming

4.1 Part 1 General socio-economics background of farm housewives and families

4.1.1 General socio-economics background

By studying the general socio-economics background of the sampling group of 375 farmer housewives in aspects of age and education level of farmer housewives and husband, number of family members, number of agricultural workforces, period of marriage, number of children, income of farm housewives, income of agricultural families, immigration and group membership, it can be explained as follows:

The sampling group of farmer housewives 36.0% ages between 41 – 50 years. The minority group 32.0% ages between 51 – 60 years. The mean of which is 47.71 years. Most of them (62.7%) graduated elementary level; there were only 2.4% who graduated a bachelor degree. Likewise, the great majority of the husband (60.3) graduated elementary level; there were only 2.8% who graduated a bachelor degree.

Families of farmer housewives 39.2% have 4 members in their families. The minority group 26.9% has 3 members in their families. Most of farm housewives (72.0%) have only 2 agricultural workforces. For the period of marriage, it found that 39.2% of farm housewives have a period of marriage between 21 – 30 years, while the minority group 23.7% has a period of marriage between 11 – 20 years. The mean of period of marriage is 24.04 years. The farm housewives 46.7% have 2 children, while the secondary group 33.9% has 1 child. The mean of child in the families is 2 people.

For the income, it found that farmer housewives 36.8% earn less than or equivalent to 2,000 Baht a month. The secondary group 30.9 earns between 2,001 – 3,000 Baht a month. The mean of monthly income is 3,948.27 Baht. In regard with the family income, most of the farmer housewives' families (62.7%) earn less than 10,000 Baht while the minority group 30.9% earns between 10,000 – 19,999 Baht. In search of group membership, it found that farm housewives 28.3% were not the member of any group; there were 43.2% of farm housewives who were a member of Village Funds, and 41.1% were a member of Bank for Agriculture and Agricultural Cooperatives. Most of farm housewives (92.0%) have never moved their residence. The details are shown in Table 5 below.

Table 5 General socio-economics background of farmer housewives and families

n = 375

General socio-economics background	Number (people)	Percentage
1. Age		
≤ 30 years	26	6.9
31 – 40 years	60	16.0
41 – 50 years	135	36.0
51 – 60 years	120	32.0
≥ 61 years	34	9.1
Minimum 20 years	Maximum 78 years	
Mean 47.71 years	Standard Deviation 10.494 years	

Table 5 General socio-economics background of farmer housewives and families
(Continued)

n = 375

General socio-economics background	Number (people)	Percentage
2. Education of farmer housewives		
Uneducated	50	13.3
Lower than elementary level	31	8.3
Elementary level	235	62.7
Lower secondary level	23	6.1
Upper secondary level/ vocational certificate	20	5.3
High vocational certificate	7	1.9
Bachelor degree	9	2.4
3. Education of husband		
Uneducated	39	10.4
Lower than elementary level	37	9.9
Elementary level	226	60.3
Lower secondary level	24	6.4
Upper secondary level/ vocational certificate	28	7.5
High vocational certificate	10	2.7
Bachelor degree	11	2.8

Table 5 General socio-economics background of farmer housewives and families
(Continued)

n = 375

General socio-economics background	Number (people)	Percentage
4. Number of family members		
2 people	21	5.6
3 people	101	26.9
4 people	147	39.2
5 people	66	17.6
6 people	27	7.2
7 people	11	2.9
8 people	2	0.6
Minimum 2 people	Maximum 8 people	
Mean 4.05 people	Standard Deviation 1.144 people	
5. Household agricultural workforces		
1 people	33	8.8
2 people	270	72.0
3 people	49	13.1
4 people	17	4.5
5 people	5	1.3
6 people	1	0.3
Minimum 1 people	Maximum 6 people	
Mean 2.18 people	Standard Deviation 0.728 people	

Table 5 General socio-economics background of farmer housewives and families
(Continued)

n = 375

General socio-economics background	Number (people)	Percentage
6. Period of marriage		
≤ 10 years	52	13.9
11 – 20 years	89	23.7
21 – 30 years	147	39.2
31 – 40 years	67	17.9
≥ 41 years	20	5.3
Minimum 1 year	Maximum 61 years	
Mean 24.04 years	Standard Deviation 10.668 years	
7. Number of children		
0 people	9	2.4
1 people	127	33.9
2 people	175	46.7
3 people	49	13.1
4 people	12	3.2
5 people	0	0.0
6 people	2	0.5
7 people	1	0.2
Minimum 0 people	Maximum 7 people	
Mean 1.84 people	Standard Deviation 0.907 people	

Table 5 General socio-economics background of farmer housewives and families
(Continued)

n = 375

General socio-economics background	Number (people)	Percentage
8. Income of farmer housewives (monthly)		
≤ 2,000 Baht	138	36.8
2,001 – 3,000 Baht	116	30.9
3,001 – 4,000 Baht	30	8.0
4,001 – 5,000 Baht	30	8.0
≥ 5,001 Baht	61	16.3
Minimum 0 Baht Maximum 40,000 Baht		
Mean 3,948.27 Baht Standard Deviation 4,501.294 Baht		
9. Income of farmer families		
< 10,000 Baht	235	62.7
10,000 – 19,999 Baht	116	30.9
20,000 – 29,999 Baht	15	4.0
30,000 – 39,999 Baht	5	1.3
40,000 – 49,999 Baht	1	0.3
≥ 50,000 Baht	3	0.8
10. Immigration		
Never moved	345	92.0
Moved 1 times within 1-5 years	8	2.1
Moved 1 times more than 5 years	22	5.9

Table 5 General socio-economics background of farmer housewives and families
(Continued)

n = 375

General socio-economics background	Number (people)	Percentage
11. Group membership (eligible to answer more than 1 choice)		
Not a member	106	28.3
Agricultural Cooperatives Group	85	22.7
Agricultural Housewife Group	112	29.9
Village Funds	162	43.2
Bank for Agriculture and Agricultural Cooperatives	154	41.1
Others	6	1.6

4.1.2 Household economic roles of farmer housewives

In studying of household economic roles of farmer housewives, the researcher used the questionnaire asking the economic roles in 10 aspects (from the questionnaire Part 1, Item 11 in Appendix A). It found that in an overall farmer housewives have economic roles in the high level (mean 3.43). When taking into account of 10 aspects of sub-roles, it found in order of priority that the feeding the family was put in the high level (mean 3.94). The secondary aspect (mean 3.83) was cost control and assets and saving from what is earned, respectively. It shows that now farmer housewives play an important role in feeding the family since they need to help the husband in finding additional income. In some aspects the farmer housewives reflected in the moderate level were sales transaction (mean 3.34), animal husbandry (mean 2.80), and household bookkeeping (mean 2.65), accordingly. From the additional interview about household bookkeeping, it found that, as a result, farmer housewives cannot make household bookkeeping in the first place; they did not want to do. Moreover the family has an excessive outcome than the amount they earned or has an inexact amount of income. They think that household bookkeeping is something complicated and time-wasting. Therefore, they did not reckon its importance. The details are shown in Table 6 below.

Table 6 Level of household economic roles of farmer housewives

Household economic roles	Levels of role taking					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
1. Family feeding	123 (32.8)	121 (32.3)	122 (32.5)	5 (1.3)	4 (1.1)	3.94	0.895	High
2. Working outside	81 (21.6)	140 (37.3)	80 (21.3)	53 (14.1)	21 (5.6)	3.55	1.141	High
3. Providing production factor	56 (14.9)	132 (35.2)	139 (37.1)	28 (7.5)	20 (5.3)	3.47	1.010	High
4. Cost control and assets	76 (20.3)	180 (48.0)	98 (26.1)	20 (5.3)	1 (0.3)	3.83	0.820	High
5. Saving what is earned	96 (25.6)	148 (39.5)	105 (28.0)	23 (6.1)	3 (0.8)	3.83	0.909	High
6. Working in farm such as planting, putting fertilizers, etc.	69 (18.4)	112 (29.9)	125 (33.3)	43 (11.5)	26 (6.9)	3.41	1.122	High
7. Animal husbandry	42 (11.2)	82 (21.9)	101 (26.9)	59 (15.7)	91 (24.3)	2.80	1.326	Moderate
8. Sales transaction	51 (13.6)	119 (31.7)	135 (36.0)	47 (12.5)	23 (6.1)	3.34	1.058	Moderate
9. Farm management	54 (14.4)	133 (35.5)	133 (35.4)	37 (9.9)	18 (4.8)	3.45	1.012	High
10. Household bookkeeping	23 (6.1)	79 (21.1)	111 (29.6)	66 (17.6)	96 (25.6)	2.65	1.239	Moderate
Overall						3.43	0.650	High

4.1.3 Power relation (Patriarchy)

From the study of power relation in the household by analyzing level of treat of farmer housewives in regard with power relation (patriarchy), it found that farmer housewives have low level of treat as male is superior in the household (mean 2.53). And when considering sub-aspects, it found that there were 2 aspects which were in high level as follows: 1) both farm housewives and husbands help out each other in household tasks (mean 3.71), and 2) farm housewives are irreconcilable to let man looks down upon, take advantage, oppress and violently abuse (mean 3.70). There were 10 issues in low level of treat, of which the important issues are as follows; when conflict happens between them; farm housewives usually lack of confidence and self-esteem; and in the farm housewives' families, man is superior in every respect (mean 2.51). Consequently, there were some issues in moderate level of treat, of which the important issues are as follows; after the marriage, farmer housewives have to use the husband' surname (mean 3.25); farmer housewives lack of social opportunity because they are responsible for the household tasks and primarily take care of the children and husband (Mean 3.10); and in the agricultural family, commonly, husband takes an leadership role in every respect (mean 2.94).

It shows that in an overall image, the families of farmer housewives pertain to the power relationship or a family which has a man in charge in low level. When deliberately taking into consideration of each issue, it found that farmer housewives have power relationship in which has a man in charge in low level. The details are shown in Table 7

Analysis of level of treat or livability in the farmer housewives' families related to power relationship was conducted (Patriarchy) by using weight mean score compared with the criteria of Likert (1932), referred by Barnett (1991), which is interpreted as follows:

Very low	mean ranges between	1.00 – 1.80	points
Low	mean ranges between	1.81 – 2.60	points
Moderate	mean ranges between	2.61 – 3.40	points
High	mean ranges between	3.41 – 4.20	points
Very high	mean ranges between	4.21 – 5.00	points

Table 7 Level of treat in farmer housewives' families in connection with power relation (Patriarchy)

Power relation (Patriarchy)	Levels of treat					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
1. In your family, choosing where to live or to live with whom solely depends on the husband	30 (8.0)	107 (28.5)	81 (21.6)	139 (37.1)	18 (4.8)	2.98	1.082	Moderate
2. After the marriage, farmer housewives have to use the husband' surname	39 (10.4)	139 (37.1)	96 (25.6)	78 (20.8)	23 (6.1)	3.25	1.087	Moderate
3. You cannot do anything if your husband needs to have more than 1 wife.	13 (3.5)	32 (8.5)	38 (10.1)	139 (37.1)	153 (40.8)	1.97	1.079	Low
4. Husband is mostly the person who make a decision in the family.	23 (6.1)	70 (18.7)	90 (24.0)	152 (40.5)	40 (10.7)	2.69	1.082	Moderate
5. When conflicts happens, you have no power in negotiating.	14 (3.7)	51 (13.6)	70 (18.7)	176 (46.9)	64 (17.1)	2.40	1.039	Low
6. Your husband hardly sees your importance in doing activities in the family.	16 (4.3)	57 (15.2)	88 (23.5)	141 (37.5)	73 (19.5)	2.47	1.096	Low

Table 7 Level of treat in farmer housewives' families in connection with power relation (Patriarchy) (Continued)

Power relation (Patriarchy)	Levels of treat					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
7. You will not let man look down upon, take advantage and be a subject of violence.	150 (40.0)	109 (29.1)	26 (6.9)	34 (9.1)	56 (14.9)	3.70	1.447	High
8. In your family, the boy is given more important than the girl.	16 (4.3)	46 (12.3)	52 (13.8)	203 (54.1)	58 (15.5)	2.36	1.021	Low
9. In your family, the boy is inherited more assets than the girl.	7 (1.8)	27 (7.2)	60 (16.0)	208 (55.5)	73 (19.5)	2.17	0.886	Low
10. You and your husband helps each other doing household works.	73 (19.5)	195 (52.0)	45 (12.0)	48 (12.8)	14 (3.7)	3.71	1.039	High
11. Your family offers more education opportunity to a boy than a girl.	11 (2.9)	36 (9.7)	68 (18.1)	182 (48.5)	78 (20.8)	2.25	0.988	Low
12. When a conflict happens, you usually lack of confidence and self-esteem.	6 (1.6)	54 (14.4)	114 (30.4)	151 (40.3)	50 (13.3)	2.51	0.950	Low

Table 7 Level of treat in farmer housewives' families in connection with power relation (Patriarchy) (Continued)

Power relation (Patriarchy)	Levels of treat					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
13. In your family, your husband is superior than you in every respect.	14 (3.7)	64 (17.1)	77 (20.5)	166 (44.3)	54 (14.4)	2.51	1.052	Low
14. In your family, man usually suppresses and takes advantage from woman.	11 (2.9)	38 (10.1)	39 (10.5)	171 (45.6)	116 (30.9)	2.09	1.038	Low
15. You agree with the proverb that "It's a sad house where the hen crows louder than the cock"	22 (5.9)	108 (28.8)	61 (16.2)	142 (37.9)	42 (11.2)	2.80	1.146	Moderate
16. In your family, husband has absolute power in teaching and punishing family members	13 (3.5)	95 (25.2)	88 (23.5)	118 (31.5)	61 (16.3)	2.68	1.122	Moderate
17. In your family, husband has a role of leadership in every respect.	15 (4.0)	127 (33.9)	88 (23.5)	109 (29.1)	36 (9.5)	2.94	1.083	Moderate
18. Housewives should act as a person taking care of husband as a major role.	12 (3.2)	80 (21.3)	81 (21.6)	138 (36.8)	64 (17.1)	2.57	1.099	Low

Table 7 Level of treat in farmer housewives' families in connection with power relation (Patriarchy) (Continued)

Power relation (Patriarchy)	Levels of treat					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
19. Lacking of social opportunity is because mostly you have to be responsible for household tasks and taking care of husband and children.	32 (8.5)	117 (31.2)	100 (26.7)	107 (28.5)	19 (5.1)	3.10	1.065	Moderate
Overall						2.53	0.521	Low

4.1.4 Level of sufficient economics acknowledgment from various sources

From the study of level of sufficient economics acknowledgment from various sources in an overall image, it found that farmer housewives had moderate level of acknowledgment (mean 2.85) as the sources of acknowledgment, which is in high level, are Television (mean 3.86), radio (mean 3.50). The sources of recognition, which is in moderate level, are broadcasting news tower (mean 3.19), neighbors (mean 3.03) and agricultural officer (mean 2.70). The sources of acknowledgement, which is in low level, are newspaper (mean 2.55) and advisory media like brochure or manual (mean 2.33). The source of recognition, which is in the very low level, is Internet (mean 1.61). However, from the additional interview, it found that it is due to farmer housewives had more change to listen to radio and watch Television than other media; their audio-visuality makes is more interesting. As for internet, they barely had a chance to come across, particularly, agricultural who do not live with the grandchildren. In consisting of what is mentioned, farm housewives are unable to use the computer and they have none of it. With these reasons, farm housewives least

receive knowledge regarding sufficient economy via Internet as the source of recognition. The details are shown in Table 8

Table 8 Level of sufficient economics acknowledgment from various sources

Source of sufficient economics knowledge	Level of acknowledgment					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
1. Radio	58 (15.5)	159 (42.4)	96 (25.6)	38 (10.1)	24 (6.4)	3.50	1.072	High
2. Television	114 (30.4)	150 (40.0)	71 (18.9)	24 (6.4)	16 (4.3)	3.86	1.057	High
3. Broadcasting news tower	41 (10.9)	113 (30.1)	124 (33.1)	71 (18.9)	26 (6.9)	3.19	1.082	Moderate
4. Newspaper	20 (5.3)	58 (15.5)	116 (30.9)	96 (25.6)	85 (22.7)	2.55	1.155	Low
5. Brochure or manual	15 (4.0)	46 (12.3)	97 (25.9)	107 (28.5)	110 (29.3)	2.33	1.139	Low
6. Internet	16 (4.3)	20 (5.3)	27 (7.2)	49 (13.1)	263 (70.1)	1.61	1.104	Vey low
7. Agricultural officer	14 (3.7)	75 (20.0)	129 (34.4)	98 (26.1)	59 (15.7)	2.70	1.073	Moderate
8. Neighbors	31 (8.3)	91 (24.3)	147 (39.2)	71 (18.9)	35 (9.3)	3.03	1.067	Moderate
Overall						2.85	0.661	Moderate

4.2 Part 2 Roles of farmer housewives in decision making on doing sufficiency economy farming

From the study of roles of farmer housewives in decision making on doing sufficiency economy farming, it was the study of level of role of farmer housewives in decision making to do agriculture in accordance with sufficient economy by considering into 5 aspects such as moderation, reasonableness, self-immunity, knowledge and morality.

Generally, it found that decision making of farmer housewives on doing sufficiency economy farming was in high level (mean 3.43). If taking a look into each aspect, we would found that the aspects in high level are morality (mean 3.88) and moderation (mean 3.44). The aspects farm housewives have moderate level of decision making are reasonableness (mean 3.33), self-immunity (3.19) and knowledge (3.12). In considering to each issue in details, it can be explained as follows:

Moderation

Generally, in an aspect of moderation, farmer housewives took action in decision making in high level (mean 3.44). It can be seen that the followings sub-issues were rated in high level; purchasing necessary products for their living and occupation (mean 3.78); using household workforces in doing things together (mean 3.73); and using existing capital and equipment in doing agriculture (3.61), respectively. The issues farm housewives have moderate level of decision making are as follows; storing some portion of products gained for further harvest without buying more seeds (mean 3.32); using compost and organic fertilizer that already contains in the soil without relying on chemicals (mean 3.24); and using natural enemies to prevent insect diseases instead of using too much insecticide (mean 2.94).

Reasonableness

Generally, in an aspect of reasonableness, farmer housewives took action in decision making in moderate level (mean 3.33). It can be seen that the following sub-issues were rated in high level; planning harvest according to the need of the market (mean 3.47); and planning production based on geographical potential (mean 3.45). The issues farm housewives have moderate level of decision making are as follows; studying sufficient agricultural knowledge that is beneficial to their occupation (mean 3.34); planning of land utilization for different purposes such as growing different plants in the same area (mean 3.28); and seeking out the cause of agricultural problems such as problem of reduced productivity (mean 3.14).

Self-immunity

Generally, in an aspect of self-immunity, farmer housewives took action in decision making in moderate level (mean 3.19). It can be seen that the following sub-issues were all rated in moderate level in order of priority; money division for investment, consumption and saving (mean 3.38); saving from agricultural gain (mean

3.37); conducting an investment plan by prior studying its agricultural capital (mean 3.32); considering possible risks such as alternative products when the main product is reduced, etc., as well as finding solution to the risks (mean 3.15); and household bookkeeping and daily statement for the family planning (mean 2.73). At any rate, it is noticeable that most of agricultural families might not foresee the importance of household bookkeeping and conducting a daily statement. Therefore, there was little number of families which get advantage from such accounting techniques.

Knowledge

Generally, in an aspect of knowledge, farmer housewives took action in decision making in moderate level (mean 3.12). It can be seen that most of the issues were rated in moderate level. There was only one issue being put in high level which is attending the meeting of the village (mean 3.67). the residual issues were all rated in moderate level as follows; seeking knowledge from other sources such as TV, radio, brochure, etc. (mean 3.13); finding a way to develop the career such as growing another kinds of plants or expanding harvesting area, etc. (mean 3.11); finding a relevant book regarding agricultural knowledge (mean 2.99); attending agriculture-related training or seminar to enhance their knowledge of sufficient economy (mean 2.94); and taking an observation field to study from the successful one (mean 2.87).

Morality

Generally, in an aspect of morality, farmer housewives took action in decision making in high level (mean 3.88). It can be seen that the following sub-issues were all rated in high level in order of priority; diligence in performing occupation (mean 3.93); not claiming other belongings/ assets to be theirs (mean 3.91); leading a life on the basis of sufficiency – not exploit others (mean 3.90); being generous and supporting people who are deficient (mean 3.89); not taking advantage from others by determining a proper price (mean 3.88); after spraying preservation chemicals, not early selling products which are under the restricted period and being fair in solving problems (mean 3.87); and considering common benefits such as voluntary work of community development (mean 3.78).

It is clearly seen that farm housewives take much role in decision making in aspects of morality and moderation. The details are shown in Table 9

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
Moderation						3.44	0.642	High
1. Using existing capital and equipment in doing agriculture	62 (16.5)	138 (36.8)	147 (39.2)	24 (6.4)	4 (1.1)	3.61	0.873	High
2. Using household workforces in doing things together	74 (19.7)	153 (40.9)	122 (32.5)	24 (6.4)	2 (0.5)	3.73	0.869	High
3. Purchasing necessary products for their living and occupation	80 (21.3)	152 (40.5)	123 (32.8)	19 (5.1)	1 (0.3)	3.78	0.848	High
4. Using compost and organic fertilizer that already contains in the soil without relying on chemicals	49 (13.1)	85 (22.7)	163 (43.5)	64 (17.0)	14 (3.7)	3.24	1.007	Moderate
5. Storing some portion of products gained for further harvest without buying more seeds	49 (13.1)	105 (28.0)	151 (40.3)	57 (15.2)	13 (3.4)	3.32	0.997	Moderate

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
6. Using natural enemies to prevent insect diseases instead of using too much insecticide	28 (7.5)	90 (24.0)	134 (35.7)	78 (20.8)	45 (12.0)	2.94	1.107	Moderate
Reasonableness						3.33	0.713	Moderate
7. Planning production based on geographical potential	33 (8.8)	149 (39.7)	151 (40.3)	36 (9.6)	6 (1.6)	3.45	0.840	High
8. Planning harvest according to the need of the market	47 (12.6)	135 (36.0)	146 (38.9)	42 (11.2)	5 (1.3)	3.47	0.898	High
9. Planning of land utilization for different purposes such as growing different plants in the same area	43 (11.5)	106 (28.3)	150 (40.0)	64 (17.0)	12 (3.2)	3.28	0.983	Moderate

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
10. Studying sufficient agricultural knowledge that is beneficial to their occupation	43 (11.5)	99 (26.4)	181 (48.3)	46 (12.3)	6 (1.6)	3.34	0.893	Moderate
11. Seeking out the cause of agricultural problems such as problem of reduced productivity	31 (8.3)	110 (29.3)	135 (36.0)	78 (20.8)	21 (5.6)	3.14	1.020	Moderate
Self-immunity						3.19	0.691	Moderate
12. Conducting an investment plan by prior studying its agricultural capital	26 (6.9)	126 (33.6)	173 (46.1)	42 (11.2)	8 (2.1)	3.32	0.843	Moderate
13. Saving from agricultural gain	26 (6.9)	136 (36.3)	170 (45.3)	36 (9.6)	7 (1.9)	3.37	0.823	Moderate
14. Money division for investment, consumption and saving	35 (9.3)	138 (36.8)	143 (38.1)	53 (14.1)	6 (1.6)	3.38	0.896	Moderate

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
15. Household bookkeeping and daily statement for the family planning	27 (7.2)	66 (17.6)	135 (36.0)	73 (19.5)	74 (19.7)	2.73	1.174	Moderate
16. Considering possible risks such as alternative products when the main product is reduced, etc. as well as finding solution to the risks	31 (8.3)	93 (24.8)	158 (42.1)	87 (23.2)	6 (1.6)	3.15	0.924	Moderate
Knowledge						3.12	0.741	Moderate
17. Seeking knowledge from other sources such as TV, radio, brochure, etc.	24 (6.4)	103 (27.5)	162 (43.2)	70 (18.7)	16 (4.3)	3.13	0.934	Moderate
18. Finding a relevant book regarding agricultural knowledge	20 (5.3)	75 (20.0)	168 (44.8)	104 (27.7)	8 (2.1)	2.99	0.882	Moderate

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
19. Attending agriculture-related training or seminar to enhance their knowledge of sufficient economy	26 (6.9)	83 (22.1)	140 (37.3)	94 (25.1)	32 (8.5)	2.94	1.044	Moderate
20. Finding a way to develop the career such as growing another kinds of plants or expanding harvesting area, etc.	31 (8.3)	97 (25.9)	148 (39.5)	82 (21.9)	17 (4.5)	3.11	0.989	Moderate
21. Attending the meeting of the village	77 (20.5)	146 (38.9)	111 (29.6)	32 (8.5)	9 (2.4)	3.67	0.975	High
22. Taking an observation field to study from the successful one	28 (7.5)	87 (23.2)	125 (33.3)	78 (20.8)	57 (15.2)	2.87	1.155	Moderate

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
Morality						3.88	0.690	High
23. Not taking advantage from others by determining a proper price	108 (28.8)	142 (37.9)	102 (27.2)	17 (4.5)	6 (1.6)	3.88	0.934	High
24. After spraying chemicals, not early selling products which are under the restricted period	113 (30.1)	147 (39.2)	81 (21.6)	21 (5.6)	13 (3.5)	3.87	1.019	High
25. Not claiming other belongings/assets to be theirs	135 (36.0)	131 (34.9)	68 (18.1)	23 (6.1)	18 (4.8)	3.91	1.102	High
26. Being generous and supporting people who are deficient	100 (26.7)	161 (42.9)	92 (24.5)	18 (4.8)	4 (1.1)	3.89	0.889	High
27. Diligence in performing occupation	113 (30.1)	152 (40.5)	82 (21.9)	25 (6.7)	3 (0.8)	3.93	0.925	High
28. Considering common benefits such as voluntary work of community development	77 (20.5)	156 (41.6)	126 (33.6)	14 (3.7)	2 (0.5)	3.78	0.832	High

Table 9 Roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Activities	Levels of decision-making					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
29. Leading a life on the basis of sufficiency – not exploit others	89 (23.7)	179 (47.7)	90 (24.0)	16 (4.3)	1 (0.3)	3.90	0.815	High
30. Being fair in solving problems	86 (22.9)	176 (46.9)	96 (25.6)	14 (3.7)	3 (0.8)	3.87	0.832	High
Overall						3.43	0.524	High

4.3 Part 3 Household agricultural activities in accordance with the sufficiency economy farming

From the study of household agricultural activities in accordance with the sufficiency economy farming, the researcher considered the 4 following issues: man, money, management and material by asking farmer housewives whether each issue has been performed and followed the principles of sufficient economy. For the data collection in this part, the researcher decided to use questionnaire with 26 items (from questionnaire, part 3 in appendix A). The respondents were required to give only yes-no answer. The answer “yes” in such question would be given 1 point and the answer “no” in such question would be given 0 point. The result of the study found that:

Man

Agricultural activities of the families concerning man, farm housewives more than 80% put into practice are as follows; using own workforce in carrying out agricultural activities (95.5%); work division in the families (93.95); and finding more knowledge in doing agriculture according to sufficient agriculture, in order to be apply for their farming, such as training or observation trip, etc. (90.7%). There was

only one issue the farmer housewives' families less than 80% put into practice is not employing external workforces (74.9%).

Money

Agricultural activities of the families concerning money, farmer housewives more than 80% put into practice are as follows; purchasing products only necessary to their occupation (96.3%); and reasonable spending, not extravagant (94.4%). There was only one issue the farmer housewives' families 53.9% put into practice is household bookkeeping for own audit.

Material

Agricultural activities of the families concerning material farmer housewives more than 80% put into practice are as follows; agricultural resource circulation such as straw, paddy husk or dried grass as a cover of soil surface and using coir placed at the bottom of the hole when growing plants, or using coir when grafting, etc. (86.9%); utilizing own material or dung for the utmost benefit such as using leaves or dung to produce compost or manure, or feeding straw to cattle, or using firewood in boiling, etc. (82.1%). Another 2 activities the farmer housewives' families less than 80% put into practice are as follows: using animal workforces or the agricultural tools for the utmost benefits (79.2); and processing products or preserving it for own consumption such as sour pickling, drying out or preserving in syrup, etc. (74.4%).

Management

Agricultural activities of the families concerning management, farmer housewives more than 80% put into practice are as follows; planning to use the house area for the utmost benefit (92.0%); growing backyard garden (90.4%); and determining precise period of doing agriculture according to sufficient economy (89.3%). Moreover, some issues the farmer housewives' families less than 80% put into practice are; planning by considering geographical potential (79.7%); growing rice for own consumption in a year (73.6%); feeding animal for own consumption and selling (71.2%). However, there was only one activity the farmer housewives' families less than 70% put into practice which is digging a pond for fishery and storing rain water (62.9%). The details are shown in Table 10.

Overall

It found that most of the farmer housewives' families do agriculture according to sufficient economy which is rated in much level, the points was evaluated from the level of actual practice (18 – 26 points) or 82.7%. There were only 16.5% of farmer housewives who have a level of practice at a medium rate (10 – 17 points). And 0.8% of farmer housewives who have a level of practice at a less rate (1 – 9 points). The details are shown in Table 10 and 11.

Table 10 Household agricultural activities in accordance with the sufficiency economy farming

Activities	Yes		No	
	Amount	%	Amount	%
Man				
1. Work division in the families	352	93.9	23	6.1
2. Using own workforce in carrying out agricultural activities	358	95.5	17	4.5
3. Rotating household workforces, none of them moves away to work	321	85.6	54	14.4
4. Not employing external workforces	281	74.9	94	25.1
5. Finding more knowledge in doing agriculture according to sufficient agriculture, in order to be apply for their farming, such as training or observation trip, etc.	340	90.7	35	9.3
Money				
6. Household bookkeeping for own audit	202	53.9	173	46.1
7. Family saving	341	90.9	34	9.1
8. Reasonable spending, not extravagant	354	94.4	21	5.6
9. Purchasing products only necessary to their occupation	361	96.3	14	3.7

Table 10 Household agricultural activities in accordance with the sufficiency economy farming (Continued)

Activities	Yes		No	
	Amount	%	Amount	%
10. If borrowing for living, family members have a plan for liquidation	339	90.4	36	9.6
Material				
11. Utilizing own material or dung for the utmost benefit such as using leaves or dung to produce compost or manure, or feeding straw to cattle, or using firewood in boiling, etc.	308	82.1	67	17.9
12. Using animal workforces or the agricultural tools for the utmost benefits	297	79.2	78	20.8
13. Agricultural resource circulation such as straw, paddy husk or dried grass as a cover of soil surface and using coir placed at the bottom of the hole when growing plants, or using coir when grafting, etc.	326	86.9	49	13.1
14. Processing products or preserving it for own consumption such as sour pickling, drying out or preserving in syrup, etc.	279	74.4	96	25.6
Management				
15. Planning to use the house area for the utmost benefit	345	92.0	30	8.0
16. Inquiring agricultural officer in the sub-district/village for agricultural information	333	88.8	42	11.2
17. Determining precise period of doing agriculture according to sufficient economy	335	89.3	40	10.7

Table 10 Household agricultural activities in accordance with the sufficiency economy farming (Continued)

Activities	Yes		No	
	Amount	%	Amount	%
18. Conducting a plan of order of priority what is to be done first or later	314	83.7	61	16.3
19. Considering if the ongoing agricultural activities are based on sustainable preservation and utilization	319	85.1	56	14.9
20. Planning by considering geographical potential	299	79.7	76	20.3
21. Considering to risks in various aspects	270	72.0	105	28.0
22. Growing rice for own consumption in a year	276	73.6	99	26.4
23. Digging a pond for fishery and storing rain water	236	62.9	139	37.1
24. Integrated farm of vegetables, fruits and herbs	328	87.5	47	12.5
25. Growing backyard garden	339	90.4	36	9.6
26. Feeding animal for own consumption and selling	267	71.2	108	28.8

Table 11 Level of household agricultural activities in accordance with the sufficiency economy farming

n = 375		
Level of operation	Amount (people)	%
Less (1-9 points)	3	0.8
Medium (10-17 points)	62	16.5
Much (18-26 points)	310	82.7
Minimum 6 points	Maximum 26 points	
Mean 21.65 points	Standard Deviation 4.264 points	

4.4 Part 4 Well-being of farmer families according to sufficiency economy farming

From the study of well-being of farmer families according to sufficiency economy, the researcher considered the 5 following issues: sanitation, working, income, family life and working environment, by using questionnaire with 25 items. The respondents were required to give only yes-no answer. From the interview of sampling group of farmer housewives, it found the results of each issue as follows:

Sanitation

In an aspect of sanitation, the questions farmer housewives more than 90% answered “yes” are; cheerful and delighted states of mind (95.5%); accessibility to public health service (95.5%); strong health being able to work regularly (95.2%); and being unworried and encouraged (93.6%). And the question the farmer housewives less than 90% answered “yes” is being deprived of diseases, having good health and living in non-toxic conditions (88.8%). From the additional interview, it also found that most of farm housewives who answered “no” are suffering from high blood pressure and diabetes. They further stated that in the past they had used chemicals in doing agriculture.

Working

In an aspect of working, the questions farmer housewives more than 90% answered “yes” are; good working environment (96.5%); being able to fully take care their farms and take control of agricultural activities (93.6%); and having sufficient workforces (92.0%). The questions the farmer housewives less than 90% answered “yes” are; having sufficient circulating funds for agriculture (87.7%); and reducing the risk from natural disasters such as wildfire, storm, drought or flood, etc. (87.5%). However, the farmer housewives who answered “no” gave out the reason in the issue of circulating funds for agriculture that the family is still in debts and sometimes they need to borrow the money. Most of them are debtors of Bank of Agriculture and Agricultural Cooperatives. In the issue of risk from natural disasters, they added that they still have to encounter the water problem both drought and flood, including wildfire.

Income

In an aspect of income, most of farmer housewives more than 90% answered “yes” in all issues as follows; earning additional income from selling products that exceed from saving for own consumption (89.1%); having continuous income from agriculture (86.7%); having reserve fund (84.8%); and having sufficient buying power for their living (84.5%). From the additional interview regarding income, the farm housewives added that they sometimes have additional income but it is not regular enough, and they do not have saving.

Family life

Most of farmer housewives (more than 90%) answered “yes” in every issues as follows; having sufficient basic facility in life such as TV, vehicle, etc. (97.1%); making discussion among family members and helping one another solving problems (95.7%); warm and loving family (96.8%); happy family taking care of each other (95.5%); family members spend more time together (95.2%); and being strong and self-dependent family (94.1%).

Working environment

In an aspect of income, most of farmer housewives more than 90% answered “yes” in all issues as follows; secure shelter (97.3%); good environment (96.0%); accessibility to sufficient public health services (94.9%); sufficient amount of consumable water (94.9%); and safety in life and property, no criminal and drugs (94.7%). The details are shown in Table 12.

Overall

When taking into account in an overall image, it found that most of farmer housewives’ families have a well-being according to sufficient economy, which was rated in the much level (17 – 25 points) or 95.2%. There were only 4.8% of farmer housewives who have a level of well-being at a medium rate (9 – 16 points). And none of farmer housewives who have a level of well-being at a less rate (1 – 8 points). It can be seen that even though agricultural career needs hard-working and full dedication, and promotes less income, some farmer housewives’ families have a good livability, well-being, and live a happy life according to sufficient economy. The details are shown in Table 13.

Table 12 Well-being of farmer families according to sufficiency economy farming

Well-being	Yes		No	
	Amount	%	Amount	%
Sanitation				
1. Deprived of diseases, having good health and living in non-toxic conditions	333	88.8	42	11.2
2. Strong health being able to work regularly	357	95.2	18	4.8
3. Cheerful and delighted states of mind	358	95.5	17	4.5
4. Being unworried and encouraged	351	93.6	24	6.4
5. Accessibility to public health service	358	95.5	17	4.5
Working				
6. Being able to fully take care their farms and take control of agricultural activities	351	93.6	24	6.4
7. Reducing the risk from natural disasters such as wildfire, storm, drought or flood, etc.	328	87.5	47	12.5
8. Good working environment	362	96.5	13	3.5
9. Having sufficient workforces	345	92.0	30	8.0
10. Having sufficient circulating funds for agriculture	329	87.7	46	12.3
Income				
11. Having continuous income from agriculture	325	86.7	50	13.3
12. Having sufficient buying power for their living	317	84.5	58	15.5
13. Having reserve fund	318	84.8	57	15.2

Table 12 Well-being of farmer families according to sufficiency economy farming
(Continued)

Well-being	Yes		No	
	Amount	%	Amount	%
14. Earning additional income from selling products that exceed from saving for own consumption	334	89.1	41	10.9
Family life				
15. Warm and loving family	363	96.8	12	3.2
16. Being strong and self-dependent family	353	94.1	22	5.9
17. Having sufficient basic facility in life such as TV, vehicle, etc.	364	97.1	11	2.9
18. Family members spend more time together	357	95.2	18	4.8
19. Happy family taking care of each other	358	95.5	17	4.5
20. Making discussion among family members and helping one another solving problems	359	95.7	16	4.3
Working environment				
21. Secure shelter	365	97.3	10	2.7
22. Accessibility to sufficient public health services	356	94.9	19	5.1
23. Safety in life and property, no criminal and drugs	355	94.7	20	5.3
24. Good environment	360	96.0	15	4.0
25. Sufficient amount of consumable water	356	94.9	19	5.1

Table 13 Level of Well-being of farmer families according to sufficiency economy farming

n = 375		
Level of well-being	Amount (people)	%
Less (1-8 points)	0	0.0
Medium (9-16 points)	18	4.8
Much (17-25 points)	357	95.2
Minimum 11 points	Maximum 25 points	
Mean 23.23 points	Standard Deviation 2.984 points	

4.5 Part 5 Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

From the study of problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming, it found that, in an overall image, farmer housewives have problems and obstacles in carrying out agricultural activities in high level (mean 3.42). When delving into sub-issues. It found that the issue the farmer housewives have problems and obstacles in high level are as follows; the cost of some production factors such as seed, fertilizer, animal feed whose price are getting skyrocketed (mean 3.86); workforces in carrying agricultural activities are insufficient (mean 3.54); and insects and pests cause damage to the farm plant (mean 3.52), respectively. The issue the farm housewives have problems and obstacles in moderate level are as follows; water source is not enough to do agriculture (mean 3.34); little agricultural area unsuitable to follow the principle of sufficient economy (mean 3.34); and sometimes, no excessive production for own consumption, except from selling (mean 3.34). The details are shown in Table 14.

However, from the additional study of problems and obstacles, it also found other problems such as; low productivity; low product price; farmer housewives do not have own reserve fund; no officer gives advice about doing agriculture, even sometimes the officer came but there was no consistency; farm housewives' health is not propitious; and the agricultural operation lacks of continuance.

Table 14 Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

Problems and obstacles	Level of problems and obstacles					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
1. Water source is not enough to do agriculture	54 (14.4)	108 (28.8)	146 (38.9)	46 (12.3)	21 (5.6)	3.34	1.053	Moderate
2. Little amount of water in the storing pond, especially during drought season	49 (13.1)	116 (30.9)	135 (36.0)	54 (14.4)	21 (5.6)	3.31	1.051	Moderate
3. Deteriorated soil, unsuitable for Agriculture	32 (8.5)	85 (22.7)	163 (43.5)	74 (19.7)	21 (5.6)	3.09	0.992	Moderate
4. Little agricultural area unsuitable to follow the principle of sufficient economy	39 (10.4)	121 (32.3)	149 (39.7)	60 (16.0)	6 (1.6)	3.34	0.922	Moderate
5. Insects and pests cause damage to the farm plant	58 (15.5)	144 (38.4)	119 (31.7)	42 (11.2)	12 (3.2)	3.52	0.989	High
6. The cost of some production factors such as seed, fertilizer, animal feed whose price are getting high	97 (25.9)	162 (43.2)	83 (22.1)	32 (8.5)	1 (0.3)	3.86	0.910	High

Table 14 Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming (Continued)

Problems and obstacles	Level of problems and obstacles					Mean	S.D.	Meaning
	Very high	High	Moderate	Low	Very low			
	Amount (%)	Amount (%)	Amount (%)	Amount (%)	Amount (%)			
7. Workforces in carrying agricultural activities are insufficient	47 (12.5)	148 (39.5)	145 (38.7)	32 (8.5)	3 (0.8)	3.54	0.848	High
8. No excessive production for own consumption, except from selling	40 (10.7)	126 (33.6)	144 (38.4)	53 (14.1)	12 (3.2)	3.34	0.957	Moderate
9. The price of excessive products for own consumption is low	49 (13.1)	139 (37.1)	139 (37.1)	35 (9.3)	13 (3.5)	3.47	0.953	High
10. No officer gives advice about doing agriculture	52 (13.9)	138 (36.8)	114 (30.4)	56 (14.9)	15 (4.0)	3.42	1.030	High
Overall						3.42	0.604	High

4.6 Part 6 Results of analysis of factors related to roles of farmer housewives in decision making on doing sufficiency economy farming

In this study, the multiple regression analysis was applied to find relation between dependent variable (roles of farmer housewives in decision making on doing sufficient economy farming) and multi-independent variables how much each independent variables relates to dependent variable. In the analysis, it consists of 13 independent variables which are categorized and groups into 5 major factors as follows:

1. Factors concerning general socio-economics background of farmer housewives and families such as:
 - 1) Age
 - 2) Education of farmer housewives
 - 3) Education of husband
 - 4) Number of family member
 - 5) Agricultural workforce
 - 6) Period of marriage
 - 7) Number of children
 - 8) Income of farmer housewives
 - 9) Group membership
2. Factors concerning household economic role of farmer housewives
3. Factors concerning level of sufficient economics acknowledgment from various sources
4. Factors concerning power relation (patriarchy) of the farm housewives' families
5. Factors concerning problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

The dependent variable is roles of farmer housewives in decision making on doing sufficiency economy farming. The issue was categorized into levels of measurement and given points. The score were then aggregated into a total score.

The study of independent variables and dependent variable show that farmer housewives' age average 47.71 years; they graduated elementary level. And husband also graduated elementary level. The families of farmer housewives have averagely 4

members; each family has 2 agricultural workforces. The average period of marriage of farm housewives is 24.04 years; having 2 children. Farmer housewives have average income of 3,948.27 Baht a month. For group membership, they averagely are a member of only one group. Household economic roles of farmer housewives is in high level (mean 3.43). The power relation of the families (patriarchy) is in low level (mean 2.53). Farmer housewives receive knowledge regarding sufficiency economy from various sources is in moderate level (mean 2.85). Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming are in high level (mean 3.42). And roles of farmer housewives in decision making on doing sufficiency economy farming is in high level (mean 3.43). the details are shown in Table 15.

Table 15 Mean and standard deviation of analyzed variables related to roles of farmer housewives in decision making on doing sufficiency economy farming

Variables	Mean	Standard deviation
1. Ages (years)	47.71	10.494
2. Education level of farmer housewives (level)	2.97	1.202
3. Education level of husband (level)	3.10	1.257
4. Number of family members of farmer housewives (people)	4.05	1.144
5. Number of agricultural workforces of each family (people)	2.18	0.728
6. Period of marriage (years)	24.04	10.668
7. Number of children (people)	1.84	0.907
8. Income of farmer housewives (Baht)	3,948.27	4,501.294
9. Group membership (number of group)	1.38	1.184
10. Household economic roles of farmer housewives (level)	3.43	0.650
11. Power relation (patriarchy) (level)	2.53	0.521

Table 15 Mean and standard deviation of analyzed variables related to roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Variables	Mean	Standard deviation
12. Sufficiency economic acknowledgement from various sources (level)	2.85	0.661
13. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	3.42	0.604
14. Roles of farmer housewives in decision making on doing sufficiency economy farming (level)	3.43	0.524

When studying relation between each pair of independent variables, it found that none of pair of independent variables relate to one another higher than 0.80 to the extent that it creates multicollinearity which infringes the hypothesis prescribed by the rule of multiple regression analysis (Prasitratthasin, 2001). The details are shown in Table 16. The abbreviations are applied to each variable as follows:

	a	=	Constraint
	b ₁ ...b ₁₃	=	Regression coefficient
Dependent variable	Y	=	Roles of farmer housewives in decision making on doing sufficiency economy farming (level)
Independent variables	X ₁	=	Ages (years)
	X ₂	=	Education level of farmer housewives (level)
	X ₃	=	Education level of husband (level)
	X ₄	=	Number of family members of farmer housewives (people)
	X ₅	=	Number of agricultural workforces of each family (people)
	X ₆	=	Period of marriage (years)

- X_7 = Number of children (people)
- X_8 = Income of farmer housewives (Baht)
- X_9 = Group membership (number of group)
- X_{10} = Household economic roles of farmer housewives (level)
- X_{11} = Power relation (patriarchy) (level)
- X_{12} = Sufficiency economic acknowledgement from various sources (level)
- X_{13} = Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)

Table 16 Correlation coefficient between dependent and independent variables in analyzing roles of farmer housewives in decision making on doing sufficiency economy farming

Variables	Y	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃
Y	1.000	.128**	.093*	.075	-.109*	-.126**	.037	-.135**	.156***	.162***	.428***	.179***	.419***	.287***
X ₁		1.000	-.216***	-.166***	.019	.002	.787***	.131**	.029	.230***	.033	-.048	.133**	.008
X ₂			1.000	.789***	-.032	-.125**	-.252***	-.227***	.256***	.091*	.012	.036	.256***	-.013
X ₃				1.000	-.009	-.088*	-.161***	-.145**	.263***	.106*	-.018	.043	.205***	-.031
X ₄					1.000	.413***	.125**	.551***	.105*	-.085	-.055	-.026	-.111*	-.064
X ₅						1.000	.073	.226***	.115*	-.023	-.152**	-.161***	-.145**	-.106*
X ₆							1.000	.232***	.005	.236***	-.024	-.060	.059	-.111*
X ₇								1.000	-.056	-.158***	-.084	-.024	-.145**	-.046
X ₈									1.000	.096*	.082	.052	.197***	-.020
X ₉										1.000	.222***	-.101*	.182***	-.099*
X ₁₀											1.000	.239***	.398***	.193***
X ₁₁												1.000	.304***	.217***
X ₁₂													1.000	.194***
X ₁₃														1.000

* statistical significance at .05 ** statistical significance at .01 *** statistical significance at .001

From the multiple regression analysis by equating 13 variables and calculating by using Enter method, the result appears that F is equal to 12.461; P Value is equal to .000 (Table 17); which means there is at least one independent variable related to dependent variable by linear equation. When considering multiple coefficient of determination (R^2), it found that R^2 is equal to .310; which means all independent variables can explain the variability of the dependent variables (roles of farmer housewives in decision making on doing sufficiency economy farming) for 31.0%.

Among 13 independent variables, there were 3 variables related to dependent variables with statistical significance at 0.05 or lower such as 1) household economic roles of farmer housewives, 2) sufficiency economic acknowledgement from various sources, 3) problems and obstacles in agricultural activities according to the principle of sufficiency economy. All of them have a positive relation which can be drawn into multiple regression equation as follows:

$$Y = 1.424 + .005X_1 - .002X_2 + .009X_3 - .014X_4 - .010X_5 - .001X_6 - .027X_7$$

(1.421) (-.051) (.310) (-.530) (-.282) (-.296) (-.836)

$$+ 9.73E-006X_8 + .018X_9 + .223X_{10} + .004X_{11} + .174X_{12} + .163X_{13}$$

(1.775) (.827) (5.472***) (.092) (4.117***) (4.019***)

t ≤ Level of significance 0.05

Table 17 Multiple regression analysis of factors related to roles of farmer housewives in decision making on doing sufficiency economy farming

Variables	Regression coefficient (b)	t	P Value
1. Ages (years)	.005	1.421	.156
2. Education level of farmer housewives (level)	-.002	-.051	.960
3. Education level of husband (level)	.009	.310	.757
4. Number of family members of farmer housewives (people)	-.014	-.530	.596
5. Number of agricultural workforces of each family (people)	-.010	-.282	.778

Table 17 Multiple regression analysis of factors related to roles of farmer housewives in decision making on doing sufficiency economy farming (Continued)

Variables	Regression coefficient (b)	t	P Value
6. Period of marriage (years)	-.001	-.296	.767
7. Number of children (people)	-.027	-.836	.404
8. Income of farmer housewives (Baht)	9.73E-006	1.775	.077
9. Group membership (number of group)	.018	.827	.409
10. Household economic roles of farmer housewives (level)	.223	5.472	.000***
11. Power relation (patriarchy) (level)	.004	.092	.926
12. Sufficiency economic acknowledgement from various sources (level)	.174	4.117	.000***
13. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	.163	4.019	.000***
$R^2 = .310$ $SEE = .44327$ $F = 12.461$ $P \text{ Value} = .000$			

Remarks:

* statistical significance at .05

** statistical significance at .01

*** statistical significance at .001

Hypothesis test

In this part, the analysis is conducted to prove null hypothesis H_0-1

H_0-1 : 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.

From the multiple regression analysis, the factors related to roles of farmer housewives in decision making on doing sufficiency economy farming (Table 17) can be concluded that there are 3 independent variables that are related to the dependent

variable (roles of farmer housewives in decision making on doing sufficiency economy farming) with statistical significance. It is, therefore, proven that the factors related to roles of farmer housewives in decision making on doing sufficiency economy farming are as follows: household economic roles of farmer housewives, sufficiency economic acknowledgement from various sources, and Problems and obstacles in agricultural activities according to the principle of sufficiency economy. All of these factors have positive relation with the roles of farmer housewives in decision making on doing sufficiency economy farming.

4.7 Part 7 Results of analysis of factors related to household agricultural activities in accordance with the sufficiency economy farming

In this study, the multiple regression analysis was applied to find relation between dependent variable (household agricultural activities in accordance with the sufficiency economy farming) and multi-independent variables how much each independent variables relates to dependent variable. In the analysis, it consists of 14 independent variables which are categorized and groups into 6 major factors as follows:

1. Factors concerning general socio-economics background of farmer housewives and families such as:
 - 1) Age
 - 2) Education of farmer housewives
 - 3) Education of husband
 - 4) Number of family member
 - 5) Agricultural workforce
 - 6) Period of marriage
 - 7) Number of children
 - 8) Income of farmer housewives
 - 9) Group membership
2. Factors concerning household economic role of farmer housewives
3. Factors concerning power relation (patriarchy) of the farm housewives' families

4. Factors concerning level of sufficient economics acknowledgment from various sources
5. Factors concerning roles of farmer housewives in decision making on doing sufficiency economy farming
6. Factors concerning problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

The dependent variable is household agricultural activities in accordance with the sufficiency economy farming. The issue was categorized into levels of measurement and given points. The scores were then aggregated into a total score (Table 18).

The study of independent variables and dependent variables show that farmer housewives' age average 47.71 years; they graduated elementary level. And husband also graduated elementary level. The families of farmer housewives have averagely 4 members; each family has 2 agricultural workforces. The average period of marriage of farm housewives is 24.04 years; having 2 children. Farmer housewives have average income of 3,948.27 Baht a month. For group membership, they averagely are a member of only one group.

Household economic roles of farmer housewives is in high level (mean 3.43). The power relation of the families (patriarchy) is in low level (mean 2.53). Farmer housewives receive knowledge regarding sufficient economy from various sources are in moderate level (mean 2.85). Roles of farmer housewives in decision making on doing sufficiency economy farming is in high level (mean 3.43). Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming are in high level (mean 3.42). And household agricultural activities in accordance with the sufficiency economy farming is in high level (21.65 points). The details are shown in Table 18.

Table 18 Mean and standard deviation of analyzed variables related to household agricultural activities in accordance with the sufficiency economy farming

Variables	Mean	Standard deviation
1. Ages (years)	47.71	10.494
2. Education level of farmer housewives (level)	2.97	1.202
3. Education level of husband (level)	3.10	1.257
4. Number of family members of farmer housewives (people)	4.05	1.144
5. Number of agricultural workforces of each family (people)	2.18	0.728
6. Period of marriage (years)	24.04	10.668
7. Number of children (people)	1.84	0.907
8. Income of farmer housewives (Baht)	3,948.27	4,501.294
9. Group membership (number of group)	1.38	1.184
10. Household economic roles of farmer housewives (level)	3.43	0.650
11. Power relation (patriarchy) (level)	2.53	0.521
12. Sufficiency economic acknowledgement from various sources (level)	2.85	0.661
13. Roles of farmer housewives in decision making on doing sufficiency economy farming (level)	3.43	0.524
14. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	3.42	0.604
15. Household agricultural activities in accordance with the sufficiency economy farming (total points)	21.65	4.264

When studying relation between each pair of independent variables, it found that none of pair of independent variables relate to one another higher than 0.80 to the extent that it creates multicollinearity which infringes the hypothesis prescribed by the rule of multiple regression analysis (Prasitratthasin, 2001). The details are shown in Table 19. The abbreviations are applied to each variable as follows:

	a	=	Constraint
	$b_1 \dots b_{14}$	=	Regression coefficient
Dependent variable	Y	=	Household agricultural activities in accordance with the sufficiency economy farming (total points)
Independent variables	X_1	=	Ages (years)
	X_2	=	Education level of farmer housewives (level)
	X_3	=	Education level of husband (level)
	X_4	=	Number of family members of farmer housewives (people)
	X_5	=	Number of agricultural workforces of each family (people)
	X_6	=	Period of marriage (years)
	X_7	=	Number of children (people)
	X_8	=	Income of farmer housewives (Baht)
	X_9	=	Group membership (number of group)
	X_{10}	=	Household economic roles of farmer housewives (level)
	X_{11}	=	Power relation (patriarchy) (level)
	X_{12}	=	Sufficiency economic acknowledgement from various sources (level)
	X_{13}	=	Roles of farmer housewives in decision making on doing sufficiency economy farming (level)
		X_{14}	=

Table 19 Correlation coefficient between dependent and independent variables in analyzing household agricultural activities in accordance with the sufficiency economy farming

Variables	Y	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄
Y	1.000	.094*	.120**	.138**	-.100*	-.028	.012	-.017	.030	-.014	.096*	-.048	.198***	.401***	.300***
X ₁		1.000	-.216***	-.166***	.019	.002	.787***	.131**	0.29	.230***	.033	-.048	.133**	.128**	.008
X ₂			1.000	.789***	-.032	-.125**	-.252***	-.227***	.256***	.091*	.012	.036	.256***	.093*	-.013
X ₃				1.000	-.009	-.088*	-.161***	-.145**	.263***	.106*	-.018	.043	.205***	.075	-.031
X ₄					1.000	.413***	.125**	.551***	.105*	-.085	-.055	-.026	-.111*	-.109*	-.064
X ₅						1.000	.073	.226***	.115*	-.023	-.152**	-.161***	-.145**	-.126**	-.106*
X ₆							1.000	.232***	.005	.236***	-.024	-.060	.059	.037	-.111*
X ₇								1.000	-.056	-.158***	-.084	-.024	-.145**	-.135**	-.046
X ₈									1.000	.096*	.082	.052	.197***	.156***	-.020
X ₉										1.000	.222***	-.101*	.182***	.162***	-.099*
X ₁₀											1.000	.239***	.398***	.428***	.193***
X ₁₁												1.000	.304***	.179***	.217***
X ₁₂													1.000	.419***	.194***
X ₁₃														1.000	.287***
X ₁₄															1.000

* statistical significance at .05 ** statistical significance at .01 *** statistical significance at .001

From the multiple regression analysis by equating 14 variables and calculating by using Enter method, the result appears that F is equal to 9.577; P Value is equal to .000 (Table 20); which means there is at least one variable related to variables by linear equation. When considering multiple coefficient of determination (R^2), it found that R^2 is equal to .271; which means all independent variables can explain the variability of the dependent variables (Household agricultural activities in accordance with the sufficiency economy farming) for 27.1%.

Among 14 variables, there were 4 variables related to dependent variables with statistical significance at 0.05 or lower such as 1) number of family members, 2) power relation (patriarchy), 3) roles of farmer housewives in decision making on doing sufficiency economy farming, 4) problems and obstacles in agricultural activities. All of them have both positive and negative relations. The variables that share positive relation with dependent variables comprise of 2 variables as follows: 1) roles of farmer housewives in decision making on doing sufficiency economy farming, and 2) problems and obstacles in agricultural activities. Whereas the variables that share negative relation with dependent variables comprise of 2 variables as follows: 1) number of family members, and 2) power relation (patriarchy). All of variables brought for analysis can be drawn into multiple regression equation as follows:

$$\begin{aligned}
 Y = & 7.022 + .036X_1 + .106X_2 + .475X_3 - .484X_4 + .390X_5 - .010X_6 + .493X_7 \\
 & (1.186) \quad (.386) \quad (1.885) \quad (-2.198^*) \quad (1.296) \quad (-.321) \quad (1.826) \\
 & - 4.64E-005X_8 - .319X_9 - .367X_{10} - 1.384 X_{11} + .400X_{12} + 3.021X_{13} \\
 & (-1.007) \quad (-1.757) \quad (-1.036) \quad (-3.417^{***}) \quad (1.104) \quad (6.858^{***}) \\
 & + 1.583X_{14} \\
 & (4.564^{***})
 \end{aligned}$$

t ≤ Level of significance 0.05

Table 20 Multiple regression analysis of factors related to household agricultural activities in accordance with the sufficiency economy farming

Variables	Regression coefficient (b)	t	P Value
1. Ages (years)	.036	1.186	.236
2. Education level of farmer housewives (level)	.106	.386	.700
3. Education level of husband (level)	.475	1.885	.060
4. Number of family members of farmer housewives (people)	-.484	-2.198	.029*
5. Number of agricultural workforces of each family (people)	.390	1.296	.196
6. Period of marriage (years)	-.010	-.321	.748
7. Number of children (people)	.493	1.826	.069
8. Income of farmer housewives (Baht)	-4.64E-005	-1.007	.315
9. Membership (number of group)	-.319	-1.757	.080
10. Household economic roles of farmer housewives (level)	-.367	-1.036	.301
11. Power relation (patriarchy) (level)	-1.384	-3.417	.001***
12. Sufficiency economic acknowledgement from various sources (level)	.400	1.104	.270
13. Roles of farmer housewives in decision making on doing sufficiency economy farming (level)	3.021	6.858	.000***
14. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	1.583	4.564	.000***
R ² = .271 SEE = 3.710 F = 9.577 P Value = .000			

Remarks:

* statistical significance at .05

** statistical significance at .01

*** statistical significance at .001

Hypothesis test

In this part, the analysis is conducted to prove null hypothesis $H_0 - 2$

H_0-2 : 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.

From the multiple regression analysis as in Table 20, it can be concluded that there are 4 independent variables that are related to the dependent variable (household agricultural activities in accordance with the sufficiency economy farming) with statistical significance. It is, therefore, proven that the factors related to household agricultural activities in accordance with the sufficiency economy farming are as follows: number of family members, power relation (patriarchy), roles of farmer housewives in decision making on doing sufficiency economy farming, and problems and obstacles in agricultural activities according to the principle of sufficiency economy. While the positive factors related to household agricultural activities in accordance with the sufficiency economy farming are such as roles of farmer housewives in decision making on doing sufficiency economy farming, and problems and obstacles in agricultural activities according to the principle of sufficiency economy. As for the negative factors related to household agricultural activities in accordance with the sufficiency economy farming are such as number of family members, and power relation (patriarchy).

4.8 Part 8 Results of analysis of factors related to well-being of farmer families according to sufficiency economy farming

In this study, the multiple regression analysis was applied to find relation between dependent variable (well-being of farmer families according to sufficiency economy farming) and multi-independent variables how much each independent variables relates to dependent variable. In the analysis, it consists of 15 independent variables which are categorized and groups into 7 major factors as follows:

1. Factors concerning general socio-economics background of farmer housewives and families such as:
 - 1) Age
 - 2) Education of farmer housewives

- 3) Education of husband
 - 4) Number of family member
 - 5) Agricultural workforce
 - 6) Period of marriage
 - 7) Number of children
 - 8) Income of farmer housewives
 - 9) Group membership
2. Factors concerning household economic role of farmer housewives
 3. Factors concerning power relation (patriarchy) of the farm housewives' families
 4. Factors concerning level of sufficient economics acknowledgment from various sources
 5. Factors concerning roles of farmer housewives in decision making on doing sufficiency economy farming
 6. Factors concerning household agricultural activities in accordance with the sufficiency economy farming
 7. Factors concerning problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming

The dependent variable is well-being of farmer families according to sufficiency economy farming. The issue was categorized into levels of measurement and given points. The score were then aggregated into a total score (Table 21).

The study of independent variables and dependent variable show that farmer housewives' age average 47.71 years; they graduated elementary level. And husband also graduated elementary level. The families of farmer housewives have averagely 4 members; each family has 2 agricultural workforces. The average period of marriage of farm housewives is 24.04 years; having 2 children. Farmer housewives have average income of 3,948.27 Baht a month. For group membership, they averagely are a member of only one group.

Household economic roles of farmer housewives is in high level (mean 3.43). The power relation of the families (patriarchy) is in low level (mean 2.53). Farmer housewives receive knowledge regarding sufficient economy from various sources are in moderate level (mean 2.85). Roles of farmer housewives in decision making on

doing sufficiency economy farming is in high level (mean 3.43). Household agricultural activities in accordance with the sufficiency economy farming are in high level (21.65 points). Problems and obstacles of farmer housewives in doing agricultural activities according to sufficiency economy farming are in high level (mean 3.42). And well-being of farmer families according to sufficiency economy farming is in high level (23.23 points). The details are shown in Table 21.

Table 21 Mean and standard deviation of analyzed variables related to well-being of farmer families according to sufficiency economy farming

Variables	Mean	Standard deviation
1. Ages (years)	47.71	10.494
2. Education level of farmer housewives (level)	2.97	1.202
3. Education level of husband (level)	3.10	1.257
4. Number of family members of farmer housewives (people)	4.05	1.144
5. Number of agricultural workforces of each family (people)	2.18	0.728
6. Period of marriage (years)	24.04	10.668
7. Number of children (people)	1.84	0.907
8. Income of farmer housewives (Baht)	3,948.27	4,501.294
9. Membership (number of group)	1.38	1.184
10. Household economic roles of farmer housewives (level)	3.43	0.650
11. Power relation (patriarchy) (level)	2.53	0.521
12. Sufficiency economic acknowledgement from various sources (level)	2.85	0.661
13. Roles of farmer housewives in decision making on doing sufficiency economy farming (level)	3.43	0.524
14. Household agricultural activities in accordance with the sufficiency economy farming (total points)	21.65	4.264

Table 21 Mean and standard deviation of analyzed variables related to well-being of farmer families according to sufficiency economy farming (Continued)

Variables	Mean	Standard deviation
15. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	3.42	0.604
16. Well-being of farmer families according to sufficiency economy farming (total points)	23.23	2.984

When studying relation between each pair of independent variables, it found that none of pair of independent variables relate to one another higher than 0.80 to the extent that it creates multicollinearity which infringes the hypothesis prescribed by the rule of multiple regression analysis (Prasitratthasin, 2001). The details are shown in Table 22. The abbreviations are applied to each variable as follows:

	a	=	Constraint
	$b_1 \dots b_{15}$	=	Regression Coefficient
Dependent variable	Y	=	Well-being of farmer families according to sufficiency economy farming (total points)
Independent variables	X_1	=	Ages (years)
	X_2	=	Education level of farmer housewives (level)
	X_3	=	Education level of husband (level)
	X_4	=	Number of family members of farmer housewives (people)
	X_5	=	Number of agricultural workforces of each family (people)
	X_6	=	Period of marriage (years)
	X_7	=	Number of children (people)
	X_8	=	Income of farmer housewives (Baht)
	X_9	=	Group membership (number of group)

X_{10} = Household economic roles of farmer housewives (level)

X_{11} = Power relation (patriarchy) (level)

X_{12} = Sufficiency economic acknowledgement from various sources (level)

X_{13} = Roles of farmer housewives in decision making on doing sufficiency economy farming (level)

X_{14} = Household agricultural activities in accordance with the sufficiency economy farming (total points)

X_{15} = Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)

Table 22 Correlation coefficient between dependent and independent variables in analyzing well-being of farmer families according to sufficiency economy farming

Variables	Y	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅
Y	1.000	.128**	.146**	.181***	-.049	.010	-.094*	-.123**	.084	.172***	.234***	.013	.172***	.254***	.300***	.014
X ₁		1.000	-.216***	-.166***	.019	.002	.787***	.131**	.029	.230***	-.033	-.048	.133**	.128**	.094**	.008
X ₂			1.000	.789***	-.032	-.125**	-.252***	-.227***	.256***	.091*	.012	.036	.256***	.093*	.120**	-.013
X ₃				1.000	-.009	-.088*	-.161***	-.145**	.263***	.106*	-.018	.043	.205***	.075	.138**	-.031
X ₄					1.000	.413***	.125**	.551***	.105*	-.085	-.055	-.026	-.111*	-.109*	-.100*	-.064
X ₅						1.000	.073	.226***	.115*	-.023	-.152*	-.161***	-.145**	-.126**	-.028	-.106*
X ₆							1.000	.232***	.005	.236***	-.024	-.060	.059	.037	.012	-.111*
X ₇								1.000	-.056	-.158***	-.084	-.024	-.145**	-.135**	-.017	-.046
X ₈									1.000	.096*	.082	.052	.197***	.156***	.030	-.020
X ₉										1.000	.222***	-.101*	.182***	.162***	-.014	-.099*
X ₁₀											1.000	.239***	.398***	.428***	.096*	.193***
X ₁₁												1.000	.304***	.179***	-.048	.217***
X ₁₂													1.000	.419***	.198***	.194***
X ₁₃														1.000	.401***	.287***
X ₁₄															1.000	.300***
X ₁₅																1.000

* statistical significance at .05 ** statistical significance at .01 *** statistical significance at .001

From the multiple regression analysis by equating 15 variables and calculating by using Enter method, the result appears that F is equal to 6.111; P Value is equal to .000 (Table 23); which means there is at least one variable related to variables by linear equation. When considering multiple coefficient of determination (R^2), it found that R^2 is equal to .203; which means all independent variables can explain the variability of the dependent variables (well-being of farmer families according to sufficiency economy farming) for 20.3%.

Among 15 variables, there were 3 variables related to dependent variables with statistical significance at 0.05 or lower such as 1) number of children, 2) household economic roles of farmer housewives, and 3) household agricultural activities in accordance with the sufficiency economy farming. All of them have both positive and negative relations. The variables that share positive relation with dependent variables comprise of 2 variables as follows: 1) household economic roles of farmer housewives, and 2) household agricultural activities in accordance with the sufficiency economy farming. Whereas the variables that share negative relation with dependent variables comprise of 1 variable which is number of children. All of variables brought for analysis can be drawn into multiple regression equation as follows:

$$\begin{aligned}
 Y &= 13.781 + .022X_1 + .008X_2 + .360X_3 + .057X_4 + .305X_5 + .015X_6 - .403X_7 \\
 &\quad (.989) \quad (.040) \quad (1.936) \quad (.352) \quad (1.380) \quad (.680) \quad (-2.029^*) \\
 &\quad - 8.90E-006X_8 + .140X_9 + .926X_{10} + .074X_{11} - .134X_{12} + .368X_{13} + .186X_{14} \\
 &\quad (-.263) \quad (1.048) \quad (3.560^{***}) \quad (.244) \quad (-.506) \quad (1.073) \quad (4.819^{***}) \\
 &\quad - .500X_{15} \\
 &\quad (-1.912)
 \end{aligned}$$

$$t \leq \text{Level of significance } 0.05$$

Table 23 Multiple regression analysis of factors related to well-being of farmer families according to sufficiency economy farming

Variables	Regression coefficient (b)	t	P Value
1. Ages (years)	.022	.989	.323
2. Education level of farmer housewives (level)	.008	.040	.968
3. Education level of husband (level)	.360	1.936	.054
4. Number of family members of farmer housewives (people)	.057	.352	.725
5. Number of agricultural workforces of each family (people)	.305	1.380	.169
6. Period of marriage (years)	.015	.680	.497
7. Number of children (people)	-.403	-2.029	.043*
8. Income of farmer housewives (Baht)	-8.90E-006	-.263	.793
9. Group membership (number of group)	.140	1.048	.295
10. Household economic roles of farmer housewives (level)	.926	3.560	.000***
11. Power relation (patriarchy) (level)	.074	.244	.807
12. Sufficiency economic acknowledgement from various sources (level)	-.134	-.506	.613
13. Roles of farmer housewives in decision making on doing sufficiency economy farming (level)	.368	1.073	.284
14. Household agricultural activities in accordance with the sufficiency economy farming (total points)	.186	4.819	.000***

Table 23 Multiple regression analysis of factors related to well-being of farmer families according to sufficiency economy farming (Continued)

Variables	Regression coefficient (b)	t	P Value
15. Problems and obstacles in agricultural activities according to the principle of sufficiency economy (level)	-.500	-1.912	.057
R ² = .203		SEE = 2.719	F = 6.111
			P Value = .000

Remarks:

* statistical significance at .05

** statistical significance at .01

*** statistical significance at .001

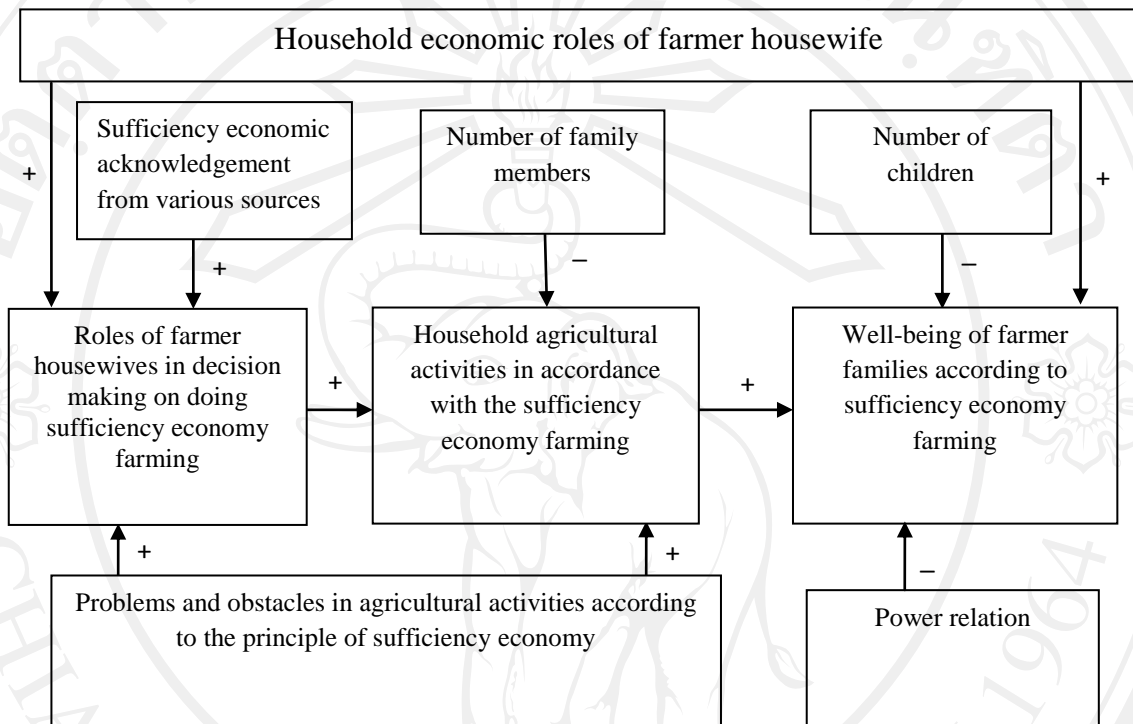
Hypothesis test

In this part, the analysis is conduct to prove null hypothesis $H_0 - 3$

H_0-3 : 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.

From the multiple regression analysis as in Table 23, it can be concluded that there are 3 independent variables that are related to the dependent variable (Well-being of farmer families according to sufficiency economy farming) with statistical significance. It is, therefore, proven that the factors related to well-being of farmer families according to sufficiency economy farming are as follows: number of children, household economic roles of farmer housewives, and household agricultural activities in accordance with the sufficiency economy farming. While the positive factors related to well-being of farmer families according to sufficiency economy farming are such as household economic roles of farmer housewives, household agricultural activities in accordance with the sufficiency economy farming. As for the negative factors related to well-being of farmer families according to sufficiency economy farming is only the number of children.

From the hypothesis test, it discovered that independent variables are related to dependent variable with statistical significance, in which the researcher makes a conclusion to such relations in three steps as a diagram below:



From the diagram, it can be explained that roles of farmer housewives in decision making on doing sufficiency economy farming related to household agricultural activities in accordance with the sufficiency economy farming with statistical significance. Furthermore, household agricultural activities in accordance with the sufficiency economy farming related to well-being of farmer families according to sufficiency economy farming with statistical significance. Therefore roles of farmer housewives in decision making on doing sufficiency economy farming related to well-being of farmer families. That can be answered the research question no.4 that farmer housewives in decision making affected to the well-being of farmer families.