

### III. MEASURING THE VARIABLES

#### 3.1 Dependent Variable Community Activeness

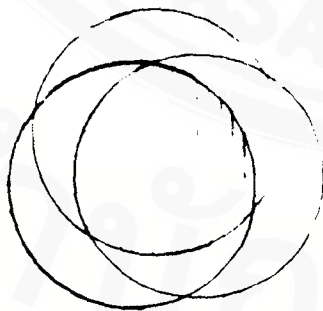
##### 3.11 Controlling for Community Characteristics

In the last chapter, it is stated that this research will use the tambon as the unit of analysis for community, and that the emphasis will be the influence of leader characteristics on the community activeness. So the community characteristics and the local people characteristics will be the control variables. This can be achieved by trying to select tambon samples with similar community characteristics and people characteristics as much as possible.

The tambons selected as samples will be like type A. more than type B. in the diagram below.

#### Diagram 3.1

Two type of community and people characteristics of three tambons



Type A.

High Common Characteristics



Type B.

Low Common Characteristics

In the diagram let each circle represents a tambon. The dark area show the common community characteristics and people characteristics of the three tambons.

### 3.12 Selection of Tambon Samples

Twenty tambons all in central region of Thailand were selected as the samples. Ten tambons from Angthong changwat and ten tambons from Singhburi changwat. Angthong located about 120 kilometers north of Bangkok. Singhburi is on the northern border of Angthong. Angthong and Singhburi are in the middle of the central region of the country. The central region is the rice bowl of the country. This region is rich in alluviums and is watered by an extensive network of canals and irrigation project. All 20 tambons sample have the similarity in climate, soil, and topography. All have good transportation systems. More than 99% of the people in all 20 tambons are Buddhists. Most of them earn their living by rice farming. All 20 tambons are not too far from Bangkok so it is convenient to travel to the research sites. Also they are not too close to Bangkok which might be another source of influence on the community activeness.

The number of twenty is arbitrarily set up. One concern was the limitation in funding and time. It is possible to randomly select 5 tambons from each region of Thailand: North, Northeast, Central, and Southern. However there are a lot regional difference. The following are some main differences among regions:

- The northeastern region is a large sandstone plateau rising about a thousand feet above the plain of central region, and sloping down toward the Mekhong river, and

laos. A great deal of land is poor, and also suffers droughts or floods, depending on the season. The topography of the plateau makes it difficult to construct good irrigation system.

- The Northern region is a region of mountains and valleys. The mountains running north and south through the Northern region are densely forested: the river valleys cutting through them are narrow but fertile.
- Southern region is a long sliver of land extending from Central region to Malaysia, and is covered in great part by rain forest. The climate is very suitable to grow rubber trees.

Not only that the climate, soil, and topography are different, the patterns of people behavior of the three regions are also different. For examples, people in the south are more articulate and speak very fast. A great number are Muslims. Tin mining and rubber plantations exist only in the south. In the North-eastern part, people have the lowest per capita income of all four regions. The northerner are slower both in the manners and their speech. They are also very religious.

At the later stage of this research, more fund was available. So twenty more tambons are added to the study. However, the additional 20 tambons are studied only in the leader values. This will help increase the reliability of the measuring scales. Besides, more leader samples from various regions of Thailand will make the finding about leader values closer to be the representatives of the leaders of the whole nation. Of these additional 20 tambons, ten are Nakorn-ratchasima changwat which is about 250 kilometers northeast of Bangkok. The other ten are from Prachuap-khirikhan changwat which is about 200 kilometers south of Bangkok. The data below shows some comparative statistics about the population of the tambon samples of all 3 groups.

	Tambon Samples from Central Region (N = 20)	Tambon Samples from Northeast Region (N = 10)	Tambon Samples from Southern Region (N = 10)
1. Tambon with the largest population	5,320	19,458	25,851
2. Tambon with the smallest population	1,694	3,441	5,799
3. Mean of the population	2,741	8,733	11,028
4. Density of the population per sq. km.	207	76	39

### 3.13 Indicators of the Community Activeness

#### 3.131 Corporate Action for Public Purpose

The following data is used as the indicators for the corporate action for public purpose.

##### a) The Money Value of Public Projects Contributed by the Local People on the Per Capita Basis

The nature of public projects are different. One tambon may concentrate on digging irrigation ditches, others may concentrate on road construction building the classrooms, holding a training program, building the church, etc. Types of the projects will be disregarded. Only the total money value of all project contributed by the local people in a year is used as the indicator. Many projects received the financial support from the government totally. Some projects are partially supported

financially by the government. Some projects contributed in the whole part by the local people. The money value of only the projects that the local people partially or totally contributed is counted.

In each changwat office the figures of the money value of public projects contributed by the local people of each tambon will be recorded.<sup>1</sup> The number used in this research is the average money value of projects contributed by the local people of each tambon for three years, 1976, 1977, 1978. The means of the figures of three years are then divided by the number of the population in each tambon. The money value on the per capita basis will be obtained.

b) Percentage of People who are the Members of Cooperatives

The number of people who are the members of cooperatives are recorded in the changwat office. The figure used is the year 1978.

c) Percentage of Eligible Voters who went to the Poll

The figure used<sup>2</sup> is the average figure of the last three elections, 1975, 1976, and 1979.

3.132 Innovative Change

The following indicators are used as the measurement of the developmental change in each tambon.

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<sup>1</sup> The estimation of the value of each project will be done together by the local leaders and the changwat community development officers.

- percentage of people in each tambon who have tractors.
- percentage of people in each tambon who have pesticide spraying devices.
- percentage of people who have water pumps.

The figure of all three indicators are obtained from each tambon heads. The figure is from the year 1978. All these three farming tools are spread to the farmers only in the last decade. So the figure of the lastest year should be enough to indicate the change of about one decade.

### 3.14 Procedure

The next step is to find the score of 1) corporate action for public purpose and 2) innovative change for each tambon. The method employed is the factor analysis. Table 3.1 shows the result of the factor analysis of all indicators.

Table 3.1

Factor loading of six community-activeness indicators

(rotated)

(Angthong and Singhburi group, N=20)

Indicators	Factor I (corporate action)	Factor II (innovative change)
1. Per capita value of public project	.41	-.06
2. Percentage of people who are cooperative members	.80	.11
3. Percentage of voters who went to the pool	.36	.52
4. Percentage of people who have tractors	.00	.84
5. Percentage of people who have pesticide spraying devices	.09	.30
6. Percentage of people who have water pumps	.05	.92

The two patterns of factor loadings are as it has been expected. That is the indicators of the similar nature have high loadings on the same factor. The exception is the "percentage of voters" which has loading on both dimensions, with high loading on "innovative change". However "percentage of voters" would be considered as the indicator of "corporate action" only.

From the factor loading the score of (1) innovative change and (2) corporate action for public purpose can be calculated. The process is this. First computing the standard score of each tambon. Then the standard score of each indicator will be multiplied by the factor loading of that indicator. In doing this the factor loadings are treated as the weights or coefficients in the assessment of activeness. Adding the multiplied results of all indicators in the same dimension of activeness will give the score of that dimension for each tambon. For example, let  $y_1$ ,  $y_2$ ,  $y_3$  be the standard scores of ractors, pesticide spraying devices, and water pumps respectively of tambon X. Then the equation to find the score of innovative change of tambon X will be:

Score of innovative change =  $(.84 \times y_1) + (.30 \times y_2) + (.92 \times y_3)$   
of tambon X

After the process is completed each tambon will have two sets of scores, one for "innovative change" and another one for "corporate action for public purpose". The scores will relatively compare the level of activeness in both dimensions of all 20 tambons.

### 3.2 Measuring Leader Values

The value scales are used to measure local leader values. Items in each scale are mostly from the ISVIP. Only few are newly written. Each scale has 5-6 items. Each item is the Likert type with the possible answers of:

- Strongly agree (Score of 4)
- Agree (Score of 3)
- Disagree (Score of 2)
- Strongly disagree (Score of 1)

The items are written in both negative and positive direction to avoid the problem of acquiescence response set.

To find the construct validity of the scale in Thai context, score of items in each scale will be factor analyzed, one scale at a time. Only items that have the loading at least .30 will be further used. The score put into the factor analysis are from the answers of 1,020 local leaders of all 40 tambons.

#### 3.21 Concern for Economic Development Scale

Table 3.2 below shows the items in the scale and the factor loading of each item.



Table 3.2

Factor Loading of Economic Development Sclae  
(n=1020)

Item		Factor Loading
1 (-)	If the people really behave according to the religious principles, economic development is not necessary (Thai)	-.67
2 (-)	Economic development should not be pursued if it means hardships for the people (ISVIPO)	-.61
3 (-)	Better standard of living will not always bring more happiness to the people (Thai)	-.48
4 (+)	The economic development of the nation should take precedence over immediate consumer gratification (ISVIP)	-.35
5 (+)	A high standard of living should be the most important goal of a society (ISVIP)	.02
6 (+)	Only economic development will ultimately provide the things required for the welfare and happiness of the people (ISVIP)	.06

In the bracket after the number of each item, the sign "-" is present if the item was worded negatively, and "+" is present if the item was worded positively. In the bracket after each item, "ISVIP" is present if the item is from the ISVIP study, and "Thai" is present if the item is newly written for the Thai project. In Table 3.2 only item 1, 2, 3 are considered good items as every one has loading more than .30. Item 4 is not considered a good item even the loading is higher than .30.

This is because the content of the item should result in positive loading opposite to the first three items. But it comes up with the loading of  $-.35$ . So it is not considered a good item. In the factor analysis of this scale, the computer printed out two rotated factors. The factor showed in the Table 3.2 is the best factor.

The same strategy is used with all other scales. The following scales will be mentioned only in term of good and bad items.

## 2. Conflict Avoidance Value

Good items are:

- 1 (+) If there is disagreement about a program a leader should be willing to give up (ISVIP)
- 2 (+) Preserving harmony in the community should be considered more important than the achievement of community program (ISVIP)
- 3 (+) Public decisions should make with unanimons consent (ISVIP)

Bad items are:

- 4 (-) Leaders who are over concerned about resolving conflicts can never carry out community programs successfully.
- 5 (+) A good leader should refrain from making proposals that divide the people even if these are important for the community (ISVIP)

## 3. Popular Participation Value

Good items are:

- 1 (-) The complexity of modern day issues requires that only the more simple questions should be considered publicly (ISVIP)
- 2 (-) Widespread participation in decision-making often leads to undesirable conflicts (ISVIP)
- 3 (-) Participation of the people is not necessary if decision making is left in the hands of a few trusted and competent leaders (ISVIP)
- 4 (-) Most people pay attention to their own personal affairs, so projects concerning community development should be left to the leaders (Thai).

Bad items are:

- 5 (-) Most decisions should be left to the judgement of experts (ISVIP).

#### 4. National Commitment

Good items are:

- 1 (-) Although national affairs are important, people here should first worry about their own community problems (ISVIP)
- 2 (-) We should not worry so much about national problems when we have so many in our own community (ISVIP)
- 3 (-) Community progress is not possible if national goals always have priority (ISVIP)

Bad items are:

- 4 (-) Locals leaders should always be prepared to adjust their programs to national goals and policies even if this is disadvantageous for the community.
- 5 (+) Although we may not understand why national leaders make certain decisions, usually their decisions turn out to have been correct (ISVIP)

- 6 (+) The representatives of the central government should have the last say in projects of this community, local leaders should only play the roles of consultants (Thai)

5. Action Propensity

Good items are:

- 1 (-) I prefer to stop and think before I act even on trifling matters (ISVIP).
- 2 (-) I usually check more than twice to be sure that I am not overstepping my tasks (ISVIP).
- 3 (-) One should be concerned with what he has rather than with what he could get (ISVIP).
- 4 (-) Action should be delayed until it is certain that it will bring the desired results (ISVIP)

Bad items are:

- 5 (-) The secret of happiness is not expecting too much out of life and being content with what comes your way (ISVIP)
- 6 (-) Only irresponsible leaders would risk community resources for possible but not certain future gain (ISVIP)

6 Change Orientation Value

Good items are:

- 1 (-) Change does not always bring the better situation (the reverse of "There is nothing inherently superior in the past (ISVIP).
- 2 (-) The most reasonable approach toward social development is to accept changes which do not substantially alter the established order (ISVIP).

- 3 (-) Changes are desirable even if they do not seem to contribute as much as one might expect (ISVIP)
- 4 (-) While changes are desirable, they should never be implemented at the cost of our past values and traditions (ISVIP)

Bad items are:

- 5 (-) New solution is not essential on solving the problems in this community (the reverse of "If society is to progress, newer solutions to problems are essential" of (ISVIP)
- 6 (-) The best way to solve this community's problem is by using the solutions used in the past (Thai).

7. Selflessness

Good items are:

- 1 (-) Every body should look after his own interest first (ISVIP)
- 2 (+) One should work to the best of his ability regardless of whether his services are adequately rewarded (ISVIP).
- 3 (-) It is quite justifiable for a leader to avoid taking clear-cut positions on important issues if it threatens his career (ISVIP)

Bad items are:

- 4 (+) Even though the citizen may not appreciate what a leader has tried to do for them, the leader is obligated to work in their interests (ISVIP).
- 5 (-) The most important thing for the leader is to act according to the expectation of the majority of people even though he thinks that the people are wrong (Thai).

- 6 (+) If the leader himself convinced of what is the best action, he must tries to implement this, even though he has to use some pressure on the citizens (ISVIP).

8. Honesty

Good items are:

- 1 (+) Leaders should present the truth no matter what the consequences are (ISVIP).
- 2 (-) If a person is requested by his superiors to present a false impression of certain matters, he should be willing to comply (ISVIP).
- 3 (-) In order to achieve community goals, it is permissible for leaders to present facts in a one-sided way (ISVIP)
- 4 (-) Local officials should cover up situations which may embarass their superiors (ISVIP)

Bad items are:

- 5 (-) If a leader knows that the truth will harm someone, he should conceal certain facts (ISVIP).
- 6 (+) It is not necessary for a leader to be strictly honest in public dealings if he knows this will interfere with getting his work done (ISVIP).

9. Equality

There are 6 items suppose to measure Equality value of local leaders. However, the factor analysis showed two dimensions of Equality. And it seems that the content of items in both dimensions present some uniqueness of their own. The two factor are present with the loadings in Table 3.4.

Table 3.3

Factor Loading of Two Dimensions of Equality Value

Item		Factor I	Factor II
1 (+)	Rich people should pay support of community projects than poor people (ISVIP)	.24	.65
2 (-)	Low income people should not be given any special consideration (ISVIP)	.40	-.63
3 (+)	The government has the responsibility to see that nobody live well when others are poor (ISVIP)	.30	.66
4 (+)	There should be an upper limit on income so that no one earns very much more than others (ISVIP)	.72	.19
5 (+)	Discrepancies in salaries should be continually reduced (ISVIP)	.63	.28
6 (-)	Being rich or poor depend on what one did in the life before (Thai)	.37	-.28

Considering both the loadings and the content of items, there should be two separate dimensions. It will be called Equality I: more responsibility for the rich, and Equality II: Wealth equality. Equality I comprised of item 1, 2, and 3 refers to the desire to see that the richer people contribute more for the community development, but still accept the difference in wealth. The second dimension comprised of item 3, 4, 5 refers to the desire to see the equality in wealth. Item 3 has loadings on both dimension. Item 6 is not included because the loading direction does not make much sense.

Score of Each Tambon

From the factor analysis, the decision is made about what items should be include in each scale. The mean of all means of

items in the same scale for each tambon will be the score of each value of each tambon leaders. Before computing this score, items of the same scale will be adjusted at that every item is given the score from 1-4 in the same direction.

### Measuring Other Variables

Aside from (1) community activeness and (2) leaders values, other variables are also measured.

#### 1. Wealth of the Community

This is measured by the average monthly income of the people in each tambon. The figure is from the year 1978. The changwat statistical office has the data of the monthly income of the tambon people. But the data did not specify the exact amount of money. Instead the monthly income was listed in four categories:

- a) Percentage of the population with income higher than 2,000 Baht per month (20 Baht = US \$1).
- b) Percentage of the population with income between 1,000 - 2,000 Baht per month.
- c) Percentage of the population with income between 500 - 1,000 Baht per month.
- d) Percentage of the population with income less than 500 Baht per month.

From the data available, the wealth of the tambon is measured like this. First assigning the weight to each of the four groups of the data available:

- 4 to group (a)
- 3 to group (b)
- 2 to group (c)
- 1 to group (d)



Then if  $y_1, y_2, y_3, y_4$  are the percentage of people from group (a) to group (d) respectively of tambon X. Then the wealth of tambon X is:

$$(y_1 \times 4) + (y_2 \times 3) + (y_3 \times 2) + (y_4 \times 1)$$

So the indicators of wealth appeared in this research are not the exact unit of money value. Nevertheless, it seems to be a reliable indicator of the wealth of the people of each tambon sample.

2. Leaders Educational Background
3. Leaders Biological Data: age, sex, and body size. The standard score of height and the standard score of weight will be added to make the score of the size of each local leader.
4. Leaders Behaviors Related to Community Activeness
  - a) Number of meetings of the tambon council in a year.
  - b) Average number of times leaders of each tambon travelled to Bangkok in the last twelve months. This variable will called "exposure to modernity".

### Chapter Summary

This chapter describes how all the variables in this research are measured. Some of them are from the interview. Some are from the aggregate data.