COMMUNITY DEVELOPMENT IN
RURAL THAILAND

by
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1973
STATEMENT BY AUTHOR

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SIGNED: Bhadrachon Pranomritha

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

DAVID E. SHIRLEY
Professor of Public Administration

Date
DEDICATION

To my parents, Mr. and Mrs. Sophon Srithienindr.
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ABSTRACT

This study focuses on a community development in rural Thailand with particular emphasis on its technique in evaluating systems.

The weakness of cost-benefit analysis, a traditional technique, leads to the use of the standardized cost-effectiveness approach. To illustrate how technique is applied in reaching a decision, three possible locations for a uniform community development program are evaluated. The process starts from the statements of goals of community development, which are then mapped into specifications sets. Long range costs are projected.

The three alternative locations are compared with both quantitative and qualitative criteria to evaluate how decision in selecting an alternative system could be reached, ranking of criteria by order of importance is illustrated. The decision to select the best system could be made by using either fixed-cost or fixed-effectiveness approach. In doing so, weighting technique will be eliminated.

The study also provides several practical advantages. The approach will suggest and help identify the best system to meet the desired goals and provide criteria for later evaluation of the impact of the system. The approach will help government in the preparation of Planning Programming
Budgeting. Both quantifiable and non-quantifiable criteria are included. Finally, the approach will consider uncertainty in data.
CHAPTER 1

INTRODUCTION

The omnipresent changes taking place in every society are in the direction of a technological society model. Community development is one of the devices used by government to cultivate change in a manner to move a nation toward a healthy form of the model. It is an accelerating device for adjustment to the changing world. When we talk about community development, we usually take for granted its definition and goal. A higher standard of living is an objective of every human society. The underlying assumption of community development, according to United Nations is to improve the economic, social, and cultural conditions of communities, to integrate these communities into the life of nations, and to enable them to contribute to national progress. Therefore, community development includes two elements: participation of the people themselves in efforts to improve their standard of living in terms of self-help and mutual-help, and changing customary community practices. The means to achieve this goal vary by different frames of

reference, namely: democratic, communistic, socialistic, or authoritarian.

In Thailand, community development aims to combat overall problems in the rural areas with the aim of raising the standards of living of the rural people. Program implementation is mainly devoted to educate the people, to develop their knowledge and ability to cope with a new life pattern, to plan their own destiny, to exercise their own initiative, and to participate in various program activities to meet their common needs.²

Purpose and Scope of the Study

The purpose of this thesis is to provide a descriptive and analytical study of community development in rural Thailand. The scope of our study is as follows:

1. To present community development in rural Thailand with emphasis on its goals, organization, and programmatic emphasis of the Community Development Department. However, community development in other countries will also be presented as related studies in order to search out how they develop their communities, and which techniques they apply in launching their programs.

2. To point out major factors (such as social, personnel, etc.) that affect community development in some provinces in the South (Peninsular) and Northeast (Korat Plateau) of Thailand. The provinces mentioned here are: Pattani, Yala, Narathivas, Satul, and Nakhon Ratchasima. These factors are considered as effectiveness criteria in the design of a community development project. In addition, some general suggestions for improvement will be presented.

3. To discuss and evaluate the techniques used in deciding how to compare and develop alternative plans for a community in rural Thailand. The way to develop a community differs from country to country. For Thailand, low income, education, and health seem to be the significant problems. The author, therefore, will decide to develop a community by: (a) establishing the primary school and secondary health center in a village, and (b) providing community development workers to stay with the villagers to help them to improve their community.

Due to the fact that a community development project can be regarded as a system, alternative systems are

presented and may be compared on the basis of several criteria. The author, therefore, will compare three projects. One project concerns the development of the community at Moo-ban Ra-ngae, Narathivas province. The second project concerns the development of the community at Moo-ban Muang, Satul province. Both Moo-bans are located at the Southern region of Thailand. The third project concerns the development of the community at Moo-ban Saraphi, Nakhon Ratchasima province, Northeast Thailand. The author will consider himself as an analyst, not a decision-maker.

In conducting the technique, we will apply cost-effectiveness study because it allows quantitative as well as qualitative methods. It can be observed from various references that each individual seems to have different procedures in performing a cost-effectiveness study. The standardized cost-effectiveness approach as proposed by Kazanowski⁴ seems to be very appropriate here and can be outlined as follows:

1. Define the desired goals, objectives, or purposes that systems are to accomplish.

2. Identify the mission or system requirements.

---

3. Develop alternative systems for accomplishing the desired goals.
4. Establish system evaluation criteria that relate system capabilities to the mission requirements.
5. Select fixed-cost or fixed-effectiveness approach.
6. Determine capabilities of the alternative systems.
7. Generate system versus criteria array.
8. Analyze merits of alternative systems.
10. Document the rationale, assumptions, and analysis underlying the previous nine steps.

The general conditions of rural Thailand are critical elements that influence the community development of the country. They are discussed in this thesis as the inputs to community development.

**General Conditions of Rural Thailand**

**Geography**

Thailand, one of the tropical Southeast Asian countries, is a part of the Indochinese Peninsular which is sometimes called the land of Divine Vision or the Golden Peninsular. It is situated between the parallels of 5°40' and 20°30' North Latitude and the meridians of 97°30' and 105°45' East Longitude. It is bounded on the north by China and Laos, on the west by Burma, on the south by
Malaysia and the Gulf of Siam, and on the east by Cambodia and Vietnam. The popular visualization of the general outline of Thailand is that it resembles an ancient axe. But to some people it appears as the head of the symbolic white elephant. The mouth is at Bangkok, the trunk extends south along the Malay Peninsular. The ears are the northern provinces. The neck is the northeast of Thailand. Figure 1.1 shows the map of Thailand.

Thailand is an independent constitutional kingdom occupying approximately 198,000 square miles. This is about two-thirds the area of the state of Texas. Thailand has four major geographical regions. They are the Central Plain or Central, Northern Thailand or Continental Highlands, the Korat Plateau or the Northeast, and Peninsular Thailand or Southern Thailand.

1. The Central Plain is the political and economic heart of the nation. This vast alluvial plain of approximately 50,000 square miles drained by the Chao Phya River is the seat of the government of Thailand and the capital city of Bangkok. It is often called the "rice bowl" of Thailand. The plain not only yields enough rice to support all


Figure 1.1 Map of Thailand -- From Eyre, *Today's World in Focus*, p. 5.
the people living there but also yields a sufficiently large surplus to make Thailand one of the world's leading exporters of rice. Here is located its greatest population density and its highest standard of living.

2. Northern Thailand is the region north of the Central Plain. It lies between two great rivers, the Mekong River to the east and the Salween River of Burma to the west. The region contains about 60,000 square miles. There are many mountains and valleys in this region. Agriculture is limited to the fertile valleys of the Chao Phya tributaries. The main products are rice, tobacco, and vegetables. Teak is its major cash export. It is the most picturesque part of Thailand.

3. The Korat Plateau is a plateau of poor soil, infertile and scanty rainfall, yet one-third of the population live here and farm at little more than subsistence level. The region contains about 70,000 square miles. As a result of poor region, people are continually migrating from the Korat Plateau into the Central Plain. Nevertheless, the Korat Plateau contains more than one-fourth of Thailand's total population.

4. Peninsular Thailand is the region which extends 500 miles south of Bangkok to form part of the Malay
Peninsular. The region contains 20,000 square miles. The region receives rainfall that in most places amounts to 80 inches or more annually. As a result, almost the entire area is covered with rain forests, edged along the coasts with mangrove swamps. Its economy is based on tin mining as well as tropical agriculture.  


Government

Thailand is a unitary state with a highly centralized government. All important agencies of power and policy are concentrated at the center. The numerous territorial divisions of the government—regions, provinces, districts, communes, villages—function mainly to implement the decisions of the center. The central government dominates the entire framework of territorial administration and is the sole important locus of power and initiative. The system of government is a constitutional monarchy. The administration of the government of Thailand is carried out at three basic levels: central, provincial, and local.

1. Central administration is carried on by the Office of the Prime Minister, the Bureau of State University, and eleven ministries namely: Ministries of Agriculture and Corporation, Commercial Affairs,
Communications, Defense, Education, Finance, Foreign Affairs, Interior, Industry, Justice, and Public Health. The Office of the Prime Minister and the Bureau of State University are public bureaus equivalent to a ministry. The ministries are divided into departments, the departments into divisions, and the divisions into sections. A typical ministry in Thailand is organized in pyramidal form; power and function flow along clearly drawn lines; responsibilities are fixed in law. National Administration is under the direction of the Council of Ministers (the Cabinet) which is the hub around which the entire political system circles. It frames and implements all important national policies. All elements of the administrative apparatus respect its dictates. 8

2. Provincial administration means "centrally directed administrative efforts through government officers and employees in the seventy-one provinces (changwads), including the changwad and the district (amphur)." 9 A province is the primary unit of


territorial administration. Administration of the province is under the authority of a provincial governor (Poo Warahakarn Changwad), who is a career civil service official. A governor is appointed by the King on the recommendation of the Minister of the Interior. Each province consists of two to nineteen districts (Amphurs). A district is headed by a district officer (Nai Amphur), who is directly responsible for district administration to the provincial governor. The district officer is also a career civil servant appointed by the central government through the Department of Local Administration, Ministry of the Interior. Districts are also divided into communes (Tambols), which are further sub-divided into villages (Moo-bans). The number of communes in a district ranges from two to twenty-seven, depending upon geographical area and population.

A commune is headed by a commune headman (Kamnan), while a village is headed by village headmen (Poo Yai Ban). Neither the Kamnan nor the Poo Yai Ban are civil servants but are elected officials. The people of each village directly elect a Poo Yai Ban, who, in turn, selects one of their members to represent the commune. Kamnan, while serving in his capacity as the chief of the commune, also remains
as Pooyai Ban. These two officials are entitled to wear a uniform and receive a small stipend from the government. Both Kamnan and Pooyai Ban are responsible for performing both civil and crime-repression duties for the central government in the commune and village, respectively. Being a Pooyai Ban, the following factors are included: (a) Thai citizen, (b) resident in his village not less than six months, (c) male householder who reached his majority—twenty years old, (d) ability to read and write, and (e) not a government servant or an employee of a municipality. 10

3. Local administration includes units concerned with matters of the locality—all agencies and divisions below the provincial level, that is, districts, communes, and villages. Local self-government is established in various forms. They are:

a. The Provincial Council has been legally designated as the legislative organ and agent of local self-government in the province. The council is composed of at least twenty-four members elected from district constituencies within the province for five-year terms of office. The governor can remove individual

10. Thailand, Official Year Book: 1964, pp. 75-76.
council members for failure to meet the minimum eligibility qualifications stated in the law. However, the Minister of the Interior has the power to dissolve the entire council. The general function of the Provincial Council is to develop areas outside of municipalities, sanitation areas, and Tambol authorities. The source of income of the Council comes from property taxes, business tax, sales taxes on various beverages, and a variety of fees and fines. The Council also receives grant and loans from the central government through the Department of Local Administration. The Council has relatively little authority over executive actions.

b. Municipality is a type of local self-government which has more authority than others. Municipality was introduced in 1933 with the purpose of familiarizing the Thai people with the parliamentary system of government, and facilitating national policies with respect to local public health and welfare. There are one hundred and twenty municipalities in Thailand, divided into three types, namely: city (Nakorn), town (Muang),

11. Ibid., p. 83.
12. Ibid., p. 84.
and commune (Tambol). The three categories are based on difference in population size, density, revenue capabilities, and ability to give service. The Nakorn must have at least 50,000 people with an average of 3,000 per square kilometer while the Muang must have at least 10,000 people with the same density as the Nakorn. Tambol municipalities are created according to the judgment of the central government concerning administrative problems.

c. Sanitation area (Sukhapiban) is usually created where there is a concentration of population and an expectation of revenue that will support limited governmental activities, but which is yet not large enough to be a Municipality. Thus Sukhapiban stands between the rural area of the Tambol and the more urban characteristic of the Municipality. The main purposes of Sukhapiban are to provide health services in the nation's many scattered and underdeveloped communities, and to serve as a preparatory school for municipal government, which, in turn, acts as a school for the democratic system.  

Sukhapiban does not have a separate legislative

13. Ibid., p. 86.
body as in the case of municipality, but it is administered by a board or commission which is composed of both civil servants and elected members, for example, Nai Amphur, Kamnan, Poo Yai Ban, etc.

d. Commune Authority was established in 1956 to awake and develop the energies of the people in rural areas so people would be interested in community affairs. Commune authorities have the same boundary as communes under village administration. Commune authority consists of two bodies: the Commune Council (Sapa Tambol) which is composed of a number of members elected directly by the villagers, one from each village for a five-year term, and the Kamnan as an ex officio member and the Executive Committee (Kana Kamakarn Tambol) which is composed of the Kamnan as a chairman, the commune herb doctor, all Poo Yai Bans, and not more than five other members who are appointed by the district officer (Nai Amphur) from the principals of local schools and from local leaders of the commune. The commune authority performs its duties in accordance with laws, rules, and regulations issued by the Ministry of the
Interior. The structure of administration of Thailand is shown in Figure 1.2.

Economy

The economy of Thailand is underdeveloped and undiversified. Agriculture is the most important sector of Thailand's economy. It provides employment for about eighty per cent of the working population. Agricultural products account for most of the country's foreign exchange earnings.

Land. The number of acres of cultivated land that a Thai farm family owns varies greatly. Average holdings are 26.81 rai (0.395 acre = 1 rai) in the Central Region, 16.14 rai in the North Region, 21.64 rai in the Northeast Region, and 22.97 rai in the South Region.¹⁴ There are few large commercial farms which belong to members of the nobility, government officials, wealthy farmers, or business men who have interested their money in land. In general, the Thai farmer owns the land he cultivates and he, typically, grows only one crop a year. The cultivation is highly concentrated in the production of rice. Of the total land area of 321.3 million rai, 64.3 million rai or twenty per cent constitute farm land. Forests account for 165.4 million rai or 51 per cent of the total land area, while the rest are

Figure 1.2 Structure of Administration of Thailand
lakes, urban areas, virgin, and abandoned land. Rice farms alone in 1963 accounted for 43.7 million rai or approximately two-thirds of the total farm land.\(^1\) Thailand has been for many years among the ten biggest rice producing countries in the world. Table 1.1 shows the rice production of the ten biggest rice producing countries. Apart from rice, diversified crops are sugar-cane, tobacco, maize, cotton, kenaf, etc.

**Technology.** Thai farmers rely heavily upon animal labor in their seasonal operations. The most important animal is water buffalo, needed to help plow and harrow the mud of the rice fields. The 1963 Census of Agriculture reported that animal power is used on 70.6 per cent of the farms; about 14.5 per cent of the units use human power. Mechanical power is used to some extent on about 3.3 per cent of the farms. Using animal and mechanical power accounts for about 11.6 per cent. The average farm had about two buffaloes for work purposes.\(^2\) In growing rice most of the farmers are dependent upon the amount of rainfall. Irrigated land for the whole country covers only about sixteen per cent of cultivated land.\(^3\)

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Table 1.1 Rice Production of the Ten Biggest Rice Producing Countries

<table>
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<th>Country</th>
<th>1964</th>
<th>1965</th>
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<tr>
<td>Total</td>
<td>262,513</td>
<td>253,931</td>
<td>253,490</td>
</tr>
<tr>
<td>India</td>
<td>58,551</td>
<td>45,983</td>
<td>45,660</td>
</tr>
<tr>
<td>Pakistan</td>
<td>17,780</td>
<td>17,726</td>
<td>15,113</td>
</tr>
<tr>
<td>Japan</td>
<td>16,343</td>
<td>16,116</td>
<td>16,552</td>
</tr>
<tr>
<td>Indonesia</td>
<td>12,628</td>
<td>13,245</td>
<td>14,103</td>
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<tr>
<td>Thailand</td>
<td>9,500</td>
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<td>Burma</td>
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<td>5,344</td>
<td>4,731</td>
<td>5,296</td>
</tr>
<tr>
<td>North Vietnam</td>
<td>4,512</td>
<td>4,600</td>
<td>4,500</td>
</tr>
<tr>
<td>South Vietnam</td>
<td>5,185</td>
<td>4,822</td>
<td>4,336</td>
</tr>
</tbody>
</table>

Production. The majority of farmers are interested in producing food for their families. Average output of rice per rai is only 274.6 kilograms.\textsuperscript{18} The problem of low production faces the rural people in every region, and is due chiefly to a lack of technical knowledge.\textsuperscript{19} The Northern Region contains much less rice acreage than either the Central Region or the Northeast Region but produces the rice production crop more than other regions. While the Northeast Region contains much more rice acreage than the other regions, it produces the least. Table 1.2 shows the estimates of area planted and rice production crop year 1968/1969. Average family income of the rural people is estimated at about 6609 Baht (20 Baht = U.S. $1) per year. This is very low when compared to the average family income of people in cities, which is about 13,090 Baht.\textsuperscript{20} Table 1.3 shows the income and expenditure of farm operators by region.

Credit. Many sources show that the credit position of the Thai farmers is critical. Over fifty per cent of the


\textsuperscript{20} National Statistic Office, Office of the Prime Minister, \textit{Income and Expenditure Survey: 1963}, p. 32.
Table 1.2 Estimates of Area Planted and Rice Production
Crop Year 1968/1969\(^a\)

<table>
<thead>
<tr>
<th>Region</th>
<th>Area Planted (Million Rais)</th>
<th>Total (Million Tons)</th>
<th>Kilograms Per Rai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Kingdom</td>
<td>45.19</td>
<td>12.41</td>
<td>274.6</td>
</tr>
<tr>
<td>North</td>
<td>9.67</td>
<td>3.69</td>
<td>381.5</td>
</tr>
<tr>
<td>Northeast</td>
<td>19.15</td>
<td>3.87</td>
<td>202.0</td>
</tr>
<tr>
<td>Central</td>
<td>12.84</td>
<td>3.95</td>
<td>307.4</td>
</tr>
<tr>
<td>South</td>
<td>3.53</td>
<td>0.90</td>
<td>256.1</td>
</tr>
</tbody>
</table>

\(^aNational Statistic Office, Office of the Prime Minister, Some Important Statistics of Thailand, p. 46.

Table 1.3 Income and Expenses of Farm Operators, by Region: 1970\(^a\)

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Cash-Income from Farm Operators per Family</th>
<th>Average Non-Farm-Income per Family</th>
<th>Average Farm-Expense per Operator</th>
<th>Average Cash-Net Income per Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>4242.81</td>
<td>1570.41</td>
<td>2074.62</td>
<td>2168.19</td>
</tr>
<tr>
<td>Northeast</td>
<td>2122.02</td>
<td>1081.24</td>
<td>1194.57</td>
<td>927.45</td>
</tr>
<tr>
<td>Central</td>
<td>8006.63</td>
<td>5415.62</td>
<td>6267.98</td>
<td>1738.65</td>
</tr>
<tr>
<td>South</td>
<td>3288.43</td>
<td>2169.55</td>
<td>2504.24</td>
<td>1784.19</td>
</tr>
</tbody>
</table>

\(^aThailand, Report on Income and Expenditure of Farmers, 1970, pp. 53-57.\)
farmers are deeply in debt.\textsuperscript{21} Interest rates also are higher than permitted by law. In some cases the rural people have to pay interest rates at more than 100 per cent a year. More than fifty per cent of the credit comes from relatives and neighbors. Very little comes from institutional sources such as credit cooperatives, or government agencies. Almost half of the credit obtained by farmers was used for family living.

**Marketing.** As mentioned earlier, the average land of Thai farmers is 26.81 rai in size and their financial position is weak. Therefore, the farmers cannot exert much influence in their business dealings. Moreover, transportation is a big problem for the rural people in selling their products. In areas that are not served by an all-well road, the selling price for their products is low because of the high cost of transportation charged by dealers who come to the village to pick up the product. In a case where the farmers bring their products to sell at the towns, they cannot compete with others who pay less for transportation. Market information is also another problem. The farmers lack current price information in bargaining with the dealers. In many cases, dealers are in collusion; they divide local areas and agree not to compete with one

\begin{itemize}
\end{itemize}
another in buying products. Besides these, the farmers are also treated unfairly by dealers in down-grading of their products.  

Cultural, Social Conditions and People

The people of Thailand are called the Thai. The last census, April 1, 1970, indicated that there were a total of approximately 34,152,000 persons.

Cultures. The culture of Thailand depends upon religion. For everything, arts and literature, social system, habits, and customs is developed and clustered in her religion. Animism is the primitive belief of Thai and her neighbors—Cambodians, Burmese, and Malays. This formed the first layer of Thai religion. Later on came Buddhism and the Thai adopted it as their national religion. In the Thai social system, the village is the unit. It was, in former days, a self-contained one in its economy and needs. The villagers worked and helped one another in times of need and enjoyed their lives socially together. In such circumstances of life, money was valueless. And in fact, there was very little currency in circulation. In every village there is at least one Buddhist temple called Wat


and a shrine for a village deity. The monastery served their spiritual needs as well as the people's education. An abbot of the village wat is a highly respected person in the village. The villagers would prefer his advice and decision even in a serious case to that of the official authorities. The wat, therefore, is the center of social meeting whether in life or in death of the villagers.24

Social Conditions. Thailand is predominantly rural. About 80 per cent of its people live in the 50,000 villages that are scattered throughout the countryside. The social conditions of Thailand can be pointed out in the following manners:

1. Size of family: The average size of a household is 5.8 persons; 5.8 in Central Region, 6.2 in Northeast Region, 5.5 in Northern Region, and 5.5 in Southern Region. Over fifty per cent of all family heads are between the ages of thirty and fifty years. Relatively more heads over sixty years of age are found in rural areas and relatively more heads under thirty years of age were found in metropolitan areas.25


2. Education: Fifty-four per cent of all family heads received four years of formal education or less, and 37 per cent had no formal education. About 29.2 per cent of the population ten years of age and over are illiterate, and more women than men.  Of the 24,000 public and municipal schools throughout the country, only 42.78 per cent have permanent buildings, whereas 46.60 per cent belong to the categories of temporary and Sala-Wat buildings. Again, only two-thirds of the desks and benches for use by the entire population are in proper condition. It is a fact that remote areas suffer a lack of teachers, textbooks, instruction aids and equipments. In the village, each teacher has to teach four classes.

3. Health: In general, Thailand has a deficiency in physicians. The gap between physicians and inhabitants is very great. Table 1.4 shows medical personnel in some selected countries. Moreover, it may be said that health conditions of rural people are very serious problems in three aspects: (a) lack of hospitals; usually hospitals are located in provinces and the distance from some villages to a

26. Ibid.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Physicians</th>
<th>Dentists</th>
<th>Pharmacists</th>
<th>Nurses &amp; Midwives</th>
<th>Inhabitants per 1 Physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>1965</td>
<td>54,181</td>
<td>18,678</td>
<td>21,376</td>
<td>8,255</td>
<td>900</td>
</tr>
<tr>
<td>Germany</td>
<td>1965</td>
<td>113,977</td>
<td>37,948</td>
<td>22,372</td>
<td>8,777</td>
<td>1,830</td>
</tr>
<tr>
<td>Italy</td>
<td>1967</td>
<td>91,519</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>570</td>
</tr>
<tr>
<td>India</td>
<td>1962</td>
<td>77,780</td>
<td>1,426</td>
<td>58,172</td>
<td>46,232</td>
<td>5,780</td>
</tr>
<tr>
<td>Japan</td>
<td>1965</td>
<td>109,000</td>
<td>35,000</td>
<td>69,000</td>
<td>41,876</td>
<td>900</td>
</tr>
<tr>
<td>Poland</td>
<td>1965</td>
<td>39,613</td>
<td>11,510</td>
<td>10,072</td>
<td>10,678</td>
<td>800</td>
</tr>
<tr>
<td>Spain</td>
<td>1965</td>
<td>39,709</td>
<td>3,005</td>
<td>13,494</td>
<td>4,617</td>
<td>800</td>
</tr>
<tr>
<td>Thailand</td>
<td>1966</td>
<td>3,609</td>
<td>397</td>
<td>940</td>
<td>9,707</td>
<td>8,730</td>
</tr>
<tr>
<td>U.K.</td>
<td>1965</td>
<td>56,966</td>
<td>14,565</td>
<td>5,375</td>
<td>25,306</td>
<td>1,480</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>1965</td>
<td>288,671</td>
<td>93,400</td>
<td>118,284</td>
<td>600</td>
<td>670</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>1965</td>
<td>485,000</td>
<td>25,500</td>
<td>--</td>
<td>250,700</td>
<td>480</td>
</tr>
</tbody>
</table>

\(^a\text{National Statistic Office, Office of the Prime Minister, Some Important Statistics of Thailand 1968-1969, p. 19.}\)
hospital is too far; (b) lack of doctors; and (c) lack of knowledge of health—villagers in some areas are still practicing traditional patterns of treatment.

From the above facts, the problems of the rural people which are in need of attention may be classified as follows:

1. Economic problem in terms of low production, lack of facilities in credit and marketing and limited employment opportunity.

2. Educational problem in terms of ignorance of modern living and lack of opportunity to have an adequate education.

3. Health problem in terms of lack of doctors, nurses, hospitals, clean water for consumption, and knowledge.

4. Transportation problem in terms of lack of vehicles.

All of the above are the inputs to our study. In Chapter 2, we present the literature review on Community Development in Thailand through its goals, organization, and in action, and in Chapter 3, the Community Development in other countries (Pakistan, Philippines, and Australia) are discussed as related studies. Chapter 4 deals with factors
affecting Community Development in some provinces as mentioned earlier.

Chapter 5 deals with the decision approach in a community development project. The literature review of two major tools in the decision process, namely, cost-benefit analysis and cost-effectiveness methodology is presented. The common pitfalls and fallacies of these techniques are summarized. Chapter 6 is the application of cost-effectiveness approach. Chapter 7 contains discussions, and conclusions of this thesis.
CHAPTER 2

COMMUNITY DEVELOPMENT IN THAILAND: GOALS, ORGANIZATION, AND IN ACTION

Definition of Community Development

The term "community development" (often abbreviated as CD) can mean many things to many people. Some people think of it as a process, some as a method, others as a program, and still others as a movement.

As a Process

CD moves by stages from one condition or state to the next. Emphasis is upon what happens to people socially and psychologically. J. D. Mezirow sees the CD process as:

... a planned and organized effort to assist individuals to acquire attitudes, skills, and concepts required for their democratic participation in the effective solution of as wide as possible a range of community problems in an order of priority determined by their increasing levels of competence.


As a Method

CD is a means to an end, a way of working to obtain some goal. Emphasis is upon some end. Irwin T. Sanders describes CD as a method as follows:

CD is a means to an end; a way of working so that some goal is attained. Other methods (such as change by decree of fiat; change by use of differential rewards; change by education) may be supplementary to the CD method which seeks to carry through the stages suggested under process in order that the will of those using this method may be carried out. The process is guided for a particular purpose, which may prove "harmful" or "helpful" to the local community, depending upon the goal in view and the criteria of the one passing judgment.  

As a Program

CD is a set of procedures and activities. Emphasis is upon activities. Irwin T. Sanders describes it as follows:

The method is stated as a set of procedures and the content as a list of activities. By carrying out the procedures, the activities are supposedly accomplished. When the program is highly formalized, as in many Five Year Plans, the focus tends to be upon the program rather than upon what is happening to the people involved in the program. It is a program that CD comes into contact with subject-matter specialties such as health, welfare . . . .


4. Ibid.
As a Movement

CD is a movement designed to promote better living emphasizing on social movement. Irwin T. Sanders describes it as follows:

CD is crusade, a cause to which people become committed. It is not neutral (like process) but carries an emotional change, one is either for it or against it. It is dedicated to progress, as a philosophic and not a scientific concept, since progress must be viewed with references to values and goals which differ under different political and social systems. CD as a movement tends to become institutionalized, building up its own organizational structure, accepted procedures, and professional practitioners.5

On the surface, there appears to exist great diversity of interpretation in the field of CD. This has led some people to doubt its value as an idea or a reality. However, it seems to be that disparities are more apparent than real. They arise primarily from a tendency to use the term to describe different specific features or aspects without regard to the total concept of CD. The total concept of community development has two essential features. The first element is the activation of the people as a resource for development and as an objective of development. In underdeveloped countries, large segments of rural people have been isolated from economic, social, and political life, and thus constitute a passive, non-productive, and non-participative group in development. CD, therefore, will

5. Ibid.
stimulate their capacities for betterment, and provide some facilities for them. The second element is the integration of programs and efforts to produce a dynamic development process. It is the concept of self-help and mutual-help within the dynamic society.

**Community Development in Thailand**

Community development work has long been operated in Thailand. In the reign of King Trailoknart who made the first attempt at administration improvement, four departments were established in 1376, namely: the department of Local Government, the department of Royal Household, the department of Finance, and the department of Agriculture. The department of Local Government or Interior was actually in charge of development affairs. In 1942, when Field Marshal P. Pibulsongkram was the Prime Minister, community development was formally introduced. In 1958, community development projects were placed in the Bureau of Community Development, Department of Interior, Ministry of Interior. It should be said that several earlier attempts had been made to start a CD program. The Rural Development Program, under the Department of Interior, which was in effect between 1943-1945; and between 1955-1959; and the Fundamental Education Program, under the Ministry of Education with the assistance of UNESCO operated.
Under the Rural Development Program, several hundred village workers were recruited and trained. These workers had the same powers as the Assistant District Officer, but jurisdiction was restricted to the Tambol where each was assigned. Every Tambol had one of these trained workers called Palad Tambol. Their duties were: (1) Tambol administration, and (2) rural reconstruction. The Rural Development Program was ended after three years of effort.

In 1955, the Thailand-UNESCO Fundamental Education Center was established, under the Fundamental Education Program of the Ministry of Education. The duty of this Center was to train the Fundamental Education Organizers (FEO). The FEO were trained in teams of six, and were assigned to each province of the country. Each team was composed of different specialized workers—agriculture, health, education, social welfare, village crafts, and home economics. In 1959, FEO workers were transferred to the Ministry of Interior.

Finally in 1962, the Community Development Department was established in the Ministry of Interior. At that time, there were two main reasons as the Ministry of Interior was responsible for the administration of provincial, district, and local government; and the governors and the district officers were already charged with
administrative responsibility in all respects of development within their jurisdictions respectively.6

Thai Community Development Programme in 1962 announced its objectives as follows:

... to bring about partnership between the government and the people at the local level. It aims to encourage the people to exercise initiative to improve their communities and ways of living through cooperative efforts on the self-help basis, and bring the coordinated support of the various ministries concerned to assist the villagers in carrying out their projects. Specific targets planned for the Thai Community Development Programme are:

1. Development of a coordinated interministerial programme of CD.

2. Establishment of an effective training programme for CD workers and related personnel.

3. Establishment of an effective training programme for village leaders.

4. Providing stimulation with the view to induce active participation of village people in community action and self-help projects designed:

   a. to introduce improved agricultural practices appropriate to the economy of a particular region;

   b. to develop other income-producing employment or activity possible in the area;

   c. to develop cooperative approach to problems of credit, marketing, and other aspects of community life;

d. to create better sanitation and favorable conditions of community life;
e. to foster community cultural activities;
f. to set up needed public facilities.  

It can be said that the main objective of Thai government aims to raise the standard of living of the people. The ways to improve the standard of living of the people may be divided into two levels; one is large projects such as building a dam, highway, etc., which are beyond the responsibility and duty of Community Development Department. It is the work of Department of Irrigation and Highway, respectively. It needs approval and must conform with the government policy. Second are small development projects which will benefit directly the people in specific rural areas, such as promotion of agriculture, improvement of health, etc. Such projects are the work of Community Development Department.

Need for Community Development

Due to the problems mentioned in the previous chapter, the government realized the need of the people in the remote areas. These people constitute a major latent resource for development of the country. If they can be

7. Community Development Bureau, Department of Interior, Ministry of Interior, National Community Development Programme Thailand, 1961, pp. 1-3.
effectively involved, given the opportunity to develop their capacities for productive and responsible participation, and provided with institutional structures through which their initiatives can be converted into self-generating activities on a continuing basis, the country will be developed. Therefore, the Community Development Department, under the Ministry of Interior, was established as described earlier, and the Community Development Program has been included in the National Economic Development Plan, because the government considered CD as the basis of effective development in other fields.

Other reasons for launching a community development service in rural Thailand are as follows:

1. CD improves human resources, which are the basic principle to the country's development.
2. CD plays an important role in extending the services of government to reach the people in the remote areas and thus it supports other developmental projects in the National Economic Development Plan.

In the ancient period, especially in Sukhothai period in the reign of King Ram Khamhaeng, the government and people were close together including the King. The government was paternalistic, which is attested by a stone inscription written by King Ram Khamhaeng himself:
During the life of King Ram Khamhaeng this city of Sukhothai has prospered. In the water there are fish; in the field there is rice. The Lord of the country levies no tolls on his subjects as they travel along the roads, driving cattle to go trade, riding horses to go sell. Whoever desires to trade elephants does so; whoever desires to trade horses does so; whoever desires to trade silver or gold does so. . . . In the [palace] doorway a bell is suspended--if an habitant of the kingdom has any complaint or any matter which irritates his stomach and torments his mind, and he desires to expose it to the King, it is not difficult: he has only to ring the bell that the King has hung there. Every time that King Ram Khamhaeng hears the sound of the bell he questions [the complainant] on his case and settles it in an equitable fashion. Consequently the inhabitants of this city of Sukhothai admire him. . . .

Since World War II, there has been a gap between the government services and the rural people. The number of well-trained extension workers was limited. Services of the government hardly reached to the people and the people's problems still were unsolved appropriately. CD workers, therefore, will serve effectively as liaison officers between the government agencies and the people.

3. CD is a joint work of the people and the government to improve the resources of local areas in the most useful way. The government will provide technical

assistance and some aids that are beyond the capacities of villagers to provide for themselves. CD will accelerate the areas of development. People don't have to wait for the government to solve their problems, they can solve by themselves. Thus the advantage of CD is not only to create a sense of responsibility in the people to help themselves; it is also an appropriate means to be used in a country with limited budget like Thailand.

4. CD creates a sense of belonging and responsibility among the people. Therefore a better life will be obtained.

**Goals of Community Development**

The goals as stated by Ministry of Interior Regulations on Community Development Planning B.E. 2510 (1967) are as follows:

1. Promotion of production to increase income of the people.
2. Promotion of construction of public properties.
3. Improvement of health and sanitation.
4. Promotion of education, recreation, and youth training.
5. Promotion of village culture.
6. Promotion of local government.

9. Thailand, Ministry of Interior Regulations on Five Year Community Development Planning B.E. 2510 (1967), Section 1, No. 2(4).
In order to attain the above goals, the Community Development Department laid out four purposes as follows:

1. To persuade people to have same idea and same faith.

2. To stimulate people to have initiative and felt need of necessary things for living and to cooperate in working at their own abilities to satisfy their needs.

3. To develop people to be knowledgeable and more competent in all occupations and to have skill in various jobs.

4. To work in groups in order to gain strength and experience from the Democratic type of practice.

Community Development in Action

In order to attain the above goals and purposes, the Community Development Department has set up ten programs of operations as mentioned below:

1. Area Coverage Projects Launching Program. In an amphur which is selected for launching, the program will cover every commune in the amphur except communes which are under the responsibility of local government bodies, i.e., municipality, sanitation area, or commune authority. The program will pay more attention to the areas that have been launched.


by a Mobile Development Unit—a development effort of military action in sensitive areas, and the Accelerated Rural Development—administered by the Office of the Prime Minister, mainly responsible for building roads to connect remote areas.

2. Community Development Personnel Training Program. This program aims at training CD workers and the personnel of other agencies at various levels to understand CD concepts. This program includes recruitment of CD workers.

3. Local Leader Development Program. Due to the concept of Community Development Department that participation among people to improve their living conditions with some assistance is essential, this program aims to train leaders in the villages to understand CD concepts, and principles of democratic local self-government.

4. Occupational Development Program. This program aims to train the people in new, improved methods of working which would bring more income.

5. Self-help Public Facilities Improvement Program. This program will encourage the people to mutually build necessary public facilities in the villages. Usually the government will give technical assistance and funds.
6. Community Development Through the Women and Youth Program (CD-WAY). This program deals with (a) introducing proper nutrition; (b) training women, children, and youth to know how to make better use of their leisure time; (c) encouraging women, children, and youth to develop good health, leadership qualities, democratic principles, good citizenship; (d) developing the dress-making business and encouraging proper dressing in accordance with the culture; and (e) training women and youth to improve household and living conditions.

7. Community Education Program. CD depends very much on the education of the rural people with new, improved skills and techniques. This program, therefore, emphasizes education (such as educating the people in new techniques, publishing articles, pamphlets, and documents, providing schools in some areas, etc.).

8. Regional Community Development Technical Assistance Center Program. This program is concerned with the effective way of CD (provide technical assistance to the people in that area); the provinces, therefore, will be grouped into nine regions as stipulated in the Public Administration Regulation Act.

9. Research and Evaluation Program. This program is concerned with conducting benchmark surveys, studying
problems of people and CD workers, collecting statistics, evaluating the progress of programs, and assisting the department in the systematic planning of operations.

10. Rural Development Volunteers Program. This program aims at allowing college students to have an opportunity to work with the people to help them on a voluntary basis. The volunteers obtain no salary except for a small amount of per diem to cover their food and accommodations.

According to the ten programs of Community Development Department mentioned above, there are two essential elements that can affect most of the programs. They are education and CD workers. All ten programs will be effective or not depending upon them. In developing the community, Community Development Department, therefore, has to realize the importance of education and CD workers.

Community Development Department

As mentioned earlier, the Community Development Department was not established until 1962. Before 1962, the community development projects were placed in the Bureau of Community Development, Department of Interior, Ministry of Interior. Community Development Bureau was divided into three sections, namely: community education division,
administration division, and training division. Figure 2.1 shows an organization chart of Department of Interior. Its policy is concerned mainly with education and training.

In 1962, Community Development Department was established, and it is responsible for the administration and operation of national community development policy, as formulated by the government. It aims to elevate the standard of living of rural people, study rural problems in order to find ways for improving rural life, emphasizing the development of new methods, techniques, and skills. The department provides preservice and inservice training for CD workers, trains community leaders, supervises community activities, and coordinates activities of other agencies which concern CD.

Field Marshal Thanom Kittikachorn, former Prime Minister of Thailand, addressed the role of the Community Development Department as to foster, through example, close cooperation among government officials in working out plans with the people, and in putting these plans into effect with the voluntary cooperation of the people. The role of the department should not go beyond the attempt to promote and advise the people to accept new methods of working and new kinds of occupations with some financial aids and materials.¹²

Figure 2.1 Organization Chart: Department of Interior -- From Community Development Bureau, Department of Interior, Ministry of Interior, National Community Development Programme Thailand.
The department is divided into five divisions as follows:

1. Office of the secretary is responsible for correspondence, personnel, finance, and supply. This office is the administration division.

2. Operations Division is responsible for opening development areas, operation, supervision, and home economic activities.

3. Community Education Division is responsible for educating the people, public relations, and recreational activities.

4. Training Division is responsible for every kind of training carried on by the department.

5. Research and Evaluation Division is responsible for the study problems of operation, benchmark surveys, collecting statistics, and evaluation of the operation of CD projects.  

At regional level, Regional Community Development Technical Assistance Centers were established to serve their regional areas in technical problems. The primary objectives of the centers are: (a) to make available technical assistance and public services; (b) to help orient other

13. Community Development Department, Ministry of Interior, Community Development ... National Development, pp. 28-31.
government officials and the people concerning the concept of CD; (c) to assist the department in research and evaluation, supervision for effectiveness of CD in the region; and (d) to be a center for supplying and servicing techniques (e.g., new methods to improve the land cultivated) and equipments.

At the present time, there are four centers, namely:

1. Ubol Center, sponsored by SEATO/THAI Government, serves as technical assistance center to a six-province area in the Northeast, and also serves as the Community Development Center for SEATO country members.

2. Yala Center, serves southern peninsular provinces.

3. Udon Center, serves nine Northeast provinces.

4. Lampong Center, serves Northern provinces.  

The centers that are mentioned above do not cover all the provinces in Thailand. They cover only one-third of the provinces. The policy of the government is to establish another five regions to cover the whole kingdom. Figure 2.2 shows the organization chart of the Community Development Department.

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14. Ibid., pp. 32-34.
Figure 2.2 Organization Chart of the Community Development Department -- From Community Development Department, Ministry of Interior, This is C.D. in Thailand (Bangkok: The Community Development Press, 1971).
Coordination of Efforts

As mentioned earlier, community development is a joint work between government agencies and the people. It seeks to coordinate the efforts of various interested government agencies for effectiveness. Committees, therefore, are established in many levels in central and provincial administration. They are:

1. Community Development Executive and Coordinating Committee. This committee is presidented by the Minister of Interior with the concerned Under-Secretaries and Director-Generals of related ministries or departments as members. The Secretary-General of the committee is the Director-General of the Community Development Department. The committee is responsible for planning the implementation of the national CD policy.

2. Community Development Coordinating Committee at Province Level. The committee is chaired by the Governor, section chiefs of provincial administration, District Officers, are ex officio members and two persons elected for two year terms. CD provincial officer is the secretary of the committee. This committee is responsible for coordinating community development work and approving CD projects in its province.
3. Community Development Coordinating Committee at District Level. The committee is chaired by the District Officer (Nai Amphur) with the section chiefs at district, members of the Provincial Authority elected from that district and chairmen of Commune Development Committees in the district are ex officio members. Two competent persons living in the district are elected members. The district officer is the secretary of committee. The committee is responsible for coordination of efforts of government for the improvement of local life according to the needs of the people.

4. Commune Development Committee. The committee is chaired by the commune headman (Kam Nan), village headman (Poo Yai Ban) in the commune as vice chairman, and the commune doctors are ex officio members. This committee is responsible for considering and coordinating commune development projects.

5. Village Development Committee. This committee is chaired by village headman (Poo Yai Ban) and five to nine other persons elected to be five year term members. The committee discusses local needs and problems, works with people in planning projects,
and organizes interested groups within the village. Figure 2.3 shows the coordination of CD.

The roles of these committees including Community Development Department, CD workers and villagers are briefly described by using Linear Responsibility Chart as shown in Figure 2.4. L.R.C. shows job position, tasks or activities, and the relationship between activities and job position.

Summary

The term "Community Development" can mean many things to many people. People can think of it as a process, a method, a program, or a movement. However, the total concept of community development has two essential features: (1) to stimulate the capacities of the people for the betterment by providing them some facilities, and (2) to integrate all programs and efforts in order to produce a dynamic development process.

In Thailand, community development work has long been operated since the reign of King Trailoknart. But at that time, community development work was regarded as a routine work of the department of local government. It was formally introduced in 1942 in the period of Field Marshal

15. Ibid., pp. 36-40.

Figure 2.3 Coordination of Community Development
Figure 2.4 Linear Responsibility Chart of Community Development in Rural Thailand
P. Pibulsongkram as the Prime Minister. In 1958, community development project was placed in the Bureau of Community Development, Department of Interior, Ministry of Interior. Finally in 1962, the Community Development Department was established in the Ministry of Interior because the government realized the importance of community development.

In addition, the advantages of a community development service in rural Thailand can be summarized as: (1) to improve human resources which are the basic principle to the country's development, (2) to extend the services of government to reach the people in the remote areas, (3) to improve the resources of local areas in the most useful way, and (4) to create a sense of belonging and responsibility among the people in order to obtain a better life.

The goals of community development in Thailand vary from time to time. Its present goals are as follows: (1) to promote the production in order to increase the income of the people; (2) to promote the construction of public properties; (3) to improve health and sanitation; (4) to promote education, recreation, and youth training; (5) to promote village culture; and (6) to promote local government. In order to attain the said goals, the Community Development Department laid out four purposes and set up ten programs of operation.

Community Development Department was established in 1962 and it is responsible for the administration and
operation of national community development policy, as formulated by the government. The department is divided into five divisions as: (1) office of the secretary, (2) operation division, (3) community education division, (4) training division, and (5) research and evaluation division. Besides these, four Regional Community Development Technical Assistance Centers were established at regional level to serve their regional areas in technical problems.

Due to the fact that community development is a joint work between government agencies and the people, coordination of efforts are very important and thus, the coordinating committees were established in many levels in central and provincial administration. The roles of these committees are stated by the Ministry of Interior Regulations on Community Development Planning.
CHAPTER 3

RELATED STUDIES

A number of studies have been made in developing countries concerned with community development because community development is a prerequisite of national development. In this chapter, we will focus on how other countries near Thailand (Philippines, Pakistan, and Australia) develop their communities in order to compare our techniques.

Community Development in Pakistan

Pakistan started a community development program in 1953 in the form of Village, Agricultural, and Industrial Development (V-AID). At that time, the CD program was concerned with economic needs rather than social or cultural developments of the country. It created in the rural people a consciousness and willingness to work for themselves individually and collectively. Progress was made in the fields of agriculture, animal husbandry, co-operatives, health, education, and communications. With the introduction of the Basic Democracies system in 1959, the name V-AID was changed to National Development Organization in 1960.¹

¹. Thailand, The SEATO Seminar on Community Development, p. 35.
Organization

Basic Democracies constitutes four systems of councils operating at union, tehsil (West Pakistan), or thana (East Pakistan), district and divisional levels. The Union Council is composed of ten elected members representing some thirteen villages with an average total population of 8,000 in West Pakistan and 11,000 in East Pakistan. Each member represents one of the wards. All members serve for five years, and each Council elects its chairman. Similarly, the Town and Union Committees are constituted in urban areas. Thana or Tehsil Councils are composed of chairmen of Union Councils and Town Committees as ex officio. Their function is to carry out responsibilities assigned to them by the District Council. The District Council is composed of the members elected by the Chairmen of the Union Councils, Town Committees, and Union Committees within the districts, and officials, including representatives from the Nation Building Departments. District magistrate serves as chairman. The Divisional Council is composed of elected members and officials, including officials from the National Building Departments. Commissioner serves as the chairman. In practice, CD is specifically the function of the Union Councils.  

2. Ibid., pp. 36-37.
Process

CD in Pakistan is composed of three phases as follows:

1. Identifying grievances and needs of village people, as understood by the village people. To realize the needs of the people, a wide range of functions is selected by the Union Councils. The Central and Provincial Governments have been sending out observation teams to survey and inquire the needs and problems of villages. In addition, Basic Democracies Order 1959 states that every year the Union Council shall survey the entire area to determine the requirements of the area in order to improve the existing facilities for the cultivation of crops. The results of the study will serve as a basis for the final formulation of the Rural Works Program. Members of all Union Council should also participate in discussions to specify needs of the community and prepare plans for their solution. Plans made on Union Council have been made subject to the approval of the Divisional and District Councils.

2. Identifying existing village leaders, factions, and motivations. Before the introduction of the Basic Democracies system, economic power was in the hands of the landowners (Zamindars) which reflected the
pattern of village leadership. This situation changed with the introduction of the Basic Democracies system. This Democracies emphasizes the building of leadership from the grass roots. Elections to the Union Councils are a matter of identifying and selecting local leaders. As a result, a new leadership is emerging. In 1964, the majority of the local leaders in the rural areas belonged to the thirty to forty year age group with a secondary school education and annual income between $421-$842. In training leaders (chairmen and members of the Union Councils), a nationwide training program was organized in December, 1959 at Dacca. The program covered four phases: (a) two-week orientation courses (such as the leadership role of chairmen, relations with other agencies, program planning); (b) a fifteen-day course (such as structure and functions of the agencies); (c) another fifteen-day course (such as laws, rules, and details of local government); and (d) training camps (such as model farms, cottage industries, adult education).

3. Taking action at village level and experiences in self-help projects. CD programs provide a direct means to improve education, health facilities, and the development of mass media of communication.
a result, they will convert the apathy, suspicion or hostility of the people into a constructive one. The Basic Democracies system, therefore, encourages the people's participation in all schemes of local development and promotes the spirit of self-help. 3

Government Funds and Village Resources

The sources of income of the Union Councils may be divided into two broad categories: local sources and government sources. Local sources are comprised of local taxes (such as tax on cinemas, drama, theaters, and other entertainments and amusements, tax on vehicles, cars, bicycles, and boats), and donations. The donations can come in the form of money, material, land, or labor. Government sources include a local rate of 6.25 per cent on the land revenue collected in the area and ad hoc grants from the government for rural programs. 4

Community Development in the Philippines

The Philippines started the community development program in January, 1956 in the form of the Presidential Assistant on Community Development (PACD). The fund for the CD program is provided by the Philippine Government through the National Economic Council and the United States

3. Ibid., pp. 37-44.
Government through the Agency for International Development. The objectives of CD program at the beginning concentrated upon the development of the individual human resource in the village. Now, it is concerned with self-help or locally-aided projects. The government encourages people to initiate and to get involved in the CD program.

Organization

Executive Order No. 156 issued by the President of the Philippines on January 6, 1956, created the Presidential Assistant on Community Development (PACD). PACD was put directly under the President instead of ministries as other countries, because the government realized the importance of CD as a multi-objective program and it was difficult to place it under the same level. The hierarchy in PACD is divided into four levels, namely: six Area Development Offices, Provincial Offices, Municipal Offices, and Barrio Development Level. In the Philippines, the basic organizational unit for CD is the Barrio Council (village council). All efforts of CD office are directed toward making these councils effective in solving local problems. A typical barrio has about 200 families or 800-1000 people. According to the Philippines law, the people elect barrio captains and six council members each with a sphere of activity such as health, agriculture, sanitation, etc. The members will then co-opt a secretary (PACD worker) and treasurer, making nine
members altogether. The Barrio Council has been given autonomous powers by law. The Council possesses legislative and taxing powers and locates within the village itself. Within the village, there is a professionally-trained CD worker, who will live, eat, and work with the village people to guide the council in the introduction of change. The CD workers must be college graduates with eight months of training. Each worker deals with three or four adjacent villages.5

Process

The main objective of CD in the Philippines is to establish a system of communities who solve their own problems through the initiative of the community and participation of the people themselves. The government will only provide funds to villagers in the form of materials, never cash, to initiate self-help concept. In brief, CD program of Philippines includes:

1. Training Program. Due to the fact that local leaders and trained personnel are very important to the development of barrios, training programs are established to train them to be good leaders. In order to make this program effective, the program will be divided into three categories, as follows:

a. Lay leaders' training. This program is established to train barrio officials and local leaders with emphasis on the art of local government and human relations; and CDWAY (Community Development Through Women and Youth) with emphasis on integrating activities of women and youth in an effective way.

b. Orientation training. This program seeks to provide the cooperators (such as technicians, elected officials and selected lay leaders in provinces and municipalities) with adequate knowledge and skills to develop their attitudes properly in order to work with the villagers effectively. The courses included two areas of study, seminars and workshops and executive development courses.

c. PACD training. This program trains personnel in PACD to live and work effectively with people in the rural areas. The training is divided into two general types as pre-service training, prepares prospective CD workers for their jobs in the field for a duration of six months, and in-service training, set up for field personnel who have had field experience for some time in order to reinforce new methods and technologies for them to improve their capacities.
2. Research and Evaluation Program. This program is carried out by the Community Development Research Council of the University of the Philippines (UP-CDRC). It is an independent research agency. Its objectives are to run basic research in the social sciences in order to provide information for PACD workers, and evaluate directly PACD implementations of the government's program for CD.

3. Projected Programs. These programs include:
   a. Commodity aided community development in the Philippines. This program is concerned with using food commodities, made available by the World Food Program through the Food and Agricultural Organization (FAO).
   b. Rural development loan program. This program is a plan to grant loans to barrios. It is designed to give the opportunities for the barrios to invest their resources in sound activities, educate the people in the use of credit facilities. This program is widespread in developing countries.
   c. Utilization of foreign volunteer specialists. This program will promote a better understanding and cultivate an international sense between Filipinos and foreign volunteers. The volunteers will help training young people in barrios.
d. Voluntary services program. This program is concerned with private welfare agencies who are interested in social development and want to help the people to improve their living conditions.

e. Urban community development program. This program aims to extend CD operations in urban centers where rapid urbanization is creating serious problems (such as social, political problems); this program may contribute to the solution of these problems.

4. Grants-in-aid Program. This program is a tool to encourage self-help. It is not treated as a gift to be equally distributed among provinces, municipalities, or barrios. It is given to barrios on a first-come-first-served basis. Its objectives are to (a) encourage barrios to plan and initiate self-help projects; (b) develop responsibilities, initiative and leadership; (c) strengthen Barrio Councils, Municipal Community Development Councils and Provincial Community Development Councils; (d) harness the enthusiasm and manpower of barrios; (e) enable barrios to secure government technical services. In order to get this Grant, the following criteria must be met: (a) the project must fall within the category defined as national priorities;
(b) at least fifty per cent of the total project cost must be contributed by the people in materials and labor; (c) the project proposal must be in writing and originate from barrios through the Barrio Council; (d) barrios must agree to carry out and maintain the project after completion; (e) the soundness and feasibility of the project must be certified by the technical agency concerned; and (f) the project proposal must be favorably considered by the Municipal and Provincial Community Development Councils, and concurred by the PACD. In order to obtain approval, a proposal must be prepared by the village captain and supported by estimates and sketches. The final decisions are made by the Barrio Development Office.  

Measurement

The Philippines applied cost-benefit analysis in measuring the benefits of the CD projects. The cost of the project is evaluated in terms of money, while the benefit of the project is evaluated in terms of number of barrio people benefited from the project and in direct benefits to the country (in terms of money value). Cost-benefit analysis was applied after the completion of the projects.

7. Ibid., pp. 46-49.
Community Development in Papua and New Guinea

Papua is legally a part of the Australian territory that formed the Commonwealth of Australia in 1906. New Guinea was an old German Territory, occupied by Australia at the outbreak of war in 1914. Prior to World War II each Territory had its own separate administration, but since the war, they have been combined in an administrative union. There are 700 different languages in both Territories. The people were primitive with no political organization and social responsibility did not exist outside the immediate village. Today, the pattern of life of the people is still underdeveloped. Agriculture remains the principal means of livelihood; the pattern of social obligation remains unchanged. 

Organization

The administrative structure of the Territory vests executive authority in an Administrator appointed by the Government of the Commonwealth of Australia. He is directly responsible to the Commonwealth Department of Territories. His authority is exercised through the Administrator's Council, which has three official members and seven elected members of the House of Assembly. The House of Assembly is comprised of ten appointed official members and 54

8, Ibid., p. 7.
members elected by universal adult franchise. The House of Assembly enacts the laws and appropriates money for the Territory, but the Australian Government retains responsibility for defense and for the economic, social, and political advancement of the people. There are sixteen departments within the Administration's headquarters organization which carry out the executive functions of government and there are fifteen districts having District Commissioners as its head, who are responsible for general administration and coordination of the activities of all departments within their districts. The districts are divided into sub-districts having Assistant District Commissioner as a head. 9

Process

There is neither a national program of community development nor a particular branch of administration charged with the specific function of CD in either Territory. The government regards CD as an integral part of normal structure of the administrative process. The government also does not have its own goals of CD. It applies general concepts of CD as proposed by the United Nations. To implement CD, Local Government Councils were established to create effective coordination at the district level. It links the gap between Government and council and

council and people. The objective of establishing Local Government Councils is to enable the people to learn the art of conducting their own affairs. The Councils raise their own revenues with some assistance from the Central Government according to their needs. Members of the councils are elected every two years on the basis of adult franchise.\textsuperscript{10}

It is obvious that Papua and New Guinea regard community development as routine work for there is no specific administration for CD. There are neither CD programs nor direct organized contributions by the people to CD project as in other countries. Each district has district officers represented from various departments (such as agricultural officers, welfare officers, medical officers). All of them are regarded as CD workers. The Commissioner of each district acts as a coordinator. None of the said countries applied the decision approach in their community development projects to obtain better decisions.

\textbf{Summary}

This chapter gave us a general concept of a community development in our neighbors (Philippines, Pakistan, and Australia). In general, the goals, the purposes, and the programs of a community development in the said countries

\textsuperscript{10} Ibid., pp. 8-13.
including Thailand are similar. There are some differences in the components (such as: organization, funds, methods of measurement of the output, etc.).

In Pakistan, community development program started in 1953 in the form of Village, Agricultural and Industrial Development (V-AID). Basic Democracies constitute four systems of councils operating at union, tehsil or thana, district and divisional levels. Community development is specifically the function of the Union Councils, and it is composed of three phases as: (1) identifying grievances and needs of village people; (2) identifying existing village leaders, factions, and motivations; and (3) taking action at village level and experiences in self-help projects. The sources of income of the Union Councils are derived from local and government sources.

The Philippines started the community development program in 1956 in the form of the Presidential Assistant on Community Development (PACD). Executive Order No. 156 put PACD directly under the President instead of ministries as in other countries. The hierarchy in PACD is divided into four levels, namely: six Area Development Offices, Provincial Offices, Municipal Offices, and Barrio Development Level. Community development is specifically the function of Barrio Council, and it is composed of (1) training program, (2) research and evaluation program, (3) projected programs, and (4) grants-in-aid program. The
fund for the community development program is provided by the Philippine Government and the United States. Barrio Council is provided funds in the form of materials, never cash.

Community development in Australia (Papua and New Guinea) is quite different from other countries. There is neither a national program of community development nor a particular branch of administration charged with the specific function of community development. Australia regards CD as an integral part of normal structure of the administrative process. There is no specific goal. Local Government Councils were established to perform the CD.

Although this chapter does not tell us about how our neighbor countries develop their communities directly, we still know the general concept of community development in those countries. However, we found that none of the said countries (including Thailand) applied the decision approach or system analysis in conducting their community development projects.
CHAPTER 4

FACTORS AFFECTING COMMUNITY DEVELOPMENT

Chapter 1 mentioned the problems of the rural people that are in the attention of the government and are our input toward community development. Chapter 2 also provided the general idea of the work of Community Development. In Chapter 3 we studied the community development of our neighbors. This chapter will consider the detailed information on the factors that affect community development. These factors are considered as effectiveness criteria in our study.

In introducing cost-effectiveness in the study of community development, alternative systems of a CD project are required. The information, therefore, will be confined to some villages in the Northeast (Nakhon Ratchasima) and to those in Southern Thailand (Narathivas and Satul).

The factors affecting community development can be classified into two categories, namely: social system and personnel because both factors are the most important and necessary in developing a community.

**Social System**

The term "social" implies that we are dealing with more than individuals; we are concerned with individuals.
in groups, or groups in a larger environment. The term "system" implies that these individuals or groups interact in some meaningful and consistent fashion that can be described.\(^1\) Social system, therefore, refers to the interaction of groups not individual in performing a set of functions. In Thailand, the social system is made up of the following social institutions: the extended family, economic, communal, health, and educational.

Extended Family

Family is the most important economic and social unit of Thai society. On the economic side, the family is a production unit, consumption unit, and also it supervises and administers wealth. On the social side, it is the most important living unit which receives and passes on culture, and it creates new members of society. When we talk about family, the concepts of extended family and nuclear family are discussed. Nuclear family is the family consisting only of the family head, his wife, and their unmarried offspring. Extended family is the family consisting of other members such as father and mother of the family head and/or of his wife, brothers and sisters of the family head and/or of his wife, married offspring and other relatives. In Thailand, it is difficult to point out

that which types of families are better. It depends upon the conditions. Usually in dynamic conditions, the nuclear family appears to be better off because it is more flexible than extended family; while under static conditions, the extended family may be in a better position because it has better discipline and division of labor in the family. In the old days, almost all of the elite families were extended families. These large families were later forced by the rising cost of living and other economic changes to break into smaller units (nuclear families). But, the rising cost of living has also in effect delayed the process of separating out, causing the nuclear family to assume an extended form of family at least as long as the new unit created by marriage is not ready to move out. 2

In the four Southern provinces of Thailand (Pattani, Yala, Narathivas, Satul) the family system is determined by the Malay culture and the Islam religion. The ratio of nuclear families to extended families is 60:40. It is true that relatives have an obligation to help in customary ceremonies; while in economic and occupational activities, there is no obligation that relatives have to give more help than friends. It is obvious that the rules of marriage and divorce according to Islam religion have important influences

over the family and kinship systems. Usually the people marry at early ages (such as 17-18 years old for male and 14-15 years old for female). A man can have four wives at the same time. A divorce will also be legalized when a man says, "I divorce you" and the Imam (a religious preacher) gives a certificate. Because of these causes, families are often unstable. Therefore, it may be said that the family and the kinship system are not a basis of power for the community.

In the Northeast provinces, most of the population are Buddhist. The ratio of nuclear families to extended families is 70:30. People of these provinces as well as the rest of the country (except four provinces in the South as mentioned above) have to follow the Thai law. The man can have only one wife and the divorce is more difficult than Muslim. The people in rural areas tend to be extremely homogeneous and have an impact for the community. Table 4.1 shows the types of families.


5. Ibid., p. 20.
Table 4.1 Distribution of Types of Families

<table>
<thead>
<tr>
<th>Province</th>
<th>Nuclear</th>
<th>Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Nakhon Ratchasima</td>
<td>78</td>
<td>22</td>
</tr>
<tr>
<td>Southern</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Pattani</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Yala</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Narathivas</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>Satul</td>
<td>80</td>
<td>20</td>
</tr>
</tbody>
</table>

\[^{a}\text{Janlekha, Study of Economic and Social Condition of the People in the Southern Thailand, p. 11; and Janlekha, Saraphi, p. 17.}\]

Economic

The economy of Thailand is underdeveloped especially in the Northeast and Southern provinces owing to the factors of environment, technology, credit, marketing, etc., as mentioned briefly in Chapter 1. Dr. Udhis Narkswasdi found the economic problems of the people in the Northeast Thailand as: (1) environmental problems--rainfall and humidity, plant disease, obsolete technology, etc.; (2) market problems--transportation, down-grading the products, collusion of the dealers in cheating the farmers, etc.; (3) area of holding problems--land fragmentation as a hurdle for
development; (4) size of the family problem; and (5) income and expense problems—negative income which needs improvement. The problems that arose in the Southern region seemed to be the same as in the Northeast region.6

In introducing cost-effectiveness in the design of CD project, labor force, income distribution, and migration factors of the people in the said areas are very important, and are considered as effectiveness criteria. Due to the fact that every construction depends upon labor force of the villagers, thus, variations in the labor force will be a good indicator for success in implementation of the project. Income distribution and migration effects will indicate how effective (in terms of people's need) the project is. The economic system here, therefore, will be concentrated on those factors.

**Labor Force.** In this study, labor force means all males and females in a population in the age group 15-64 years. These are the people that are considered in the labor force in Thailand.7 Table 4.2 shows the labor force to population in some provinces of Thailand. Those numbers will be used as effectiveness criteria in terms of successful in implementation the project.


Table 4.2. Proportion of Labor Force to Population

<table>
<thead>
<tr>
<th>Region</th>
<th>Provinces</th>
<th>Population</th>
<th>Labor Force</th>
<th>Percentage of Labor Force to Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern</td>
<td>Pattani</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Yarang</td>
<td>473</td>
<td>287</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Kok po</td>
<td>415</td>
<td>245</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Yala</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Muang</td>
<td>462</td>
<td>292</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Rahman</td>
<td>452</td>
<td>275</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Yaha</td>
<td>480</td>
<td>283</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Narathivas</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Yi-nga</td>
<td>459</td>
<td>255</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Ra-ngae</td>
<td>759</td>
<td>434</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Satul</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Muang</td>
<td>412</td>
<td>222</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>La-ngu</td>
<td>300</td>
<td>167</td>
<td>56</td>
</tr>
<tr>
<td>Northeast</td>
<td>Nakhon Ratchasima</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Saraphi</td>
<td>1443</td>
<td>722</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Thung Hua Khwan</td>
<td>517</td>
<td>260</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Nong Sakae</td>
<td>760</td>
<td>356</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Nong Krathum</td>
<td>344</td>
<td>158</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Don Thayung</td>
<td>266</td>
<td>131</td>
<td>40</td>
</tr>
</tbody>
</table>

**Income Distribution.** In this study, income distribution means net income. Table 4.3 shows average family income and expenses in some provinces of Thailand. It is obvious that the people in the said areas have negative income. Therefore, the government should realize their problems. CD project will be one of the methods to raise their income. And the figures of income distribution will be used as effectiveness criteria in terms of peoples' needs.

**Migration.** In this study, migration means the result of the difference between emigrating and immigrating offsprings. Table 4.4 shows the percentages of migration in some provinces in Thailand. Those figures will be used as effectiveness criteria in terms of peoples' needs.

**Communal**

Communal living is the way of life, a belief, and involves a mode of living. People in rural areas are backward and resistant to change. This is because of the low level of education and standard of living. However, change is necessary for them. Factors affecting the development are: the attitude toward change and toward the savings and spending of income.

Change occurs slowly in rural areas. This is because of the strong belief in the old values, the poor education, the lack of communication, and the low standard
Table 4.3 Average Family Income and Expense

<table>
<thead>
<tr>
<th>Item</th>
<th>Southern</th>
<th>Northeast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pattani Baht</td>
<td>Yala Baht</td>
</tr>
<tr>
<td>Income From farm sources</td>
<td>3,127</td>
<td>3,772</td>
</tr>
<tr>
<td>From non-farm sources</td>
<td>420</td>
<td>111</td>
</tr>
<tr>
<td>Total</td>
<td>3,547</td>
<td>3,883</td>
</tr>
<tr>
<td>Expenses Costs of producing crops</td>
<td>510</td>
<td>331</td>
</tr>
<tr>
<td>Living expenses</td>
<td>5,776</td>
<td>5,466</td>
</tr>
<tr>
<td>Total</td>
<td>6,286</td>
<td>5,797</td>
</tr>
<tr>
<td>Income Distribution</td>
<td>-2,739</td>
<td>-1,914</td>
</tr>
</tbody>
</table>

Note: Janlekha, The Study of Economic and Social Condition of the People in the Southern Thailand, p. 53; and Janlekha, Saraphi, p. 52.
Table 4.4 Percentages of Migration

<table>
<thead>
<tr>
<th>Province</th>
<th>Percentage of Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattani</td>
<td>19</td>
</tr>
<tr>
<td>Yarang</td>
<td>14</td>
</tr>
<tr>
<td>Kok po</td>
<td>25</td>
</tr>
<tr>
<td>Yala</td>
<td>25</td>
</tr>
<tr>
<td>Muang</td>
<td>35</td>
</tr>
<tr>
<td>Rahman</td>
<td>20</td>
</tr>
<tr>
<td>Yaha</td>
<td>20</td>
</tr>
<tr>
<td>Narathivas</td>
<td>33</td>
</tr>
<tr>
<td>Yi-nga</td>
<td>20</td>
</tr>
<tr>
<td>Ra-ngae</td>
<td>41</td>
</tr>
<tr>
<td>Satul</td>
<td>3</td>
</tr>
<tr>
<td>Muang</td>
<td>5</td>
</tr>
<tr>
<td>La-Ngu</td>
<td>2</td>
</tr>
<tr>
<td>Nakhon Ratchasima</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Janlekha, *The Study of Economic and Social Condition of the People in the Southern Thailand*, p. 27; and Janlekha, *Saraphi*, p. 25.
of living of the people. As mentioned earlier, in Southern and Northeast Thailand, farmers still cut rice with a tiny knife instead of using other tools which can work faster and better. Such practices and beliefs make change difficult. Three factors that lead to resistance to change are: (1) strong doubt as to the material profitability of proposed changes; (2) more abstruse and more deeply rooted in the old way, afraid such change will change his way of life, society, and norm; and (3) some farmers, operating under a system in which landlords get 70 to 100% of all increases in production, exert no effort to apply new methods.

In order to make change, creative, innovative, and dynamic personalities among villagers are necessary. However, such change will never take place without education. Education is the media of acquisition of new skills, participation, creativity, and innovation. Without it nothing will happen. Change takes place in form of innovation and creativity. Innovation may occur in any field of business or science such as agriculture, industry, education, etc. The rural areas need innovators and leaders. Community development workers (Patanakarns) will be the key people


who can initiate change and encourage the villagers toward a new way of life.

The methods of savings and spending are also factors that affect the development of the country. Capital accumulation occurs through savings. These savings, in turn, are accumulated to be used as capital for investment. Without funds or capital there will be no business expansion, and consequently, no economic development. Therefore, to develop an economy, a society must have some institutional savings including investment. There is a very little savings in developing societies. This is because cultural norms of the people are not favorable to savings. They spend money unwisely; large amounts are spent for births, weddings, tombs, or monuments for the dead. These expenditures are not productive and bring no progress to economic life, and even sometimes lead people into debts and misery. People in advanced societies spend their money on what they want and not on society needs. So they have more opportunities to save for security and old age. Above all, these people save money in form of investments such as buying bonds or depositing it in banks, which bring them profits and higher incomes. Through these savings the money is circulated in banks and business organizations and this in turn helps develop the economy. On the other hand, people in developing societies usually in rural areas save their money unwisely. They keep the money at hand or buy
land or gold. None of these methods bring them any profits. Hence, the money is not well circulated, business is not expanded, and the economy is not developed. Table 4.5 shows the methods of keeping the money of the people in Southern and Northeast Thailand.

Table 4.5 Methods of Keeping Money (in Percentage)\(^a\)

<table>
<thead>
<tr>
<th>Method</th>
<th>Northeast Saraphi</th>
<th>Southern Pattani, Yala, Narathivas, Satul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Deposit</td>
<td>0.6</td>
<td>32</td>
</tr>
<tr>
<td>Govt, Bond</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>Keep at Relatives</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Keep at Home</td>
<td>99.0</td>
<td>35</td>
</tr>
<tr>
<td>Buy Gold’s Valuables</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Lend Out</td>
<td>0.4</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>--</td>
<td>13</td>
</tr>
</tbody>
</table>

\(^a\)Janlekha, Saraphi, p. 48; and Janlekha, The Study of Economic and Social Condition of the People in the Southern Thailand, p. 59.

Religion plays an important role in the culture. In the villages of the four Southern provinces of communal living, religious belief has more influence than traditional belief, which includes Thai folklore, i.e., ghosts, spirits, etc. The villagers still believe in ghosts and spirits, but
they do not openly practice these things for they are ashamed and feel that these things are not up-to-date like believing in the Muslim religion. The officials in the Islam religion are the Iman—a villager who is respected by villagers because he is a good person and has knowledge of religious activities. The religion also plays an important role in classifying the people. They are: (1) common villagers—the ones who observe the basic regulations of the religion; (2) tak fa'khir—a person who has studied the religion at the elementary level; (3) lower class Haji—a person who has taken the pilgrimage to Mecca but who is not a real learned man in the religion; (4) orang alim—a person who has studied the religion at a religious school for more than ten years and has taught other people, but he has not yet made a pilgrimage to Mecca; (5) higher class Haji—a real learned man in religion; (6) imam—religious official of the village; and (7) tok guru—a person who can teach about the religion or a higher level and has enough students to establish a school. To be a Tok Guru is the goal for the people which takes not less than ten years. The villagers, therefore, do not see primary education in a non-Thai speaking village as being valuable. They encourage their children to learn their religion. Table 4.6 shows the distribution of religious affiliation by provinces. In

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Moslems</th>
<th>Buddhists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattani</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Yala</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>Narathivas</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>Satul</td>
<td>61</td>
<td>39</td>
</tr>
</tbody>
</table>


the villages of the Northeast, Buddhism is the most important religion and belief system of the villagers. The Buddhist community in the villages centers around the wat which is under the charge of the abbot, the priests, and a lay committee appointed from the villagers. More than 90% of the population in this region is Buddhist.11

Communication plays a very important role in communal living. It has become more and more important in helping develop human knowledge, technology, skill, administration, as well as economic, social, cultural, and political organization and development. The level of community

development can be measured through the level of communica-
tion existing in that commune. If the communication system
(such as mass media, newspapers, interaction among indi-
viduals, etc.) is poor, the commune is poor. Communication
development is the result of education, economic, social,
cultural, and political development. Such developments are
the basic requirements for communication developments and
vice versa. In fact, communication is the most important
factor in overall development, because it is the tool to
understand and to participate in any human activities.

The author believes that the greater the degree of
participation, the higher the level of development.
Communication helps develop education, agriculture, industry
through the transmission of knowledge from one to another
and from generation to generation. In the highly developed
countries, new media play a very important role in human
development. Newspaper, radio, and television are the
sources of knowledge and the learning institutions. New
products and technology are introduced through communication
channels. Social, cultural, and political development are
also transmitted through communication mechanisms. To
fulfill overall development, the government, therefore, must
develop its communication system in order to facilitate
development. In the history of the world, "Political
democracy, economic opportunity, free public education, the
industrial revolution, and mass communication were all
woven together to make a great change in human life and society on several continents."

The percentage of households with radios is 10.50 in the Southern and 24.74 in the Northeastern Thailand. In the rural areas of both regions, people are able to receive news by radio broadcasting of Thailand in Northeast and radio broadcasting of Thailand and Malasia in Southern. Newspapers are not a very common media at the village level because people can not read. Formerly, there were many mobile commercial movies which were very popular among villagers but now the government does not permit such mobile movies to be shown in the village. However, the USIS mobile units have a greater occasion to bring in news to the village but they are academic, not entertaining movies.

In order to improve communication in the villages, the government should: (1) permit mobile commercial movies again and provide the better methods to control the behavior of the audiences and the selection of the movies, (2) extend the educational system from pathom 4 to pathom 7 (grade 7) in every village, (3) send CD workers (government workers)


officials) to stay with the villagers to introduce the concept of participation, (4) provide and increase funds for road construction as other alternative program in the rural areas, and (5) provide and promote recreational activities because recreation is a good tool to pull the people together.

Health

Health plays an important role in developing the community. There must exist at least one secondary health center in a village (health centers of Thailand are divided into two categories, namely: primary health centers and secondary health centers). The problems of health conditions in rural Thailand can be summed up into three items: lack of health center, doctor and nurse, lack of equipment, and lack of knowledge of health of the people. There are 82 provincial hospitals with a total of 7,200 beds in 68 provinces (excluding Bangkok and Thonburi), 2,169 health centers (233 as primary health centers and 1,936 as secondary ones). Of the 34.1 million people, 29.3 million people live in the provincial areas. The lack of physicians and nurses depends upon two factors: brain drain and inadequate medical students. The aspects of brain drain can be viewed as either "pro" or "con." The

"pro" thinks that most physicians and nurses go abroad for the average of five to six years and, then return to the country with special knowledge which brings benefits to the country. The "con" argues that the outgoing of physicians each year costs a great loss to the country since a large amount of overhead capital has been invested for training these physicians and nurses. For Thailand, the problem of physician and nurse brain drain is a real thing and getting more serious. It should be negative rather than positive. Table 4.7 shows the number of physicians and nurses left and returned to Thailand. This figure shows that the number of physicians and nurses leaving the country has doubled. It is an important cause of poor health condition which in return affects the CD of the country. Fertility and mortality rates are also high in Thailand. Table 4.8 shows the fertility and mortality rate in some provinces of Thailand. In a CD project (health program), we cannot include a physician as an input to our project because of the lack of physicians as described above.

Education

Above all, education is very important because it is the key to knowledge, to acquiring new skills and trainings, to solving problems, to democracy and political stability, to making change, and to acquiring a better standard of living. Without education, there will be no meaningful change.
Table 4.7 Number of Physicians and Nurses Left and Returned to Thailand, 1965-1969\(^a\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Physicians Left</th>
<th>Physicians Return</th>
<th>Physicians Difference</th>
<th>Nurses Left</th>
<th>Nurses Return</th>
<th>Nurses Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>277</td>
<td>91</td>
<td>186</td>
<td>153</td>
<td>35</td>
<td>118</td>
</tr>
<tr>
<td>1966</td>
<td>337</td>
<td>101</td>
<td>236</td>
<td>200</td>
<td>30</td>
<td>170</td>
</tr>
<tr>
<td>1967</td>
<td>281</td>
<td>173</td>
<td>108</td>
<td>250</td>
<td>102</td>
<td>148</td>
</tr>
<tr>
<td>1968</td>
<td>616</td>
<td>337</td>
<td>279</td>
<td>573</td>
<td>142</td>
<td>431</td>
</tr>
<tr>
<td>1969</td>
<td>654</td>
<td>285</td>
<td>369</td>
<td>630</td>
<td>134</td>
<td>496</td>
</tr>
<tr>
<td>Total</td>
<td>2,165</td>
<td>978</td>
<td>1,178</td>
<td>1,806</td>
<td>443</td>
<td>1,363</td>
</tr>
</tbody>
</table>


Table 4.8 Fertility and Mortality Rates in Satul, Narathivas, and Nakhon Ratchasima, 1970\(^a\)

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Fertility Rate/1000 Persons</th>
<th>Mortality Rate/1000 Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satul</td>
<td>31</td>
<td>6</td>
</tr>
<tr>
<td>Narathivas</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>Nakhon Ratchasima</td>
<td>31</td>
<td>5</td>
</tr>
</tbody>
</table>

\(^a\)National Statistic Office, Office of the Prime Minister, Statistic Yearbook, Thailand, No. 20, 1970-1971, pp. 80-83.
was mentioned earlier, the villagers are poor, ignorant, and primitive. This is because of the failure of the educational program. The government, therefore, has to set up an urgent plan for educational development to lift up the standard of education. Primary education should be made compulsory and extended to seven years. We have to motivate them to change and encourage them to accept what is necessary. No one should be left uneducated. CD Department must take strong action to improve education by all means. At the same time, educational programs must be planned carefully and effectively.

Education in the villages of the Southern region may be classified as follows: (1) informal education—the socialization of children by their parents, children will be taught about rubber production, farming and other easy traditional occupations; and (2) formal education—primary school where Thai language is taught and Pondok school where religion is taught in Malay language. Problems of education in the villages are as follows:

1. People are not interested in learning and have no opportunity to use the language because no one in the village speaks Thai.

2. The children have to spend their nights practicing reading the Koran as the preparation for studying the religion at Pondok.

3. Some people are not willing to allow their children to speak Thai, for they are afraid of their children deviating from the ancestors' culture.

4. There are not schools in every village, and parents are unwilling to send their children to a school in another area.

5. Some modern books used in Thai schools are objected to by Tok Guru.\textsuperscript{17}

These problems are the obstacles to community development. CD Department, therefore, should send the CD workers who can speak Thai-Malay to work with them, to encourage and motivate them to realize the importance of education. A primary school should be established in every village. There should be sufficient teachers and school facilities.

The problems which arose in the Northeast region are mainly the same as the Southern except the religion problem. The people see no value of education. The people have to send their children to the school at another village, about five miles away.\textsuperscript{18}

\textsuperscript{17} Ibid., pp. 27-29.

\textsuperscript{18} Janlekha, Saraphi, p. 15.
The term "personnel" according to the Administration and Supervision Dictionary means,

A field, aspect, and technique of administration which is concerned with 1) the selection, organization, development, or control of human resources, and 2) the improvement of working conditions in order to accomplish the primary goals, objectives, or functions of the organization with maximum efficiency and minimum expense.19

The trained CD worker or Patanakarn is the key government official on whom rests the success or failure of the program. Toward fulfilling the CD's objectives, the CD worker is supposed to live among the village people and therefore be able to work closely with them. There must be one CD worker in a village. He assists the villagers in organizing themselves more efficiently, in developing more effective local leadership, in identifying their basic needs and problems and in seeking the ways for solving them. He stimulates the people to adopt new technologies. In this way, not only economic and material benefits are produced, but local self-government and self-help capability are fostered and the national loyalty of the people is likely to be strengthened.

The CD workers may be classified into three types:

1. College graduates or equivalent. These CD workers are third-grade officers who graduated with a bachelor's degree or equivalent in the field of social science (such as Political Science, Social administration, Economics, Agriculture education, etc.).

2. TUFEC graduates. These CD workers graduated from Thailand-UNESCO Fundamental Education Center which belongs to the Ministry of Education. TUFEC trained CD workers from 1954 to 1961 prior to the establishment of the CD Department. They were specialists and worked in a team which consisted of six specialists (such as health, agriculture, housekeeping, rural artisan, social welfare, and education). These workers were transferred to the CD Department later with a rank of third grade officer, and assigned to work as generalists.

3. Fourth-grade CD workers. These CD workers are recruited from graduated students from vocational schools in various fields (such as carpentry, mechanics, construction, etc.). Generally, the fourth-grade CD workers come from rural
Table 4.9 shows the class and scale of salaries of civil servants (monthly).

Besides CD workers, there are college student volunteers from various fields who work during a summer as Patanakorn. They are not civil servants; they get per diem instead of salary.

Summary

This chapter gave the detailed information on the factors that affect community development. These factors are considered as effectiveness criteria in our study. The factors affecting community development are summed up into two categories, namely, social system and personnel.

Social systems are described as extended family, economic, communal, health, and education. Personnel system is described as CD worker or patanakarn which is a key government official. The CD workers are classified into three types, namely, college graduates or equivalent, TUFEC graduates, and fourth-grade CD workers.

When we talk about family, the concepts of extended family and nuclear family are described. In developing a community, the government should encourage the villagers to accept the concept of nuclear family.

Table 4.9 Scale of Salaries of Civil Servants\textsuperscript{a}

<table>
<thead>
<tr>
<th>Class</th>
<th>Grades</th>
<th>Salary Steps (Baht)\textsuperscript{b}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Class</td>
<td>1</td>
<td>540- 570- 600- 630- 660-</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>2</td>
<td>690- 720- 750- 780- 810-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>850- 900- 950- 1100- 1050-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1100- 1150- 1200- 1250- 1300-</td>
</tr>
<tr>
<td>Third Class</td>
<td>1</td>
<td>850- 900- 950- 1000- 1050-</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>2</td>
<td>1100- 1150- 1200- 1250- 1300-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1400- 1500- 1600- 1700- 1800-</td>
</tr>
<tr>
<td>Second Class</td>
<td>1</td>
<td>1300- 1400- 1500- 1600- 1700-</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>2</td>
<td>1800- 1900- 2000- 2150- 2300-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2450- 2600- 2750- 2900- 3050-</td>
</tr>
<tr>
<td>First Class</td>
<td>1</td>
<td>2750- 2900- 3050- 3200- 3350-</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>2</td>
<td>3500- 3650- 3800- 3950- 4100-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4250- 4400- 4600- 4800- 5000-</td>
</tr>
<tr>
<td>Special Class</td>
<td>1</td>
<td>4400- 4600- 4800- 5000- 5200-</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>2</td>
<td>5400- 5700- 6000- 6300- 6600-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>7000- 7400- 7800- 8200-</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>8600-</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Thailand, Civil Service System and Civil Service Commission (Bangkok: Mongkol Garnpim Press, 1972), p. 55.

\textsuperscript{b}20 Bahts = Approximately $1.
Economy of Thailand is underdeveloped due to the environmental factors. Its economy can be described in terms of labor force, income distribution, and migration effects.

Culture is the way of life, a belief and a mode of living. People in rural areas are backward and resistant to change. The methods of savings and spending show the culture of the rural people. They spend money unwisely and keep money ineffectively. Besides these, religion plays an important role in the culture. In the Southern part, people do not speak Thai. They do not see primary education as being valuable because they want their children to learn their religion in order to be a Tok Guru which is their ultimate goal. This retards the development of the community. However, in Northeastern Thailand, most of the people are Buddhists, thus, the religion does not retard the development of the community as in the Southern part.

Communication is also an important factor affecting community development, since communication is the tool of human interaction and the basic requirement for acquiring knowledge, skill and technology. Without the development of communication and education, change and development are impossible.

The lack of physicians and nurses is the main problem which creates poor health conditions in Thailand. Its causes depend upon two factors: brain drain and
inadequate medical students. Fertility and mortality rates also are high in Thailand.

Finally, education is very important because it is the key to knowledge, to acquiring new skills and trainings, to solving problems, to democracy and political stability, to making change. Primary school should be existing in every village. No one should be left uneducated.

For the purpose of illustration the application of cost-effectiveness analysis in a community development project, the factors that will be used as effectiveness criteria in making decisions are: (1) labor force (434 at Ra-ngae, 222 at Muang, and 722 at Saraphi); (2) income effects (-1,131 at Ra-ngae, -3,013 at Muang, and -852 at Saraphi); and (3) the willingness of the students in the participation of educational programs. These figures indicate how effective a project should be in terms of peoples' needs.
CHAPTER 5

DECISION APPROACH IN A COMMUNITY DEVELOPMENT PROJECT

This chapter is the literature review of major tools, namely, cost-benefit analysis and cost-effectiveness methodology. Cost-benefit analysis has been in existence for a long time as a decision tool in economic evaluation. Nevertheless, it possesses many fallacies and is subject to various criticisms. Cost-effectiveness has been recently proposed by Charles Hitch, McNamara, and Enthoven in the design of U. S. defense system.¹

Cost-Benefit Analysis

Cost-benefit analysis and cost-effectiveness have been incorporated into Planning, Programming and Budgeting (PPB)--a budgetary process to help the various governments operate with more efficiency and more effectiveness. Cost-benefit analysis has been a favorite tool for many government agencies and private sectors in making economic choices which involve investments and decisions. It implies the enumeration and evaluation of all relevant costs and benefits in monetary units. It was introduced by Jules

Dupuit (French engineer) in 1844. He attempted to measure the benefits and the costs of public works. In the 1930's, many American agencies (such as the Tennessee Valley Authority, the Corps of Engineers, etc.) employed cost-benefit analysis in their work.²

During World War II, various techniques of analysis were applied to national problems, for example, anti-submarine warfare. After World War II, a need for clarification arose because of the conflict among the Army Corps of Engineers, the Bureau of Reclamation, the Soil Conservation Service, and the Tennessee Valley Authority in their project evaluation. The Bureau of the Budget began enforcing Circular A-47—a document for project appraisal issued by the Bureau.³ The conclusion reached in A-47 was that a program or project for authorization or funding had to have a cost-benefit ratio greater than one in terms of tangible benefits and tangible costs.

In general, cost-benefit analysis has been concerned mainly with the measurement of national economic development effects. It emphasizes methods of evaluating projects individually rather than by a comparison of alternatives for

³ Ibid., pp. 10-11.
attaining a given goal. It is a method which requires comparing benefits and costs in terms of dollar values.

In cost-benefit analysis is imbedded the idea that benefits should be measured, and should exceed costs in order for a project to be justified. Its purpose is to help determine both the size of the agencies' budgets, or the number of projects, and the particular projects that are to be undertaken.⁴

Cost-benefit analysis is a method of evaluating a project or projects. It involves:

1. The enumeration of all costs and benefits expected from each project in terms of common monetary units.
2. A comparison of the costs and benefits over time.

Since cost-benefit analysis depends upon the ability to quantify costs and benefits, it loses power if the problems concern intangibles and externalities because they cannot be transformed to money equivalents. Some costs and benefits (such as the grief or happiness of people arising from the construction of a dam) cannot be quantified. Such costs and benefits have been called

intangible costs and benefits. Some projects (alcoholism treatment) bring benefits to the individuals who participate in the program, but society at large also benefits (as in the form of reduced crime and fewer automobile accidents). These effects are considered as externalities. Some projects, like education and community development, are difficult, sometimes impossible, to evaluate in terms of dollar values.

The use of cost-benefit analysis or ratios in economic evaluation of projects has been subjected to much criticism. Using a ratio criterion for comparison of alternatives is a common fallacy which is illustrated in Table 5.1. This illustration is taken from McKean.

In this illustration, each project requires the same investment ($100,000). It is seen that by using ratio criteria expressed either as the ratio of present value of benefits to present value of costs or the ratio of mean annual benefits to mean annual costs, Project B has an advantage over Project A. Nevertheless, Project A would


### Table 5.1 Benefit-Cost Ratios as Criteria

<table>
<thead>
<tr>
<th></th>
<th>Project A</th>
<th>Project B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Each Year's Benefit</td>
<td>70,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Each Year's Expense</td>
<td>50,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Present Value of 20-year cost stream-discounted at 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial investment</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Recurring costs</td>
<td>623,000</td>
<td>723,000</td>
</tr>
<tr>
<td>Present value of 20-year Benefit stream-discounted at 5%</td>
<td>872,200</td>
<td>249,200</td>
</tr>
<tr>
<td>Ratio of present value of benefits to present value of costs</td>
<td>1.21</td>
<td>1.54</td>
</tr>
<tr>
<td>Mean Annual Costs(^b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[\frac{100,000 + (20 \times 5,000)}{20}]</td>
<td>--</td>
<td>10,000</td>
</tr>
<tr>
<td>[\frac{100,000 + (20 \times 50,000)}{20}]</td>
<td>55,000</td>
<td>--</td>
</tr>
<tr>
<td>Mean Annual Benefits</td>
<td>70,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Ratio of mean annual benefits to mean annual costs</td>
<td>1.27</td>
<td>2.00</td>
</tr>
<tr>
<td>Increase in present worth (Present value of benefits minus present value of costs)</td>
<td>149,100</td>
<td>86,900</td>
</tr>
</tbody>
</table>

\(^{a}\)McKean, Efficiency in Government Through System Analysis, pp. 111-112.

\(^{b}\)The method of calculating "annual values" is not correct procedure, as it gives future benefits and costs the same weight as initial benefits and costs; the calculation is shown here because the method is often used.
increase net benefit almost twice as much as Project B on a present worth basis.

The method of calculating "annual values" in Table 5.1 is not a correct procedure because of the time value of money concerned. The value of money in the future is not worth as much as the value of money right now, so we cannot give future benefits and costs the same weight in value as initial benefits and costs. We have to bring their values (in the future) back to the present in calculating the result. Its value depends upon the interest rate chosen for discounting.

Table 5.2, excerpted from lecture notes of Professor Willard T. Price, 8 will illustrate the time value of money.

Table 5.2 illustrates the difference between annual values and present values. If we use annual-values, the money value of all alternatives through the third year is equal. Thus, if someone asks which alternative do you want, you can choose any alternative because of the same result ($1500). However, the value of money at the second year and third year is not equal to present value. Converting present values at a discount rate of 5%, alternative A seems to be the best one.

It is a major limitation of cost-benefit analysis that it recognizes only a sole objective (maximizing

8. Price, Lecture of Problems in Public Administration,
Table 5.2 Time-Value of Money\textsuperscript{a}

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Annual Values</th>
<th>Present Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$t_0$</td>
<td>$t_1$</td>
</tr>
<tr>
<td>A</td>
<td>$600$</td>
<td>$500$</td>
</tr>
<tr>
<td>B</td>
<td>$1500$</td>
<td>$1500$</td>
</tr>
<tr>
<td>C</td>
<td>$300$</td>
<td>$500$</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Price, Lecture of Problems in Public Administration.
monetary income). As McKean comments along this line:

Our partial criterion can only tell us which projects are "efficient." By itself, this test cannot tell us which position is best in any ultimate sense. . . . Hence it is deemed appropriate here to have the cost-benefit measurement shed light on efficiency in this limited sense, and to have further exhibits shed light on redistribution effects.\(^9\)

He further suggested that decision makers be provided as well with "descriptions" of benefits (and costs, if appropriate) for each alternative project design that was analyzed. McKean's statements essentially stress that selection of alternative projects, lists of money-valued benefits, and non-commensurable effects should be presented openly to the decision-makers.

Hatry\(^10\) comments on the limitations of cost-benefit analysis as follows:

1. It is defined in the limited sense of translating program effects into monetary, dollar, terms.

2. Key value concerns (such as value of human life, the political decision-making process) get ignored completely.

3. The distributional effects are usually ignored in cost-benefit analysis because the program benefits,

---


and the negative effects of proposed programs, seldom, if ever, will be spread evenly over population subgroups. Program-selection problems should give explicit consideration to how each program alternative affects each of the various significant population subgroups.

Dupnick and Duckstein also comment on the weaknesses of cost-benefit analysis as follows:

1. The difficulty in identifying which costs and benefits are to be included and how they are valued.
2. The monetary evaluation of qualitative factors.
3. The ineffectiveness in consideration of only a single alternative.
4. Cost-benefit analysis is less useful where great uncertainties exist.

The advantages of cost-benefit analysis are limited. It makes the decision-makers make final decisions easily by looking at numbers. It forces the doer to quantify costs and benefits as far as possible. It is conceptually powerful but weak in application because of need for quantifiable criteria.

Cost-Effectiveness Analysis

Cost-effectiveness is a very broad term; the term may create the impression that it is a new discipline because the people strongly believe in cost-benefit analysis. However, cost-effectiveness is an extension of an old discipline, namely, engineering economic analysis in which alternative plans are sought and compared.\textsuperscript{12}

Following World War II, the field of operations research provided a greatly expanded viewpoint of economic assessment. Multi-valued systems were widespread among the people. Strong impetus was given to the need for economic evaluation of systems by Charles Hitch, Assistant Secretary of Defense. A realization of the need for the appropriate economic assessment of a defense system was brought into consideration. It is worth noting that cost-effectiveness emphasizes the necessary discipline that will serve as a basis for decision making. The people who were concerned with application of cost-effectiveness in defense systems were McNamara, Hitch, and Enthoven. The main purpose of such applications was to identify the most effective of a set of alternatives to meet given goals, for example the number of targets destroyed, with consideration of cost of implementation. One of the advantages of this technique is

---

that the word "effectiveness" has a powerful meaning in itself; it does not necessarily require an evaluation in terms of monetary units.\textsuperscript{13}

Applications of this methodology to public and civilian systems have emerged in recent years. Hatry defines the terms "output measures," "evaluation criteria," "measures of effectiveness," and "program effects" as being synonymous and suggests general measures of effectiveness of non-defense public programs such as health, highway safety, etc.\textsuperscript{14} In addition, he discusses three inadequate approaches to criteria often used by government. The first one stems from the assumption that effectiveness is either not measurable at all or is not needed. This assumption is implied by the use of program cost estimates to reflect the program's degree of effectiveness. Thus, if one program alternative calls for expending ten per cent more than another, it does not necessarily follow that this program alternative will yield ten per cent more benefits. The second inadequate approach arises from the use of workload measures and physical standards which ignore vital questions. An example is one commonly used by the Department of Agriculture for cattle inspection programs: "the number of health-cases examined" as a measure of output. As

\begin{itemize}
  \item \textsuperscript{13} Ibid., pp. 2-4.
  \item \textsuperscript{14} Hatry, "Measuring the Effectiveness of Non-Defense Public Programs," p. 772.
\end{itemize}
indicators of workload, these are clearly useful. But these measures say little about the effectiveness of these programs, since they ignore such vital questions as: How effective will the health examinations be? What would be the effects on citizens if the programs were reduced or increased? The third one concerns translating of each program effect into a common unit of measures that one expressed in different units into a single overall index of worth alternatives. It should be noted that the inappropriate approach is imbedded into cost-benefit analysis.

Carpenter and Haggart also introduced cost-effectiveness analysis into educational programs because cost-effectiveness analysis is a tool that can help the planner in relating the resources required by an educational program to its effectiveness. It also is a technique for comparing programs, For example, in improving pupil performance, which program, in-service teacher training program or improvement in reading program, is better.  

Cost-effectiveness analysis is defined by Quade as "any analytic study designed to assist a decision-maker in

15. Ibid., pp. 773-775.

identifying a preferred choice among alternatives.\textsuperscript{17} The cost is the dollar cost of personnel, facilities, equipment, materials, and so on that are consumed to effect the project. The word "effectiveness" denotes that we do not attempt to express every economic factor in monetary units.\textsuperscript{18} However, the purposes of cost-effectiveness is to find the one alternative course of action that will attain the objective at least cost to seek the optimal in an optimal way.

Cost-effectiveness analysis is considered here as a methodology in making a decision. As Quade describes: "Cost-effectiveness analysis is something a man has always practiced when he buys an automobile, or plans a vacation, or builds a house."\textsuperscript{19} He will look at various kinds of automobiles by comparing their costs against effectiveness (in terms of color, speed, safety, etc.), and then make a decision based on his judgment of the specifications of the automobiles.


Quade also mentioned five fundamental components of cost-effectiveness as follows:

1. The objective (or objectives): Cost-effectiveness is an aiding tool in choosing a policy of action. It is an attempt to discover the objectives of the decision-maker in attaining his policy, in terms of comparing and choosing on the basis of how well and how cheaply an objective can be obtained.

2. The alternatives: The alternatives are the means of attainment of defined objectives.

3. The costs: Cost, according to Webster, is "the amount of money, time, labor, etc. required to get a thing; price; expenditure." Cost is not limited to money; it will include intangible or external costs.

4. A model (or models): A model represents the features of the situation relevant to the question being studied (e.g., mathematical model, tabular model).

5. A criterion: A criterion is a rule or standard to rank the alternatives in order of desirability and choose the most promising. The ranking of several


criteria is often purely subjective. It provides a means for weighing cost against effectiveness. Figure 5.1 shows the structure of analysis.

Cost-effectiveness suffers from the absence of a standardized mathematical structure. Quade notes that if the assumptions and chain of logic are made explicit, others can use the information to introduce their own considered opinions.22

Kazanowski offers ten steps which constitute the primary standardized approach to the conduct of cost-effectiveness which will be discussed. He also comments that one of the most common pitfalls in the evaluation of alternative systems may be termed the ranking-weighting-utility fallacy, which is lumping of project effects into a common unit or index, because this is generally the sequential pattern of commission.23 Because of the ranking-weighting-utility fallacy, Kazanowski presents "the fixed-cost and fixed-effectiveness approach instead of ranking-weighting techniques."24


24. Ibid., pp. 126-129.
Figure 5.1 The Structure of Analysis -- From Quade, "Systems Analysis Techniques for Planning-Programming-Budgeting," p. 196.
The application of the cost-effectiveness analysis seems to be better fitted to problems for which the evaluation of benefits have proved difficult. No literature has been found to indicate that if benefits can be measured in monetary units then the cost-benefit analysis should be applied. Besides other measures of effectiveness, each benefit can be qualified as a measure of effectiveness.25

Cost-Benefit and Cost-Effectiveness—
A Contrast

Haldi indicates some differences between cost-effectiveness and cost-benefit studies: "Cost-Effectiveness differs from cost-benefit studies in that (1) certain basic objectives are taken as given and (2) no attempt is made to quantify all benefits in dollars cost."26

Alkin points out the distinctions between cost-benefit analysis and cost-effectiveness evaluation as applied to educational programs: "Cost-benefit analysis relies almost exclusively on financial benefits and is,

25. Ibid., p. 122.

therefore, of limited value in assessing education, where many outcomes cannot be defined economically."\textsuperscript{27}

Dupnick and Duckstein\textsuperscript{28} summarize the differences and similarities in terms of (1) general techniques and (2) pitfalls and fallacies associated with each approach.

Some difference and similarity of general techniques of cost-benefit and cost-effectiveness studies are as follows:

1. Structural and marginal transformation. Both techniques deal with structural transformations. For example, structural transformation of cost-benefit in general is to build or not to build a highway while structural transformation of cost-effectiveness in general is to build a highway or to build a rapid transit. Cost-effectiveness may concern itself with marginal transformation (e.g., increasing a highway capacity by five or 10 per cent) while cost-benefit analysis ignores this technique.

2. Externalities. Due to the fact that in conducting cost-benefit analysis, such costs and benefits have


to be transformed into money equivalents, this method cannot include externalities because some costs and benefits cannot be quantified. But cost-effectiveness can include externalities because it allows quantitative as well as qualitative methods.

3. Social science applicability. Cost-effectiveness can adapt to diverse projects (engineering projects as well as social welfare projects). It includes social science criteria because it does not require a single unit measurement, while cost-benefit often cannot include social science criteria because they are not measurable.

4. Uncertainty. Cost-benefit analysis makes no systematic allowance for uncertainty, while cost-effectiveness can include uncertainty.

5. Alternative solutions for comparison. Both techniques need alternative solutions for comparison.

6. Goal specification. Goal specification is very important to every project. Both techniques need goal specification.

Some differences and similarities of pitfalls and fallacies are as follows:

1. Omission pitfall. Both techniques cannot include every criteria,
2. Ratio fallacy. Ratio between major criteria are calculated and the alternative that has the best ratio is selected. This fallacy is encountered in cost-benefit analysis.

3. Weighting fallacy. The use of weighting factors to relate or weigh the significance of various criteria. This fallacy is encountered in both cost-benefit analysis and cost-effectiveness analysis. Table 5.3 shows the example of weighting fallacy. In this example, if we add criteria weights, alternative B is better than alternative A, while alternative A is better than alternative B if we multiply criteria weights.

Table 5.3 Weighting Fallacy

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Criteria Weights</th>
<th>Added</th>
<th>Multiplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6  4  3  2</td>
<td>15</td>
<td>144</td>
</tr>
<tr>
<td>B</td>
<td>9  3  2  2</td>
<td>16</td>
<td>108</td>
</tr>
</tbody>
</table>

4. Sole criterion fallacy. A single criterion is selected for the basis of the evaluation.
world is seldom this simple). This fallacy is encountered in cost-benefit analysis.

5. Quantification fallacy. The assumption is made that every criterion pertinent to the evaluation or decision may be quantified. This fallacy is encountered in cost-benefit analysis.

6. Inter-relationship fallacy. It is assumed that all of the significant criteria can be related to, and expressed in terms of one super criterion and that the evaluation can be made on that basis (i.e., sole criterion fallacy). This fallacy is encountered in cost-benefit analysis.

7. Definition fallacy. The key problems of an economic evaluation are defined away as being irrelevant to the study. For example, if a major unquantifiable consideration bears on the evaluation, then it will be defined away as being irrelevant to the study. This fallacy is encountered in cost-benefit analysis.

Tables 5.4 and 5.5 show the comparisons of both analyses.

**Standardized Cost-Effectiveness**

It is observed from various references that each individual seems to have different procedures in performing cost-effectiveness analysis. However, cost-effectiveness
Table 5.4 Comparisons of General Techniques of Cost-Benefit and Cost-Effectiveness<sup>a</sup>

<table>
<thead>
<tr>
<th></th>
<th>Cost-Benefit</th>
<th>Cost-Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Transformations</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Considers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marginal Transformations</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Includes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externalities</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Adaptability to Diverse Projects</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Social Science Applicability</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative Solutions for Comparison</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Can Include</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Needs Goal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specification</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 5.5 Comparisons of Pitfall and Fallacies of Cost-Benefit and Cost-Effectiveness<sup>a</sup>

<table>
<thead>
<tr>
<th></th>
<th>Cost-Benefit</th>
<th>Cost-Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omission</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pitfall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio-Fallacy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ranking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fallacy</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sole Criterion</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fallacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantification</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fallacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-relation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fallacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definition</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fallacy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

analysis is always considered as a methodology to aid in making a decision. In this method, the criteria can be expressed both in present and future measurements (buying automobiles as an example). The standardized cost-effectiveness approach proposed by Kazanowski²⁹ seems to be very appropriate to our study because it is a good tool to assist decision-makers. It is described as follows:

Step 1: Define the Desired Goals

The purpose of cost-effectiveness evaluation is to identify the best system for achieving the specified goals. For example, a governmental agency might conduct an evaluation to determine the most desirable smog control device for automobiles. Similarly, the agency also may want to evaluate the comparative systems of expending funds for air pollution versus water pollution. To perform a meaningful evaluation of alternative systems, it is significant first to establish the specific goals that are desired. The analyst must examine the desired goals to be certain that they are a cohesive, logical, and unambiguous entity.

Step 2: Identify Mission Requirements

In order to attain the desired goals, we should identify the requirement in meeting the defined goals. This will reduce the bias in the evaluation step. For

example, in hiring and selecting typists, we have to specify the fixed requirement (such as eighty words per minute). The expression of mission requirements could portray in a more meaningful way what is actually desired in order that the goal should be reached. The identification of mission requirements that are related to the goals requires judgment sharpened by experience. Obviously, the omission of significant mission requirements will result in an invalid conclusion.

Step 3: Develop Alternative Systems

After the mission requirements have been identified, the next step is to develop alternative systems that can meet the goals. To conduct a meaningful evaluation, at least two distinct alternative systems must be conceived and considered. A basic implication in cost-effectiveness evaluation is that the best alternative system is being sought.

Step 4: Establish System Evaluation Criterion

In accomplishment of the mission requirements, system evaluation criteria must be established. Under evaluation criteria and their relationship to goals, we have to consider cost versus effectiveness. Under program cost, we might view in terms of cost to accomplish specified mission or resources required. Such cost may be characterized into direct, indirect, and external costs. Under
effectiveness, the criteria to identify and evaluate may be expressed in terms of performance, economy, safety, accuracy, flexibility, security, political, GNP, etc. The unit used in effectiveness criteria can be expressed in any kind of unit (such as number, speed, ton-miles/hr., range, percentages, good-gad, etc.). The selection of appropriate and adequate criteria are based on judgment augmented by experience or comprehensive participations. The omission may result in a less meaningful decision. However, the inclusion of numerous criteria (10 or more) can result in mental paralysis. The greater the number of criteria, the greater the probability that the evaluation will be very difficult, if not impossible.

Step 5: Select Fixed-Cost or Fixed-Effectiveness Approach

The choice between fixed-cost or fixed-effectiveness is necessary in analysis. In the fixed-cost approach the basis for selection between alternatives is the amount of effectiveness obtained for a given expenditure of resources. In the fixed-effectiveness approach, the selection criterion is the amount of cost incurred or resources required to obtain a given level of effectiveness. This step will eliminate various weighting techniques.
Step 6: Determine Capabilities of Alternative Systems

Once the appropriate criteria have been identified, the next step is to express capabilities of alternative systems in terms of evaluation criteria, quantitatively and qualitatively.

Step 7: Generate System Versus Criteria Array

This step is to establish the techniques in evaluation cost-effectiveness within fixed-cost or fixed-effectiveness approaches. Kazanowski presented two different approaches: (1) model approach applying mathematical effectiveness model in calculating cost and effectiveness in the case that they are quantifiable and commensurable criteria; and (2) tabular display approach—arrange cost and effectiveness in tabular array for evaluation. Figure 5.2 shows a tabular array for cost-effectiveness evaluation. In generating the criteria, it should be noted that decisions are usually based upon relatively few considerations in order to avoid mental paralysis. In selecting the criteria, therefore, the analyst should select relatively few criteria (not more than six criteria). In selecting few criteria, value judgments are concerned. Analysts as well as key people and experts are significant in this process. In most evaluations, both quantifiable and unquantifiable criteria must be considered in order to arrive at valid conclusions.
<table>
<thead>
<tr>
<th>System</th>
<th>Total $</th>
<th>Capital Cost</th>
<th>Operating Cost</th>
<th>Intangible Cost</th>
<th>Effectiveness Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AAA BBB CCC DDD EEE</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 5.2 Format for Tabular Array for Cost-Effectiveness Evaluation
Step 8: Analyze Merits of Alternative Systems

After the systems are arranged in order of their important criteria, the next step is to eliminate the poorer criteria and focus attention on the important ones. For example, the poorer criteria in our study may be the types of families. This step could be argued because it is highly subjective. In reality, value judgments usually portray the realities of the situation much more accurately than the use of numerical values alone. Enthoven also supports value judgments as the part of the analyst:

... value judgements are an integral part of the analysis; and it is the role of the analyst to bring to light for the policy-maker exactly how and where value judgements enter so that the latter can make his own value judgements in the light of as much relevant information as possible.\(^\text{30}\)

However, in eliminating the poorer criteria, the analyst can ask key people or experts because these people are very important in conducting cost-effectiveness analysis.\(^\text{31}\)

Step 9: Perform Sensitivity Analysis

Sensitivity analysis is the process of re-evaluating or modifying different values of the variables


to see how sensitive the solution is. It should be performed in order to determine how dependent the results are upon variable measurements. It is a systematic testing tool to see how uncertainty affects the criteria.

Step 10: Document Bases of Previous Nine Steps

This is the last step. Cost-effectiveness evaluation is incomplete without a detailed document which expresses its purpose, assumption, and methodology. No prudent decision maker makes a decision based on blind trust. Documents should be lucid and clear.

Summary

In this chapter, we presented the major tools, namely, cost-benefit analysis and cost-effectiveness methodology. Cost-benefit analysis is a method in evaluation of a project or projects. It involves the enumeration of all costs and benefits expected from each project in terms of common monetary units and the comparison of the costs and benefits. Cost-effectiveness analysis is any analytic study designed to assist a decision-maker in identifying a preferred choice among alternatives. It is a method to find the one alternative course of action that will attain the objective most effectively.

Moreover, we drew the distinctions between cost-benefit analysis and cost-effectiveness methodology.
Cost-benefit analysis has been subjected to much criticism (as McKean, Hatry, Dupnick, and Duckstein, etc.\textsuperscript{32}) because of its limitations. For example, the difficulty in which costs and benefits are to be included and how they are valued, the monetary evaluation of qualitative factors, neglect of the various significant population subgroups, etc. It relies almost exclusively on financial benefits and is, therefore, of limited value in assessing a project, where many outcomes cannot be defined economically. Cost-effectiveness analysis is useful in comparing means to effecting desired results by using multiple viewpoints, not all of which need be expressed in monetary units. It seems to be better fitted to problems for which the evaluation of benefits have proved difficult. Numerical figures alone cannot give reasonable judgment; we have to use a more subjective method.

It is observed from various references that each individual seems to have different procedures in performing the cost-effectiveness analysis. The standardized approach proposed by Kazanowski\textsuperscript{33} seems to be very appropriate to our study and is repeated as follows:

1. Define the desired goals.
2. Identify mission requirements.

\textsuperscript{32} Each as previously cited.

3. Develop alternative systems.
4. Establish system evaluation criterion.
5. Select fixed-cost or fixed-effectiveness approach.
6. Determine capabilities of alternative systems.
7. Generate system versus criteria array.
8. Analyze merits of alternative systems.
10. Document bases of previous nine steps.
CHAPTER 6

APPLICATION OF STANDARDIZED COST-EFFECTIVENESS APPROACH

The review of cost-effectiveness analysis gives a perspective on applications of cost-effectiveness methodology in various fields. However, this extension of the methodology to a community development project may be the first of its kind. The standardized cost-effectiveness approach proposed by Kazanowski and the various limitations associated with the traditional cost-benefit analysis provide argument for judging its appropriateness. Another positive feature is that the approach can be applied in many locations of interest. However, the standardized approach can only give a guideline; therefore, an illustration is necessary. The purpose of the thesis is to present a technique for choice of a community development project in accordance with the cost-effectiveness approach. It should be noted that the illustration here deals with long range costs and effectiveness criteria under existing conditions for making decisions in choosing the alternative system only. However, the effectiveness criteria here will be useful in post-evaluation.

Community development is a broad project, and each country develops its communities differently according to
the people's need. For Thailand, it is obvious from the previous chapters that education and health seem to be the main problems that need to be solved. Therefore, the author will hypothetically develop a community by (1) establishing the primary school and secondary health center and (2) providing CD workers. The problem is in which area of Thailand such a community development project could most effectively be carried out. Thus a fixed budget approach will be employed. The locations which will be evaluated are Ra-ngae, Muang, and Saraphi.

Backgrounds of Locations in Illustration

Backgrounds of Ra-ngae and Muang

Ra-ngae and Muang are the villages in Narathivas and Satul provinces with the populations of 759 and 412 respectively. Both villages are located in Southern region of Thailand. A majority of the village people are Moslems, and speak Malay in daily life. The people do not know Thai. About thirty per cent of the people in Narathivas use the Thai language while more than ninety per cent of the Moslems in Satul use the Thai language. Rural villages in the Southern provinces may be classified into three types: (1) fishing villages, (2) rice cultivation villages, and (3) para-rubber villages. A group that is a center of communication is usually equipped with a public pavilion, a coffee shop, a grocery shop, and a Suraw, a mosque where
the people will come to pray together every Friday afternoon and on various other occasions. Not every house has its own well. A well-to-do villager may have his own sanitary well near his house, while poor villagers may have to take water from their neighbor's wells. There are no formal schools in those villages; no public health center in those areas. The distances from the nearest medical establishments are 74 km for Ra-ngae and 30 km for Muang (1.6 km = 1 mile). The sick usually treat themselves by taking drugs brought from town.¹

**Background of Saraphi**

Saraphi is one of the villages in Nakhon Ratchasima province—Northeast Thailand. The population is 1,443 persons. A majority of the village people are Thais. The economy of that area depends upon rice, pigs, and kapok. Resources of water for home use are ponds that are provided by the government at the center of the village. There is no permanent school building. They use Salawat building as a school for their children. There is no public health center. Distance from the nearest medical establishment is 58 km. Malnutrition and malaria are the two principal illnesses.²

From the standpoint of the thesis, reasons for selecting the above areas are:

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1. Information on the said areas is massive because the research reports were already done by the community development department and some concerned agencies.

2. Those areas are included in the area coverage projects launching program.

3. Ra-ngae and Muang are sensitive areas where the government pays more attention because those areas are located near Malaysia and the people want to separate themselves to Malaysia.

4. Saraphi is sensitive area in the sense of depression from Communist invaders.

It should be noted that in performing the cost-effectiveness analysis, it is not necessary to follow all ten steps in order. The necessary steps should be taken first. The order followed in this thesis is: Steps 1, 2, 3, 6, 4, 7, 5, 8, 9, and 10 of the standardized approach. Since the choice of a fixed-cost or fixed-effectiveness approach depends upon merits of alternative systems, steps 5 and 8 should be combined in one step in the decision-making process.

**Standardized Cost-Effectiveness Approach**

**Step 1: Define the Desired Goals**

This step is necessarily the first one. The goals of the community development in Thailand as stated by
Ministry of Interior Regulations on CD Planning B.E. 2510 are as follows:

1. Promotion of production in order to increase income of the people.
2. Promotion of construction of public properties.
3. Promotion of village culture.
4. Promotion of local government.
5. Promotion of education, recreation, and youth training.
6. Improvement of health and sanitation.

Step 2: Identify the Mission Requirements

This step pertains to what we would like to have in a system to permit us to meet the desired goals. The input requirements should be stated explicitly. Judgment is necessary here concerning those specifications that are to be met at all costs and those that are desirable but not necessary (such as homogeneous and heterogeneous society, methods of keeping money, etc.). The standardized inputs of the system are as follows:

1. One primary school with four classrooms (pathom one to pathom four).
2. In order to cope with number 1, the four teachers are required classified as follows:

3. Thailand, Ministry of Interior Regulations on Five Year Community Development Planning B. E. 2510.
3. One secondary health center.

4. In order to cope with number 3, the manpower required is as follows:
   a. One graduate nurse (third class civil servant Grade 1).
   b. One nurse-aid (fourth class civil servant Grade 2).
   c. One sanitarian (fourth class civil servant Grade 1).
   d. One administrator (fourth class civil servant Grade 1).

5. Community development workers and college student volunteers classified as follows:
   a. One patanakarn (third class civil servant Grade 3).
   b. Five college student volunteers in different fields (such as agriculture, social science, political science, engineering and rural artisan).
The requirements number 1 and 2 will meet goal number 5 while the requirements number 3 and 4 will meet the goal number 6. Requirement number 5 will meet the rest of the goals.

Step 3: Develop Alternative Systems for Attaining the Desired Goals

As noted earlier, there are many possible areas that could be developed to meet the desired goals. In this thesis, the alternatives considered are the application of the same set of inputs in three alternative locations. They will be defined as follows:

System 1. Community Development project at Ra-ngae, Narathivas province.

System 2. Community Development project at Muang, Satul province.

System 3. Community Development project at Saraphi, Nakhon Ratchasima province.

Step 6: Determine Capabilities of the Alternative Systems

In System 1. Table 4.2 shows that the labor force is 434. The number of people age 0-14 years is 242.4

In System 2. Table 4.2 shows that the labor force is 222. The number of people age 0-14 years is 172.5

In System 3. Table 4.2 shows that the labor force is 722. The number of people age 0-14 years is 687.6

However, the entire population of system 1 is 759, while systems 2 and 3 are 412 and 1,443 respectively.

Step 4: Establish System Evaluation Criteria That Relate System Capabilities to the Mission Requirements

This step concerns cost and effectiveness criteria for each system. The cost of each system is shown in Table 6.1.

It is estimated that the community development project should have a duration of thirty years. Thus, the present worth of system 1, in dollar value, is 1,449,488 (116,800 x 12.41), system 2 is 1,449,488 (116,800 x 12.41), and system 3 is 1,439,560 (116,000 x 12.41), if the discount rate is 7%.

Effectiveness criteria under existing conditions, according to the author's judgment, may be expressed as follows:

1. Labor force, CD is a self-help and mutual-help concept; construction of any kind depends upon the

5. Ibid.

Table 6.1 Cost of Each System

<table>
<thead>
<tr>
<th></th>
<th>System 1</th>
<th>System 2</th>
<th>System 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secondary Health Center</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capital Cost (Baht)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Land (100,000 x 3)</td>
<td>30,000</td>
<td>30,000</td>
<td>(30,000 x 3) 90,000</td>
</tr>
<tr>
<td>B. Building</td>
<td>180,000</td>
<td>180,000</td>
<td>180,000</td>
</tr>
<tr>
<td>C. Equipments</td>
<td>28,500</td>
<td>28,500</td>
<td>28,500</td>
</tr>
<tr>
<td>D. House for man-power (MD, Nurses, Sanitarium)</td>
<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>E. Contingency 10%</td>
<td>33,850</td>
<td>33,850</td>
<td>36,850</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>372,350</td>
<td>372,350</td>
<td>435,350</td>
</tr>
<tr>
<td><strong>Operating Cost (Baht)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salary/year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Nurse (850 x 12)</td>
<td>10,200</td>
<td>10,200</td>
<td>10,200</td>
</tr>
<tr>
<td>b. Nurse-aid (690 x 12)</td>
<td>8,280</td>
<td>8,280</td>
<td>8,280</td>
</tr>
<tr>
<td>c. Sanitarium (850 x 12)</td>
<td>10,200</td>
<td>10,200</td>
<td>10,200</td>
</tr>
<tr>
<td>d. 1 Administrator (540 x 12)</td>
<td>6,480</td>
<td>6,480</td>
<td>6,480</td>
</tr>
<tr>
<td>B. Fringe Benefit/year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Physician</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>b. Transportation</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>C. Miscellaneous Expense/year</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>47,160</td>
<td>47,160</td>
<td>47,160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>419,510</td>
<td>419,510</td>
<td>482,510</td>
</tr>
</tbody>
</table>
Table 6.1—Continued Cost of Each System

<table>
<thead>
<tr>
<th></th>
<th>System 1</th>
<th>System 2</th>
<th>System 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capital Cost (Baht)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Land (10,000 x 5)</td>
<td>50,000</td>
<td>50,000</td>
<td>150,000</td>
</tr>
<tr>
<td>B. Building</td>
<td>120,000</td>
<td>120,000</td>
<td>120,000</td>
</tr>
<tr>
<td>C. Equipments</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>D. Work-shop House</td>
<td>45,000</td>
<td>45,000</td>
<td>45,000</td>
</tr>
<tr>
<td>E. House for Teachers</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
<tr>
<td>F. Contingency 10%</td>
<td>24,400</td>
<td>24,400</td>
<td>29,400</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>268,400</td>
<td>268,400</td>
<td>373,400</td>
</tr>
<tr>
<td><strong>Operating Cost (Baht)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salary/year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Head-teacher (1,100 x 12)</td>
<td>13,200</td>
<td>13,200</td>
<td>13,200</td>
</tr>
<tr>
<td>b. Deputy-head (850 x 12)</td>
<td>10,200</td>
<td>10,200</td>
<td>10,200</td>
</tr>
<tr>
<td>c. 2 Teachers (540 x 12)</td>
<td>12,960</td>
<td>12,960</td>
<td>12,960</td>
</tr>
<tr>
<td>d. 1 Administrator (540 x 12)</td>
<td>6,480</td>
<td>6,480</td>
<td>6,480</td>
</tr>
<tr>
<td>B. Miscellaneous Expense/year</td>
<td>2,000</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>44,840</td>
<td>44,840</td>
<td>44,840</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>313,240</td>
<td>313,240</td>
<td>418,240</td>
</tr>
<tr>
<td></td>
<td>System 1</td>
<td>System 2</td>
<td>System 3</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>Community Development Workers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating Cost (Baht)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Salary/year of Patanakarn (1,400 x 12)</td>
<td>16,800</td>
<td>16,800</td>
<td>16,800</td>
</tr>
<tr>
<td>B. Per diem/semester of five college student volunteers 5(10 x 90)</td>
<td>4,500</td>
<td>4,500</td>
<td>4,500</td>
</tr>
<tr>
<td>C. Transportation of Volunteers</td>
<td>1,000</td>
<td>1,000</td>
<td>200</td>
</tr>
<tr>
<td>D. Miscellaneous Expense</td>
<td>2,500</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24,800</td>
<td>24,800</td>
<td>24,000</td>
</tr>
<tr>
<td><strong>Total Capital Cost</strong></td>
<td>640,750</td>
<td>640,750</td>
<td>808,750</td>
</tr>
<tr>
<td><strong>Total Operating Cost (Annual)</strong></td>
<td>116,800</td>
<td>116,800</td>
<td>116,000</td>
</tr>
<tr>
<td><strong>Total Cost of CD Project</strong></td>
<td>757,550</td>
<td>757,550</td>
<td>924,750</td>
</tr>
</tbody>
</table>
labor force of the villagers. Labor force, as defined by the author, is the available labor force in each location, not what is ultimately utilized. We use available labor force to point out how many people are available for involvement in a CD project in the different locations. Labor force involvement will be a good indicator of successful implementation of the project.

2. Income effect. Due to the fact that a CD project will also raise the income of the villagers, the existing income distribution of the villagers in the said areas will indicate the value of the project in terms of the peoples' needs. Income distribution is used as the current state of income effect, not the ultimate change in the income state after the project.

3. Methods of keeping money. CD is one method to help people realize how to deal with their money correctly (that is, depositing it in the bank, buying bonds, investing in business instead of hoarding money, buying gold, etc.). The way people keep their money will indicate which locations need CD projects.

4. Types of families. In this study, the types of families are nuclear or extended. In developing a community, CD workers will try to make people
change from extended family to nuclear family. However, in Thailand (as mentioned in Chapter 4) it is difficult to differentiate which type is better. Thus, we can consider this criteria as a poor criteria.

5. Migration effects. Thailand now faces the problem of the emigration of the villagers of Bangkok (capitol city) which creates a lot of problems (such as crime, pollution, slums, etc.). Therefore, CD project will try to reduce emigration.

6. Fertility and mortality rate. CD project attempts to reduce the mortality rate and help in birth control of the villagers.

7. Convenience of physicians and CD workers. Due to the fact that physicians and CD workers are key people, in developing a community their conveniences are important and can be considered as one of the effectiveness criteria.

8. Education effects. The number of students enrolled, adjusted for the impact of religion toward education, is necessary to evaluate the effectiveness of a project. The number of students available for participation in the educational program, not change in student skills or quality of knowledge, is considered as effectiveness criteria. We need student efforts (such as number of students enrolled, willingness of
the students to study, etc.) as a guideline for making decisions.

9. Health effects. Due to the fact that CD project includes health programs which affect the entire population, the population of the said areas is used as the indicator.

10. Sensitive area. The poorer the people, the greater probability that they will become communists or need to separate the province to connect with Malaysia. The CD project will be a process to help the government solve these problems.

Step 7: Generate System Versus Criteria Array

After we establish system evaluation criteria, the next step is to use a tabular array for cost and effectiveness criteria as shown in Table 6.2.

Steps 5 and 8: Select Fixed-Cost or Fixed-Effectiveness Approach and Analyze Merits of Alternative Systems

In the fixed-cost approach, an amount of expenditure is given and the selection between alternatives is a function of the effectiveness measures of each alternative. On the other hand, in the fixed-effectiveness approach, a given level of effectiveness is needed and the cost of implementation is determined.

In community development project, it is very difficult to suggest which approach is better. Due to the fact
Table 6.2 Tabular Array for System Evaluation Criteria

<table>
<thead>
<tr>
<th>System</th>
<th>Cost (Baht)</th>
<th>Effectiveness Criteria&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital</td>
<td>Operating</td>
</tr>
<tr>
<td>1</td>
<td>640,750</td>
<td>1,449,488</td>
</tr>
<tr>
<td>2</td>
<td>640,750</td>
<td>1,449,488</td>
</tr>
<tr>
<td>3</td>
<td>808,750</td>
<td>1,439,560</td>
</tr>
</tbody>
</table>

<sup>a</sup>Effectiveness criteria may vary with each region or they may centralize within CD policy.

<sup>b</sup>Including,
that in most developing countries financial resources are limited, the fixed-cost approach is generally followed. However, if the difference in cost among alternative systems is not great, the fixed-effectiveness approach will be desired.

For this reason, the merits of alternative systems should be considered along with the fixed-cost and/or fixed-effectiveness choice. This step requires ranking of effectiveness criteria in the order of importance. The ranking requires judgment, intuition, and experience. Kazanowski also suggests that the selection will have to be made on the basis of value judgments. In this connection, the task of cost-effectiveness tends to be terminated after the ranking of effectiveness criteria has been done and leaves the selection to the decision maker.

To illustrate how ranking of effectiveness criteria can be done, Table 6.3 shows a possible ranking of effectiveness criteria for the three locations according to the author's judgment. It must be emphasized that at this point, all information is assumed correct. Kazanowski indicates that the importance of the decision rests upon a few criteria and suggests that the number of criteria should be

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Table 6.3 Ranking of Effectiveness Criteria in Order of Importance Under Existing Conditions

<table>
<thead>
<tr>
<th>System</th>
<th>Cost (Baht)</th>
<th>Selected Effectiveness Criteria for Making Choice</th>
<th>Education Effects (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital Cost</td>
<td>Operating Cost</td>
<td>Total Cost</td>
</tr>
<tr>
<td>1</td>
<td>640,750</td>
<td>1,449,488</td>
<td>2,090,238</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>640,750</td>
<td>1,449,488</td>
<td>2,090,238</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>808,750</td>
<td>1,439,560</td>
<td>2,248,310</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Accordingly, we choose five criteria as a basis of discussion and evaluation.

It also should be noted that the criteria in Table 6.3 are both quantified and non-quantified (in any unit of measurement). This is one of the features of cost-effectiveness analysis that avoids lumping of project effects into a common unit or index.

As indicated earlier, CD is a self-help and mutual help concept, every construction or participation depends upon the labor force of the village. Based on our judgment, participation of the labor force is ranked first because it is very important for a successful community development project. Sensitive area comes second because of two main things: (1) the necessity to prevent the villagers from separating, and (2) the special interest of the government in those areas. Health effects are ranked third because they can influence the secondary health program. Income effects are ranked fourth because this aspect can be achieved by other alternatives (such as credit cooperative program, irrigation program). Education effects are ranked fifth because they depend upon three things: (1) uncertainty about the impact of religion on education, (2) the exact number of the student enrollment (we would prefer to use the age of 6-14 instead of 0-14 but the statistic cannot be

8. Ibid., p. 134.
provided), and (3) we have to use another judgment (combine two factors: culture and numbers of students in our unit as very good--good--fair).

Compare Systems 1 and 2. Due to the fact that the costs of both systems are equal, it is obvious that fixed-cost approach can be applied (consider only effectiveness criteria). We have to trade off some effectiveness criteria between two systems because effectiveness criteria in system 1 do not show better than those of system 2 in all respects. In this case, we have to trade off among effectiveness criteria 1 (labor force) and 3 (health effects) in system 1, with 4 (income effects) and 5 (education effects) in system 2. Again based on our judgment, system 1 obviously is better than system 2.

Comparing Systems 1 and 3. Systems 1 and 3 are different in two criteria: (1) cost and (2) effectiveness. But the difference between costs of the two systems is less than ten per cent, so a rule of thumb could be to assume costs are essentially equal. In this case, we can also apply fixed-cost approach. Considering effectiveness criteria again, we have to trade off among effectiveness criteria 2 (sensitive area) and 4 (income effects) in system

Comparing Systems 2 and 3. As we know that system 1 is better than system 2 and system 3 is better than system 1, therefore system 3 is better than system 2. Thus, we will recommend system 3.

Step 9: Sensitivity Analysis

Sensitivity analysis is the process of re-evaluation or modification of various variables to see how sensitive the solution is. In this connection, it should be performed on the following:

1. Cost estimates. There is uncertainty on cost estimates of the alternative systems.

2. Specification sets. There is uncertainty in the projection of specification sets (future forecasts of population, people needs, etc.).

3. Manpower estimates. There is uncertainty in manpower estimation (labor force, income effect, health and education effects, etc.).

4. Political pressure. There is uncertainty in the policy of the government toward CD project.
Step 10: Document Bases of Previous Steps

The last step of the cost-effectiveness approach is to present or attach the document, assumptions, hypotheses, purposes, and methodology. Step 10 reminds the analyst to organize the assumption and methods of analysis underlying the previous assumptions. This phase enables the decision-maker to retrace his steps when project updating is undertaken or when another study arises, or a new team is going to apply new methods of analysis and information that has been generated since the last studies. An explicit statement of assumptions will help another analyst to continue the work.

This chapter illustrated the advantages of a cost-effectiveness approach in making a decision under existing conditions. The selected effectiveness criteria in Table 6.3 are a guideline for the decision-maker. However, we should search out how many people would like to participate in CD project (categorize into age groups as 6-14 and 15-64) before starting the program.
The evaluation process in community development project is not a simple task; it requires expertise or key people in various fields (such as economic, sociology, public work, engineering, public administration, etc.). The major work of this thesis has focused on a systematic methodology for the evaluation of possible community development projects in rural Thailand. The application of decision approach in CD project indicates the advantages of the cost-effectiveness analysis. Some detailed aspects of the analysis which have been omitted in the previous chapters are discussed in this chapter and finally, conclusions are drawn.

Discussion

It is necessary to emphasize that alternative systems should be considered and compared by various quantitative and qualitative criteria. This is consistent with real world where quantitative and qualitative aspects exist. In community development projects, different locations produce different quantified and unquantified impacts. They should be compared as alternative systems in order to get the better solution.
In this thesis, we drew the distinctions between cost-benefit analysis and cost-effectiveness evaluation. We showed that cost-benefit analysis relies almost exclusively on financial benefits and is limited value in assessing community development project, where many outcomes cannot be defined economically. Opposed to cost-benefit analysis, cost-effectiveness seems to be more appropriate because it allows quantitative as well as qualitative methods in conducting the study. Especially the standardized cost-effectiveness approach gives a guideline to the analyst in making decisions in community development project in a systematic manner. Goals or objectives must be explicitly stated. These goals are then mapped into the specification sets. As mentioned earlier, alternative systems are compared according to the ranking of preferred existing criteria. Instead of using the fixed-cost or the fixed-effectiveness approach, most of the literature has proposed various weighting techniques which are criticized because of inappropriateness. Analysis of merits of alternative systems together with consideration of the choice of the fixed-cost or fixed-effectiveness approach is not an easy task. It needs value judgment, As stated by Quade:

Reliance on judgement and intuition is, in fact, crucial to every decision, and not only to take account of the intangible and moral considerations. This reliance permeates every aspect of analyst—in limiting its extent, in deciding what hypotheses are likely to be more fruitful, in designing the model, in determining what "the
facts" are and what numerical values to use, and in interpreting the results.¹

In addition with judgment and intuition, the roles of experts or key people are significant in the decision process. As shown in Chapter 6, we have delayed this step until the end of analysis and have demonstrated how the decision could be reached in selecting an alternative. We feel that lumping the benefits into a single index is a fallacy, so we used a fixed-cost and fixed-effectiveness approach. The choice of a fixed-cost or fixed-effectiveness approach will determine appropriate projects in terms of social needs at the time of need. Concerning the alternative systems, it is admitted that choice of alternative is very difficult. The first problem that faces us is that we are not the decision maker. The second problem concerns the merits of the alternative systems themselves. However, in the decision process concerning community development project, the process of decision-making involves several individuals, namely: (1) the analysts—to analyze the problem and recommend the solution to the decision-maker; (2) representatives from government or agencies concerned—as representatives from Bureau of Budget, National Economic Committee, etc., to discuss the problems of budget and government policy; and (3) people who would be affected by

the development—Poo Yai ban, herb doctor, etc., to repre-
sent the villagers in order to express their needs.

The illustration described in Chapter 6 is a
guideline for decision-makers. A post-evaluation is neces-
sary to see how effective the program has been. Post-
evaluation should be done using the criteria established
in the decision making model.

Conclusions

Thailand is an agricultural country in Southeast
Asia. It is faced with many village problems. Among them
are low income, low productivity, limited education oppor-
tunities, malnutrition and ill health, and poor standard
of living.

Community development is undertaken to promote
better living for the whole community with the active
participation and largely the initiative of the community.
Participation has a various level (activity participation
to policy making). According to the situation in Thailand,
participation of the villagers should be limited to
activities concerned (such as construction, self-help, etc.)
because of their limited knowledge.

Community development is a continuous process and
requires the combined efforts of all the agencies working
in the field of rural community development. The way to
develop a community differs from country to country. For
Thailand, health and educational programs are the most important ones.

Due to the fact that Thailand is a poor country and has limited resources, the approaches applied in community development projects should be effective as far as possible. The cost-effectiveness approach seems to be an appropriate one. It has a lot of advantages which may be summarized as follows:

1. The approach combines several aspects. First, the approach accepts several goals as desired. The approach allows alternatives to be compared on the basis of several criteria not on a sole criterion.

2. The approach will suggest and help identify the system closest to meet the desired economic and social goals because the approach considers both quantifiable and non-quantifiable problems. The choice of a fixed-cost or fixed-effectiveness approach will determine appropriate projects in terms of social needs at the time of need.

3. The approach will help government in the preparation of Planning Programming Budgeting of capital for further investigations and investments in development projects.

4. The approach provides a detailed and careful analysis; omissions of important factors in making decisions are less likely to occur.
5. The approach will eliminate unnecessary expenses that might be incurred if projects are planned by cost-benefit analysis because the approach considers many factors that affect the projects. The omission of some factors will create unnecessary expenses.

6. The approach allows both quantifiable and non-quantifiable criteria. The choice of a fixed-cost or fixed-effectiveness approach will eliminate weighting techniques as illustrated in Chapter 6 in selecting alternative systems.

7. The approach recognizes the distribution of project effects to different groups (sub-group) of individuals as shown in Chapter 6 that in developing a community, number of people age 0-14 years have to be considered as effectiveness criteria.

8. The approach considers sensitivity analysis which accounts for uncertainty in data.

9. The approach provides criteria for later evaluation of the impact of the system selected.

This thesis does not indicate how far the analysis should be carried out. This phase of study depends upon the amount of time, information, and resource available. In this study, beside criteria mentioned in Chapter 5, detailed research on the role of leadership of the villagers, the
willingness of the CD workers, college student volunteers, teachers, nurses, etc., have to be done. But those circum-
do not negate the usefulness of our study in selecting the stage for actual decision making.

The author would like to recommend that the re-
searches on the following items should be done by the Community Development Department. They are: (1) the role of leadership in the villagers, including the attitude of the villagers toward CD projects; (2) the belief of the villagers toward the government officials; (3) the willingness of college student volunteers; and (4) evaluation on the results of CD projects.

As we mentioned CD projects need a lot of effort from experts or key people from various fields. Therefore, some difficulty in performing CD projects should be expected to occur as: (1) change in the policy of the government, (2) the lack of cooperation from the villagers, (3) budget constraint, and (4) red-tape of bureaucrats.

However, cost-effectiveness analysis is very appropriate and useful in making a decision; therefore, it should be performed. Finally, we suggest that the amount of analysis should be confined to important criteria (labor force, sensitive area, health effects, income effects, and education effects).

It is hoped that the technique suggested here will not only apply to Thailand but also are applicable to other
countries where a program in rural community development is undertaken. As Quade mentioned:

Cost-effectiveness approach can help a decision-maker to understand the relevant alternatives and the key interactions by giving him an estimate of the costs, risks, and possible payoffs associated with each course of action. In so doing, it may sharpen his intuition; it will certainly broaden his basis for judgment. This almost always helps the decision-maker make a better decision than he would otherwise make.²

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² Quade, Cost-Effectiveness Analysis, p. 7.
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