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Suranart Khamanarong (M.P.A.)

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CHAPTER 1

INTRODUCTION

(1) Introduction

Governments throughout the developing world share the same wide objective of bringing development to their people (Cheema and Rondinelli, 1983, 10). However, just as there is no universally accepted definition of what 'development' should involve, so too is there no universal strategy for achieving development (Black, 1991, 15: Jenkins, 1992, 164). Some countries try to develop their economies by increasing their national aggregate productive capacity, which essentially seeks to bring about development through fostering economic growth. The expectation here is that a dynamic economy will over time create the necessary conditions for the improvement in livelihood and welfare of the population as a whole (Jenkins, 1992, 165).

Other countries give priority to poverty reduction and welfare improvement directly through prioritising a strategy of income distribution and the equitable provision of utilities and opportunity. This approach, which is often guided by prevailing ideology, is driven by the experience that economic growth alone has seldom been successful in bringing 'development' (seen here as an improvement in the quality of life) to the entirety, or even majority, of a country's population (Demaine, 1986, 94: Ekins, 1992, 8). Some countries - among them Thailand - have been remarkably successful in engendering economic dynamism, but its benefits have not been shared by all. Typically, rural areas and the rural peasantry, particularly in peripheral and isolated areas, have derived little if any benefit from national economic growth (Demaine, 1986, 94). This results, *inter alia*, in widening levels of income disparity and regional inequality. Growth tends to be concentrated in certain core, dynamic areas whilst poverty and welfare problems may persist elsewhere. According to most contemporary definitions, this hardly constitutes 'development'

The governments of most developing countries have vested in themselves an important role in development planning and policy-making (Rondinelli, 1990, 31). Some have been more successful than others, especially in cases where poverty alleviation and the reduction of social and spatial inequalities represents the most pressing development need (*ibid.*, 34). In countries like Thailand, where the majority of the population still resides in rural areas, the promotion of rural development has to be the overriding priority. Unfortunately, in spite of state intervention in economic planning, and policy pronouncements which identify redistribution as an important objective, the development gap between rural and urban people, and between core and peripheral areas, continues to widen. One explanation for this apparent paradox is the highly centralised nature of development administration (usually emanating from the capital city), and the top-down nature of the planning process (Simon, 1990, 8). This typically leads to a disarticulation between the peasants' needs and the planners' perception of these needs. In the meantime, market forces almost inevitably determine that economic dynamism, and the associated benefits, will tend to concentrate in the areas, sectors of the economy, and among the social groups who have the initial advantage (Rondinelli, 1990, 54). In most cases this translates into urban-based industrial dynamism bringing benefits to a relatively small, privileged section of the national population (Ekins, 1992, 9). The hoped-for diffusion, or trickling-down, of benefits to the rural periphery has been very slow to materialise.

Set against this back-drop, this study aims to explore alternative means of promoting development in peripheral rural areas. In particular, it aims to explore the potential for fostering development at the 'grassroots' level, and engendering 'development from below' (Stöhr and Taylor, 1981). The enquiry is set within the context of development in Thailand, and in particular the Northeastern region which has enjoyed few of the benefits of the country's recent economic boom.

There are several factors which underpin the rationale of this study. The first is provided by the rather poor record of past achievement by government planners in Thailand in confronting levels of social and spatial inequality which are amongst the highest in the developing world. The second is found in the increasing tendency for 'development' to be interpreted in qualitative as well as quantitative terms. The third is the belief that the orthodox, and often paternalistic, centralist strategy of top-down planning has tended to overlook the qualities and potential which exist at the grassroots level to contribute to the process of development and the alleviation of social and welfare problems. The fourth is the desire to explore conceptually the notion of alternative development: is it possible to confront directly problems of distribution without adversely affecting the pace and quality of growth? Would a development strategy which gives a more pronounced emphasis to grassroots development be any more successful than conventional approaches in alleviating poverty in peripheral rural areas? What model should alternative development follow?

This study puts forward 'rural industrialisation' as one such model, and explores its constraints and potential as a means of bringing 'development' to Thailand's impoverished North-East. Of particular interest is the way in which rural industrialisation has helped to improve economic and social conditions in households which are involved in this rural economic activity. The study seeks to examine how the promotion of rural small-scale enterprises might assist in the processes of poverty alleviation and economic diversification in peripheral, economically depressed regions such as Thailand's North-East. The study will also explore both the potential and prospects for change, and some of the constraints and barriers which must first be overcome. In so-doing, it is hoped to be able to inform the policy-making and development administration processes in Thailand, with the underlying objective of helping to improve conditions in those parts of the country which the economic boom of the late 1980s and early 1990s has largely passed by.

Three interrelated factors may be argued to have had a particularly strong influence on the incidence and persistence of rural poverty: low levels of income; high levels of underemployment and employment insecurity; and the limited diversification of the rural economy, determining that there is a lack of alternative income-earning opportunities *in situ*. The agricultural sector, which still provides the main source of livelihood for peasants in most rural areas, has proven incapable of absorbing surplus labour and a rapidly growing rural population (Jayasuriya and Shand, 1986, 24). The relatively slow pace of transformation of the agricultural sector, particularly in the rural periphery, has determined that agricultural incomes have increased more slowly than elsewhere (*ibid.*, 24). Set against a background of slow employment creation and income stagnation, growing cash needs have increasingly tended to be satisfied by the movement of rural people to find work and a source of livelihood elsewhere - typically in town and away from the farming sector (Ahluwalai, 1990, 118-19: Parnwell, 1993).

This being the case, there would be undoubted merit in finding means of generating employment and income-earning opportunities *in situ*, in the process sustaining people's livelihoods without the need for dislocation through migration: to give people more options and choice than presently appears to be the case. This study of rural industrialisation in North-East Thailand has revealed that, where peasants have an income from non-farm activities to supplement that derived from agriculture, levels of poverty and income insecurity are generally much lower than where this is not the case. This is especially true in the areas that have poor soil quality and no irrigation system available.

Based on this evidence, we might explore the potential for encouraging rural economic diversification through the promotion of non-farm activities. Is it possible to apply this principle to areas where the non-farm sector is presently undeveloped or underdeveloped? Would this be an effective means of alleviating poverty and underemployment in these areas?

Another advantage of this approach is that it represents a means of channelling benefits directly to those who need them, rather than relying on their indirect diffusion from economic growth occurring elsewhere. If we accept that rural industrialisation has potential in this regard, we need then to ask how the government might formulate policies which will promote this potential. How might the Thai government plan to build development initiatives from the grassroots upwards, not least given its traditional reliance on the diffusionist approach to rural and regional development? The following section will set this question within a framework provided by a conceptual discussion of development administration in Developing Countries, and its role in the promotion of rural development.

(2) Development Administration and Rural Development

It is typically the government which takes responsibility for fostering economic and social development, and improving the living conditions of the people. Whether motivated by social justice or national pride, there is an overriding desire to remove the stigma of economic backwardness. Furthermore, the success of a government may frequently be judged by the pace of economic growth and the extent to which pressing social and welfare problems have been confronted. These objectives can be pursued by means of a wide variety of development planning strategies, although it tends to be the case that different types of planners may favour certain policy approaches over others (Botterweg, 1983, 14). Most economists who are concerned with development planning will examine and prioritise development in the sense of economic growth, and will thus lead development planning principally in the direction of fostering economic dynamism. In contrast, officers who are concerned mainly with the provision of social utilities and amenities may give greater priority to activities which focus on social development.

Underpinning many of these planning strategies are the objectives of improving living standards, promoting economic growth and raising levels of productivity. These ends can be achieved by using systematic planning techniques, guided by the above objectives, which in turn must have a clear assumption of development. Measurement techniques are also used to assess the effectiveness of such strategies.

Because the promotion of national development requires a heavy use of resources which, in some Developing Country contexts, are often very scarce, it is important that such resources should be efficiently utilised. This either means that resources are concentrated in those areas and sectors which will provide the most dependable and effective return on their 'investment', or are deployed in such a way that benefits of development are brought to the widest possible section of society. Without the wide distribution of the spoils of growth, this growth will be valueless, as Mehta has argued:

> "Development planning may be defined as any action of the State which is aimed at raising the rate of economic growth above a level which could provide better living conditions. In other words, it may be defined as any deliberate and continuing attempt made by the State or the government to accelerate the rate of economic and social progress and to alter institutional arrangements which are considered to act as hurdles in achieving this goal." (Mehta, 1984, 8).

Some questions arise when the government tries to achieve the goal of raising living conditions by encouraging economic growth. Has economic growth really been effective in raising living standards and, if so, who has derived the greatest benefit in this regard? In as much as national development planning involves the government taking responsibility in the allocation of resources on behalf of the people, and where development policy is guided by considerations of distribution and redistribution, it follows that the disadvantaged groups in society should enjoy the greatest benefit from this process. Quite obviously, the precise nature of the adopted strategy will depend upon prevailing conditions, but for a country that has a high percentage of people living in poverty, development activities should give a high priority to poverty alleviation. Economic growth is, of course, essential to generating the resources which are necessary for social and spatial redistribution, but the important point here is that economic growth alone is not sufficient to achieve this objective. If governments focus on raising the rate of economic growth, they may fail to help the poor. A strong GDP growth rate may give the impression of economic 'success', but it is quite possible for this to be achieved at the same time as inequality is increasing and poverty is persistent. The benefits from economic growth may accrue to a minority of already quite wealthy citizens.

In many cases it is not the lack of 'development' that has brought impoverishment but 'development' itself, as in cases where natural resources that provide a decent subsistence livelihood for large numbers of people are turned into industrial raw materials that benefit relatively few (Ekins, 1992, 9: see also Arghiros and Wongsekiarttirat, 1995). According to this interpretation, we can claim that an income distribution policy is needed as an important counterweight to any policy of economic growth promotion if the income gap is to be reduced. This will have a more direct effect on the poor in the rural areas than the promotion of growth alone. Burki has argued that:

> "The faster per capita income rises the more quickly poverty will recede, though there is no strict correlation between the changes in income and an improvement in the distribution or with a reduction in numbers below the poverty line ... economic growth is a necessary but not a sufficient condition for declining poverty. Cross-country statistical tests on a large scale do not uncover strong links running from GDP growth to the incidence of poverty." (Burki, 1990, 5).

The issue and strategy of income distribution has become central to the context of rural development since it can help in the alleviation of rural poverty. Furthermore, in some cases distribution policies can alleviate poverty even while the overall rate of economic growth remains very slow. Oshima (1990) gave the example of the People's Republic of China, where the strategy of distribution rather than growth was pursued and which succeeded in achieving a low level of poverty. He noted:

> "The People's Republic of China has been able to achieve low levels of poverty even though per capita incomes have been

> low, which implies that it has reduced poverty not by growth but by redistribution." (Oshima, 1990, 57).

However, at present the situation is changing. The economic growth of the People's Republic of China is very rapid and income inequality is tending to increase very rapidly, both spatially and sectorally. This does not mean that income distribution policies have ceased to be effective, but that the pace and pattern of development which has been associated with the current phase of economic liberalisation have tended to supersede the effects of the country's continuing adherence to socialist principles (albeit less dogmatically and more pragmatically).

Although policies of economic redistribution can be more effective than economic growth in reducing poverty, it is impossible to deny the importance of economic growth in the development context, as mentioned above. The facilitation of growth and the encouragement of equitable distribution must run in tandem in government policy towards the promotion of rural development and alleviation of rural poverty. In other words, the poor must be given opportunity by government development programmes to participate fully and effectively in economic activities. Dennis Rondinelli emphasises this point:

> "An earlier belief prevalent among development economists that economic growth and equitable distribution of income were conflicting goals was largely displaced during the 1970s by evidence that deliberate efforts to distribute income and wealth more equitably in countries such as Taiwan, South Korea and Malaysia did not impair high levels of economic growth and, in fact, created a broader base of participation in economic activities that reinforced and accelerated growth processes. It was also more widely recognised that 'automatic' mechanisms rarely produce the expected spread and filtering effects in poor countries and that policies must be deliberately designed to incorporate peripheral areas and marginal groups into the economy if poverty is to be ameliorated." (Rondinelli, 1990, 56).

Such objectives can not be met by the 'trickle-down effect' alone. The government has to take prime responsibility for encouraging 'equity with growth'.

Rural development planning in the past was mostly carried out by the upper echelons of a hierarchical bureaucracy which was mostly urban based and had the character of top-down planning or 'development from above'. Inherent in the directionality of rural development policy was a detachment from and lack of understanding of rural life. The provision of infrastructure such as roads, bridges and dams, with which the planners aimed to stimulate the rural economy or solve rural problems, did not in itself satisfy rural needs or have much of an impact on regional disparity (Black, 1991, 18). The strategy of growth centre development, which aims at the diffusion of economic activity to the peripheral areas, has also had little success. Development will not take place through the trickling-down of wealth or through the gradual diffusion of modern attitudes and modern technology; upward absorption into the modern sector is no solution to the problem of the impoverishment of the masses (*ibid.*, 28). Simon has argued:

> "...it is evident that top down planning, or development from above, has seldom been successful even where sufficient time has elapsed to permit evaluation of the overall impact of programmes initiated twenty to thirty years ago... Modern 'development' is largely restricted to urban centres and their immediate surroundings, while inter- and intraregional disparities in material wellbeing have generally not declined." (Simon, 1990, 8).

The strategy of 'development from above' is conceived, organised and implemented from the centres of political and economic power, often with little regard for the views and interests of supposed 'target' areas and groups. The failure to achieve rural needs has thus effectively represented the misallocation of national resources (Stöhr, 1981, 7). Thus, if rural development is the objective and the government genuinely has the intention to raise the living conditions of the poor in rural areas, the strategy of bottom-up planning or 'development from below' is more appropriate. The assumption of this approach is based on the belief that the villagers or local people know their rural areas and local conditions more fully and intimately than officials from outside the locality. A more effective exchange of ideas and information between outside experts and those in possession of local knowledge may help more successfully to channel appropriate assistance and support towards the rural poor. Local officers may act to transfer information from the upper echelons of the bureaucracy to the village level, and at the same time communicate information concerning rural needs and conditions to outsiders. Rigg claims that:

> "Most aspects of development, by their very nature, must be disseminated from the top. New technology, education, modern health facilities, credit organisations and marketing structures rarely develop at the grass-roots. The point, surely, is that policies and programmes implemented from above must be balanced by a flow of information (and participation) from below. The 'expert knows best' has been widely rejected; the 'locals know best' view still has some supporters. A balance of local and expert, supported by exchange of information between the top and bottom, is required." (Rigg, 1991, 208).

'Development from below' and bottom-up strategies have the same objective of providing the poor with the minimum level of basic needs and to enable them not only to survive but also to improve their own circumstances. This involves the utilisation of local resources, potential and initiative for the benefit of the people themselves. In other words, it is helping poor people to help themselves.

The strategy for helping the poor to improve their circumstances within the top-down development paradigm often left the poor better provided for with inappropriate goods and services than basic needs. Furthermore, the dependency culture which this inculcated often left the poor 'weak' and unable to help themselves. The basic needs approach, in contrast, requires that the poor must be at the centre of development (Simon, 1990, 12). To achieve this, the poor must be empowered, which in turn requires a change in the *status quo* and in the distribution of power within society. Thus not only does the bottom-up strategy require that the poor are placed at the centre of development activity, but there is also a need for the decentralisation of power. This includes the promotion of local participation in decision-making and also the decentralisation of function and authority to field officers. This in turn will allow the field officers greater freedom to utilise their knowledge of local problems and needs, to exchange information with local people, and plan more effectively according to these needs. Rondinelli has argued that:

> "By decentralising development functions to the field officers of ministries, or to subordinate levels of administration, more public servants can become knowledgeable and sensitive to local problems and needs because they will be working at the level where these are most visible and pressing. Closer contact between local populations and government officials could also allow the latter to obtain better information with which to formulate plans and programmes than could be obtained in the national capital." (Rondinelli, 1990, 134).

It can be concluded that the prioritisation of rural development is needed, especially in those developing countries that have a high percentage of people living in the rural areas and where income inequality tends to be increasing. Although the strategy of economic growth is needed as a means of raising productivity (so that greater equality does not involve bringing everyone down to a level of basic subsistence), growth alone is not sufficient to reduce poverty. As discussed above, emphasis on the distribution of income and the spoils of growth is also required. The failure of the 'top-down' approach to development to cater adequately for rural needs and aspirations has led to calls for greater emphasis to be given to the 'development from below' approach, which arguably is more appropriate to the context of rural development. Encouraging peasants to participate in the decision-making process, through the decentralisation of development administration, is an important first step in catering for the needs of rural producers.

(3) Agricultural and Off-Farm Employment

In this section we explore the notion that, by improving the range and diversity of income-earning opportunities in the rural sector, progress can be made towards poverty alleviation, greater social justice and strengthening self-reliance. It is our contention that 'rural industrialisation' represents one such means of developing and diversifying employment opportunities in rural areas, and as such should be given greater attention than hitherto in public policy.

When we consider the rural situation, the poorer families in rural areas of most developing countries are characterised by a high dependence on income from agriculture, and typically have access to small or sub-marginal plots of land, often without the benefit of irrigation (Balisacan, 1993, 535). Rural poverty is common where agricultural productivity is low, and/or where the distribution of the product of the land is unequal. The ability of poor farmers to improve their productivity is substantially limited by their low incomes and restricted access to credit, especially from institutional sources (Webster, 1986). Attempts to improve rural incomes by raising aggregate levels of agricultural productivity often necessitate massive investment in various forms of infrastructure, input delivery systems, improved crop technology, farmer education and extension, and so on. Yet governments with limited development budgets typically face competing demands from other sources - most notably the urban-industrial sector which, historical experience has shown, generally provides a larger, more immediate and more dependable return on development investment. Equally, different parts of the rural sector offer a 'safer' return on investment than others, leaving governments with difficult choices in respect of whether to prioritise the most marginal and disadvantaged zones for reasons of social and welfare development, or the more advantaged areas as a means of utilising limited resources efficiently and effectively. Thus, whilst lip-service may be paid to the need to confront rural poverty, only those countries with an ideological commitment to social and distributive justice are likely to prioritise equity over efficiency (Mabogunje, 1989).

Additionally, there is no certainty that the prioritisation of agricultural development - by means either of the 'improvement approach' or the 'transformation approach' (Long, 1977) - by itself will substantially and effectively reduce rural poverty. There are several weaknesses inherent in the agricultural sector which serve to restrict its capacity for building substantial and stable rural livelihoods. The prices of agricultural products are seldom stable, and the demand elasticity for agricultural products is low (Chandra, 1992, 1). When there is overproduction, prices fall to compensate. Accordingly, without attention to marketing systems and outlets, improvements in agricultural productivity may not have the effect of raising farmers' income, even where mechanisms (e.g.

technocratic or reformist agrarian reform measures: Fredericks and Wells, 1978) are introduced to ensure that productivity gains are enjoyed by the majority of the rural populace. Furthermore, in marginal and infertile areas, efforts to increase agricultural productivity may necessitate substantial investment in irrigation, fertilisation, pesticides, etc. which will partly or totally off-set any income gains from improvements in agricultural production.

Another rural problem, which typically occurs partly as a consequence of rapid growth of the rural population, is unemployment and underemployment. The agricultural sector, particularly where its performance is sluggish, may be incapable of absorbing surplus labour in the rural sector or new additions to the rural workforce. It is here, we contend, that the non-agricultural sector has a crucial role to play. Balisacan has claimed that:

> "The rapid growth of the labour force and the slow pace of employment generation in rural areas combined to create a large pool of unemployed and underemployed. Because the rural agriculture sector failed to absorb the additional labour force members and to provide full employment to its workers, pressure built up for labourers to move out of the farm to rural non-farm activities." (Balisacan, 1993, 546).

In addition to playing a role in labour absorption, and alleviating poverty by providing alternative or supplementary means of generating income, the rural off-farm or non-agricultural sector also has the potential to act as a nucleus for the creation of wealth which, by entering into wider circulation, will stimulate a wider range of support and consumption activities. Ahluwalia envisages:

> "Rapid growth in the non-agriculture sector leading to progressive shifts of the labour force from the low-productivity low-income agriculture sector into high-productivity high-income non-agricultural employment... As the size of the non-agriculture sector increases, its growth

> has a greater potential impact on poverty and to absorb surplus labour from agriculture." (Ahluwalia, 1990, 119).

Thus, not only can the non-agricultural sector play an important role in absorbing surplus labour in rural areas, it can also provide a source of supplementary income for rural households. Provided there are sufficient and suitable opportunities for the development of the non-farm sector (as we shall see later, this is not universally the case, particularly in areas which are already disadvantaged by low levels of productivity, surplus creation and investment capacity), non-agricultural activities represent a potential means whereby surplus rural labour can be absorbed, often at a lower investment cost than may be necessary for the transformation of agricultural production. In the People's Republic of China, for example, rural off-farm income has provided a vital source of supplementary income for the peasantry, and has played a significant role in restricting the extent of rural poverty. Harry Oshima reinforces this point:

> "In the 1980s, peasants in China were allowed to move out of the villages and encouraged to supplement their agricultural income by working in towns and in rural industries. Off-farm incomes began to rise rapidly. Poverty incidence in the very large rural sector fell by more than one-half from 1979 to 1986, as the peasants found an additional source of income to supplement that from agricultural production." (Oshima, 1990, 57).

In combination with farming, therefore, non-farm activities (such as construction and various forms of industry) represent an important potential means of diversifying the rural economy and providing much-needed income earning opportunities. As such, they represent a crucial but often overlooked means of confronting rural poverty, and thus fulfilling one of the central objectives of rural development (*ibid.*, 65).

However, we do not mean to suggest that non-farm activities are necessarily and universally better than farming. In some areas, for instance where the cultivated land is suitable, or where agricultural products (such as coffee, fruits, etc) are in demand on the world market, earnings from the farm can drive the local economy, as is the case in Kutus, Kenya (Evans, 1992). Here, the income and employment of most households is derived from agriculture, and there is the additional benefit of wages and profits obtained from agriculture-related businesses in the town of Kutus. In this and other instances, therefore, farming can spur the rural economy and help to stimulate the associated non-farm sector. According to Evans:

> "...it is external demand for the produce of the region that enables agriculture to serve in the first place as the engine driving the local economy. In Kutus it is world demand for coffee and domestic demand for coffee and domestic demand for maize, beans, and other local produce that provide the incentive for increased agricultural production in the region" (Evans, 1992: 662).

Although non-farm activity is potentially important for rural development, especially in those areas that have limited agricultural productivity or whose agricultural products are not in demand on local or wider markets, our optimism in this regard needs to be guarded. Whatever their potential as a means of facilitating rural development, there are also a great many constraints which serve to stifle this potential. One of the most serious of these is the fact that the potential for rural diversification may be most restricted where it is most needed - in depressed and marginal areas where poverty may be most manifest and entrenched. As such, the economic means to both facilitate (through investment) and support (through consumption demand) non-farm activities may be missing. The same applies in situations where non-farm activities are related to the local agricultural economy, such as through the processing of agricultural products: where surpluses are limited, the capacity to support a diversity of non-farm activities will be severely constrained.

A further constraint is the difficulty in encouraging farmers to become involved in non-farm activities where they have no previous exposure to or experience of them. For some there may be an understandable reluctance to leave the familiar world of agriculture for the much less familiar, and typically more risky, non-farm world. Accordingly, the most realistic approach is to promote non-farm activities as an additional, as opposed to an alternative, source of livelihood. Such a view is shared by Balisacan:

> "The root causes of the rural problem - low productivity, landlessness, high underemployment, and high incidence of rural poverty - go beyond agriculture. The economic welfare of the rural population can be secured only by a comprehensive economy-wide policy reform aimed at promoting back-ward integration. This allows the expansion of productive earning opportunities for the relatively fast-growing labour force. In particular, the reform has to allow a rapid, sustained growth of agriculture, combined with equally rapid employment growth outside of agriculture." (Balisacan, 1993, 557 [my emphasis]).

Thus, the central thesis underpinning this research is that the rural non-farm sector has a vital potential role to play as a means of diversifying, and thus developing, the rural sector in countries such as Thailand where the distribution of the spoils of rapid economic growth has been insufficient to satisfy the needs of a substantial section of the rural population. It holds prospect to the amelioration of rural backwardness and alleviation of poverty, and most importantly represents a means whereby peasants may claim a modicum of control and choice concerning their future destiny - particularly the creation of *in situ* means of forestalling the need to find *ex situ* means of sustaining their livelihood. It also represents a means whereby economic and social improvements can be achieved without the need to compromise the quality and momentum of economic growth, which has typically been the case where more radical measures have been introduced as a means of promoting greater social and distributive justice. However, as we shall see in the following sections, there are a great many hurdles which must first be overcome if this potential is to be realised. It is also important that the promotion of non-farm activities should follow a path which is appropriate to the needs and potential of rural areas, rather than one which facilitates the exploitation of their underdevelopment and the sequestration of benefits by a privileged elite. One such appropriate means of proceeding is to encourage the parallel and integrated development of the rural farm and non-farm sectors. Priority should also be given first and foremost to promoting and developing existing non-farm activities rather than introducing activities which may be alien to the local economic, social and cultural setting. Rural small-scale industry is put forward in this thesis as one such appropriate non-farm activity which, in many parts of the developing world can be built upon a pre-existing foundation of traditional cottage-type industrial functions.

(4) The Role of Rural Small-Scale Industry in Rural Development

It is clear that rural off-farm employment has an important potential role to play in absorbing surplus rural labour and also securing rural income, particularly where the agricultural sector faces constraints on increasing productivity and income. Rural industry in particular represents an important means of diversifying productive activity and generating an additional, and in some instances the sole, means of livelihood (Kriedte, 1981, 13). Rural industry can also play an important role in employment generation in areas that have high rates of population and unemployment growth. It can also be a highly efficient means of promoting labour-intensive activities in rural areas (South Commission, 1992, 93), which can be seen as particularly appropriate in conditions of high unemployment and underemployment. As Kirkpatrick and others have observed:

> "In India, the establishment of small-scale village enterprise is seen as an essential element in rural development via expanding employment opportunities, raising incomes and living standards and bringing about a more balanced and integrated rural economy." (Kirkpatrick *et.al*, 1984, 212).

Income generation through rural industry may sometimes enhance the economic status and security of the household because some members who for various reasons (age, infirmity, looking after young children ,etc) are house-bound can earn a livelihood by working from home, thereby combining productive and reproductive activities. Chiwat Rungruengsri, A Thai researcher, found that:

> "In Chiengmai, in the Northern part of Thailand, cotton-weaving is one form of rural cottage industry that had a partial role in livelihood creation for villagers, especially women and young workers, who normally have work responsibilities related to housework which impair their income earning capacity." (Chiwat Rungruengsri, 1985: 89)

Rural industry not only increases rural income, but it also typically has linkages with agriculture, and thus there may be a certain complementarity to the development of both sectors. Rural industry has the additional advantage of being able to utilise not only surplus rural labour, but also agricultural labour which, at certain times of the year (e.g. slack periods in the farming cycle), may be underutilised (Sigurdson, 1977, 58). In rain-fed areas, where farmers do not have the option of undertaking agricultural production in the dry season because of a lack of water, they may have the opportunity to engage in rural industrial production during the dry season. In other words, rural industry can help local farmers more fully, efficiently and gainfully to utilise their labour throughout the year, instead of for only part of the year.

Another role of rural industry in rural development apart from employment generation is the utilisation or mobilisation of local resources/materials which might otherwise not have any productive and income-generating use (Chee, 1992, 29: Kriedte, 1981, 24), although of course, conversely, there is the danger of their overutilisation, to the detriment of farming and other activities (see Parnwell, 1994). For example, the post-harvest utilisation of straw from the rice fields to stuff cushions, or the utilisation of bamboo from the forest to produce products such as baskets, or the utilisation of reeds from natural ponds to produce mats, or the utilisation of clay from natural lakes to produce pottery, etc. These otherwise valueless materials can generate value, and thus income, through the manufacturing process. Agricultural products can also generate value through this process (Wield, 1992, 312).

A feature of cottage industry, by definition, is that it can typically occur within the home of the producer, thus minimising the overhead costs associated with productive activity (Chee, 1992, 50). Because of this, rural cottage industry may be particularly appropriate to the needs and capacities of villagers whose potential to meet basic development needs from farming is severely restricted by the amount of land to which they have access, either as smallholders, tenants or landless workers.

There are further features of rural industry which underpin its appropriateness to conditions which prevail in many rural areas. Its infrastructure requirements, at least during the early stages of its development, are quite modest - in contrast to those of the agricultural sector, and also the large-scale industrial sector (*ibid*, 32). Although it is obviously advantageous to have adequate provision of infrastructural facilities such as roads, water supply, electricity supply, etc., not least in terms of removing some of the constraints of geography, demography and economy which have traditionally disadvantaged the rural sector *vis à vis* the urban sector, rural industry can nonetheless function adequately without massive investment in infrastructure, facilities and utilities. Rural industries typically use quite simple technologies, and utilise raw materials which, although often bulky, are available within the vicinity of the producing enterprise(s). These industries may consume little if any electricity, having traditionally been based upon non-commercial energy inputs, and water supply requirements are also usually met locally. For this reason, rural small-scale industry can be considered quite flexible. It can locate almost everywhere in the countryside, provided certain requirements such as the availability of raw materials and production skills are met (although we draw a clear distinction here between the initiation and the subsequent development of rural industry, as shall be discussed below). For this reason, and at the same time reiterating its developmental advantages, we claim that the process of rural industrialisation may be seen as particularly appropriate and suitable process, particularly in areas where the provision of infrastructure is inadequate to support other forms of development and diversification, for instance in the agricultural sector.

As we shall see in this study, entrepreneurship is a crucial variable in the successful development of rural industrial enterprise (Chandra, 1992, 71). However, it is also the case that rural industries provide a fertile training ground of the entrepreneurs of tomorrow, giving them exposure to business organisation and decision-making, and to the wider capitalist market economy. Rural industry also provides a relatively uncompetitive and less risky (certainly in comparison with the urban industrial sector) investment outlet for local financial resources, in the process retaining the resources in the local area instead of allowing their haemorrhaging from the locality. This point is reinforced by Chandra:

> "On the whole, bigger investors conduct more thorough locational searches for manufacturing, but many small local entrepreneurs do not conduct such lengthy locational searches. They locate in the region of their origin because they are averse to risks and therefore prefer the most familiar and least risky locations." (Chandra, 1992, 78).

So, local entrepreneurs can obtain a first foothold in capitalist production largely insulated from the fiercely competitive world outside.

Considering the state of the economy, local investment is useful. When rural industry occurs in the village, local people who become new entrepreneurs will mobilise financial resources in the rural economy. The major sources of finance of these new industries come from the owners' own family, friends and local sources of credit. This mobilisation of local savings can push rural economic growth and encourage a propensity to save and invest which can increase overall regional savings such as we see in Malaysia (Chee, 1992, 28). The new entrepreneurs who gain entry into the industrial sector through rural small-scale industry also create the expansion of a middle class in the rural areas.

The wider distribution of income through these new entrepreneurs and the villagers who are employed in the rural industrial sector (*ibid.*, 29) means that rural industry can help to mobilise rural resources, especially in finance. Further, it can be said that its role in employment generation and resource mobilisation helps increase local incomes which in turn may stimulate the local rural economy. With more income, peasants will have more purchasing potential, and when they consume goods and spend money it can help the rural economy to expand (Aguda, 1991, 10).

Another issue that relates to the promotion of rural industry is the distribution of industry within the national spatial economy. The spread of small industries throughout the countryside may be an important strategy for future development policy, but it can be only one component of wider attempts to reduce disparities of income and wealth. nonetheless, it does hold the potential to create a better balance of economic opportunities between urban and rural areas (South Commission, 1992, 93). Burki has argued:

> "Among developing countries, the People's Republic of China has been among the most successful in combatting poverty and lessening income disparities ... Industrialization strategy that encouraged the spread of rural industry throughout the country and spurred the growth of new manufacturing centres in the central and western provinces increased employment and brought prosperity to the more backward parts of the country." (Burki, 1990, 10).

The employment generation role of rural industry does not affect only the rural economy but also the process of migration. The principal reason why people migrate from rural to urban areas is the need to find work, and thus a source of cash income (Goldstein and Guo, 1992, 50). As discussed earlier, the peasants who have little land or very poor land will often need to look for the supplementary jobs to secure their families' expenditure, especially in the dry season. This factor often forces them to migrate to work in the city - especially if there are few alternative employment opportunities in the vicinity of their home areas. Temporary migration into the city often has an adverse impact on the provision of facilities and infrastructure (*ibid.*, 53), as well as causing social effects in the migrants' home areas. Rural industry, by generating employment *in* *situ*, can help reduce the forces behind migration (Parnwell, 1993, 143). It can provide supplementary work that people can undertake in their home villages.

It can thus be seen that rural industry has many potential roles to play in rural development. Employment generation is the major role that can help to alleviate problems of unemployment and underemployment in rural areas. Fuller employment can bring more income to rural areas which in turn can stimulate demand for other rural goods and services whilst at the same time gradually decreasing levels of income inequality between rural and urban areas. Furthermore, village-based manufacturing is a means of bringing about the fuller mobilisation and utilisation of resources which might otherwise be wasted or underutilised. Finally, rural manufacturing can have an impact on migration by reducing peasants' need to migrate to find work in the city. Thus, in essence, rural industrialisation is suitable for and appropriate to rural conditions, not least because it can commonly be undertaken within the existing system, requiring limited infrastructural investment and few facilities, and it is also easy to manage with little risk, and thus represents an ideal training ground for the rural entrepreneurs of the future.

(5) The State and the Development of Rural Industry

Since rural development has long been an important issue in the developing countries and as the need for development at the grassroots level has increasingly been recognised, it is the state's function to formulate policy and take action to help the peasants in the countryside. As rural industries have many potential roles to play in rural development, not least in stimulating the rural economy, and helping in the transfer of wealth and economic dynamism from the city to the countryside, rural industrialisation may be put forward as a potentially important rural development strategy. Rural industrialisation can be considered as a form of grassroots development when the state concentrates directly on the rural entrepreneur and rural producers and attempts to promote development at the village level through prioritising rural industry as a basis for income generation. The strategy of rural industrial development may allow the rural entrepreneur and rural producer the scope to develop their own firms and enterprises with the support of local officials, who co-ordinate the strategy with the help of higher levels of government administration, from whence also derives other forms of assistance which the local administration is unable to provide. By this strategy, rural entrepreneurs and rural producers become the centre of development activity and fully participate, from the bottom upwards, in the process of development planning and implementation. The public sector need not be the only source of facilitation: rural entrepreneurs and rural producers may also liaise with large-scale private enterprises from outside their communities who may facilitate both the production and marketing processes.

However, in the author's view, the facilitating of rural industry by private entrepreneurs from outside the community should occur in conjunction with, rather that as an alternative to, state involvement. Although private enterprises may have an important role to play, it is not possible to rely entirely upon the private sector to achieve this objective: private enterprises might well play a role in facilitating the growth of industry in the countryside, but they may be drawn particularly by the opportunity it provides to exploit cheap labour and local resources (Kriedte, 1981, 24), which may not necessarily and inevitably be of significant social benefit to the rural people concerned. Private enterprise alone may not be enough to stimulate the rural economy or bring benefits to the rural poor. Thus, it is the function of the state to intervene in the development of rural industry for both the development of rural economy and to help the peasants to enjoy better and more stable incomes. Clark and Lemco have argued:

> "When the degree of economic 'backwardness' in a country or countryside does not exceed a certain point, new private institutions may emerge to speed up the pace of industrialisation. However, when the developmental gap is too great for any private institution to bridge, the state activity has to intervene in the economy and acts to increase the supply of capital for nascent industries." (Clark and Lemco, 1988, 2).

The development of rural industry to stimulate the rural economy may take the form of encouraging the development of active (on-going/present) industries or encouraging the establishment of new industries. To achieve either of these objectives, the state faces the need to overcome many of the problems and constraints which face the rural industrial sector. From the study of rural small-scale industries in many Asian countries, such as Malaysia and the Philippines, it has been found that the principal constraints of this kind of industry which cause it to grow so slowly concern the low quality of products and the limited size of markets (Chee, 1992, 38). If the government can reduce these constraints, there will be a better chance of the sector realising some of its undoubted potential. Jaruwan Thammawat, a Thai researcher who has studied rural industry in Ubon Ratchathani, northeastern Thailand, has argued:

> "One, among many, problems of producers in the village is the price of products which they may negotiate with wholesaler. The quality of their products is a major problem, and this is reflected in their income earnings from rural industry." (Jaruwan Thammawat, 1985:17)

The problems with the market concern poor designs and also the limited experience of entrepreneurs in the field of marketing (Chee, 1992: 40-5). If this is indeed the case, then the government can assist by facilitating training programmes and providing technical advice with regard to the penetration of different and wider markets. It can also assist by providing producers with market information and market intelligence, putting local producers in touch with the places and the people through which they stand a better chance of selling the items they produce (Kirkpatrick *et.al*, 1984, 200-13). However, the problem of marketing is not only caused by entrepreneurs' lack of knowledge but also the poor quality of the products they are seeking to sell. The low level of technology and poor quality of raw materials which are often used in the process of rural industrial production contribute to such quality constraints (Chee, 1992, 48-9). If the government can create linkages between urban large-scale industries and rural small-scale industries, it may be possible to encourage the trickling-down or direct transfer and dissemination of technical and other forms of support which can help to confront the quality constraints faced by rural industry, as happened in Japan (*ibid.*, 51).

The small size of the markets for the products of rural industry is perhaps the biggest constraint. It is the nature of many small-scale rural industries that producers do not have much experience with selling their products outside their home areas (Parnwell, 1990, 20). Because of this we can say that rural industry mostly, or at least traditionally, has a local market which is not only small in size but is also limited in its capacity for expansion. Furthermore, it may be severely constrained by limitations of local purchasing power, which is linked in turn to the depressed state of the rural economy. Some governments have tried to take action to cope with these constraints by providing market information as a means of encouraging or facilitating the expansion and spatial extension of the market such, as has occurred in India (Kirkpatrick *et.al*, 1984, 200-13). Some governments have attempted to provide financial assistance to local producers who lack investment potential in the hope that it will encourage the emergence of new entrepreneurs, as has occurred in countries such as the Philippines (Chandra, 1992, 70-1). The provision of credit to the new entrepreneurs who lack capital may also help to increase the number of entrepreneurs in a locality. Those who have skills and potential to do business or manufacturing but lack supporting funds can gain from this financial assistance policy, facilitated if not provided by the government (Kirkpatrick *et al.*, 1984, 213). State-provided financial assistance may help the emergence of small-scale industries in the rural areas because farmers or peasants typically do not have sufficient capital for investment. Although some large manufacturing enterprises can also help in the provision of necessary capital to local entrepreneurs as part of a support package to their suppliers, not all rural industries can use this system. Rural industries that use local materials in manufacturing and sells directly to the consumers may be in great need of this financial assistance. It is a way to help the new local entrepreneurs who are financially weak and cannot obtain loan from the commercial banks or other lending institutions.

The improvement of infrastructure is another way for the state to help develop rural industry. Although the infrastructural needs of rural industry are quite modest in comparison with urban large-scale industry, improvements of infrastructure, if possible, can assist the products from local manufacturing by providing better transport connection to external markets, which will clearly also help to extend the market sphere for their products. Skills training may also be an important factor to upgrade the rural labour force. Because of the significant potential benefits which will accrue from working in rural industry, there is a need to match the provision of skills and education with the needs of local industry. Training assistance may help local entrepreneurs to have efficient workers and at the same time will arm peasants with sufficient skills to join these local firms. The provision of infrastructure and training are areas where the state can play a crucial role in facilitating the establishment and development of rural industry (Harris, 1983, 50-1).

The training assistance must also include technical advice to those local producers who produce low quality products which do not attract the consumer. Government assistance can help local producers to develop rural small-scale industries by synchronising the products they provide with the needs and desires of the market. Assistance in the provision of market information and infrastructure may not be enough if the quality of products is not adequate. Improvement in quality and design can make products more interesting and more competitive in the market place. Technical advice can develop the skills of local producers to enable them to produce a better quality of industrial product. The policy of trying to improve quality and to promote the special character of local handicrafts will help to sustain rural industry on the basis of its own potential rather than swaddling it in protective policies which may make it difficult for them to compete in the market place in the long run. Parnwell argued:

> "Rural industries must be made to compete on an equal footing with other enterprises, principally by taking full advantage of their comparative advantages, rather than

> being cosseted in an overly-protective environment. They must thus find for themselves a particular niche where, perhaps, they are not in direct competition with larger urban-based industries." (Parnwell, 1990, 21)

In conclusion, rural industrialisation is very important both as a means to help peasants to increase their income and to improve the condition of the rural economy. Rural industries in many developing countries are mostly small-scale industries. These industries have many constraints to their development, and are waiting for their governments to formulate suitable policies to help them. It is necessary to study the nature and constraints of rural industries in each region and to identify the particular and precise ways whereby their future development can be encouraged. Thailand is one of the developing countries in which rural industries have an important potential role to play in the development of rural areas, especially rural industries in the northeastern region. Accordingly, it will be interesting to explore the potential for and constraints faced by rural industrialisation in this particular economically depressed region. By exploring this case we hope to be able to inform the wider debate on the potential role to be played by rural industrialisation in other developing countries. Furthermore, it will be useful for the country itself for us to study the possibility and suitability for policy formulation for rural industrialisation as part of a wider rural and regional development strategy.

(6) Objectives and Hypothesis of the Study

Objectives:

(a) To study the character of rural small-scale industry in North-East Thailand and the social, economic, cultural and structural context of its operation.

(b) To study the role played by rural small-scale industry in terms of employment, local income and social development.

(c) To evaluate the constraints, progress and potential of rural small-scale industry, and assess the prospects for its future development.

(d) To study rural small-scale industry in the context of current development theories, philosophies and ideologies.

(e) To establish a context for possible future development policy formulation and administration.

Hypotheses:

(a) The level of development of rural small-scale industry is influenced to a considerable degree by the social, economic, cultural and structural context within which it operates (including communication with outside manufactures, and the nature of market demand).

(b) Rural small-scale industries hold potential as a means of generating employment and income *in situ*, and in the process improving the welfare of those involved and reducing the need for some people to migrate from their home areas.

(c) Rural small-scale industry can be developed in such a way as to minimise the degree of social (and cultural) disruption experienced by participating rural communities.

(d) Rural small-scale industry can be developed by initiating linkages with urban-centred industries, and by adopting market-oriented designs and methods of production.

(e) Rural small-scale industries represents a realistic means of promoting development 'from below' at the grassroots level, and thus of fitting into recent policy shifts which have taken place in development planning in Thailand.

(7) Data Collection and Analysis

As the objectives of this study are to look at the character and role played of rural small-scale industry of North-East Thailand in the process of rural development, its constraints, potential and prospects for development, the three models of industry were developed to provide the foundation for this enquiry (the rationale behind this is discussed in Chapter 2). These are: traditional industry, technical skill-based industry and industries using the sub-contracting model. Seven villages in four provinces of North-East Thailand were selected for study. The selection criteria prior to data collection and the selection criteria for the key informants who are the interviewed in the study villages will also be discussed in Chapter 2.

To achieve the objectives of this study, a data collection technique was designed. Questionnaires were used to collect quantitative data from those seven villages. The questionnaires were designed into three types to fit each type of industrial model with different characteristics. Although the details of each type of questionnaire might be different, in order to achieve the same objectives of the study the main structures and questions were quite similar. The questionnaires were designed to interview villagers who were involved in rural industry. The questions in the questionnaire were concerned with family background, agricultural background, family income, expenditure of income from rural industry, relationship between rural industry and agriculture, involvement in rural industry, impact of rural industry on living conditions, migration of family members, improvement of rural industry (producers' attitudes), changes in manufacturing compared with the past, adaptation to the changes in manufacturing, factor to 'push' and 'pull' in implementing rural industry, and the social impact of rural industry. The structure of the questionnaire can be considered as having three major parts: the first part deals with the general background and assets of respondent households; the second part relates to the villagers' income, sources of income, and expenditure; and the third part relates to the manufacturing process, attitudes and impact of change. A summary example of the questionnaires is shown in the appendix at the end of this thesis.

In the process of data collection, the random sampling technique was adopted for use with the questionnaire survey. Approximately 20 per cent of the population was the goal for the sample survey. The first type of rural small-scale industry, which was the traditional type, obtained data from Ban Krajai village and Ban Sithan, Yasothon province. The total number of households in these two villages that were involved in cushion-making was approximately 400 households, so a sample of 100 was collected. The second type, the technical skill-based industry, collected data from Ban Sangming Mu 6 and Mu 7, Ubon Ratchathani province. The sample of 100 from a population of approximately 400 villagers/workers involved in the gemstone-cutting industry was collected. A further sample of 50 was collected from Ban Non-Fun-Rua, Ban Non-Sathorn and Ban Bayao, Khon Kaen province. Although these latter three villages have large populations, they do not have a high percentage of households involved in gemstone-cutting when compared with Ubon Ratchathani province. There were approximately 250 villagers/workers in these three villages who were involved in this type of industry, so a random sample of 50 seemed reasonable.

The third type, the sub-contracting industry, collected the data from Ban Nakae, Ban Nok-Ork and Ban Thungjan, Nakhon Ratchasima province. These three villages had approximately 300 households involved in silk-weaving industry with the characteristics of the sub-contracting system, so a random sample of 70 was collected from these sites. By this method, a total sample of 320 respondents/questionnaires from seven villages in four provinces was collected to form the basis of the quantitative material for this study.

The qualitative technique was adopted. Details from interviews and observation during the field work were noted. These qualitative data were used to explain and support the quantitative data in the process of data analysis and discussion. A pre-test of the questionnaire was done in August 1989 and the data collection process itself was undertaken during October 1989 to March 1990. There was a follow-up process to confirm and detect changes in the target villages; this process was done after the data collection process was finished, about 22 months later.

After the questionnaire pre-test process, some questions were changed from the first design to fit both the study objectives and the rural field situation. For example, some wording which was difficult for the interviewees to understand and answer was changed to be more easily comprehended. The data collection process took about 6 months because the field sites were quite far from each other: Ubon Ratchathani province is about 100 kilometres from Yasothon province, Yasothon province is 200 kilometres from Khon Kaen province and Khon Kaen province is about 180 kilometres from Nakhon Ratchasima. The details of the studied areas will be explained in Chapter 4. Because I, as the researcher of this study, did the interviewing myself, it took a long time for the field work to be completed, but there were many advantages to the study. First, the researcher is a local person, a Northeastern Thai, so the familiarity with the interviewees helped them to give data in depth which was very useful in the data collection process. Second, I could communicate with them in *esarn* which is the northeastern Thai local language, which made it easy for the interviewees to answer in their own language. Third, I know the local situations and local customs of interviewees so there were no difficulties with the understanding and interpretation of the data.

The timing of the data collection was quite convenient because it was the end of the agricultural session which meant that rural small-scale industry in the village was in full swing. Normally, the workers in the industrial sector of rural North-East Thailand villages do agricultural jobs in the rainy season and come back to work in the rural industrial sector in the dry season. The rainy season in Thailand starts in mid-May and ends in mid-October; November to February is winter, and the summer season is during March to mid-May. If researchers go into the village during the wet season, they may not get anything from the villagers - either interviews or the opportunity to observe their behaviour - because the villagers are working in their fields and it is difficult to locate them.

Problems of data collection during this study concerned the difficulty in obtaining quantitative data such as numbers, especially relating to income from each source. This problem arose because the study's aim required some economic data on income from industry compared to other sources of income, but in the sense of rural villagers this information is not thought of and remembered separately. The nature of rural villagers in North-East Thailand was immediately to spend the money that they could earn, because of their low income and because the need to spend money occurs everyday of their life. It was very rare for them to keep a lump sum of money except when they had clear plans in their mind such as to build a new house or to buy a motorbike. Then they would try to save their income. The technique in solving this problem during the process of data collection was to use the expenditure of the villagers to compare or cross-check or sometimes estimate the real income, and to use the previous income from agriculture before implementing the industrial firm to separate how much of the real income and benefit they could get from working in industry.

The other problem in the process of the interviews was the question of social change. It was the aim of the study to find out the social impact, if any, of rural industry in addition to its economic impact. But the rural villagers seemed to think that change was normal so they felt that there was no change taking place in their society. This problem could be solved by using many questions for encouraging the rural villagers to get the ideas by themselves which might be called a cross-checking technique. This was very important in data collection because the interviewer should not guide the answers of the interviewees, in order to avoid any bias that might arise during the interview.

The last problem was the interviewees, who felt a little bored whenever the interview ran for more than half an hour. During interviews they had to think more than just talk which cause them to get a headache sometimes. To create good feelings to all interviewees, the data collection from each household, which needed to interview the household heads or other household members, tried to finish each questionnaire within half an hour. Moreover, the interviewees were sometimes still working in their fields or in their workshops while answering the questions. For example, gemstone-cutting needs technical skills, so the faster the interview finished the better so as not to avoid interference with work.

After the data collection process was finished, all data from each questionnaire were coded on a coding sheet for computer data processing. Then the coded data were transferred onto a computer storage. The SPSS-PCplus computer programme was used to analyse the data which had three separate files for the three types of rural industry. The data analysis technique mostly used descriptive data to show the characteristics of rural industry in North-East Thailand, but there was also some bi-variate analysis to compare patterns and distributions, and to search out similarities and difference. The Chi-square technique was used to test patterns of distribution between various pairs of variables.

By the technique of study area selection, data collection and data analysis, as described above, could be built up a valuable analysis which could enable the objectives of the study to be operationalised and the hypotheses tested. In particular the study was able to explore and discover the nature and impact of rural small-scale industries in North-East Thailand, the prospects for its development and the policy needs which face development administrators in Thailand.

(8) Definition and Explanation of Technical Terms

It is important to define some of the terms which were used in this study so that the reader has the same understanding of meaning as the writer. Those terms that have to be defined are as follows:

(a) Rural small-scale industry; means, in this study, industry that is located in the rural villages and not in the city, and is implemented by villagers who are local people. Small-scale here means industry that has a limited amount of capital investment and a smaller number of workers (up to *circa* 25-30) compared with urban large and medium scale industries.

This definition may differ from the Thai official concept. In Thailand, the term small-scale industry was defined as industry which has a total investment of less than 1 million baht (£25,000) and employs fewer than 50 workers (Ministry of Industry, Thailand, 1990). This is quite different from this study because the official definition of 'rural industry' actually means the 'up-country industry' (Panpiemras, 1988; 35). If the study followed the official concept, the output of the research would have had to include provincial or up-country industry, much of which is urban based. The aim of this study, as discussed at the beginning of this chapter, was to focus on genuinely rural industry because it needed the answer questions about rural development. The limit of 1 million baht investment cannot be used for the real rural-based industry in North-East Thailand because it is too high for the villagers to afford. If policy set to promote industry in the rural areas with 1 million baht of investment, the medium-size enterprises and medium-size entrepreneurs would get the majority of the benefit, and not the large numbers of peasants who are involved in cottage industry. This study sought to explore the potential for creating benefits for the rural peasantry, so the definition given above had to be redefined.

(b) *Ban, tambon,* district and province: these are the principal administrative units with which this study is concerned. Thailand is divided, administratively, into 73 provinces, each of which is divided into a number of districts depending on the size of the province. The number of districts in each province may not be equal. Each district is in turn divided into several *tambon*, and these contain a number of *ban* or villages. By this meaning the village or *ban* is the smallest administrative unit in the country.

(c) *Rai* is the measure which is typically applied to agricultural land in Thailand. One *rai* equals 0.16 hectares.

(d) *Remote areas*, in this study, means the areas that are located far from the provincial town; are linked to the main road with laterite or poor quality roads; and where the people live with poor infrastructure. Some areas in this study may not be particularly far from a main road but are far removed from the provincial town, making it difficult for them to benefit from government services or public infrastructure. Some areas find it difficult to communicate with the 'outsider world' because of poor roads. These areas are all considered 'remote'.

(9) Structure of the Thesis

This chapter has discussed development theories, concepts and ideologies appertaining to rural development. The need for non-farm activities and rural industry in the interests of employment generation and rural income promotion beyond agriculture, as well as the State's role in the development of rural industry, were some of the issues discussed. The interesting issues of rural industry which this study aims to examine are its role in employment generation, increasing income and social development in rural North-East Thailand as well as its constraints, potential and prospects for the region's development. Six hypothesises were established to test the concept of rural development and the developmental role of rural industry. This chapter also described the data collection techniques which were employed in the field work. The structure of the questionnaire and random sampling technique which were used in the process of data collection were explained, as was the adoption of qualitative techniques to collect detailed case study information.

Chapter 2 will discuss further the research methodologies and study area selection. It will explain the principle of study areas selection and the basic criteria which were used in the selection process. The three-way typology of rural industry in North-East Thailand is described. The reasons why the seven villages and four provinces of North-East Thailand were selected for the study are also explained.

Chapter 3 will introduce North-East of Thailand, its characteristics and rural development process in the region. This chapter will also describe past rural development policy, the results of past policy implementation, the current policy for rural industry promotion and the potential for the region's future development. It will bring out the linking idea between the regional condition and rural industry that will be discussed in a later chapter.

Chapter 4 will discuss the rural small-scale industries of North-East Thailand by type and location. The industries which will be introduced are: cushion-making, pottery-making, brassware-making, mat-making, gemstone-cutting, pseudo-ancient pottery-making, silk-weaving, fish-net repairing and blanket-making. The discussion will concern itself with location, manufacturing and history, business, marketing, development potential and constraints. The discussion in this chapter will lead to the further discussion in each type of industry in chapters 5-7.

Chapters 5-7 will discuss the three types of industry as three separate models. Chapter 5 will discuss the model of traditional industry using the cushion-making industry in Yasothon province as a case study which is discussed in comparison with other industries in the same type. Chapter 6 will discuss the technical skill-based industries using gemstone-cutting in Ubon Ratchathani and Khon Kaen as a case study which will be examined in comparison with other industries in the same type. Chapter 7 will discuss the model of sub-contracting industry using the silk-weaving industry in Nakhon Ratchasima as a case study which is compared with other industries of the same type. These three chapters will be based on the data collected from the questionnaires and field studies. The analysis assess comparatively the character of these three types of industry, their relationship with agriculture, their employment generation role, their role in reducing migration, change in rural income after the introduction or development of industry, social impact and the development of rural society, and the potential and constraints which face the development of each type of industry.

Chapter 8 will bring the three models that were analysed separately in Chapters 5-7 together in a comparative study that also seeks to place the discussion within the broader context of current rural development discourses and ideologies. The role and potential of rural industry in the development of peripheral areas as well as its developmental constraints will be derived from this analysis. Later the prospects of policy formulation for the development of rural small-scale industry and rural development will also be brought in.

Finally, chapter 9 will summarise the major conclusions of this thesis and will discuss some policy recommendations which have emerged from the study.

CHAPTER 2

STUDY AREA SELECTION AND SURVEY DESIGN

This chapter is intended to introduce the study area to the reader. It will describe how the study area was selected and how the survey was designed. As such, it links in with the discussion of data collection and interpretation methodology which was contained in Chapter 1.

Because the objective of this study is the consideration of appropriate policies for the development and promotion of rural small-scale industry in North-East Thailand, the research methodology has to be designed accordingly. In the identification of research methodology, and especially the process of study area selection and data collection, it is useful to establish some criteria with which to guide the design process. For this study, three criteria were used: first, because rural industry provides the central focus of this study, the enquiry will include only those productive enterprises which are located in rural villages and/or the countryside. In other words, small-scale enterprises in district and provincial towns are excluded from the analysis, except where there are clear linkages between rural and urban industries, such as through sub-contracting or putting out arrangements. Second, because another of the objectives of this study is to examine the developmental role of the rural industrialisation process, only those industries which have been established for a number of years will be examined. In other words, newly-established enterprises, whilst interesting in their own right, do not enable us to examine the process of evolution which has taken place as traditional industries have become modernised and developed in response to internal and external market and other stimuli. Third, because the study seeks to inform the on-going development discourse by examining the rural industrialisation process generally, the rural industries which will be selected for in-depth enquiry must be broadly representative of the wide array of such industries found in Thailand today. In other words, were we to select interesting but atypical enterprises our ability to extrapolate from our findings in terms of the form, process and prospects of rural industrialisation in peripheral and economically depressed areas of the developing world would be unduly constrained.

The following discussion provides additional information in support of the above selection criteria:

(a) More than 80 per cent of industry is located in Bangkok metropolis, the capital city, and a small number of provinces in its vicinity: Nakhon Pathom, Nonthaburi, Pathum Thani, Samut Prakarn and Samut Sakorn. Industries in up-country areas, which together constitute less than 20 per cent of the country's industrial sector, mostly consist of agro-industries. These are neither high technology nor large-scale industries, and generally have only limited potential to compete with industries in Bangkok and vicinity, both for a share of the domestic and international market, and for investment resources. Provincial industry in Thailand is closely related to the rural and particularly agricultural life, so it is not surprising that most provincial industries consist of rice-mills (further information is provided in Chapter 3).

Past policies of industry promotion by the Thai government did not differentiate between urban and rural industry. There was no specific policy to promote rural industry, so most of the capital-intensive industries tended/preferred to locate near to the capital city because of its superior infrastructure and myriad locational advantages. However, the government also had a policy of provincial industry promotion, which encouraged some new firms to relocate to, or become established in, up-country areas, although mainly in urban areas. Few of them were rural based industries, or became genuinely located in rural areas (some, essentially urban industries, became established in green field sites). Accordingly, past policies of industrial promotion, even in relation to the provinces, have done little directly to help in reducing rural poverty. Such provincial in that have been established have helped neither to increase employment nor, because of their tendency towards capital intensity, absorb rural labour. Moreover, they have done little to stop migration from rural to urban areas.

Because it represents an area which has been largely neglected in past industrial development policy, and because of the potential role that it can play in achieving certain of the Thai government's development and poverty alleviation objectives, this study therefore aim is to focus on the rural industrial sector. For this reason, we have adopted the criterion which specifies that only genuinely village-based rural industries will provide the focus for this study.

(b) The second criterion, which relates to the scale or size of industries on which this study will focus, identifies small-scale industry as our principal concern on account of the fact that this is the most prevalent form of industry found in the North-East of Thailand. The North-East region is known as the economically least developed part of Thailand's spatial economy. For this reason, the Thai government has initiated a number of rural development programmes in the region in its attempts to alleviate poverty and encourage the modernisation and diversification of the regional economy. Rural small-scale industry has in recent years demonstrated a certain responsiveness to wider externally-derived development initiatives in the North-East. It is also the case that small-scale industries have a greater potential role to play in rural development because, for reasons which were discussed in Chapter 1, of their inherent flexibility and ability to dovetail with agricultural and other activities and responsibilities - certainly to a greater extent than larger-scale enterprises, where rural labour is more likely to be separated from the means of production in the process of becoming, effectively, factory workers. Furthermore, because the rural peasantry is the principal focus of our enquiry, and because peasants are more likely to be engaged in small-scale activities, we are excluding larger-scale enterprise from our enquiry. Hence the second criterion, that the study industries must be located in rural villages of North-East Thailand and must be small in scale according to the definition given at the end of Chapter 1.

(c) The third criterion concerns the kinds of industry that might be considered 'representative' of the rural industrial sector in Thailand generally. As we shall see in Chapter 3, the North-East of Thailand contains a wide variety of forms and types of rural industry. However, it is impossible to study all such industries, so it is necessary to select a representative cross-section. The selection criteria include the need to identify rural industries which are at different levels of developmental transformation, have different degrees of integration into the regional, national and international markets, and which have different degrees of integration with the local agricultural economy. We also aim to include industries which have different forms of structural organisation. By identifying a representative cross-section of industries we hope more meaningfully to be able to identify the developmental role, potential and constraints which face the rural industrial sector in Thailand. In this way, this study will hopefully help to inform public policy through the breadth, depth and empirical insight it is able to provide.

With the above criteria in mind, the investigation started by appraising recent research which has been undertaken in North-East Thailand and which describes the nature of rural industry in some of the region's villages. Whereas some of this research has focused on rural industry as its major part, most research has studied rural industry as a background to the other issues and processes with which it was mainly concerned, in particular the region's agricultural and urban-based industrial economies. Research on industry in the region appears to be of only very recent interest to scholars both in Thailand and abroad. Whilst the information provided by past research yielded some superficial information on the types of cottage industries which could be found in the region, there was little detail which could have been of help to the present study.

The next step was to undertake a preliminary study in the field. In order to prepare for in-depth field research, and especially to select the study communities, it was necessary to visit a large number of villages in many parts of the North-East - a form of Rapid Rural Appraisal. It was clearly impractical to expect to visit all villages in the region, or even every province. Fortunately, basic information on rural villages in the North-East was available from a database held in the Rural Development Information Centre. The National Rural Development Database (in Thai is called *Gor Shor Shor Song Khor*), prepared by the National Rural Development Committee, contains information relating to rural development issues in all of the country's 44,000 or so villages. The Database is structured around two sections: the first provides a general overview of each village (e.g. size of village, population, number of households and location of village); the second section provides information on the major and minor occupations of most villagers, and also the average income. All of this information is stored in a computer and is updated every two years.

The occupation and source of income were used as the key variables in identifying the names of villages contained on the database which contained some form of rural industry, be it as a major, minor or supplementary source of livelihood. It was decided to ignore this latter information as there tends to be little consistency between what people perceive to be their major and minor occupations and the actual proportion of their time which is dedicated to each. Thus, for instance, villagers may typically describe themselves as 'farmers' even though they may spend the major part of their time and derive the major part of their earnings from non-agricultural occupations such as cottage industry.

The 1987 database was used in this selection process, and 107 villages were selected using this source. The 107 villages which had some form of rural industry were spread throughout the 17 provinces of the North-East. After perusing the details of these 107 villages, several were eliminated because they did not satisfy the various selection criteria. In the end, 30 villages of particular interest were selected for further study. These villages were located in seven provinces around the North-East: Ubon Ratchathani, Yasothon, Nakhon Ratchasima, Khon Kaen, Nong Khai, Udon Thani and Maha Sarakham.

The next step was to undertake a basic field survey of the selected industries. This phase of the research was completed between January and June 1989. It took a long time to travel back and forth between Khon Kaen and the study villages. Moreover, it was found that several of the industries which had been identified on the database had already disappeared or gone bankrupt. A considerable amount of time was expended in up-dating the information by talking to local government officials whose jurisdiction included the various study villages, and also the *kamnan* (headman of the Tambon or commune) who is in charge of local administration. However, these various conversations with officials yielded a great deal of useful information. They provided a clear view of such facets as the nature and characteristics of rural small-scale industry in North-East Thailand; the rural way of life associated with rural industrial production; the origins and recent dynamics of local industries; and the manufacturing and business development processes.

The data from the field survey and discussions with officials were used as the basis of an initial classification of rural small-scale industry in the North-East. The 30 identified villages and their principal forms of industrial production are outlined below:

1. Ban Hua Saai, Tambon Paan Prao, Sri-Chiangmai District, Nong Khai Province.

   Major kind of rural small-scale industry: <u>mat-weaving</u>

2. Ban Pon Sawan, Tambon Sra Khai, Muang District, Nong Khai Province.

   Major kind of rural small-scale industry: <u>blanket-making</u>

3. Ban Na Kha, Tambon Na Kha, Muang District, Udon Thani Province.

   Major kind of rural small-scale industry: <u>cotton-weaving</u>

4. Ban Mor Din, Ban Chiang, Ban Pulu and Ban Kham Or, Tambon Ban Chiang, Nong-Han District, Udon Thani Province.

Major kind of rural small-scale industry: pseudo-ancient pottery-making

5. Ban Mor, Tambon Ban Kwao, Muang District, Maha Sarakham Province.

Major kind of rural small-scale industry: pottery-making

6. Ban Pa Ao, Tambon Pa Ao, Muang District, Ubon Ratchathani Province.

Major kind of rural small-scale industry: brassware-making

7. Ban Sang Ming Mu 6 and Ban Sang Ming Mu 7, Tambon Nong Muang, Muong Samsip District, Ubon Ratchathani Province.

Major kind of rural small-scale industry: gemstone-cutting

8. Ban Kra Jai, Ban Sri Tan, Ban Tao Hai, Ban Po Sri, Ban Po Sai, Ban Nong Ped, Ban Kud Samrong and Ban Pa Tong of Tambon Kra Jai and Tambon Sri Tan, Pa Tiew District, Yasothon Province.

Major kind of rural small-scale industry: cushion-making

9. Ban Non Chai, Tambon Non Han, Chum Phae District, Khon Kaen Province.

Major kind of rural small-scale industry: cotton-weaving

10. Ban Non Fun Rua, Ban Non Sathorn and Ban Ba Yao, Tambon Kud Kwang, Nong Rua District, Khon Kaen Province.

Major kind of rural small-scale industry: gemstone-cutting

11. Ban Nong Toom, Tambon Nong Toom, Muang District, Khon Kaen Province.

Major kind of rural small-scale industry: gemstone-cutting

12. Ban Kok Lam and Ban Savathi, Tambon Ban Thum, Muang District, Khon Kaen Province.

Major kind of rural small-scale industry: fish-net repairing

13. Ban Na Kear, Ban Nok Ork and Ban Thung Jan, Tambon Na Kear and Tambon Nok Ook, Pakthongchai District, Nakhon Ratchasima Province.

Major kind of rural small-scale industry: silk-weaving

After studying the details of the data derived from the field surveys and discussions with officials, the study industries were classified into three types for convenience of subsequent analysis:

(a) Traditional Industry: this general designation was used for industry that had been established for a long time and which had become an intricate part of the way of life of the local people. In the past, the products which resulted from these industries - mostly utilitarian in nature - were either consumed by the producing household or were exchanged locally for other items and agricultural produce. In some, but not all, cases the production methods of these industries have been transformed and the products have a higher level of exposure to the external market. This type of industry includes: mat-weaving, cotton-weaving, pottery-making, brassware-making and the cushion-making industry.

(b) Technical Skill Industry: this type includes forms of industrial production where certain technical skills are an essential component of the production process. In several cases these had involved the introduction of production skills which had not been present in the traditional and long-established rural industries in the region. Villagers had obtained these skills through on-the-job training or as a result of work-related migration to other (typically urban) places. Returning migrants had used their skills and experience to create such technical skill industries in their home villages. Others derived their technical skills through on-the-job training or from their friends and neighbours. The levels of skill required by industries within this broad category were very variable, particularly in accordance with the kind of product being made. However, they are lumped together within the same type, for analytical purposes, because they are quite clearly differentiated from others with which this study is concerned. Forms of industrial production which fell within this category included: pseudo-ancient pottery-making, which uses technical skills in shaping and painting to make pots resemble genuinely ancient pottery in a nearby archaeological site, and the gemstone-cutting industry which uses technical skills in cutting and polishing of gemstones and artificial 'diamonds'.

(c) Sub-Contracting Industry: this type includes all firms where the production process occurs as part of a sub-contract or putting-out arrangement from large-scale firms in nearby urban areas. Such forms of sub-contracted production typically take place within the home. The central firm would typically provide the requisite raw materials, and be responsible for marketing and control quality.

This type of industry includes fish-net production, silk-weaving and blanket-making.

In each of these three types, the study had to select for in-depth research certain locations and forms of production which could be seen as representative of the type. After careful analysis of every kind of industry in every type, and using the three criteria of study area selection which were described above, ten villages in four provinces were ultimately selected for in-depth study and quantitative data collection. These ten villages were:

(a) Traditional Industry: Ban Sri Tan and Ban Kra Jai of Pa Tiew District, Yasothon province were selected. Almost every household among the approximately 400 households in these two villages was involved in the cushion-making industry. Cushion-making is a traditional cottage industry which can be found in many villages of North-East Thailand. However, these two villages appeared to be the principal and largest places where these traditional products were being made. Other villages had only 60-100 households involved.

Other kinds of traditional industry were also considered, including cotton-weaving. However, few rural cotton-weaving establishments can now be found in the North-East, making quantitative data collection problematic. Accordingly, it was decided to concentrate on qualitative data collection for this industry. A similar problem was faced in connection with other traditional industries, such as pottery and brassware manufacture. These industries have contracted considerably in recent decades, to the extent that it was difficult to find representative establishments for inclusion in the survey, particularly firms of sufficient size to include in the questionnaire survey. Nonetheless, rather than omit these interesting and informative (in relation to the development process) types of industry, efforts were made to find other techniques of data collection so that they could be retained within the in-depth stage of the survey. The reasons why there are so few manufacturers at present will be discussed in the subsequent analysis section.

(b) Technical Skill Industry: Ban Non Fun Rua, Ban Non Sathorn and Ban Ba Yao of Tambon Kud Kwang, Nong Rua District, Khon Kaen Province and Ban Sang Ming Mu 6 & Mu 7 of Tambon Nong Muang, Muong Samsip District, Ubon Ratchathani Province were selected. The principles of selection were similar to those employed in (a) above. Gemstone-cutting is not a traditional form of industrial production in the North-East, but is a newly introduced form of enterprise which has spread with remarkable rapidity throughout many villages and provinces in the North-East. It may have the character of a sub-contracting arrangement in some parts of the manufacturing process, but its important use of technical skills was seen as the main distinguishing feature of this kind of industry. The reason why we preferred to select gemstone-cutting to form part of the wider in-depth survey was mainly because of the large number of manufacturers who were potentially available for interview, making quantitative techniques a reasonable proposition. It was also an interesting industry for further study because it suggested an important potential model - non-indigenous industries - which might be more widely imitated as part of a broader rural industrialisation strategy.

In comparison, the pseudo-ancient pottery industry is found only in Udon Thani Province, and with a much smaller number of manufacturers than is the case with gemstone-cutting. However, although it was thus less amenable to quantitative techniques of enquiry, we did not wish to omit the industry from the survey because it provided an interesting counterpoint to the gemstone industry. Pseudo pottery-making was principally examined by means of qualitative survey techniques.

(c) Sub-Contracting Industry: Ban Na Kea, Ban Nok Ork and Ban Thung Jan of Tambon Na Kear and Tambon Nok Ork, Pakthongchai District, Nakhon Ratchasima Province were selected because they offered good examples of the sub-contracting industry type. The silk-weaving industry in these villages had been established during the last 5-10 years. Other kinds of industry using the sub-contracting system, such as the fish-net industry and blanket industry, had started about three years before the time of the survey. The dynamics of these firms made them particularly appropriate to a study which was concerned with rural industrialisation within the context of the rural development process. The fish-net industry stopped manufacturing in 1984 because of a fall in demand, but re-opened in 1986 as the demand from the international market picked up. The blanket industry spread to areas of Nong Khai Province in 1986-1988, but then disappeared in 1989. Thus both provide an illustration of relatively unstable industries which are clinging on for survival in the peripheral and impoverished North-East. Further discussion of these industries is provided in Chapter 3.

In contrast, the silk-weaving industry was chosen in order to investigate a cottage industry which has been active in the region for several decades, and which has enjoyed a period of sustained dynamism in recent years as a result of a strong international demand for silk material and products. The in-depth study of this type of industry is valuable in identifying how peasant producers have benefited from the industry's recent buoyancy. The silk-weaving industry in the three selected villages of Pakthongchai District were the main centres of production in the North-East, and most of them had employed the sub-contracting system. In each, more than 200 households are involved in the silk-weaving industry, whereas in other villages in the region the maximum is only 30-40 households, and there is seldom a sub-contracting system in place. Most produce silk using their own investment and inputs, and sell their products directly to the consumer. These three main villages in Pakthongchai District were the principal focus of the quantitative data collection exercise, whilst the other silk-producing villagers were also included in the exercise of collecting qualitative information for comparative purposes in the analysis chapters.

These three industry types together represent a sufficiently wide cross-section of rural small-scale industry in North-East Thailand to satisfy the criterion of representativeness. They also allow an interesting basis for comparison, allowing the analysis to explore the extent to which industry type and structure has an influence on the development dynamics and function of individual forms of rural small-scale industrial production in the region.

Quantitative data collection in the three types of industry focused on the producers in the villages. This was because the objectives of our study particularly concerned the development dynamics, role and potential of rural industry in the study area, and hoped to draw out appropriate public policy guidelines for the development of rural industry as a basis for rural development. Therefore, data collection was mainly directed towards the producers who would prove to be the most likely source of important relevant information for our analysis. However, this is not to imply that the remainder of villagers who were not engaged in rural industry in the study villages were completely omitted. They were also studied using qualitative techniques as a means of ascertaining the contextual background to rural industrial production. Principally, the data so obtained concerned their way of life, their income, and their attitudes towards rural economic activities, used as a basis for comparison with the rural industrial producers in the same village.

CHAPTER 3

NORTH-EAST THAILAND AND THE RURAL DEVELOPMENT PROGRAMME

The earlier discussion has explained the phenomenon of rural small-scale industry and the concept of rural development which might allow for the fuller integration of the rural industrial sector. It has also started to suggest ways in which 'alternative' or complementary policy approaches could be formulated. Chapter 2 explained the research methodology relating to the selection of the study area and target industries which lays the foundation for an investigation of the characteristics of the rural small-scale industrial sector and its prospects for growth and diversification. This chapter will provide a brief overview of North-East Thailand and of the national rural development programme, especially as it relates to this region. It seeks to facilitate the reader's understanding of the context within which this study is placed and the conceptual enquiry is unravelled. In particular, we seek to show why the North-East provides an ideal location for a study of developmental constraints and potential of the rural small-scale industrial sector in peripheral and economically depressed areas.

(1) North-East Thailand

The North-East region of Thailand has an area of 168,854.3 square kilometres, or 32.91 per cent of the country's land area, and its population in 1989 was 19.5 million (34.9 per cent of the national total), making it the largest of the country's 4 main geographical regions (National Statistical Office, 1990). The North-East is also the poorest region of Thailand in terms of resources, economy and personal income. Approximately 80 per cent of people in this region live in the countryside and are small-holder farmers who earn an income which is substantially below the national average. The region's farmers usually face a diverse range of agricultural and resource problems related to extreme environmental variability, adverse climate, poor soils and limited, often unreliable, water resources.

The Kingdom of Thailand has 73 provinces which are administratively grouped into 6 regions (three of which - the North, North-East and South, broadly overlap with the geographical regions referred to above). The northeastern region has 17 provinces (in Thai, *changwat*): Kalasin, Khon Kaen, Chaiyaphum, Nakhon Phanom, Nakhon Ratchasima, Buri Ram, Maha Sarakham, Mukdahan, Yasothon, Roi Et, Loei, Si Sa Ket, Sakon Nakhon, Surin, Nong Khai, Udon Thani and Ubon Ratchathani (see Figure 3.1).

Soil in this region is typically loamy sand and has low fertility. As a result, the region's soils tend to provide lower yields per *rai* than those found in other regions of Thailand. Recent statistics suggest that roughly 11.5 per cent of the region's soil is unsuitable for cultivation of any kind and another 20 per cent is recommended to be kept in reserve or used only for grazing. Soils deemed suitable for general field crop cultivation amount to roughly 29 per cent, while another 38.4 per cent is believed suitable for paddy agriculture (TURA, 1987, v.I). Soil salinity is an increasing problem in many areas. According to 1981 estimates, salinity problems affected approximately 17.8 million *rai* and another 19.4 million *rai* were believed likely to face similar problems in the near future (North-East Development Centre, 1981).

The climate of the North-East is similar to other parts of Thailand and South-East Asia that have a monsoon climate. The normal temperature is between 25°C and 34°C, and in the summer sometimes reaches as high as 40°C. The actual amount and pattern of rainfall can be extremely erratic and unpredictable, however, not only from year to year but also within the wet season itself. It is not uncommon for farmers to experience too little, and then too much rain. This creates considerable risks for agricultural production, more than half of which involves rain-fed cultivation.

The population of North-East Thailand has grown substantially over the last thirty years, creating substantial pressure on the resource base and hindering rural development efforts. In 1960, the region's inhabitants numbered slightly less than nine million. By 1989, the population had basically doubled to 19.5 million. Average population density increased during this same period from 53.3 persons/sq.km. to 115.5 persons/sq.km. Since the introduction of family planning in the early 1970s, the birth rate has slowly declined and family size now averages less than six persons per family (TDRI, 1987, 12).

Although many of the region's peasants display cultural, social and economic similarities resulting from a traditional rural lifestyle and a shared religious belief in Buddhism, there is nonetheless considerable ethnic diversity. A majority of the region's population belongs to the Thai-Isan ethnic group which is composed of several sub-groups, the largest of which, the Lao-Wieng, is concentrated in the central and northeastern portions of the region. The second largest ethnic subgroup is the Thai-Korat, a genetic blend of Thai and Khmer concentrated in the southwest part of the North-East. Other ethnic sub-groups are the Phuthai, So, Kui, Yor, Song, etc. (Lovelace *et al*, 1988, 10).

Agriculture is the primary economic activity in the North-East. Agricultural production may be divided into three categories: crop production, livestock production and forest/fishery activities. Most crop production involves rain-fed agriculture due to the lack of substantial supplies of water and irrigation. Rice is the major food crop of the North-East and is grown on roughly 80 per cent of the total cultivated land. Both non-glutinous and glutinous varieties of rice are grown, with glutinous rice being the region's principal food. Cassava, kenaf and maize are also grown as minor crops. The other crops grown in this region include sugar cane, cotton, soybean and peanut. Livestock production activities account for roughly 15 per cent of the region's overall agricultural production. Livestock products include cattle, buffaloes, pigs, poultry and eggs. A relatively new activity in rural areas involves dairy production. Forest and fishery activities also contribute to the rural diet and economy. Collection of natural foods from forest lands and paddies, as well as fish production in freshwater ponds and paddies, provides an important source of food in many rural areas and also generates cash through sales.

The per capita income of the North-East is nonetheless quite low, averaging about 10,000 baht (approximately £250) per year in 1992. This amount is roughly one-quarter of the national per capita income. There is also a substantial disparity within the region between the income of rural farmers and urban residents. Rural income is approximately 50 per cent lower than urban income. Chronic unemployment and underemployment occur and seasonal migration for employment outside the region is a common pattern for many rural households.

The region's infrastructure has improved considerably in recent decades. Surfaced highways provide links between the provincial capitals and district centres, and the region itself is linked to Bangkok by a major highway, as well as by air and rail services. Dirt or laterite roads provide access to almost all villages.

Although conditions in North-East Thailand, particularly in terms of infrastructural provision, have improved, the region's resource base has become increasingly weak and the majority of its rural population remains extremely poor. This is a consequence of many factors: resource degradation, population growth and pressure, increased demands and competition for resources, agro-economic instability, etc. These issues and problems are complex, interlinked and not easily solved.

(2) Development Problems, Administration and Rural Development Programmes

During the last three decades, changes in Thailand have been brought about as a result of the wider transformation of the economy and the extension of the government's involvement in development programmes. Since the First National Development Plan was formulated in 1961, development through economic growth within a context of national security has been a national priority. A cumulative Gross National Product (GNP) growth rate of approximately 8 per cent was achieved between 1959 and 1969, followed by a slightly lower rate of approximately 7 per cent during the 1970s. The growth rate reached double figures at times during the mid-to late 1980s, making the Thai economy one of the fastest-growing economies in the world, a situation which has continued only slightly abated during the 1990s.

However, it has been clear that growth alone has been insufficient to sustain development. Inequalities between rich and poor, centre and periphery, and urban and rural areas remain and have tended to increase.

Rural-urban income differentials in Thailand are quite high, about 1:3, and per capita income disparities between Bangkok Metropolis and North-East Thailand increased from 5:1 to 6:1 during the 1960s. These imbalances took on a political significance in 1973 that led the country's planners as well as university students, academics, and other concerned groups to turn more specifically to rural development as a counterbalance to the policies that had failed to uplift the living standards of many of the four-fifths of the population who live in the countryside.

The concern for rural development has sprung from the inequities of the past development strategy based primarily on economic growth and national security. The inequities have been posed as a development problem in a number of ways: politically, as a dangerous gap between aspirations and achievement; economically, as a failure to increase productivity and create a rural market; and morally, as an unjust social distribution of the benefits of economic growth. How to ensure the trickling-down of benefits to the rural poor has become a principal issue.

Although regional disparities and income inequalities remain and the gap in development between rural and urban areas tends to be a major problem, the government has held the objective of trying to ameliorate the rural problem since formal state planning commenced in the early 1960s. The strategy of rural development has changed many times. Nonetheless, every national economic and social development plan has contained rural development activities as a stated priority. The North-East region, as an economically depressed part of the Thai spatial economy, has also constituted a priority focus for rural development activities. The First and Second National Economic Development Plans (1961-1971) concentrated strongly on agricultural development in order to lift the farmers' income. Because the majority of the Thai population, and that of the North-East, were farmers, it was believed that the development of agriculture would be the most effective means of helping the majority of the people. The major objectives of the first and second national plans, which highlight this intention included: the improvement and expansion of government infrastructure projects (such as irrigation and transportation) in the rural areas; the improvement and strengthening of agricultural research and experimentation in order to modernise farming techniques and increase productivity, and also improve the quality and grade of agricultural products in order to satisfy domestic and foreign demands; and the promotion of agricultural institutions, such as farmers' associations, co-operatives, peoples' irrigation associations, and young farmers' associations, so that these institutions could represent the farmers and express their interests (NESDB, 1967, 2).

Despite these rural development objectives which were enunciated in these two national plans, they were very broad and ambitious and were not particularly effective in directly helping the peasants to increase their income. The national rural development programmes provided infrastructure in many major rural areas, effectively facilitating better communication between the urban and rural sectors.

The Third National Economic and Social Development Plan (1972-1976) also focused on agriculturally-oriented strategies as a part of the government's broader rural development objectives, and also began incorporating foreign and local social scientists in the policy formulation process. The societal aspects which were thereby introduced were considered primarily in terms of how to reach crop production targets. The major objectives of the third plan in respect of the government's objectives regarding the promotion of agricultural development were: to provide more and better government services to the farmer, particularly in the form of agricultural credit and extension services; and to improve co-ordination in marketing so that producers could sell their products at fair and stable prices - to achieve this, the government emphasised the promotion of agri-business and agricultural institutions (NESDB, 1974, 13).

The Fourth National Economic and Social Development Plan (1977-1981) still demonstrated the need to improve agricultural production and farmers' income, as in the previous three plans, but it shifted its focus more towards broader rural development activities. It proposed to use three new strategies in addition to the strategies which had been incorporated in the previous plan. These were:

(a) Diversification of Production: the government intended to generate new employment opportunities for the rural labour force and to alleviate the risk of income fluctuations (as the rural economy becomes more integrated with commercial agriculture and world market prices) which materialised where farmers were dependent on a single crop, using multi-cropping rather than the additional expansion of cropland, for example, accomplished by facilitating the more intensive use of land and the year-round use of rural labour by encouraging the planting of other than the traditional six major crops (rice, maize, sugar cane, tapioca, rubber, and kenaf), and by helping to introduce improved strains of livestock;

(b) Improvements in Productivity: the government intended to achieved this by expanding irrigation facilities, improving soil quality, strengthening agricultural extension services, and further encouraging the emergence and development of farmers' groups; and

(c) <u>Stabilization of agricultural prices</u>: by establishing realistic minimum prices for agricultural commodities, making direct purchases from farmers' groups, and establishing a marketing council (NESDB, 1978, 17).

In assessing the national plans, each has had a specific focus in its development objectives. For example, the first two plans concentrated on developing infrastructure, whereas the 3rd and 4th plans began to focus on raising levels of productivity. Thus, whilst the underlying objective of the first plan was to foster economic growth, it was realised that this was impossible because of the precarious state of the country's infrastructure. The 4th plan, meanwhile, was able to concentrate specifically upon the growth aspect because by the late 1970s the basic infrastructural support for the development effort had already been provided. The productivity of agriculture at this time was quite low, and Thailand's products were in a weak competitive position in the world market. The improvement of irrigation facilities, soil fertility, etc. by extending the provision of canals across a wider cultivated area and improving the provision of fertiliser and high-yielding crop varieties suited to local physical conditions were the principal strategies which were adopted. At this time the important potential contribution of agriculture to the Thai economy was still being emphasised. However, the 5th to 7th plans shifted the emphasis much more heavily towards the industrial sector, driven in part by the increasing export-orientation of the national economy, but encouraged also by faith in the income-generating capacity of relatively higher value-added industrial activities. This is not to imply that the agricultural sector was completely neglected: as we have seen, given its importance as a source of livelihood to a significant section of the Thai population, agricultural promotion has continued to be emphasised in almost every national plan.

Apart from agricultural development, through which the government tried to make farmers more business-oriented, another strategy of rural development was adopted in the fourth national development plan. The 'growth pole' policy was employed as a regional development strategy. Actually, the 'growth pole' policy was introduced into the regional development planning of Thailand in 1962 within the North-East Regional Development Plan (1962-1966), as part of the first national development plan, but it became known more generally after the government included this policy in the fourth national development plan. This fourth plan designated a key city in each geographical region (two in the North-East) a 'regional growth centre'. The five regional growth poles were: Chiang Mai of the North, Khon Kaen and Nakhon Ratchasima of the North-East, Chon Buri in the East, and Songkla of the South. The 'growth pole' concept came from the belief that development does not appear everywhere at once, but at certain points or poles of variable intensity and then spreads through different economic channels to other sectors of the economy. Many planners believed that if the pole can exist in geographic space, since in reality growth primarily occurs in geographic space, and if they can influence the spatial pattern of development, then it might be possible to induce growth spatially through the creation of new nodes or poles of growth. Applying the logic of the growth pole concept, these poles could be used to stimulate development in remote or less developed areas, to initiate development in those remote areas and to provide alternative employment opportunities to those found primarily in the major centres of economic activity.

The First North-East Regional Development Plan was drawn up in 1962. Under this plan, Khon Kaen was designated as a 'regional development centre' to help stimulate the widespread economic development of the North-East. Most governmental agencies which are concerned with development activities established their regional or sub-regional offices in or near Khon Kaen. A network of national highways, a modern bus terminal and the airport have been built and the railway has been renovated. All of these communications and other infrastructural facilities have helped to break down the region's geographical remoteness and the relatively closed nature of the North-East's economy.

However, this 'growth pole' strategy for the North-East could not fully stimulate a more widespread growth in economic activities, drawing in other urban centres and provinces in the region. Small visible trickle-down effects occurred only in the rural areas immediately surrounding the growth centres. The prime benefit from the heavy investment in development activities accrued to the growth centre itself. One of the major reasons that may explain the shortcomings of the growth pole strategy in this regard is the lack of a supportive network in which innovation and economic stimuli could be diffused across a matrix of urban and rural centres of different sizes and characteristics across the region. In this sense, the development of larger number and wider matrix of small growth centres around the region may have been more effective in facilitating a widespread economic development than the heavy investment in one or two large 'growth poles'. The less than optimum impact of the growth pole strategy in the North-East caused the Thai government to shift the direction of its regional development policy towards the development of a larger number of smaller growth centres in various parts of the region and country, as enunciated in the Fifth and Sixth National Economic and Social Development Plans (1982-91).

The Fifth National Economic and Social Development Plan (1982-1986) formulated new national development objectives through structural adjustment programmes in key sectors. The restructuring of the agricultural sector aimed: to provide greater justice to producers; to speed up the dispersion of the land ownership pattern; to increase farmers' capacity and bargaining power by forming co-operatives and by providing them with more services and know-how; and to encourage agri-economic activities in rural areas in order to increase income for landless farmers during the off-peak farming seasons (NESDB, 1982, 10).

Besides the agri-economic policy, the objective of focusing on the rural poor was emphasised, giving an indication that the fifth plan period was to see an emphasis on rural development which was much greater than in previous plan periods. Less developed areas were selected to become the priority of state-led development activities. Altogether, 288 districts (*amphoe*) located in 38 provinces around the country were chosen. Approximately 50 per cent of these target districts were located in the northeastern region. Thirty-two specific development projects relating to rural villages were formulated to help those target districts (NESDB, 1981, 1), and included such foci as increasing basic health and educational services, and providing agricultural production assistance. Moreover, the Rural Job Creation Programme (RJCP) was initiated to provide jobs for the rural population during the dry season so that people might be able to earn some extra income. The government hoped that, through this programme, poverty in the rural areas would be greatly reduced and migration to find jobs in the major urban centres and in the Bangkok metropolis would be slowed down.

Although the major objective of the Rural Job Creation Programme (RJCP) was employment generation in the rural areas during the dry season, the benefits that accrued did not only include the extra income earned by peasant farmers, but also the additional infrastructure which the programme provided (much of the expenditure under the RJCP was on infrastructure-related projects). Most of the infrastructural construction which took place under the RJCP has proven to be of direct benefit to rural inhabitants. Small roads have been built to link rural villages together, and these villages with nearby urban centres, in the process helping to reduce their remoteness and improve their access to town-bases services and facilities. However, rural development requires more than making rural life more modern and convenient. It should also help to stimulate the rural economy and facilitate the production and exchange of goods throughout the national economy in the longer term.

After the termination of the Rural Job Creation Programme, the administrative structure which had been built up around the RJCP was used to provide the foundation for a new Rural Development Committee (RDC). The government continued to support the objectives of the Fifth Plan by providing a special budget for rural development purposes, but the form of job creation was changed from direct labour hiring to become more concentrated on the improvement of rural economic activities through which the peasants derive their principal source of livelihood, providing amongst other things: a programme of technical skills training, the expansion of rural off-farm employment, various occupational training programmes, and so on. The Rural Development Committee is structured around provincial- and district-level committees which approve project proposals before they are submitted to the National Rural Development Committee. Under the RDC the decision-making process associated with the formulation and approval of projects and programmes has been changed to give more authority to the lower administrative levels, in line with wider objectives of decentralisation.

Before the commencement of the Sixth National Economic and Social Development Plan, the results of all previous rural development plans and programmes during the periods of the First to Fifth Plans were evaluated by the National Economic and Social Development Board. Some of the results of rural development activities during the first 25 years of formal state planning were as follows:

(a) The benefits of rural development activities during the first four development plans had not been successful in reaching all poor people in rural areas. A considerable section of the rural population was still facing rudimentary problems associated with rural poverty, including food shortages, disease, poor health, and a lack of skills and education. Such problems, for which adequate remedies had not been found, had prevented poor people from improving the quality of life of their families and communities. This condition was seen to have arisen as a consequence of national development policies prior to the Fifth Plan.

(b) The Fifth Plan had placed a strong emphasis on rural development, especially in areas of poverty within 288 districts and 12,562 villages in 38 provinces, and including, as we have seen, thirty-two intensive rural development projects which had been initiated under an integrated rural development administration. The projects has been successfully implemented at all levels down to the target areas; as a result, the standard of living of the rural population had improved in comparison with their previous condition. However, in spite of such progress, many important development issues remained such as low production and productivity, and low earnings particularly in peripheral rural areas (NESDB, 1987b, 14f).

According to the above evaluation of the previous five national development plans, the Thai government then identified four main rural development strategies to be initiated under the Sixth National Economic and Social Development Plan (1987-1991). These were:

(a) Rural development activities would be oriented towards solving the socio-economic and security problems of each area according to the actual conditions and needs of the people. Authority for the selection of target areas would be delegated to provincial authorities;

(b) Efforts would be made to improve the standard of living in all areas: backward, middle-level, and progressive. The government would concentrate its efforts and resources on developing the backward and middle-level areas while increased investment by the private sector in progressive areas would also be encouraged;

(c) Emphasis would be given to integrating the efforts of government agencies, the public and private sectors, and the general public, in order to solve fundamental problems in the rural communities and promote activities that generate production, income and employment through the use of appropriate technology for each locality; and finally,

(d) The role of people's organisations and the general public in deciding how to solve their own problems and those of their communities would be encouraged, thus increasing self-reliance (NESDB, 1987b, 13).

The Sixth Plan specified four main guidelines for development (see below), which were then spelled out in detail within the Plan:

(a) Develop the basic factors of rural production and marketing;

(b) Increase the efficiency and capability of government agencies in solving rural problems;

(c) Improve administrative mechanisms by consolidating efforts in an integrated rural development system; and

(d) Increase participation by people's organisations and the private sector, especially in operations in backward and middle-level areas (NESDB, 1987b, 14f).

In rural development efforts under the Sixth Plan, the government sought to move from its previously heavily centralised and paternalistic role to a multi-faceted and multi-agency approach. It increasingly emphasised co-ordination, especially between government agencies, and also ceded a gradual recognition of the appropriateness of Non-Government Development Organisation (NGDO) involvement in the development process, and a growing awareness of the importance of sociological factors in development thinking, particularly the active participation in decision-making of the target population.

Although this Sixth Plan sought and managed to achieve a degree of improvement and self-reliance in rural areas, its overall preoccupation was on building and maintaining the momentum of national economic growth, rather than prioritising rural development, as had happened under the Fifth Plan. Industrial development was the major target, although recognition was given to the way that rural industry (in the Thai definition this is usually taken to mean 'up-country' rather than 'in rural areas': see Parnwell and Suranart, 1990 for a fuller explanation) might benefit from the country's industrialisation strategy.

The current Seventh National Economic and Social Development Plan (1992-1996) enunciates the strategy for rural areas in terms of income and development distribution, which is to be achieved through such means as:

(a) Improvement in the agricultural production structure and the distribution of industries and services to rural areas, with the aim of lifting the income level of farmers, promoting fairness in the agricultural production and pricing system, controlling the price stability of agricultural products, and especially the promotion of industrial dispersal to up-country area and the provision of special support for increasing the potential of some provinces to become industrial distribution centres; and secondly,

(b) The development of growth centres in up-country areas in order to encourage their role as the economic and employment catalyst in their respective region. The aim of this is to speed up the development of the services and communications network among and between the regions, and with Bangkok Metropolis and vicinity, in order to benefit from the economic activities and growth which emanate from the central region (NESDB, 1992, 21).

The Eastern Seaboard Project could be considered as a part of this plan. It was set up in the 4th plan and formed a major part of the 6th and 7th plans. Although this project focused on promoting economic development by developing industrial areas geared towards the export economy, it was also seen as a key component of the development effort for the northeastern region. If the Eastern Seaboard (ESB) project is a success, the rural population of the North-East will benefit by being able to sell their agricultural products to form the raw materials of export-focused agro-industry in the ESB. Additionally, they may be able to sell their cottage products as semi-finished inputs into larger-scale industry in the adjoining Eastern Seaboard region. The linkages between the rural North-East and urban industry in the Eastern Seaboard will be discussed later in this thesis. However, it is important to emphasise at this stage that the anticipated development of the Eastern Seaboard project has been much slower than originally expected, and thus the potential benefits for the rural areas of the North-East have thus far been much more limited than was originally hoped.

The Seventh Plan, in which the government appears interested in confronting the issue of regional disparity, places a much stronger emphasis than hitherto on reducing the economic and welfare gap between the country's central and peripheral regions. Another focus is on human resource development in order to serve the present and future needs of industry and the country's emerging industrial society. It is also the first plan to include the enunciation of policy which has a clear view of the objective and means to promote the development of rural industry as a means of stimulating the rural economy, and as an important element of the rural development strategy.

It is not meant to imply here that past regional development initiatives have failed, but rather that their achievements have been slow and limited. Set against this back-drop, then, rural industry may be suggested as another strategy for the promotion of regional development.

(3) Industrialisation Policy and Rural Industry Promotion

Over the past quarter century, Thailand has experienced remarkable economic growth with a parallel rapid transformation of its economic structure. The country has been transformed from an agricultural economy, where the agricultural sector contributed significantly to the country's Gross Domestic Product (GDP) and export earnings, to one which is increasingly becoming industrialised. The manufacturing sector has now caught up with the agricultural sector in terms of GDP share and exports. Since the early 1970s manufactured exports have expanded at a rapid rate and the value of manufacturing has in recent years exceeded that of agricultural products in the export market.

Industrialisation has been a relatively recent phenomenon in Thailand. Before the Second World War, Thailand had developed a small manufacturing capacity. The dominant manufacturing industries were rice-milling, saw-milling, textiles, and other simple processing industries. The government showed some intention to promote industrial development after the Second World War, but in the ensuing decade the process of industrial development was rather slow.

Since the late 1950s the government began actively to promote private investment. Various policy measures have been adopted to foster industrial growth. In 1959, the Board of Investment was established to administer the investment promotion law which gave various fiscal and other incentives to industrial enterprises which came within the aegis of its promotion strategy. During the 1960s, the tariff structure was revised several times to give more protection to domestic industries. The government also undertook massive spending to build up social overhead facilities to facilitate private investment.

By international standards, Thailand's growth record during the last three decades has been respectable. In the 1960s, the annual average growth rate of GDP at constant prices was around 8 per cent, as compared with about 5 per cent in the 1950s. Average growth of the manufacturing sector was estimated at 6 per cent in the 1950s, and accelerated to around 11 per cent in the 1960s. Other non-agricultural sectors, including commerce and banking, also expanded significantly.

In the 1970s, there was a continued rapid growth in the industrial sector. Industrial development during the 1960s had largely taken the form of import substitution. Since the early 1970s there has been a change in policy, placing more emphasis on the promotion of manufactured exports, which have subsequently increased rapidly, while the process of import substitution has also continued.

The transformation of the economy, however, has appeared to be less rapid in terms of employment. Although the share of employment in manufacturing and services has increased much over the years, labour engaged in agriculture still constitutes over 60 per cent of the country's total labour force, while that in manufacturing, commerce and other services respectively each accounts for only around 10 per cent of total employment.

One important characteristic of the industrial sector in the Thai economy is the predominance of small-scale establishments. Despite the efforts at investment promotion by the government, which have especially targeted modern industries with relatively large scale production, most of the manufacturing establishments in the country are small-scale enterprises. Approximately 90 per cent of registered factories were small-scale enterprises with less than 50 workers (Prasitrattasin, 1992). In addition, a large number of small establishments usually called 'cottage undertakings' developed. These are family workshops, mostly with no or only a few paid employees, engaged in activities like handicrafts, foundry and the making of wearing apparel and other household consumer items. These small family workshops do not qualify as 'factories' and do not appear on the factory list of the Ministry of Industry. Moreover, there exist a wide variety of industrial activities which are engaged in by households in rural villages. These are non-farm activities, usually secondary to agriculture, by which farm households augment their income.

Relatively large-scale manufacturing enterprises fall within the Board of Investment (BOI) industrial promotion programme, with many of them having foreign capital participation. These large manufacturing enterprises are mostly located in Bangkok and its nearby provinces, while most of the factories located outside the central region are small-scale, a large proportion of which are rice mills, saw mills, and other primary product processing enterprises.

Because of the concentration of industrial activities, Bangkok and other adjacent provinces have been the major sources of the country's industrial output. More than 80 per cent of the total value added in the manufacturing sector is generated in this core region, and Bangkok alone accounts for over half of it (*ibid.*, 13). Among several possible explanations for the clustering of industrial activities in and around Bangkok are closeness to the biggest consumer market, the quantity and quality of the labour force, and the availability of more modern facilities in both production and living conditions.

The concentration of industrial activities has created several social and economic problems, including uneven income distribution between regions, and congestion and pollution in Bangkok and nearby provinces. The promotion of industrial activities in provincial towns and in rural areas is undoubtedly helpful in preventing further concentration of industrial activity in the central region. Since the mid-1970s, the government has made some attempt to disperse industrial investment to other regions, but few effective concrete measures have been implemented and the decentralisation of industrial activity has not been successful.

According to government industrial policy, the First National Economic Development Plan (1961-1966) stated the objective of promoting industrialisation through the encouragement of private enterprise. The Second Plan (1967-1971) continued to give emphasis and support to industries producing for the domestic market, but it also started to give attention to industries utilising local raw materials and labour. BOI incentives were also revised to reflect the government's intention of reducing the import dependence of industrial production. The strategy of export promotion was set out in the Third Plan (1972-1976). There was also an emphasis on decentralisation of industrial activity to locations away from Bangkok. The investment promotion law was revised to give more incentives to export industries and enterprises located in provincial areas. The policy of export promotion and dispersion of industrial factories has continued to be emphasised in the various National Development Plans up to the present time.

The promotion of small-scale industries was first emphasised in the Fourth Plan (1977-1981). In the Fifth to Seventh Plans (1982-present), small-scale industries have again been emphasised. The promotion of small-scale industries has often been mentioned alongside the promotion of regional industries. In the Fifth Plan, it was intended that small-scale industries should grow at a rate higher than large-scale industries, and regional industries should grow faster than industries located in Bangkok and in the Central Region. However, there appear to be few concrete policy measures which have been formulated and implemented. There also seems to be lack of evaluation as to whether small and regional industries have actually been growing faster than other industries, as mentioned in the Fifth Plan.

The promotion of small-scale and provincial industries has been specified in the Sixth Plan. These include industries located in provincial towns in regions outside Bangkok and its surrounding provinces, and industries and industrial activities located in rural villages. The Plan stated that these industries, being labour-intensive in their production, would help in creating more jobs, and being located in provincial and rural areas would be helpful for augmenting the income of residents in these areas. They would also be helpful in solving the problem of seasonal unemployment. However, the policy for promoting small-scale industries has not been effectively carried out. Even though the promotion of small-scale industries has been emphasised since the Fourth Plan period, few concrete policy measures have been formulated and implemented.

In recent years, it seems to have increasingly been recognised among Thai industrial planners that the development of small-scale industries could be an important avenue for generating employment. Comprehensive studies on small-scale industries have been lacking in Thailand. But the findings of various surveys of manufacturing establishments of different sizes tend to reveal that small-scale establishments are more labour-intensive and have a higher local-material content in their production.

Despite the heavy concentration of industrial activities in Bangkok and other provinces in the Central Region, there exists a variety of industrial activities in various provincial towns throughout the country, most of which are small in scale but of which the total number is quite large. The development of these small-scale industries could be helpful in respect of the dispersion of industrial activity. It is probably for this reason that, in the Fifth and Sixth Plans, the policies for promotion of small-scale and regional industries have been lumped together. However, the lack of distinction between small-scale versus regional industries on the one hand, and between industrial activities in provincial towns and those located in rural villages on the other, could lead to unnecessary confusion, and could possibly contribute to a lack of effectiveness in measures for promoting small-scale industries, and also in the simultaneous promotion of village-level and regional industrial activities.

Despite the possible lack of understanding of the needs and potential of small-scale and regional industries, the Sixth Plan contained more policy statements on promoting these two forms of industries. This is consistent with the overall objective of the Sixth Plan in promoting growth in provincial areas and in reducing the gap in income between the central region and other regions of the country. Policy measures for promoting small-scale and regional industries specified in the Sixth Plan include: increasing the provision of financial credit at reasonable rates of interest to small-scale industries, and considering the feasibility of granting BOI privileges to support small-scale industries.

The policy of small-scale industrial promotion in the Sixth Plan seems, however, to have a wide discrepancy between the policies which are stated in the development plan and the actions which are actually taken. The National Development Plan provides only general guidelines, which require supportive measures from various government agencies which are responsible for putting the Plan into action. If the agencies concerned do not operate in accordance with what has been planned, the policy may achieve less-than-optimal results. Among the various industrial strategies laid out in the Sixth Plan - that is, the promotion of exports, small and rural industries, agro-industries and engineering industries - it is possible that the policy of export promotion has received the greatest emphasis and achieved the most impressive results, whereas the obverse applies to the promotion of small-scale and rural industries.

This point is reinforced in the Seventh National Economic and Social Development Plan, which stated that past rural industry promotion has had few positive effects - most industries are still located in and around Bangkok. The major problems that have caused the growth rate of rural industry to be so low include a lack of necessary infrastructure, investment resources, marketing and technology, and also the disadvantage of distance from the main centre(s) of trade and communications.

Some strategies and measures for rural industry promotion outlined in the Seventh Plan include:

(a) Decentralisation of administrative decision-making, giving the provincial administration authority to permit and control local industry in their own areas;

(b) The management and technological capability of local entrepreneurs will be improved through such measures as technical and training support from local government agencies which will also help to stimulate and facilitate co-operation among local entrepreneurs;

(c) The promotion of the marketing system of small and cottage industries, especially by improving the quality of products and seeking new market for future expansion of production; and finally,

(d) The provision of more credit from the commercial banks and government credit agencies in the provincial areas for small and cottage industries, and the stimulation of local entrepreneurship (NESDB, 1992, 140-41).

Apart from the above strategies of rural industry promotion in the Seventh Plan that are currently being implemented in each of the country's geographical regions, some special areas have been selected to promote the continuing implementation of the growth centre policy. In North-East Thailand two selected provinces, Khon Kaen and Nakhon Ratchasima, are considered to be the highest potential areas for rural industrialisation promotion and subsequently the diffusion of activity and benefits to surrounding provinces. These two northeastern provinces are to be provided with full infrastructure, training services centres and industrial information centres. The government hopes that they will become the base and engine of rural industrial development in the region after the end of Seventh Plan in 1996.

In the past, shortages of financial resources and manpower have represented the main barrier to the effective promotion of rural industries, particularly those located in remote provincial towns. Lack of understanding on the part of government officials of the nature and characteristics of rural enterprises, the problems they face, and the critical areas where they need assistance could also have been a cause of a lack of effective measures for promoting rural small-scale industries. In accordance with these quite fundamental impediments, it therefore remains to be seen whether the policy statements contained in the Seventh Plan can eventually be implemented and to what extent.

(4) The Industrial Structure of North-East Thailand

As discussed above, North-East Thailand's economy continues to be based on agriculture while the structure of the country's economy has changed from being agriculture-based to containing a more balanced mix of agriculture, industry, trade, services and other activities. The Gross Regional Product (GRP) from agriculture in the northeastern region at the end of the Fifth Plan (1984-1988) was one-third of the total. The GRP from industries was only 8.9 per cent. Furthermore, most of the industries in the North-East were agro-industries. Nonetheless, the proportion of GRP from agriculture has tended to decrease while that from off-farm or non-agricultural activities has increased. In 1988 the GRP from off-farm sources in the North-East was 66.7 per cent, compared with only 60.5 per cent in 1970. That from agriculture was only 33.3 per cent in 1988, down from 39.5 per cent in 1970 (see Table 3.1).

Table 3.1

Sectoral Distribution and Growth of Production, 1984-1988: Thailand and the North-East Region Compared

		Whole Kingdom		North-East	
Growth		Proportion of Total Production	Annual Growth Rate (%)	Proportion of Total Production	Annual Rate (%)
1.	Agriculture	16.9	2.0	33.3	2.5
2.	Trade	17.1	9.1	12.1	-0.3
3.	Industries	23.3	9.9	8.9	7.1
4.	Services	13.6	7.8	13.9	6.7
5.	Others	29.1	7.6	31.8	5.4

Source: Bank of Thailand, North-East Regional Branch, 1991.

According to a report of the National Statistical Office in 1989, 82.5 per cent of the work-force in the North-East of Thailand worked in the agricultural sector. It is quite interesting to note, then, that 82.5 per cent of the region's work-force could produce only one-third of total production. Paradoxically, this means that the remaining 17.5 per cent of the work-force, in the non-agricultural and service sectors, could produce two-thirds of all production, implying also that earnings from the non-agricultural and service sectors are significantly higher than those derived from agriculture. However, part of this two-thirds of production might derive from the notional agricultural work-force who work as a seasonal migrants in the urban and non-farm sectors during the dry season. Nonetheless, the point we wish to make here is that the non-farm sector has the potential to produce a quite large volume of production and, indeed, it has already recently shown itself to be a most important sector in the economy of North-East Thailand.

Table 3.1 shows that industrial production of the North-East in 1988 contributed only 8.9 per cent of GRP. Although the North-East is the largest region and has the largest proportion of the national population, production from industrial sector is remarkably low when compared with the Kingdom as a whole. Furthermore, the industrial sector of the North-East contributed only 4.9 per cent of the Kingdom's total industrial production (Bank of Thailand, 1991). These points notwithstanding, the growth rate of the industrial sector in the North-East has recently been very high compared with the other sectors. During 1984-1988 the growth rate of agriculture was only 2.5 per cent per year. In contrast, certain provinces have experienced a phenomenal annual growth rate in industrial production: Nong Khai (57.4%), Buri Ram (47.6%), Chaiyaphum (22.4%) and Khon Kaen (12.9%) (Bank of Thailand, 1991).

The implication here, therefore, is that although industrial production in the North-East has in the past been very limited, it has recently been increasing very quickly, especially the designated growth centre provinces of Khon Kaen and Nakhon Ratchasima.

Table 3.2

The Industrial Base of North-East Thailand (1992)

	Type of Factory	Number of Factories	Investment (Million Baht)	Labourers (Persons)
1.	Rice-mills	36,598	6,364.0	45,479
	(%)	(81.9)	(17.9)	(27.4)
2.	Engineering	2,690	4,115.1	21,290
	(%)	(6.0)	(11.6)	(12.8)
3.	Cassava products	2,476	5,819.9	20,451
	(%)	(5.5)	(10.6)	(12.3)
4.	Food products	934	6,505.5	13,049
	(%)	(2.1)	(18.3)	(7.8)
5.	Non-metallic products	935	2,181.0	11,437
	(%)	(2.1)	(6.1)	(6.9)
6.	Wood products	436	1,231.8	9,914
	(%)	(1.0)	(3.5)	(6.0)
7.	Textiles	260	4,057.7	32,156
	(%)	(0.6)	(11.4)	(19.4)
8.	Others	367	5,197.2	12,252
	(%)	(0.8)	(14.6)	(7.4)
	Total	44,696	35,552.2	166,028
	(%)	(100.0)	(100.0)	(100.0)

Source: North-East Industrial Economic Centre, Thailand, 1992

Impressive though these latter figures may be, we must not lose sight of the fact that the region's industrial base is only weakly diversified, and still displays an unhealthy reliance on the primary production sector (see table 3.2). There is little evidence to suggest that the rapid growth of the region's industrial sector is being paralleled by an equally rapid diversification of the region's industrial base. Most of the region's industrial growth was accounted for by factories that are registered with the provincial office of the Ministry of Industry. It therefore follows that most of the factories which were benefiting from government support, under its rural and regional development strategies, were agro- and resource-based industries, which may not be exactly what the government had in mind in formulating its regional industrialisation strategy. The promotion of rice-milling and food production can only help the rural economy where it is matched by a parallel development and modernisation of the agricultural sector, which is not occurring sufficiently widely and quickly in the North-East. Furthermore, the income-generating impact of promoting traditionally low value-added activities such as rice-milling and cassava processing is likely to be insufficient by itself to achieve several of the objectives which have been outlined in successive national development plans. Accordingly, the government be looking to other high value-added forms of industry for its promotion campaign. It should also be looking to the promotion of labour-intensive industrial activities as a means of fulfilling some of its employment-generation objectives. Cottage industry, and sub-contracting/putting-out arrangements between urban and rural enterprises, represent other means of generating employment where it is needed - *in situ*. Most cottage industries and other village industries in the North-East are not registered with the provincial offices of the Ministry of Industry, so few policy-makers are aware of their existence.

and very little in-depth research has been conducted into their constraints and potential.

Because rural industrialisation holds prospect to bringing benefits directly to those whom successive government planning statements have consistently identified as being in greatest need of assistance, we argue in this thesis that there is considerable potential value for exploring its prospects more fully. Accordingly, we commence in Chapter 4 with an examination of the principal characteristics of small-scale village industries in North-East Thailand.

CHAPTER 4

RURAL SMALL-SCALE INDUSTRY IN NORTH-EAST THAILAND

The previous chapter has provided some background information on the nature, geographical characteristics and industrial structure of the North-East of Thailand, the Thai government's rural development policy and programme as it appertains to this backward region, and also the rural industry promotion policy for the North-East. We have seen that there have been many rural development initiatives for the North-East during the last thirty years, several of which are on-going. After thirty years of rural development activity, many parts and sectors of the North-East have been developed. The physical infrastructure represents the most visible product of past development initiatives. The regional growth centres have also facilitated communication and interaction with other parts of the country's spatial economy, and have helped give the impression of modernisation and dynamism. When we look back, and compare the regional economy today with that of the past, we find that per capita income has increased steadily, and the quality of life has improved. However, the income gap between the people of the North-East and those of the Central Region and elsewhere has widened. Clearly, then, much more remains to be achieved.

As we have seen, the Thai government has tried to adopt a rural industry promotion policy since the 1970s with the objective of increasing employment and income in the rural areas. Unfortunately, the past rural industry promotion policy of the Thai government has had little effect, with industrial activity still being overwhelmingly concentrated in urban areas generally and the Bangkok Metropolitan Region specifically. Moreover, 'rural' industrial promotion has tended to have a distinct urban bias (largely because the Thai word *chonnabot* is usually taken to mean 'up-country' - i.e. away from Bangkok - rather than 'rural' - i.e. in the village), leading to the concentration of 'rural industrial' policies in provincial urban centres rather than rural villages. Although the Seventh Plan has also included village industry promotion as part of its rural development programme, both the intentions and the impact of this strategy are as yet unclear. One of the problems which the planning process encounters is the insufficiency of hard information concerning the structure and functioning of the genuinely rural industrial sector. Accordingly, this chapter aims to provide some background information on the nature of rural small-scale industry in North-East Thailand. This discussion introduces the kinds of rural small-scale industry that can be found in the region, their location and characteristics, the nature of the business, levels and forms of interaction between industry and people in the region's villages, the developmental impact of rural industry (if any), and also an indication of possible future trends. It will also, in the process, provide a macro-level back-drop against which the in-depth analysis contained in Chapters 5-7 will be viewed, and will also explain the categorisation of rural industries which helps to structure the subsequent analysis.

There are many kinds of rural small-scale industry in North-East Thailand, each of which has particular characteristics of manufacturing process and socio-economic context that are of interest to the present study. However, as was explained in Chapter 2, for reasons of convenience and because of the constraints of time and space imposed on this study, we shall examine a cross-section of industries which fall into three broad types. We commence our discussion with an overview of traditional rural industries in the North-East.

(A) Traditional Industries

As was explained in Chapter 2, this loose classification includes enterprises that have manufactured items over a long period of time, to the extent that industrial production has become an integral and inseparable part of the way of life of the local people. We include within this categorisation such industries as cushion-making, pottery manufacture, cotton-weaving, brassware manufacture and mat-weaving. Although each has its own distinctive history and characteristics, it is believed that they have a sufficient amount in common to justify their inclusion within the same broad category. We will see, however, that the enterprises which have been selected for the present study are very variable in terms of their recent dynamics, and the developmental role that they play. Before focusing on their dynamics in Chapter 5, we proceed below to outline a few of their more salient characteristics.

(1) The Cushion-Making Industry

This industry is in many respects symbolic of the traditional material culture of the North-East. It has been practised in rural villages within the for decades, perhaps even centuries. The characteristic triangular cushions of North-East Thailand have the local name of *Khid*, which is a diagnostic style of weaving. Normally, Thai cushions have a cotton cover and are stuffed with kapok, but the Isan or *Khid* cushions (those from the North-East) use an outer cover which is woven in the special *Khid* style. Many villages around the North-East have traditionally manufactured the *Khid* triangular cushion for use in the household. It is useful when reclining or when sitting on the ground. According to the tradition of northeastern Thai people, cushions are made to be given to monks on special occasions, or to be used when receiving a special guest at home

(Gittinger and Lefferts, 1992, 115). Ban Sri Than is one of the principal places where cushions are manufactured in northeastern Thailand. The cushions are manufactured in many shapes and sizes: rectangular and triangular, large and small. The triangular-shaped cushion (some people call it the axe-shaped cushion) is the most popular.

Ban Sri Than, in Tambon Sri Than, Pa Tiew District, Yasothon Province, is 22 kilometres from the main town of Yasothon province and is located 13 kilometres before reaching Pa Thiew district town on the main route from Yasothon to Ubon Ratchathani. In 1989, during the data-collection phase of this research, there was a small 3-kilometre long laterite road linking the study village with the main Yasothon-Patiew road. This small road was subsequently up-graded to a concrete road in 1991.

In the past, Ban Sri Than was under the local administration of Tambon Kra Jai, Pa Tiew District. It was promoted to Tambon status in 1988. Tambon Sri Than has eight villages: Mu 1 has 130 households, Mu 2 200 households, Mu 3 160 households, Mu 4 102 households, Ban Tao Hai (Mu 5 & 7) 300 households, Ban Kud Samrong (Mu 6) 65 households and Mu 8 130 households. Mu 1, 2, 3, 4 and 8 are proximate to each other and effectively constitute one large community (although they will be treated as separate entities in this study as there is some significance here according to the location and role of local entrepreneurs. Ban Tao Hai and Ban Kud Samrong are located 2 and 5 kilometres away from the Sri Than community, respectively. Tambon Kra Jai has 10 villages located near to Tambon Sri Than, two of which manufacture cushions - namely Ban Nikom and Ban Kra Jai. Other nearby tambons have some villages, such as Ban Po Sri, Ban Po Sai, Ban Pa Tong and Ban Ped, all roughly 5 kilometres away, which also manufacture cushions.

Approximately 60 per cent of the more than 1,000 households in these various villages are involved in the cushion-making industry in one way or another, but the majority of producers are from the Sri Than community. The manufacturing is done by women. Men usually do agricultural work (most households combine both sets of activities), or just help their wives in the transportation of products (more details will be provided in the analysis section in Chapter 5). Their products are sold mostly to wholesalers in Bangkok, but some are sold within the more central and accessible provinces of the North-East.

On of the special features of the production process in the cushion-making industry in Tambon Sri Than, and which serves to differentiate it from others discussed under the heading "traditional industry", is the division of labour which is practised. The complex elements of the manufacturing process (such as weaving, shaping, sewing, finishing, preparing kapok and straw, stuffing, transporting, marketing, etc.) are distributed to many producers within the community. Most of the producers in Ban Po Sri, Ban Po Sai and Ban Pa Tong do weaving and shaping, then send their products to Ban Kra Jai and Ban Sri Than to do stuffing, sewing and finishing. It involves a division of labour in which the various parts of the production process are undertaken by individual households. One household may undertake several parts of the production process (as was typically the case in the past, and is also more generally typical of traditional cottage industries), or may specialise in one particular component. This largely depends on the number of members in the household who are available for cushion work. Households with several (female) members will have a chance to undertake several parts of the production process because of the various skills, some high, some low, of individual members.

This complex and effective division of labour has been introduced as a means of increasing the efficiency of the production process, and thus also levels of productivity. It has also been the most effective means of meeting the recent increase in demand for the cushions which has emanated from the wider domestic and international markets. The producers like this system as it allows them to specialise according to their skills and interests, and enables them to earn much more from the piece rate system which is operated than would otherwise be the case if they had to engage in every constituent part of the production process. The system has a built-in flexibility, which allows producers to switch tasks or undertake several tasks according to their preference or the prevailing needs of the industry. Most of the young producers do the weaving and sewing, but the elderly are also able to be involved in stuffing the cushions with kapok and straw, even if they are not strong or nimble enough to do some of the other tasks. As such, no one is left out of the production process, irrespective of their skills, age or other commitments - a factor which emphasises the socially binding role of this particular industry - and which stands in sharp contrast to the practices and conditions which are normally associated with industrial production in the urban setting. The chance that the industry provides for everyone to be involved, and thus to be gainfully employed, is an important source of pride and happiness within this community.

Ban Sri Than has four large and three smaller entrepreneurs who play a critical role in the industry's development. These entrepreneurs purchase the products from village producers and sell them on to wholesalers in Bangkok and in other provinces. These entrepreneurs have their own trucks (each entrepreneur has 2-3 trucks) to transport their products. They also purchase and provide all the requisite production materials for the villagers. The villagers are thus effectively the workers of the entrepreneurs, and receive wages according to a piece rate system according to how much is produced or what particular parts of the production process are undertaken.

The entrepreneurs have played an important role in introducing changes in cushion designs and production methods. The linkage that they provide between the producers and the wholesalers in Bangkok also helps to keep them abreast of the changing nature consumer taste and demand, and the wider needs of the market. The information so derived allows the entrepreneurs the opportunity to introduce new designs and new techniques of production back in the village. Through this medium, the entrepreneurs have played a crucial role in synchronising production with the needs of the external market, in the process adding to the dynamism and buoyancy of this rural industry. At the same time, it has enabled the businesses of the entrepreneurs to grow substantially, so pivotal has been their position in the industry's recent transformation from its earlier cottage roots.

The linkages that the entrepreneurs of Ban Sri Than have established with wholesalers in Bangkok also extend out into the wider international economy. Tourists and entrepreneurs from as far apart as Japan, Saudi Arabia, Kuwait and the United States have been responsible, via the wholesalers and village entrepreneurs, for introducing these diagnostic Thai cushions to the markets in their respective countries. This engagement of the international market has brought considerable benefits to the cushion-making villages of Yasothon Province. Increasing demand has meant increasing income-earning opportunities which, as we shall see in Chapter 5, have brought considerable developmental benefits to the villages concerned: historically, the limited size of the market has represented a significant barrier to the modernisation and development of the rural industrial sector (as some of the other case studies below clearly show). The success of this industry further demonstrates how benefits can accrue to rural areas without compromising the momentum of economic growth at the national level: the triangular Isan cushions have simply added to the array of manufactured products which currently underpin the success of Thailand's export-oriented industrialisation strategy.

The designs and style of cushions produced from Ban Sri Than have tend to change to suit the export market. Cushions with mattresses attached is one example of the change in style to suit the Saudi Arabian market. The Saudis apparently like to sit on a mattress and recline on a cushion at the same time, so, as the demand from the Middle East for this style of product increased, production methods were adjusted to meet this new and changing demand. The Japanese market demanded high-quality cushions which were both softer to the touch and also cleaner. Accordingly, greater attention was paid to quality control, including the more effective cleaning of the cushions prior to despatch, as a way of responding to the demands of the external market.

The path towards the world market was initiated by a government agency which several years ago encouraged the Ban Sri Than villagers to sell their products in Bangkok. The government had a policy of seeking to introduce producers from up-country to consumers and wholesalers in Bangkok. The government built up a central market (in Thai call the *Or Tor Kor* market) which was to be a meeting point between the various groups in Bangkok. Through this innovation, wholesalers in Bangkok had an opportunity to know about the cushions being produced in Ban Sri Than because a number of producers from this village went to show their products at that market. Meanwhile, the wholesalers used their experience of the international market to promote these Thai handicrafts abroad, via their established international clients.

Such a success story raises optimism that other traditional rural industries might be able to follow a similar path. However, as we shall see shortly, this is not inevitably the case. Indeed, Ban Sri Than itself has faced a number of difficulties and constraints as it has sought to engage more fully the international economy. For example, the rapid growth of the industry led to severe shortages of raw materials. Kapok has traditionally been used where it occurs, on trees which were scattered throughout North-East Thailand. No new trees have been planted to serve the cushion industry, even in Ban Sri Than or in other villages where the cushions are produced. As local supplies of kapok became more scarce, the price increased rapidly. To solve this problem, entrepreneurs from Ban Sri Than have introduced the re-cycling of the kapok from old mattresses and cushions purchased throughout the country - this is illustrative of the fact that solutions can be found to problems, however insurmountable they may at first appear. There are 6 small factories which re-cycle kapok in Ban Sri Than, all belonging to the larger entrepreneurs in the village. In fact, the recycled material is preferred because its price is cheaper than for fresh kapok, and also it does not settle or become slack as much as the fresh kapok does. Another innovative way of overcoming the raw material constraint was to use straw together with kapok. The straw was readily available in the village after the rice harvest. However, it should also be noted that the Japanese customers do not like the cushions which have been partially stuffed with straw, so different methods are now used according to the eventual destination of the products.

The above illustration shows how producers and entrepreneurs have been able to overcome problems of production whilst at the same time expanding the range and number of marketing outlets. It is clear that the village entrepreneurs have played a central and crucial role in this process, and it is also evident that they have benefited the most from the dynamism of this particular rural industry. Nonetheless, the villagers have also enjoyed considerable benefits from the industry's recent expansion, as the analysis in Chapter 5 will reveal, although efforts could clearly be made to ensure that the spoils of development are distributed more evenly and fairly within the villages concerned.

In relation to public policy-making in respect of rural development in backward regions such as the North-East, a number of lessons might be learned from the dynamics and success of the cushion-making industry in Yasothon Province.

(2) The Pottery-Making Industry

The pottery-making industry is another traditional cottage industry of the northeastern region. Pottery products were in the past very commonly used as utilitarian kitchen and storage items, but started to be replaced by aluminium products two decades ago (Buasri, 1990, 35). The pottery-making village which provides the basis for the present study is Ban Mor, Tambon Ban Kwao, Muang District, Maha Sarakham Province. The name *Mor* in the local language means 'pot', so the place of manufacture has come to be known as Ban Mor.

Ban Mor is located in Tambon Ban Kwao, three kilometres from Maha Sarakham town on the Maha Sarakham to Roi-Et road. Ninety out of a total of 120 households in this village are involved in the pottery industry. Most of the villagers here do not have their own agricultural land so, unlike farmers in other villages, they cannot rely on agricultural work. They are generally poor, and have been engaged in pottery manufacture as their major occupation for a long time. However, their income was not very good and this has forced them to seek to earn from sources other than pottery-making, such as from other forms of non-farm and off-farm employment. Although some villagers have been successful in finding other sources of income, both in and outside village, the location of the village in a fairly remote part of the North-East does not provide much opportunity for their members to earn enough. So most of them continue to work in and earn a little money from the pottery industry, just as their forebears have done for generations. For many, though, pottery-making is the only activity upon which they can depend for a livelihood, however meagre, which helps to explain the industry's persistence in spite of its significant lack of dynamism and success.

The industry involves mainly old, and in many senses primitive, manufacturing techniques. It still uses manpower to operate the potters' wheels for producing pots, stoves and water storage jars, much as has been the case historically. Pots are shaped by hand, and are then fired either in an open heap of straw or in a rudimentary charcoal 'furnace'. The clay is derived from a nearby lake.

If we consider the quality of pottery produced from this village with that of other villages which use the same technology, the products from Ban Mor are not too bad. However, if we compare it with the products from large factories, the quality of hand-made pots using local and rudimentary technology is much lower. Furthermore, prospects for an improvement in quality and in quality control in the process of manufacturing are extremely limited because of the very low price of the products, offering producers little incentive to attempt improvements.

Because of the generally low quality and thus marketability of the pottery products, the market is mostly local - mainly nearby villages. Occasionally middlemen came to buy pottery in the village to be sold to a distant market, but this happened only very rarely. The demand for the products is very limited, in spite of the price being very cheap, and is unlikely to change significantly in the foreseeable future. The substitution of aluminium, plastic and other materials for earthenware represents a considerable barrier to the industry's future development. Most people prefer to utilise those new materials, not only because of their greater durability but also because of the relative status which attaches to the use of more modern items, in spite of their higher price.

Another problem which the industry faces is in the supply of raw materials. Clay, which producers have taken from a lake nearby the village, is becoming more scarce. The lake which has always supplied large amounts of clay is becoming drier, especially in the summer season. This clearly poses a significant problem to an industry which has traditionally relied upon naturally available materials. Just as there are now doubts over the continued supply of raw materials, so are there significant concerns over the industry's future - not so much in an economic sense, as it has effectively been superseded by other forms of manufacture, but in a social sense: the villagers have few alternative means of satisfying their subsistence needs. Nonetheless, given the various constraints which have been mentioned above, it is quite difficult to find ways to develop this kind of rural industry. However, producers in these villages have tried to change in an attempt to earn more from the pottery industry. With the help of a well-meaning non-governmental organisation (NGO), some producers tried to use a mechanical potters' wheel as a means of improving productivity. However, it did not succeed because the cost of investment could not be met through selling more pots - the market constraint remained as a significant barrier. The government industrial promotion agency has also attempted to help by building a big furnace with the hope that it would enable the villagers to produce more pots and of better quality. In reality, however, the furnace requires considerably more fuel than the traditional methods, further adding to the cost of production: fuelwood locally is very scarce. The furnace, like the mechanical potters' wheel, is no longer utilised.

The question thus remains as to how, if at all, such a traditional industry can be developed. Is it possible to develop the market (the principal constraint) while consumers' tastes are changing, and the demand for earthenware products falling? Is it possible to find alternative, non-traditional uses for the earthenware products which are being made, such as plant pots and other items which are in heavy demand in urban households? Finding a solution to such questions represents the only means whereby the producers in this industry will be able to survive, economically, and the industry helped to develop.

(3) The Cotton-Weaving Industry

Cotton-weaving is also a traditional industry of the northeastern region. In the past, weaving was on of the principal tasks of the region's womenfolk, and most products were consumed in the household (Krisanaputi, 1986, 55). Cotton-weaving and silk-weaving are forms of cottage industry the skills for which most rural Thai females developed from a young age, learning from their parents (Gittinger and Lefferts, 1992, 61). Ban Na Kha is one such village where villagers are engaged in cotton-weaving as an industry. Most villagers who are concerned with this kind of industry in the village are females, similar in many respects to the cushion-making industry which was discussed earlier. Men do not concern themselves with weaving and sewing, even though it is organised on a proto-industrial basis. Thai tradition believes that these jobs are not for men (Krisanaputi, 1986, 55), and thus it is very rare to find a Thai male who does weaving and sewing.

Ban Na Kha is located 16 kilometres from the town of Udon Thani along the road to Nong Khai. Almost 90 households in this village are engaged in the production of cotton fabric. The cotton-weaving industry in this village has changed from the traditional 'production for self consumption' to 'production for sale'. Economic factors primarily explain this transformation. The villagers were faced with the imperative of earning more, and cotton fabric was one of the few things that they could sell. Accordingly, increasing amounts were diverted from self consumption to sale, whilst the volume of production also increased.

The cotton-weaving industry in Ban Na Kha is structurally quite similar to the cushion-making industry in Yasothon Province. Seven entrepreneurs organise and manage production, providing raw materials to the producers, introducing new designs, and organising the marketing of products. All raw materials such as cotton and dyestuffs are bought from Udon Thani town, and accordingly there is no problem of scarcity. The consumers of the finished products are mostly people from the region, but the cotton fabric is also sold to people from outside the region, and also to tourists. The products of Ban Na Kha include sheets of cotton fabric and also finished cotton-suits and other items to suit the needs of the consumer. The products are taken weekly to Udon Thani, and some are also sold in the village.

The special character of the cotton products of Ban Na kha which consumers like so much is the fact that they are hand-made. The quality of the cotton fabric is quite different from that which comes from a large factory. The finished quality of the cotton fabric cannot compare with that which is machine-made. Nonetheless, its charm lies in its relative scarcity, distinctiveness and interest value. There is a small niche for hand-made cotton products in a market which is increasingly dominated by machine-made cotton products. However, there are concerns as to whether this specialist market can be sustained, or even increased as a first step in the long-term development of this industry. One important quality which cannot be matched by the large factories is their flexibility in responding to particular consumer demands, such as the demand for specific designs and artforms. This may add to the charm and, ultimately, the longer-term sustainability of this industry in the face of stiff competition from mass-produced cotton fabric from large factories in the region and elsewhere.

Not far from Ban Na Kha there is a village named Ban Thorn which produces much the same kind of product but where the volume of sales is appreciably less. Evidence of this is partly provided by the period of manufacturing activity in the two villages. Whereas the producers of Ban Thorn are engaged in cotton-weaving only during the dry season, the producers of Ban Na Kha work throughout the year. Field observations revealed that this difference is primarily accounted for by significant differences in the volume of demand and sales, which in turn reflected differences in the marketing of products respectively from Ban Na Kha and Ban Thorn. There are several factors which influence the marketing of cotton fabric from these two villages. The quality and price of their products is relatively consistent, and thus is not a significant factor in the relative dynamism and success of the two sets of industries. Both villages were introduced to the market in Bangkok and other urban centres by a single government agency, since when wholesalers and consumers have come to regular contact with the producers in the two villages. Surprisingly, however, the industry has not subsequently boomed in the same way that the cushion-making industry has. Instead, most of the wholesalers and customers are from Udon Thani and its vicinity, with very few consumers coming from other regions.

Nonetheless, most consumers prefer to buy products from Ban Na Kha to those from Ban Thorn. The respective location of the two villages may be one of the influencing factors for this issue. Ban Na Kha is located on the roadside whereas Ban Thorn is not, being some three kilometres from Ban Na Kha along a laterite road. The wholesalers and consumers prefer the ease of contact which they can enjoy with Ban Na Kha, whereas it is quite difficult and inconvenient for them to travel on the laterite road. It is thus logical and understandable that they should do most of their business in Ban Na Kha, in spite of the fact that the products available from Ban Thorn are very similar in terms of quality and range.

A second factor concerns the entrepreneurs in the two villages. There are several entrepreneurs in Ban Na Kha, and they are able to support the industry's flexibility and efficiency by helping with designs, especially in relation to market demand, and also in the provision of raw materials, making it easier for new producers to enter the industry without having first to invest heavily in the requisite fixed and working capital. Ban Thorn, on the other hand, has no entrepreneur to oversee manufacturing and to deal with consumers, so the producers here lack skills and flexibility in design and marketing. Entrepreneurship may therefore be an important factor in determining the success or otherwise of rural industrial enterprises, as appears to be the case in the two villages discussed above. The factors which help to explain success and failure in both manufacturing and marketing will become more evident from the analysis which is contained in Chapter 5.

(4) The Brassware Industry

Brassware-making is one of traditional industries of Ban Pa Aao in Ubon Ratchathani Province. This is another industry in which village producers have been engaged for a very long time, with the technology and skills of manufacturing being transferred from generation to generation. Ban Pa Aao is well known as a brassware-making village, and it is often visited by customers and also by groups of tourists who regularly come to the village to see the traditional manufacturing process. Ban Pa Aao is located on the road which links Roi-Et and Ubon Ratchathani, 23 kilometres from Ubon Ratchathani town and 4 kilometres along a specially constructed concrete-block road.

The brassware products of Ban Pa Aao are varied, and include such items as buffalo bells, betel containers, and so on. The production process employs a very rudimentary technology, and most of the manufacturing process is done by hand. A hand-operated bellows is used to heat the charcoal furnace. The producers smelt the metal in the furnace, and this is then poured into moulds made from clay which the villagers have earlier produced. The production tools are also very simple, and are mostly made from materials which can mostly be found in the local area, such as clay, bamboo, charcoal, etc. Only the unsmelted brass is bought from Ubon Ratchathani.

If we compare the production technology of brassware-making in this village today with that which was found about 200-300 years ago, there is little substantive difference. Evidence of earlier production methods in the North-East is found in the regional museum at Udon Thani. The production technology then, and the tools used, are remarkably similar to those which are presently employed in Ban Pa Aao. Somehow this village has retained the traditional methods and technologies when elsewhere there has been a significant modernisation of the metal-working industry in Thailand. In some rather ironic way, the industry now survives *because* of its out-dated technology (an item of curiosity), rather than in spite of it. Nonetheless, the out-moded technology also contributes to problems of marketing. It is incapable of producing items of a quality which is comparable with those produced in modern urban factories and workshops. Accordingly, it is not surprising that the number of producers in this village is decreasing every year and will probably continue to do so in the future. Most of them try to find jobs in Ubon Ratchathani and further afield. Unless customers desire a hand-made, traditional product they are more likely to purchase a brassware item from an urban factory rather than from Ban Pa Aao.

In respect of the future development of the industry, it is difficult to envisage how the brassware industry in Ban Pa Aao, with its rudimentary handicraft technology, can produce brassware items of sufficient quality to be able to compete with the products from large-scale factories. To do this will require considerable investment and retraining which, in turn, would probably erode the one enduring quality of this village industry - its traditional rustic charm. In other words, its admittedly contracting niche market would likely disappear altogether in the process of modernisation. In line with the discussion in the previous chapter, it is also doubtful whether the producers themselves would wish to see the brassware industry in their village evolve in this way, even if they were able to adapt to what would be quite fundamental changes in their way of life and livelihood. The industry's best chances of survival may rest in the retention of its special local and traditional character, with greater efforts being made to market the industry - manufacturing process as well as finished products - to a wider constituency.

(5) The Mat-Making Industry

Mat-making is the final kind of industry which we consider within the 'traditional' category. People in the North-East of Thailand traditionally use mats for sitting on the ground. This tradition of mat using has been around for the past 100 years and it still widely found at present (Buasri, 1990, 64). In the rural areas of the northeastern region, people prefer to use mats rather than chairs, especially in the temple, because it is polite not to sit with your head at a level higher than someone else, and it is also the proper thing to do when paying respect to the monk (*ibid.*, 65).

The northeastern people have for a long time utilise reeds (Genus *Cyperus*) to produce mats (*ibid.*, 65). In the past, reeds could be found easily in the lakes or natural water sources in this region. Ban Hua Sai of Nong Khai Province is one such place where many villagers are engaged in the production of reed mats. Ban Hua Sai is located on the roadside which links Nong Khai Province with Sri Chiangmai District. It is 53 kilometres from Nong Khai. Ban Hua Sai has 500 households, 50 of which are involved in the mat-making industry. The source of the raw material (reeds) is a large natural lake located close to a nearby village. The pattern of development of the mat-making industry is similar to other kinds of traditional industry which started from 'production for household use' but, when the society changed and villagers were obliged to find a source of cash income, they then shifted to 'production for sale'.

The market for mats produced in this village is quite good, with 3-4 merchants from Udon Thani, Kalasin and Roi-Et province regularly visiting the village to purchase mats. They usually come with trucks and buy all products from the manufacturing site and sell them throughout North-East Thailand. It is a middleman system through which the merchants tend to benefit more than the producers, but the producers nonetheless prefer this system because they do not want the uncertainty of selling their mats piece-by-piece to the consumers or selling to the shops in town by themselves. The cost of travelling between the village and the town is on important reason in this regard. While the unit price of mats is very low, the travelling cost to sell their products is very high (especially as producers can only take a limited number of these bulky products to market at any one time). Most of the producers are also too poor to be able to afford the travelling costs. Accordingly, it is better for them to sell through the middleman. Although they lose some of the economic benefit in this way, it saves them the cost and responsibility of marketing the mats themselves.

The problem of the mat-making industry of Ban Hua Sai is not particularly concerned with marketing but with a serious lack of raw materials. Reeds are becoming increasingly scarce in the North-East. At present the big lake nearby the village, which has always been the major source of reeds for the village producers, has reeds available only in the wet season. In the dry season when most producers have free time from agriculture and they are ready to undertake mat-making, there are few reeds available due to a lack of water in the lake. Some years the producers had to travel as far away as Khon Kaen and Maha Sarakham to find sufficient reeds to serve the needs of this industry, adding to the cost of production. This problem is similar in many respects to the cushion-making industry of Ban Sri Than, where kapok became increasingly scarce, and pottery-making in Ban Mor, where clay was in short supply.

Another problem with the mat-making industry concerns the very low incomes which producers obtain. This is not because the mats are difficult to sell, but because the unit value of the mats is very low. The buyers tend to consider that the products of traditional industries should have a cheap price. Furthermore, it is difficult to increase the unit price to more closely reflect the amount of time which is spent in the manufacture of mats, because the potential urban market is very limited (urban people with a high disposable income also have a wide variety of alternative products to choose), whereas the purchasing power of the rural people who traditionally use the mats is generally low. For this reason, it is not remarkable to find that the mat-makers in Ban Hua Sai has been steadily declining. Some producers have shifted to the production of *Yor*, a kind of food, from which they can earn much more than from weaving mats.

From the above discussion we have seen that many kinds of traditional industry can still be found in the North-East Thailand. However, most are facing problems associated with the quality of product, its marketing and the supply of raw materials. Production technology is a major problem. Because of its traditional roots, this type of industry incorporates mostly out-dated technologies which are significant in constraining the quality and marketability of their products. Meanwhile, significant changes are taking place in Thai society, bringing about shifts in consumer tastes and making it very difficult for traditional rural industries to survive in the face of stiff competition from the products of large-scale factories. The constraints facing the traditional industrial sector will be analysed in more detail in Chapter 5, as will the means whereby traditional industries in the North-East might be able to make a contribution to some of the rural and regional development objectives which were outlined in Chapter 3.

(B) Technical Skill Industry

Chapter 2 explained that industries of this type use technical skills in the production process. There are two kinds of industries in the North-East of Thailand which can be considered to fall into this category: gemstone-cutting and the pseudo-ancient pottery-making industry. The first uses skills in the cutting and polishing of gemstones and artificial 'diamonds'; the second uses skills in the manufacture and decoration of pots in order to make them look like the genuine, ancient earthenware article.

(1) The Gemstone-Cutting Industry

Gemstone-cutting is essentially an urban industry which has spread into rural villages in the North-East since 1981 (Thammawat, 1991, 5). The two principal sites where the gemstone industry is found are Ban Non Fun Rua, in Khon Kaen Province, and Ban Sang Ming, in Ubon Ratchathani Province.

Gemstone-cutting requires technical skills and production methods with which people in the North-East have no previous familiarity or experience (*ibid.*, 5), other than through past migration to work in gemstone and cosmetic jewellery factories in Bangkok (Parnwell, 1988, 67). Indeed, the industry was originally brought to the North-East by returning migrants who brought the skills and experience derived from several years employment in Bangkok jewellery factories back to their villages, where they established their own gemstone enterprises (*ibid.*, 67). The opportunity to work in their home villages rather than migrating to work in the big city is an attractive proposition for many northeasterners. Although their earnings may be less than in the city, they also have fewer expenses if they work close to their homes.

The evolution of the gemstone-cutting industry in Ban Sang Ming of Muang Samsip District, Ubon Ratchathani Province, is very similar to that outlined above. There are altogether more than twenty gemstone-cutting workshops in this village. Two workshops belong to migrants who previously worked in Chantaburi Province, and who became gemstone entrepreneurs after introducing the industry to their home villages. The other workshops have mostly been created by petty entrepreneurs who used the skills and experience of working in their neighbours' workshops in setting up their own establishments.

Ban Sang Ming is located alongside the road which links Ubon Ratchathani town and Lerng Noktha district, 46 kilometres from Ubon Ratchathani. The gemstone-cutters in this village are mostly local villagers, although a few come from other villages in the North-East, and some have even come from other regions to work in this village industry. There are between five and fifty workers in each workshop. Most of younger members of this village are employed as gemstone-cutters. Their earnings generally vary according to the tasks in which they are engaged, and the amount of time they are willing or able to commit to this activity.

The raw materials of this industry are either uncut gemstones from eastern Thailand, Cambodia and Sri Lanka, or zirconium, which is imported from Taiwan. Neither of these materials is therefore local, and thus linkages to the local resource economy are absent. Most of the entrepreneurs purchase their raw materials and cutting equipment from large entrepreneurs in Bangkok, to whom they also sell their products after manufacture. Some village entrepreneurs also act as middlepeople (mostly middlemen) between the village and Bangkok.

The evolution of the gemstone-cutting industry in Ban Non Fun Rua, Nong Rua District, Khon Kaen Province, follows a story similar to that of Ban Sang Ming. However, this village is more disadvantaged because transportation facilities to and from Ban Non Fun Rua are not as good as is the case with Ban Sang Ming. To get to this village it is necessary to travel some 33 kilometres along the Khon Kaen-Chum Pae road, and then a further 5 kilometres along a laterite road. The gemstone industry is also found in neighbouring villages, such as Ban Ba Yao, Ban Non Sathorn, etc. However, the level of industrial activity is not as high as in Ban Sang Ming: there are between 3-7 workshops in each of the above villages. These workshops have a close working relationship with eight merchants in Tambon Nong Kae, 8 kilometres away, who provide machines and raw material to the entrepreneurs, and also buy their products after processing. Another gemstone-cutting village in Khon Kaen Province is Ban Nong Toom, Tambon Koksri, Muang District, which is 20 kilometres from Khon Kaen on the Khon Kaen-Kalasin road. The six entrepreneurs of Ban Nong Toom do business with merchants in Khon Kaen town in much the same way as described above for Nong Kae.

The gemstone-cutting industry in the above villages has grown extremely fast. A large number of young people from these villages have become involved in this industry. Furthermore, and of relevance to the context of the impact of rural industrialisation on migration patterns, young villagers from other villages, especially those nearby, have also become very interested in this industry. Quite large numbers of them migrate to work in the gemstone-cutting workshops in these villages. For most it is an important alternative source of income, especially where earnings from agriculture are low. This industry has provided jobs for a large number of villagers on both a permanent and seasonal basis. Some villagers come to work only in the dry season, but some of them work in the industry year-round. Work is available on a fairly flexible basis (income being derived on a piece-rate basis), allowing people to work full-time or part-time according to their needs and availability. Its flexibility is an attractive feature for the villagers, allowing the opportunity for them to supplement their incomes at any time of year and at any stage of the agricultural cycle. One principal virtue of the industry in this regard is the way that it provides an alternative to out-migration during slack periods in the farming calendar: without the industry, most would have little alternative but to migrate from their home villages, probably to Bangkok.

Although the peasants are satisfied with the benefits the industry provides, a number of problems have occurred in this industry which bring into question its longevity, and thus its ability to sustain its current economic benefits into the longer term. The problem, essentially, is that the industry has become <u>too</u> successful: because it has provided such a good source of income for villagers in the locality and further afield, it has expanded like wildfire. This has led to problems of over-supply, a glut on the market and, ultimately, a decline in the prices which the products command on the open market. This problem is compounded by the generally poor quality of the cut stones (especially compared with those from urban establishments with which the rural workshops are effectively in competition), which is a consequence of the piece rate system which is widely employed and which tends to place the highest emphasis on the quantity rather than the quality of output. As a consequence of these factors, wage rates have steadily fallen, and with them the contribution that the industry makes to the local rural economy.

Thus the gemstone and 'diamond' industry in North-East Thailand provides a great many interesting indicators not only about the potential for rural industrial expansion but also some of the consequences of a lack of regulation and control. These and other matters will be discussed in more detail in subsequent chapters.

(2) The Pseudo-Ancient Pottery Making Industry

This kind of industry occurs in Udon Thani Province in association with an important archaeological site in the village of Ban Chiang. Ancient skeletons and pottery were found here in 1970 and, following subsequent analysis by research teams from the Schools of Archaeology of Pennsylvania State University, U.S.A., and from New Zealand, the remains were found to date back more than 4,000 years (Sangvichien, 1990, 16). Such an important archaeological find stimulated the interest of the academic community, and drew visitors from around the world during the 1970s and 1980s. Subsequently, it also became an important tourist attraction for both local and foreign tourists who had a passive interest in archaeology and heritage (ibid., 540). The Department of Art built an archaeological museum at Ban Chiang as a way of building up both touristic and academic infrastructure. This in turn provided an opportunity for the villagers of Ban Chiang and its vicinity to capitalise on the tourist market. One principal means whereby they achieved this was by developing a cottage industry making pseudo Ban Chiang pottery for sale to visitors to the area.

Ban Chiang of Nong Han District, Udon Thani Province is located on the Udon Thani-Sakon Nakhon road, some 50 kilometres from Udon Thani town along the main road, and a further 6 kilometres along the small side road. The importance of the archaeological site and the growing number of visitors to the area created a market interest in pseudo Ban Chiang pottery which, initially, was catered for by 'antique' shops in Bangkok, which employed skilled sculptors to imitate the real thing (some pots were also stolen from the archaeological site, but mostly found their way into private collections). The Community Development Department thus saw a potential economic niche for local villagers, and thus advised the villagers of Ban Chiang and vicinity about the prospects and process of developing a pseudo-ancient pottery industry. Because of the specialised nature of the market, the pottery-making industry requires the use of greater technical skills than is generally the case with pottery production in the region (see the discussion of Ban Mor above). None of the villagers possessed such production and wider entrepreneurial skills, and thus the Community Development Department sent trainers to up-grade the skills of local producers. Those villagers who already had pottery-making skills were trained to produce the diagnostic-shaped Ban Chiang pots, and also to reproduce the texture of ancient pots. Those who had artistic skills were trained to paint the pottery according to the diagnostic Ban Chiang designs. This particular rural industry, the manufacture of pseudo-ancient Ban Chiang pottery, has become quite successful, principally on account of the intervention of external agencies in both initiating and facilitating the industry's genesis and subsequent evolution. Producers are now able to sell sufficient pots to generate a respectable income with which to supplement their earnings from agriculture.

There are altogether three villages in the vicinity of the archaeological site which are involved in this industry: Ban Kam Or, Ban Mor Din, Ban Pulu and Ban Chiang. It is interesting to note that the producers from these four villages have developed a rudimentary form of division of labour. The producers of Ban Kam Or and Ban Mor Din mould the pottery into the classical Ban Chiang shape, and then send it to Ban Pulu where it is painted. The finished products are then sent for sale in Ban Chiang. This division of labour is based on the respective advantages and disadvantages of location and the skills of producers of each of the above village. Ban Chiang has the advantage of being close to the ancient burial site and archaeological museum which make it easy to have contact with the tourists, but its disadvantage is that the villagers have no inherent skills or experience in pottery-making. Conversely Ban Kam Or, Ban Mor Din and Ban Pulu have the disadvantage of being sufficiently far removed from the archaeological site to be effectively off the tourists beaten track, and thus they must rely upon their respective skills in pottery-making and pottery-painting. Nonetheless, through this spatial division of labour a wider number of households is able to gain benefits from the industry's development than would otherwise have been the case.

The principal problem with the pseudo-ancient pottery industry in Ban Chiang is the quality of product. There are two kinds of buyer for the industry's products: first, there are people who are interested in Ban Chiang pots as usable souvenirs, such as to keep pencils in or otherwise adorn their office desks; second, there are those who are interested in the pots as a reflection of art, culture and heritage. The first class of customer varies in their degree of discernment: some (particularly international tourists) are largely ignorant of the difference between high and low quality in these pots, and, indeed, may perceive low quality as a virtue because of the ancientness of the artefacts they are intended to imitate; whereas others are more discerning, requiring properly shaped, beautiful pieces. However, the pots in general tend to be rather irregularly and inconsistently designed and finished, which restricts the potential size of the market. For the second type of consumer, the Ban Chiang producers face direct competition from Bangkok producers who are able to produce much higher quality replicas. Thus, in order to claim a larger share of a larger market, the producers in the North-East need to pay more attention to the designs and manufacturing techniques that they presently employ. Although the industry is generally seen as providing a supplementary source of livelihood for peasant farmers, they might nonetheless be able to earn more if they could improve the quality of their finished products. One potential advantage of this is that they might be able to command a higher unit prices, and thus wider margin of profit, compared with the present situation. Another point which requires some attention is the need for producers in this particular rural industry (and other industries which are associated with tourism) to gain more knowledge about the tourist attraction upon which the industry has been built. Not only would they then be able to apply their knowledge more directly to the manufacturing process (in relation to designs, etc), but they could also have more direct interaction with the tourists and other consumers, in the process doing more to promote the sale of their pseudo-ancient products.

(C) Sub-Contracting Industry

The sub-contracting industry is the last type of rural industry in North-East Thailand which features in our research scheme. As discussed in Chapter 2, this type of industry has a special character whereby parts of the production process are sub-contracted out to rural villages by larger industrial enterprises in urban areas. There are three principal kinds of industry in North-East Thailand that fall within this category: silk-weaving, fishnet-repairing and blanket-making.

(1) The Silk-Weaving Industry

The silk-weaving industry of Ban Na Khae, Ban Nok Ork and Ban Thung Jan of Tambon Na Khae, Pakthongchai District, Nakhon Ratchasima Province, illustrates the sub-contracting system which is increasingly being employed in rural small-scale industry in North-East Thailand. As explained earlier, silk-weaving, like cotton-weaving, has been a cottage industry of the northeastern people for a long time. The people usually use cotton fabric in everyday-life, and use silk fabric for special occasions, such as during festivals in their village or town (Krisanaputi, 1986, 55). There are two sites which are considered to be the principal manufacturing places of silk in North-East Thailand: Chonabot District of Khon Kaen Province and Pakthongchai District of Nakhon Ratchasima Province.

The silk-weaving industry in Chonabot District, Khon Kaen, is still principally a cottage industry where several households produce and sell silk cloth at home. However, an important recent development concerns the introduction of mass-production techniques, centralised in a number of quite large factories within the District. More than 10 factories, each with some 20-30 weaving looms (in Thai these are called *Ki Tor Phaa*), have recently appeared on the scene. Each factory also has its own showroom in front of the main workshop. Every day, consumers who want to buy hand-made silk pieces or silk fabric come to visit Chonabot. It is both an important tourist centre for Khon Kaen Province and also an important silk trading centre for ordinary consumers and merchants.

Another silk-weaving centre in the North-East which has even more the character of large-scale industry is Pakthongchai, Nakhon Ratchasima. The production system here is different from that of Khon Kaen. There are two big factories here: one has 500 weaving looms, and the other 200. The business of these two factories is quite good: they are able to export their products to America, Europe, Australia and the Middle East. The silk products of this site are also produced by hand, with no use of machines other than the weaving looms. However, to bestow economies of scale on this industry, which are important to its competitive position, it requires elaborate organisation. This is partly achieved in the form of a division of labour, with different people specialising in different components of the production process. However, because of the unique character of the industry, with one producer operating a fairly bulky, traditional wooden loom, the size of the industry is very much constrained by the amount of space which is available - i.e. the size of the premises. To accommodate 200-500 producers under one roof would necessitate considerable expenditure on overheads, the cost being even greater in an urban or peri-urban location. One way of overcoming this constraint is to sub-contract silk-weaving work out to village-based producers. The two big factories in Pakthongchai have done precisely this, enabling them to expand considerably with minimal investment in premises and overhead costs.

Through the sub-contracting system, the factories provide raw materials and a certain amount of training, and also a guaranteed market for the finished product, whilst the producers themselves provide the premises and equipment. In addition to restricting the required overheads investment, entrepreneurs are also able to minimise their investment in welfare provision for their workers (other than those who are employed in the factories). It is also an extremely flexible system as far as both the entrepreneurs and producers are concerned: the former can iron out fluctuations in market demand by increasing or restricting the amount of work which is contracted out; the latter can do as much or as little as their time, inclination and other commitments allow. A core volume of production is maintained by the permanent full-time workers who are employed within the factories. Quality control is also easier within the premises compared with the sub-contractors.

An added advantage for the village producers is that they are able to engage in cottage industry in synchronisation with their other activities and responsibilities - agriculture, child-care, etc. They are also able to save a greater proportion of their earnings in comparison with working in the factory in town on account of the fact that the cost of living in the village is considerably lower than in town. For most producers, silk-weaving provides an income which supplements that derived from farming. Earnings from weaving largely depend upon the amount of time a producer is able to commit to this form of enterprise, in addition to their skills, level of productivity and the quality of their work.

Ban Na Khae, Ban Nok Ork and Ban Thung Jan are some five kilometres from Pakthongchai District, which in turn is about 19 kilometres from Nakhon Ratchasima. The villagers here sub-contract silk-weaving work from the factories in Pakthongchai. They have their own weaving looms, and the factory provides them only with pre-dyed silk-yarn. This system differs from the gemstone-cutting industry, however, in that the silk weavers have a guaranteed market (although not necessarily a guaranteed price) for their produce whereas this is not the case with the gemstone-cutters. The villagers (sub-contractors) in the silk-weaving industry produce according to a contract with the main factories. The contract concerns not only the volume of production but also the character and quality of the silk which is produced: the factory sets a standard which as a minimum the producers must attain.

The manufacturing process in the factories in Pakthongchai is separated into many parts. Dying the silk yarn is done in the factory, and after the completion of the weaving process in the villages the fabric is sent to another factory (though controlled by the same entrepreneurial families) for printing and other finishing and processing operations. After the completion of these stages, the products are sent for sale in Bangkok showrooms. Approximately sixty per cent of the silk products from Pakthongchai are sold in Bangkok, and forty per cent is exported.

The biggest problem which the silk-weaving industry presently faces concerns the insufficient supply of raw materials (a constraint similar to that identified for cushion-making above). The local suppliers are unable to supply enough silk yarn to maintain an optimum level of production in the factories. They have thus had to establish buying-stations in Khon Kaen, Chum Phae and Udon Thani to buy silk yarn directly from the farmers/villagers. Also, approximately 20-30 per cent of the yarn they use (mostly for the warp) is imported from China and Japan.

The sub-contractors/villagers also have problems. In particular, they complain about their wages. Although they were satisfied with the industry's flexibility, they feel that their wage levels are steadily falling, especially in comparison with other forms of industry in the North-East and elsewhere. Many have left the silk-weaving industry to take up other forms of work. In relation to the discussion earlier in this thesis, where it was claimed that people in the North-East have few alternative sources of employment in the region, the province of Nakhon Ratchasima is slightly different. Because of its closer proximity and better access to Bangkok and the Central Region, a much more rapid rate of industrialisation (particularly labour-intensive industry) has been enjoyed here than in other parts of the North-East. This has had the effect of raising wage levels and increasing the range of employment opportunities which is available. The silk industry, however, is faced with a cost-price squeeze, allowing very little scope for increasing wage demands or expectations to be met by raising prices. Accordingly, the industry is in a relatively weak competitive position with other forms of manufacturing in the province.

(2) The Fishnet Industry

Ban Kok Lam and Ban Savathi of Tambon Bantum, Muang District, Khon Kaen Province, have a large number of people who are engaged in the fish-net industry. These villages are located along the Khon Kaen-Chum Phae road, some 20 kilometres from Khon Kaen town and 8 kilometres on the right hand side using a laterite road. The villagers of Ban Kok Lam and Ban Savathi have contracts with two fish-net factories in Khon Kaen. The factories manufacture the fish-nets using machines, but some pieces are either not adequately finished or have to be repaired by hand. These tasks are then sub-contracted to villagers, who complete this work at home. The factories provide tools and nylon which are the raw materials for this industry, and also initial training. As with some of the other industries we have already described, income is derived on a piece-rate basis: the more they complete, the more they earn.

The fish-net business is quite good. Its products are sold to both the domestic and external (export) markets. The industry has expended very rapidly in recent years, and with it the number of sub-contractors. A large quantity of unfinished fish-nets are brought to the two study villages every week to be despatched to the sub-contractors. The volume of production is so great that now other villages in the vicinity are becoming involved.

The fish-net industry in these villages originated when the Khon Kaen factory needed some more workers to meet its market expansion, but at the same time faced expansion constraints similar to those discussed above for the silk-weaving industry. Some villagers from Ban Tum and Ban Savathi had previously worked in the fish-net factory in Khon Kaen, and it was they who principally acted as intermediaries between the factory and their home villages in introducing friends and relations to the sub-contracting system. As the market expanded, and with it the volume of production, so branch offices of the factories were established in the study villages in order to facilitate the more efficient organisation of production. There is also a degree of competition between the two factories for village sub-contractors which, because it is not possible to raise substantially piece-rate payments, means that the sub-contracting system is expanding ever more widely. One advantage of this, from the perspective of bringing development to rural areas of the North-East, is that more people and more villages are benefiting directly from the industry's expansion. Also, in relation to urban-rural differentials, it is encouraging to note that the sub-contracting system represents an important means of retaining benefits from the industry's expansion within the rural sector, instead of seeing them centralised in urban areas, which is more conventionally the case.

As with other industries which we have already examined, the fish-net industry in the rural setting is principally used as a means of supplementing incomes from agriculture, especially during the long dry season. Its flexibility allows them to move between jobs and tasks according to need and demand. At its present stage of development, but the entrepreneurs and the producers are reasonable content with the sub-contracting arrangement, although the falling wage levels in real terms are a slight cause for future concern.

(3) The Blanket-Making Industry

A final kind of rural industry in North-East Thailand which uses a sub-contracting system is the blanket-making industry in Ban Pon Sawan of Tambon Sra-khai, Muang District, Nong Khai Province. It is located along Udon Thani-Nong Khai road, some 39 kilometres from Udon Thani town and 3 kilometres along the laterite side road. Blanket-making is not a traditional form of industry in Ban Pon Sawan. It originated in this village when two villages who had worked in a blanket shop in Udon Thani introduced this business to their village, on a sub-contracting basis. The shop in Udon Thani now provides the raw materials (waste garments and cotton pieces from textile factories in Bangkok) and the blanket nets. The villagers then convert the waste materials into a fibrous matter which is used to stuff the blanket nets. The shop in Udon Thani town then finishes the product by adding a blanket cover. The sub-contractors thus simply provide their labour power. Marketing and organisation of production are taken care of by the blanket shop.

In contrast to the industries discussed above, the blanket-making industry has been unsuccessful, and has now closed down after three years of operation. Customers shifted demand to superior quality synthetic materials, produced in large Bangkok factories. Remarkably, the price of these Bangkok-produced blankets is higher than those produced in villages in the North-East. However, the latter are now unfashionable, and thus it is very difficult to find ways of re-establishing the market for them. Thus the villagers of Ban Pon Sawan have reverted to their earlier agricultural tasks and still await an alternative opportunity to supplement their livelihoods.

We include this industry in our discussion because it helps to highlight some of the weaknesses associated with rural industries as they attempt to penetrate a wider, external market. It highlights the vulnerability and inherent weaknesses of the rural industrial sector. It also shows that the sub-contracting system is not universally successful, irrespective of its potential advantages. Much depends on the kind of industry.

Summary

This overview of rural industry in northeastern Thailand has shown that some kinds of industry use traditional old techniques to produce local houseware goods, whereas other kinds produce items as a component part of chains of large urban industry via sub-contracting arrangements. However, the productivity of neither set of rural industries was particularly high. This is not an issue if we assume that the principal aim of these industries was to produce items for the local economy, and that the producers are engaged in rural industry as a sideline activity. If the concern is for supplementary income and employment, rather than productivity, efficiency, quality and profitability, then the current situation is not a cause for anxiety. However, from the perspective of facilitating rural and regional development, based upon a thriving, efficient and dynamic rural industrial sector, such a situation is much less desirable.

The situation in North-East Thailand is similar to that described by Chee Peng Lim (1992) for Malaysia, as we have already discussed in Chapter 1, where the principal aim of rural industrialisation was the promotion of income generation for small scale producers. Although the income earned from rural industrial activities was not considerable, due mainly to the small and sub-economic scale of production, and low prices due to the low quality of the finished products, the local peasants were nonetheless able to survive economically, and in situ, by virtue of the supplementary income that cottage industry was able to provide. This in spite of the fact that commentators viewing these industries from outwith tend to draw attention to such negative aspects as the poor quality of production and difficulties of marketing.

If we look now at the case of Japan, small-scale industry in Japan has for a long time been linked into the chain of large-scale industry, and has benefited in terms of the quality and marketability of its products by virtue of its contacts with larger industrial enterprises, with innovations being quite quickly diffused within these functional networks (Okamoto, 1991). As we have seen, rural industry (particularly that which applies the sub-contracting system) in northeastern Thailand also enjoys this functionally integrated characteristic, and thus theoretically should benefit from its linkages with larger firms, with their greater capacity for innovation, as was the case in Japan. However, it appears that a rather different set of circumstances prevails in Thailand. Here, the incorporation of the countryside into the realm of industry appears to be more exploitative or parasitic than it is generative: large, urban-centred firms are exploiting the underdevelopment of rural areas rather than contributing significantly to their development.

This being the case, profound questions remain to be answered in relation to the means by which the development potential of the rural industrial sector may be realised. Set against the back-drop described above, how can quality be improved in order to allow the rural industrial sector to compete on an even footing with its urban counterpart? This is a question which will be addressed in the following chapters (5-7) of this thesis. Another field of enquiry will be the linkages between agriculture and industry (Kirkpatrick, 1987). As in the case of Germany, might agriculture in the North-East of Thailand be integrated with the industrial sector as a supplier of raw materials for the latter, thereby providing mutual benefit to the two sectors? As the workforce moves from the agricultural to the industrial sector (including the local rural industrial sector), what will be the implications for the farming sector, and also the provision of food for the rural population? We should not interfere with people's freedom of choice in moving between the two sectors, but it is important that we are fully aware of the implications of this process. The challenge which faces the country's planners is to find ways of promoting rural industrialisation in order to maximise the local economic and other benefits whilst at the same time minimising the negative effects of this process of change. Is gradual or rapid change the most appropriate strategy in this regard? Should a strategy which helps to underpin the rural population's economic survival be given the highest priority, or should planners strive to achieve something more profound than this, irrespective of the social consequences? These are all issues which will be considered in some detail in Chapter 8.

From the above explanation and discussion of rural small-scale industry in North-East Thailand, we have seen some of the advantages and problems of various kinds of industry in the region according to the way that production has been organised. We now proceed to analyse in more detail some of the problems and constraints which these industries have encountered, and if/how these have been overcome. This in turn will provide some useful indicators with regard to future development policy-making on rural industrialisation.

CHAPTER 5

ANALYSIS OF THE CONSTRAINTS AND POTENTIAL OF TRADITIONAL RURAL INDUSTRY IN NORTH-EAST THAILAND

This chapter presents the findings of the analysis of the characteristics of producer households in the traditional category of industry, and also the economic benefits which they derive from their involvement in the industry. It will also examine the constraints which traditional industries face, and also the potential benefits which might accrue were means to be found of overcoming these. The discussion will focus in the main upon the cushion-making industry in Yasothon Province, and will occasionally weave in discussion of pottery-making in Mahasarakham, cotton-weaving in Udon Thani, brassware manufacture in Ubon Ratchathani and mat-making Nong Khai for the purposes of comparison and further elaboration. The main source of information for the following analysis with be field data derived from a questionnaire survey (questionnaire no.1) which was conducted in Ban Sri-Than, Patiew District, Yasothon Province (see Appendix 1). The findings of the analysis are principally presented in descriptive form.

(1) Background of Producers

The cushion-makers are mostly middle-aged, with almost half (48%) being between 30 and 40 years old, and a further third (32%) aged between 41 and 60 years. Only a very small proportion are aged less than thirty (see Table 5.1). As we have seen earlier, almost all of the producers are women.

In seeking to explain the age distribution of cushion producers, we need to look at their marital and other circumstances. Of those aged less than thirty, the majority had moved to the village through marriage, and had recently started to learn how to produce cushions as a means of earning a supplementary source of livelihood. Another explanation for the very low proportion of young women engaged in the industry (which stands in stark contrast to, for example, the gemstone-industry which is discussed in the next chapter) is that their strength and vitality makes them indispensable for agricultural work which, as we shall see, is generally afforded a higher priority than crafts work. Somsak Srisontisuk (1994) studied the role of Thai men and women in northeastern Thai rural society and found that married women mostly worked to support their husband's work, such as in housework and agriculture, and that this provided the backbone of rural society. However, the new, younger generation was facing more economic pressures and opportunities, pushing more women to seek employment in order to provide a supplementary source of livelihood to that provided by their husbands. Accordingly, more of the married women in this village do industrial work during the dry season. Fortunately for them, such work was quite freely available *in situ* (i.e. in the village). In contrast, because they were less subject to these economic pressures, fewer young and unmarried women were involved in this industry.

There is a complex interplay between rural industry and agriculture, not least in respect of competing demands for labour. It appears in this case that farming has the competitive edge when it comes to securing access to young female labour. However, with increasing age strength generally declines and other responsibilities take over. Thus, we find a greater proportional allocation of female labour to other tasks, including rural industry. There may be other facets to this situation, however. For instance, it may also be the case that younger women are less able to make independent choices in respect of the allocation of their labour, and thus have to put their obligation to their parents ahead of any personal desire to earn a livelihood from cushion-making.

Table 5.1
Age and Occupation of Cushion Producers

Age	
Under 30 years	6%
30-40 years	48%
41-60 years	32%
Over 60 years	14%
Total	100%
Major Occupation	
Agriculture	88%
Cushion-making	10%
Employment	2%
Total	100%
Prioritisation of Cushion-Making Work	
Major work	10%
Minor work	52%
Supplementary work	38%
Total	100%

Source: data from questionnaire no.1

Older women who do not allocate their labour to farming, either because of strength/inclination, or because they have various household chores to attend to, including looking after younger children, are more likely to be involved with cushion-making. This group of women is able to combine their home-based duties with cushion-making - a point which emphasises the industry's flexibility and appropriateness to the circumstances of certain echelons of rural society, including married women with families. It is for this reason that the modal age group falls between 30-40 years.

This finding is consistent with other of the industries which fall within the 'traditional' category, where the majority of producers are middle-aged. However, the gender mix in the division of labour is rather different for these other industries. Mat-weaving requires a certain amount of strength in extracting reeds from the pond, and the weaving technique also requires a certain amount of force in the cutting and tying processes (it is not meant to imply that women are incapable of undertaking the heavier tasks - indeed many do - but that a degree of gender specialisation has evolved according to the amount of energy which must be expended at different stages of the production process). For this reason there are quite a number of men involved in this industry.

Pottery-making also requires a certain amount of brute force, which men tend to provide, in taking clay from the pond kneading and shaping the clay, and also operating the potter's wheel. In brassware manufacture men are engaged in making clay moulds, smelting the brass and shaping and finishing the brassware items. In contrast, the cotton-weaving industry, which requires endurance but not a great deal of physical strength, has, like cushion-making, a much greater proportion of women involved, and few men.

Table 5.1 provides an indication of the relationship between farming and cottage industry in respect of what people consider to be their major and minor occupations. In spite of the cushion-making industry's recent boom and economic contribution, the majority of producers (88%) list agricultural work as their major occupation. Only 10% of producers claimed cushion-making to be their principal occupation. Of those who listed agriculture as their main source of livelihood, 52% viewed cushion-making as a minor or secondary occupation, and 38% considered it to provide only a supplementary form of work.

On the surface it therefore appears that cottage industry, even a relatively successful one such as cushion-making, is somewhat insignificant as a source of livelihood in peripheral rural areas such as the North-East. However, we need to probe a little more deeply to uncover the reality of this situation. It is quite normal among northeastern Thai people to say that the villagers in this region are mostly farmers, and that agriculture is thus their major form of work. They may utilise their free time during and after the main agricultural season to undertake supplementary jobs such as in cottage industry, but they will nonetheless consider themselves to be farmers first and foremost - even if, in some cases, they devote relatively more time and derive more income from non-farm activities (in a similar way, they will consider themselves to be villagers even if a significant amount of their time is spent, and income derived, as migrants in urban areas). In any case, the mentality of many in the North-East is such that their principal priority is to guarantee subsistence security in the first instance, whereafter attention may switch towards supplementing agricultural earnings. One of the problems which faces efforts to promote rural industrial development in areas such as these is the difficulty of convincing peasant producers that they could be better off economically by dedicating a greater proportion of their time to rural industrial production. Only where they can see clear benefits from so-doing is this likely to occur. In other words, incentive has an important influence on inclination.

To test this last observation, we now look at levels of participation in cottage industry, and villagers' occupational self-perception, according to the size of their land-holding and the volume of agricultural production. The interesting issue is whether their perception of the relative importance of agriculture is related to the amount of land they have available for cultivation. The majority of villagers in Ban Sri-than mostly grow rice and water melons. They grow glutinous rice for household consumption and fragrant (white) rice to sell. Those who have little land for cultivation tend only to grow glutinous rice for consumption and nothing for sale. Only those who have large plots of land are able to grow glutinous rice, fragrant rice, water melons, chillis and maize. We might hypothesise from this that it would be the smaller landholders who would be more inclined to prioritise cushion-making, due partly to the insufficiency of supplementary income from farming and also the fact that the labour demands of small land-holdings are relatively modest (size of household notwithstanding - see Table 5.2).

Table 5.2
Size of Resident Household and Involvement of Family Members in Cushion Production

Number of Resident Household Members	
2 persons	16%
3 persons	12%
4 persons	38%
5 persons	16%
more than 5 persons	18%
Total	100%

Number of Family Members Involved in Cushion Production	
1 person	48%
2 persons	42%
more than 2 persons	10%
Total	100%

Source: Data from questionnaire no.1.

The study indeed revealed that producers who cultivate more than 10 rai of land (which in this study is used as the loose cut-off point between a situation where a farmer can derive sufficient income from farming to satisfy his basic needs, and that where this is not possible) considered cushion-making to be either a minor or supplementary source of livelihood (Table 5.3). This implies that cushion producers who have large plots of cultivated land derive their main income from agriculture because they are able to sell a lot of agricultural produce, thus relegating cushion-making in relative importance. But those who have small plots of land cannot rely upon income from farming and so see cushion-making as their major occupation. We find the same in other kinds of traditional industry where producers who have a small plot of cultivated land tend to focus on rural industry as their major occupation, if the earnings so-derived are not too low.

Table 5.3
Relationship Between Size of Land-Holding and the Prioritisation of Cushion-Making Work

Prioritisation of Cushion-Making Work	Size of Land-Holding less than 10 rai	more than 10 rai	Total
Major work	6.0	4.0	10.0
Minor work	8.0	44.0	52.0
Supplementary work	2.0	36.0	38.0
Total	16.0	84.0	100.0
Chi-square 17.67881		Significance	0.00014

Source: analysis of data from questionnaire no.1

A distinctive feature of the cushion-making industry is the division of labour which has emerged in recent years in association with the industry's recent development. This, in turn, is a factor in the relationship between cushion-making and other forms of economic activity in the locality, most notably agriculture. The division of the production process into component parts allows a greater degree of flexibility in terms of entry and exit, both on a short- and long-term basis, than is generally the case where a single producer is engaged in all components of the production process. For this reason, perhaps, a greater proportion of local producers saw, and used, the industry as a minor or supplementary source of livelihood than was the case with other of the traditional industries under study here. Production was significantly scaled down during the planting and harvesting seasons as villagers went about their main farming duties.

It is worth dwelling on the division of labour in the cushion industry for a moment because it signals other characteristics of producers which are of significance to our later analysis. The manufacturing process has four steps: the first involves the weaving of *khid* cloth for making the cushion cases; the second involves the sewing and shaping of the cushion cases from the woven *khid*; the third step centres around the stuffing of the cushions with straw and kapok; and the fourth step involves the sewing, completion and cleaning of the cushions. As we noted earlier in this thesis, the villagers of Ban Sri-Than mostly purchase the woven *khid* from Ban Po-Sri, Ban Po-Sai and Ban Patong, before taking it through the remaining stages *in situ* (thus there is also a certain spatial division of labour involved). Forty per cent of producers of Ban Sri-Than are routinely engaged in the second step of the manufacturing process, 26% of them specialise on the third step, and a further 26% preoccupy themselves mainly with the fourth step (see Table 5.4). Each of the last three stages of the production process provides a higher income than the first stage (because value is added to the 'raw' materials at these stages), which is one reason why the villagers of Ban Sri-Than prefer to engage in these stages.

Table 5.4
Components of the Manufacturing Process and Experience of Cushion Producers, Ban Sri Than

Proportion of Producers Engaged in Different Components of the Cushion-Making Process	
Weaving	8%
Making cushion covers	40%
Stuffing	26%
Finishing	26%
Total	100%

Total Number of Years Experience as a Cushion Producer	
1 year	2%
2 years	4%
3-5 years	22%
6-10 years	20%
10-20 years	40%
more than 20 years	12%
Total	100%

Source: data from questionnaire no.1.

Another reason for the specialisation of the villagers of Ban Sri-Than on these stages relates to the skill requirements of these latter stages, which has a direct bearing on the quality of the finished product. It is this which partly helps to explain why other villagers in the vicinity have not introduced other components of the production process themselves but instead continue to function as the providers of relative low-value cloth to the cushion producers. The industry have been established in Ban Sri-Than for quite some time, during which the villagers have developed the requisite skills and specialisations. The possession of skills and experience enables Ban Sri-Than producers to choose the more highly remunerative components of the production process, whereas the absence of these qualities in other villages prevents their emergence as competitors (along with the controlling influence of the Ban Sri-Than entrepreneurs, which we shall discuss shortly).

Evidence of the long-established nature of the cushion-making industry, and thus of the time period over which the spatial and social division of labour had occurred, is evidenced by Table 5.4. Some forty per cent of the producers in the Ban Sri-Than cushion-making industry have between 10 and 20 years' experience in the industry, and a further twelve per cent have more than twenty years' experience. On the basis of their experience, most producers were able to choose which parts of the production process they wished to engage in (usually the most rewarding financially, although sewing stages require more skills and dexterity than stuffing the cushions, so not everyone was capable of doing all stages, however long they had been involved in the industry), rather than take part in every stage of the manufacturing process. Not surprisingly, the study revealed a close relationship between the producers' age and their level of experience in the industry (Table 5.5).

In spite of the long-established nature of several of the other traditional industries under consideration here (brassware, mat-making and others), the ability of an individual to choose which parts of the production process (s)he would wish to specialise on was not duplicated elsewhere. This, in turn, may either have prevented the emergence of a division of labour along the lines found in Ban Sri-Than, or was in fact a consequence of the absence of such an organisational structure.

Table 5.5
Relationship between Age and Experience of Cushion Producers

Experience	< 5 years	6-10 years	> 10 years	Total
Age				
Under 30 years	2.0	4.0	0.0	6.0
30-40 years	18.0	16.0	14.0	48.0
41-60 years	6.0	0.0	26.0	32.0
Over 60 years	2.0	0.0	12.0	14.0
Total	28.0	20.0	52.0	100.0

Chi-square: 39.78414 Significance: 0.00000

Source: analysis of data from questionnaire no.1.

It is interesting to ponder at this stage the possible link between the length of establishment of a cottage industry and the evolution of its products in terms of product quality and marketability. In an orthodox production context it seems reasonable to assume that, the longer-established an industry is, the greater will be the likelihood that refinements will have been made to the production process, product design, external market linkages and so on. In the case of traditional cottage industry, however, this progression is not inevitable. Several of the industries under study here - most notably the pottery industry in Ban Mor - have remained fairly stagnant in the above respects. Little stimulus has come from the market for change in production methods and designs, and thus the earthenware products today are little different from those produced several decades ago in terms of design, quality and functionality. Paradoxically, the changes which have recently occurred in the cushion-making industry can not be attributed simply to the amount of time that the industry has been in existence or the amount of experience that individual producers have accumulated. It is true that the traditional nature of the industry is relevant to the fact that it is producing handicraft items which are imbedded in North-East Thai material culture, which is certainly a factor in their appeal to the external market (this also applies, to a slightly different extent, with the brassware industry where it appears to be the production process more than the products themselves which add to the distinctiveness of this form of enterprise). However, there are several other factors which may be considered to be of equal or greater importance, such as the process whereby products become engaged with the market, the organisation of the production process and the techniques of production, the willingness of producers to incorporate change, and also the external economic climate and structure. We shall return towards the end of this chapter to look at traditional cottage industry within the context of these wider considerations.

In exploring the economic background of cushion-makers in Ban Sri-Than, we find that most of the villagers are quite well-off when compared with those of other villages, including those which are also involved in the cushion-making process. The size of land-holding is one means of identifying the relative wealth of these villagers. Half of the study households have between 20 and 50 *rai* of land available for cultivation, and altogether more than 80 per cent have more than 10 *rai* of cultivated land (see Table 5.6). This places them in the middle- to large-landholding classes within the North-East, and quite far removed from the poorer rural folk whose small landholdings are a major source of poverty and income insufficiency and, in many cases, pushes people to sell their remaining landholdings as a means of realising income for their short-term economic and nutritional survival. The cushion producers of Ban

Sri-Than, on the other hand, have a much different status compared with the median group of peasants in this region. They have no need to sell their cultivated land because they have enough food and income to survive from both agriculture and cushion-making (there will be a more detailed discussion of the expenditure of income from cushion-making a little later in this chapter). Moreover, those who have enough savings have in fact sought to buy more land in order to increase the size of their landholding. However, few have been able to realise this ambition because, with high overall income levels in the village, there are few villagers who are either willing or need to sell their land. Accordingly, they have resorted to buying land in other villages. Mrs Chai Waivong, one of the cushion-making producers in Ban Sri-Than said:

> "Thirty years ago the agricultural products in this village were just enough for household consumption. Each household had a small plot of cultivated land, and very few had a large amount of land. Cushion-making was done for household-use and for donating to the temple. After cushions could be sold to Bangkok, the villagers had more income and more savings. The income from cushion-making was spent to buy food for daily subsistence, and they could save other income. When savings were large the villagers tried to buy more cultivated land. At the moment, many villagers have enough savings and want to buy land but they cannot because nobody wants to sell, even when the price of land increases. My son had to buy land in Loei province because of this reason."

So, from this perspective, we can deduce that the presence of industrial work for villagers in Ban Sri Than has been one of the factors that has helped to make the villagers more wealthy. Of course, this is not the only factor, as we shall see later in the analysis section of this chapter. We now turn to look at agricultural production as a further means of gauging the economic standing of cushion-producers in Ban Sri-Than.

Table 5.6
Size of Land-Holding and the Sufficiency of Agricultural Products of Cushion Producers

Size of Land-Holding (cultivated land)	
Less than 10 rai	16%
10-20 rai	28%
20-50 rai	50%
More than 50 rai 6%	
Total	100%
Sufficiency of Agricultural Production	
Sell a lot (much)	54%
Sell some (not much)	30%
Produce enough to consume (little)	12%
Do not do agriculture	4%
Total	100%

Source: data from questionnaire no.1

Table 5.6 shows that a high proportion of villagers in Ban Sri-Than produce enough from their farms to satisfy their own consumption needs, and a quite large number derive a reasonable source of livelihood from selling agricultural produce. This undoubtedly has some bearing upon prevailing attitudes towards involvement in and degree of dedication to cottage industry in the village. Table 5.7 identifies the principal sources of income of villagers in Ban Sri-Than. Income from agriculture relates to the total cash income which is derived from selling all or part of the crop on an annual basis. It does not relate to total agricultural production, and therefore makes no reference to that proportion of production which is consumed by the producing household. Farmers who can earn more than 10,000 baht (c. £250) annually from selling agricultural products may be considered non-poor peasants (the average income of farmers in the North-East Thailand is about 10,000 baht per year). Accordingly, more than half of the cushion producers may be considered as peasants who have a fairly good income status.

Table 5.7
Sources of Income of Cushion Producing Households

Income Obtained from Agriculture	
Less than 10,000 baht	46%
10,001-20,000 baht	18%
20,001-40,000 baht	20%
40,001-70,000 baht	16%
Total	100%
Income Obtained from Cushion-Making	
Less than 10,000 baht	80%
10,001-20,000 baht	18%
20,001-40,000 baht	2%
Total	100%
Income Obtained from Employment	
Less than 10,000 baht	96%
10,001-20,000 baht	2%
20,001-40,000 baht	2%
Total	100%
Total Income	
Less than 10,000 baht	10%
10,001-20,000 baht	26%
20,001-40,000 baht	28%
41,001-100,000 baht	18%
Total	100%

Source: data from questionnaire number 1

The study also found that there is an understandable relationship between income from agriculture and the size of land-holding (Table 5.8). The cushion producers who have less than 10 *rai* of cultivated land tend on average to earn less than 10,000 baht (£250) a year from agriculture, whereas the higher earners are almost invariably the larger landowners. Accordingly, it is not surprising that many of the better-off villagers wished to purchase land in order to increase their capacity for earning a livelihood from agriculture, and also as a means of increasing the potential income base for their children in the future.

Table 5.8
Relationship Between Size of Land-Holding and Agricultural Income

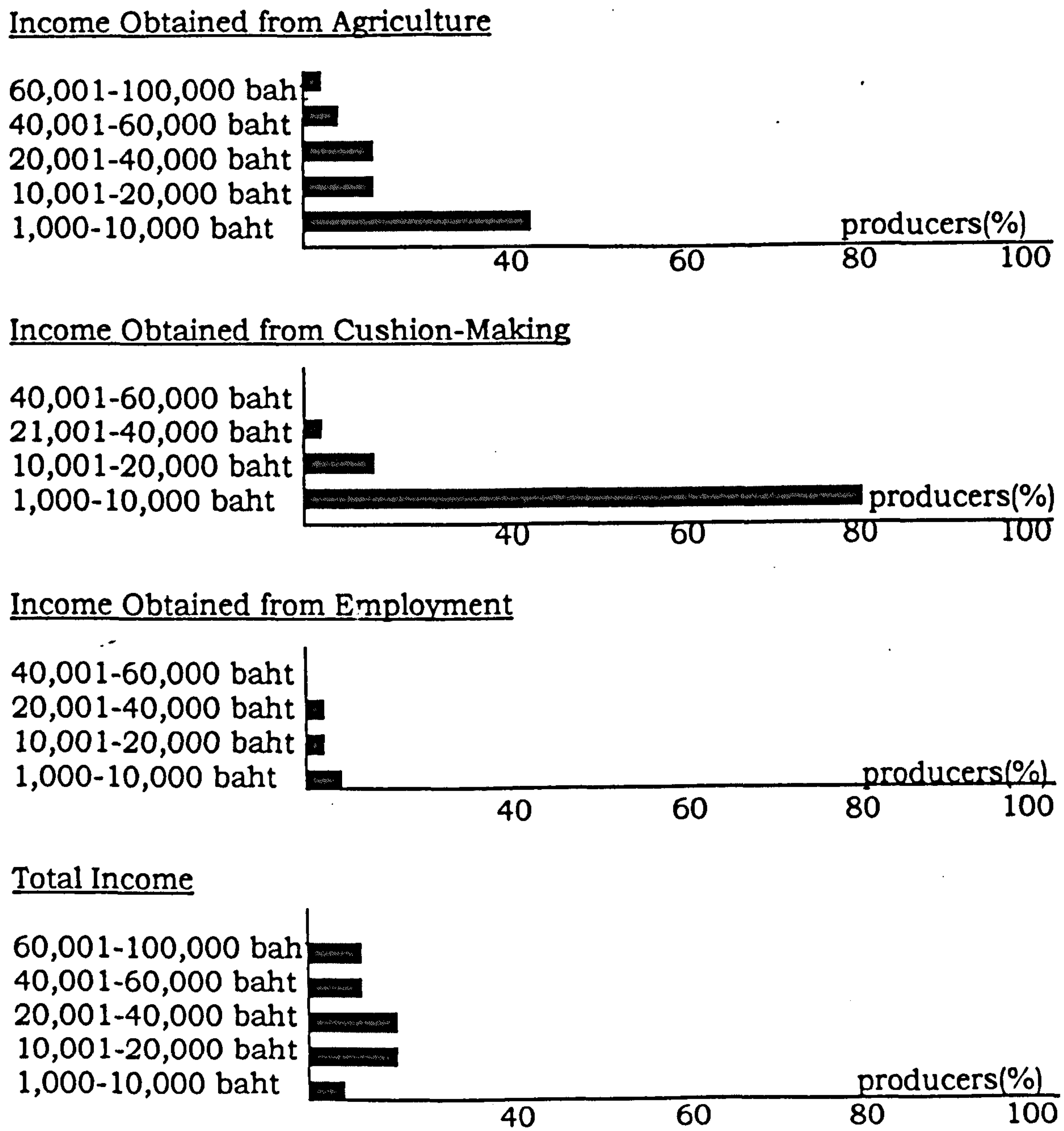
	Size of Land-Holding		
	<10 rai	>10 rai	Total
<u>Agricultural income</u>			
Less than 10,000 baht	30.0	16.0	46.0
10,000-40,000 baht	12.0	26.0	38.0
More than 40,000 baht	2.0	14.0	16.0
Total	44.0	56.0	100.0

Chi-square17.22683 Significance0.00018

Source: analysis of data from questionnaire number 1

Moving on to look at villagers' earnings from cushion-making, Table 5.7 shows that some 56 per cent of producers obtained more than 5,000 baht (c.£125) annually from this form of enterprise. Although the average income from cushion-making was not as high as from farming (which both explains and is explained by the relative prioritisation which agriculture received over industry), it was nonetheless a very useful supplementary source of income and, when added to earnings from farming, further identified villagers from Ban Sri-Than as appreciably better off than many others in the vicinity. Only twelve per cent of study households relied upon sources of income other than from farming and

Figure 5.1
Graph Showing Comparative Income of Producer Households



Source: data from questionnaire number 1 cushion-making. The total income profile of the study communities is presented in Table 5.7. These data are represented graphically in Figure 5.1.

From the above analysis we can thus deduce the significance of the cushion-making industry as a source of livelihood for villagers in Ban Sri-Than. It is clearly an important source of supplementary income, but it is equally clear that agricultural production is afforded the greatest priority by producer households. Later in this chapter we will examine why this should be the case, and also whether there is any prospect for the cushion industry to play a more prominent role in the household economy than hitherto.

As for other traditional industries in the North-East, many share the same character to the cushion-making industry described above. Most of the producers derive their main source of income from agriculture and obtain supplementary income from several non-farm sources, though most prominently from cottage industry. This is largely because of the absence of alternative sources of livelihood *in situ*, which in turn is largely attributable to the relatively remote location of the villages under examination here. Thus, villagers have little choice about their source of livelihood - the only real choice, as mentioned above, centres on whether they prioritise industry or agriculture as their main source of livelihood.

(2) Importance of Income from Traditional Cottage Industry

Having identified producer households' earnings from their involvement in traditional cottage industry, we now turn to a brief examination of the relative importance of this particular income source to the households concerned. It is clear that the vast majority consider the income provided by cushion-making to be important to the day-to-day management of the

Table 5.9
The Importance of Income Obtained from Cushion-Making

Importance to Household	
Very important	42%
Quite important	42%
Not significant	16%
Total	100%
The Spending of Income Obtained from Cushion-Making	
Purchase food and necessities	76%
Purchase clothes and support childrens' education	18%
Save to buy sewing machine and/or motorbike	6%
Total	100%
The Spending of Income to Improve Agricultural Production	
Purchase cattle	6%
Purchase fertiliser	34%
Employ labour force	18%
Not enough to improve	42%
Total	100%
Well-Being Brought by Income Obtained from Cushion-Making	
Secure household income for emergency expenditure	22%
Brought better food and more household supplies	49%
Not enough income to improve	29%
Total	100%
Problems in Agriculture Caused by Cushion-Making	
Problem with labour shortages	12%
No problems	88%
Total	100%

Source: data from questionnaire no.1

household economy. Some 42 per cent of study households considered that the income derived from cottage industry was "very important", and a similar proportion thought it "quite important" (Table 5.9). Only sixteen per cent considered this source of income to be "not significant".

Most of producers spent the income which they obtained from cushion-making in purchasing daily food and household necessities such as washing powder, soap, tooth paste, brushes, kitchenware, etc. (Table 5.9). A smaller proportion used the money so-derived to purchase clothes and support their children's education, whilst six per cent were able to save money, with the longer term aim of, for example, purchasing sewing machines (which could be used in the industry to provide more highly remunerative employment) and repairing or improving their house. The fact that most income was spent on everyday forms of expenditure reinforces the notion that the income derived from cushion-making is important mainly as a supplementary source of livelihood.

Table 5.10 seeks to assess the perceived importance of income derived from cushion-making in relation to the principal ways in which the income is spent. This task is made a little difficult by the fact that such a large proportion used the income for general consumption purposes. However, the relatively high Chi Square value indicates that there is a significant difference in the importance of income in relation to how it was spent. The vast majority of those who considered that income obtained from cushion-making was important for their families spent their income on the purchase of daily food and household necessities. This implies that they have only limited income from other sources, and thus that derived from cushion-making is crucial to their day-to-day functioning. There are significant development implications attached to this finding. Certainly, the field-work revealed that such people were in a much more favourable position than those in a similar situation in the study village who were not involved in the industry. The fact that they can support their everyday needs from cushion-making also suggests that they may be in a position to utilise income derived from other sources (e.g. external employment) for other purposes, such as the purchase of consumer durables or savings for education or the purchase of land (as discussed in the previous section).

Table 5.10
Relationship Between the Spending of Income from Cushion-Making and the Consideration of its Importance by Producers

Importance	The Use of Income: Food, Clothing and Savings	Necessities	Children's Education	Total
Very important	34.0	6.0	2.0	42.0
Quite important	26.0	12.0	4.0	42.0
Not significant	16.0	0.0	0.0	16.0
Total	76.0	18.0	6.0	100.0

Chi-square 10.19215 Significance 0.03731

Source: data evaluated from questionnaire no.1

There was also some evidence that the income obtained from cushion-making had enabled producers to make improvements to farming which, for most, was their principal economic activity: 58 per cent of producers spent income obtained from cushion-making on the purchase of cattle, agricultural tools and fertiliser, and to employ farm labourers. The remainder considered that the income obtained from cushion-making was too little and thus too insufficient to improve agriculture (Table 5.9). Furthermore, the income they obtain from the industry does not arrive in the form of a lump sum, but rather it comes in small, fairly regular amounts. For this reason, most producers used the income to buy either fertilisers, if they were investing it on the farm, or food, if the household had the highest priority call on the income. For more expensive or larger items, they mostly used their income from other sources, such as from selling rice at the end of the harvesting season. This point highlights the relationship between the farm and non-farm sectors. The data show that more than half of the producers in this industry gave the highest priority to their farm work. Income from non-farm work was being spent to improve farm production, providing evidence of the complementarity of farm and non-farm activities, as discussed in Chapter 1. If producers who divide their time between agriculture and rural industry can allocate their resources and funds appropriately, they can improve and secure their source of income and livelihood. As such, rural life will be able to survive without the need for a dramatic shift of farmers' energies agriculture into the non-farm sector.

As for the impact of the industry on the economic well-being of the producers' families, some 70 per cent of producers considered that income obtained from cushion-making helped to improve the well-being of their families by making income more secure, enabling them to have more household necessities, and to have more and better food. However, the remaining 30 per cent considered the income from cushion-making to be too small to have a significant impact on their well-being (Table 5.9). This means that, whilst some of the producers are quite satisfied with the impact of their work in the industry, others were involved principally because the work was better than doing nothing, even though they did not believe that it can help them to improve their family's economic condition.

Figure 5.2
Graph Showing the Importance of Income from Cushion-Making and How it is Spent

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The importance of income from cushion-making

Very important
Quite important
Not significant

20 40 60 80 100

The spending of income from cushion-making

Food and necessities
Clothes and children education
Savings

20 40 60 80 100

The spending of income to improve agricultural production

Purchase cattle, fertiliser
Employ labour
Not enough to improve

20 40 60 80 100

Well-being brought about by income from cushion-making

Much
None

20 40 60 80 100

Source: data from questionnaire no.1

As for the negative impact of the cushion-making industry on agriculture (we have already discussed the positive impact resulting from producers' investment in farming), it was found that the cushion-making industry has very little negative impact: only twelve per cent of producers' families complained of shortages of agricultural workers as a consequence of household members' involvement in the industry. The remaining 88 per cent saw no conflict between the two forms of enterprise because the respective workforces in agriculture and cushion-making are either separate (as a consequence of the gender division of labour discussed earlier), or because potentially competing demands for labour are solved by scaling down cushion-making work at times of peak labour demand from agriculture - the system of parallel work which was discussed in Chapter 1. The above findings are presented in comparative form in Figure 5.2.

Observations of other traditional industries in the North-East (e.g. cotton-weaving, pottery-making and mat-weaving) reveal similar trends and effects to those which have been described above for the cushion-making industry. Although the amounts of income derived from these industries are not very great (certainly less than that derived from cushion-making), they do have a similar impact on producers' livelihoods and general level of well-being and also, in some instances, enable producers to free income up from farming which can be used for saving and reinvestment in agriculture.

Overall, therefore, rural villagers who are engaged in cottage industrial production can enjoy a better quality of life when compared with the farmers who rely only on agriculture. Although few of these producers are rich, they can enjoy a higher and more stable income than would otherwise be the case, and also a sufficient and better quality diet. On the other hand, a number of producers considered that the income from these traditional industries is not enough to uplift their quality of life. This is quite interesting: even though they expressed negative views about the industry's role and impact, they were still quite happy to participate in cottage industrial production. One possible explanation for this is the fact that they have few viable alternative sources of livelihood to choose from - thus it is better to be involved than to do nothing.

(3) Traditional Industry and Migration

Although alternative opportunities for employment *in situ* may be limited, one option which is open to many villagers is to leave the village in search of employment elsewhere. In this short sub-section we explore not only the incidence of migration from Ban Sri-Than but also, more significantly , examine the impact of the cushion-making industry's recent development in influencing the scale and extent of both outward and return migration. It is hypothesised that, because most people leave their villages in search of employment and income-earning opportunities which are not present *in situ*, the gradual expansion of such opportunities should both reduce the need for people to leave and increase the incentive for them to return to their home village.

The incidence of migration is detailed in Table 5.11, and can be considered low in comparison with other villages in North-East Thailand: 40 per cent of cushion producers' families have members who have ever migrated to work, mostly to the capital city Bangkok. Half went to work as factory workers in Bangkok, and the remainder worked either as construction workers or as agricultural labourers in rubber-producing farms in the southern part of Thailand. Compared with other villages in the North-East, Udon Titwongsa (1995) studied migration in the rural villages of Udon Thani and found that 85 per cent of households contained members with migration experience. Preeda Praprutchop (1993), who also studied migration in North-East Thailand, found that 67 per cent of households in the rural areas had members who had ever migrated. Accordingly, the level of migration from Ban Sri Than, although quite high, was not as high as in other parts of the northeastern region. Table 5.12 attempts to relate the incidence of migration to the background characteristics of villagers in Ban Sri-Than. We can see that households with landholdings greater than 10 *rai* have no migrants (or alternatively that all migrants are derived from households with relatively small landholdings). This implies that, in the past, insufficiency of landholding, and thus production and income, may have had an important bearing in their need and inclination to send household members to find work away from the village. This being the case, how has the expansion of employment opportunities *in situ* in recent years helped to alleviate such problems, and thus reduce the need for out-migration?

At present, the proportion of villagers who are engaged in migration to work is very small. Whilst some migrants (35%) continue to work in other provinces, mostly because they now have families there, a large proportion (65%) of migrants have returned home. Among the reasons given for return migration were that the contracted period of employment had ended (31%), and that there was now sufficient work and income in their home village to obviate the need for migration (69%: see Table 5.11). Most expressed a preference to work in their home village if sufficient employment and income were available. However, lest we read too much into this finding in terms of the developmental effects of rural industrialisation, it should be pointed out that the large majority of out-migrants were males. Bearing in mind the gender bias in the cushion-

Table 5.11
Migration of Members of Cushion-Producing Households

Past employment migration by household members	
Migrated to the same province	2%
Migrated to other provinces	34%
Migrated abroad	4%
Never migrated	60%
Total	100%
Type of work engaged in by migrant household members	
Agriculture	6%
Factory work	20%
Construction work	10%
Other	4%
Never migrated	60%
Total	100%
Reasons for returning home	
Contract finished	8%
Home village has sufficient work	18%
Still working away from village (not yet returned)	14%
Never migrated	60%
Total	100%
Opinion of cushion-makers on the role of the industry in preventing migration	
Can prevent	52%
Cannot prevent	28%
Not sure	20%
Total	100%
Other work which they would do if there were no cushion-making work	
No work (no idea/did not plan yet)	32%
Weaving	8%
Paid agricultural work on a neighbour's land	30%
Agricultural work on own land	30%
Total	100%

Source: data from questionnaire no.1

Table 5.12
Relationship of Size of Land-Holding, Cushion-Making Industry and Migration of Cushion Producers

Land-holding of household	Migration of household members Ever	Never	Total
Less than 10 rai	10.0	6.0	16.0
More than 10 rai	30.0	54.0	84.0
Total	40.0	60.0	100.0

Chi-square 4.01786 significance 0.04502

Opinion of producers about the role of the cushion-making industry in the prevention of migration	Migration of household members Ever	Never	Total
Can prevent	18.0	34.0	52.0
Cannot prevent	20.0	8.0	28.0
Not sure	2.0	18.0	20.0
Total	40.0	60.0	100.0

Chi-square 19.65201 significance 0.00005

Source: data evaluated from questionnaire no.1

making industry towards females, we cannot claim that the industry has had a direct impact on return migration. It has, however, had an indirect impact: the industry has helped in many cases to alleviate economic stresses to the extent that the migration of one or more household members is no longer essential. The males returned to engage themselves in agricultural work, partly because there was insufficient labour to work on the farm because of the industry's labour demands, but partly also because the occupational division of labour allowed the household's women the opportunity to earn a useful source of supplementary income from cushion-making.

Looked at from a different perspective, some 52 per cent of cushion producers believed that the industry's recent development had helped to prevent further out-migration because it had reduced the need for additional sources of income to enable them to afford basic household necessities (this view was particularly prevalent amongst those households with no migrants: Table 5.12). One-fifth were undecided about the industry's impact in this regard, particularly because of its inability to provide households with a large lump sum of cash with which to purchase larger items of expenditure. It was much easier for people to accumulate such a sum from a period of migration employment in Bangkok. Thus, although the industry had undoubtedly had an influence on the scale and extent of outwards and return migration, which is of considerable significance in relation to the developmental impact of rural industrialisation, it had not been successful in curtailing migration altogether. A question to which we shall return later in this thesis concerns whether rural industry in a more developed form, to which villagers give a much greater priority and commitment than hitherto, might play an even more significant role in reducing the extent of rural out-migration, which we identified in Chapter 1 as being an important sign of some of the failures of the development process in peripheral areas such as the North-East.

Respondents were asked to address the hypothetical question as to how they would be obliged to respond if there were not a thriving cushion-making industry in the village. They conceded that, without the industry and in the absence of alternative employment opportunities, they would have little option but to turn to migration as a means of making financial ends meet. Without migration as an option, 30 per cent thought that they (women) would return to agricultural work with their husbands;

another 30 per cent thought that they would work as employees for other farmers in their villages and vicinity; and a further 32 per cent had no idea what they would do (see Table 5.11). This means that 62 per cent would have no alternative activities were it not for cushion-making work in the village. Thus cushion-making is not done instead of other work (apart from agriculture); if there were no cushion-making work, there would be no other *in situ* work for the villagers to do. This is quite interesting, and important: the areas that have traditional industries are mostly located in remote areas where there are not many options for non-farm employment. This reinforces the importance of the industry in developmental terms, and raises serious welfare concerns should traditional cottage industries be allowed to go into decline.

(4) Change in the Industry

On the issue of the future sustainability of traditional industry, we need first to consider how the industry has changed, and presently is changing, in order to have a clear understanding of the issue. The cushion-making industry of Ban Sri-Than has changed in many ways from the past to the present - most particularly in relation to the organisation of production which, we contend, has been the singlemost important factor in the industry's survival and current vitality). Around half of the respondents considered that changes to the designs of the cushions and the production techniques being used constituted the most significant such changes. Others (21%) drew attention to changes in the industry's organisation (division of labour and entrepreneurship). Yet others (18%) referred to the way that productivity had increased (clearly this is related to the last point), whilst at the same time the number of producers increased (12% - see Table 5.13), which was closely related to the fall in piece-rates which was caused by an over-supply of producers. At the same time, however, the producers also could produce more, because of better skills and the utilisation of cheaper materials, so their total income did not decrease.

Table 5.13
Producers' Opinions about Recent Changes in the Cushion-Making Industry and the Adaptation of Cushion Producers

Changes in the cushion-making industry in recent years	
Changes in design and production technique	49%
Changes in management system	21%
Production increased	18%
Number of producers increased	12%
Total	100%
The adaptation of cushion producers in recent years	
Adapted from producing every part to producing some parts	58%
Adapted from being producers to being waged workers	42%
Total	100%
Change in the income obtained from cushion-making in recent years	
Decreased (wages reduced because numbers of producers increased)	36%
Increased (could produce more because of greater experience)	64%
Total	100%
Source of adaptation to change in cushion-making production	
Learned from other producers	48%
Learned from the guidance of entrepreneurs	52%
Total	100%

Source: data from questionnaire no.1

The cushion producers had clearly had to adapt themselves to these changes. Some 58% of producers thought that they had become more specialised in certain components of the production process (consequent of the division of labour), and the remainder described their situation as having changed from being producers to being workers employed by the entrepreneurs - receiving wages, and with no need to invest (Table 5.13).

In coping with changes in the shape, size and style of the cushions they produced, the craftspeople had either learned the new techniques under the guidance of the entrepreneurs (52%) or from other producers (48%). The producers thought that the change in the cushion-making industry in recent years had had an impact on their earnings: 64% thought that their income obtained from cushion-making had increased because they could produce more, whereas the remainder thought that their income from cushion-making had declined along with piece-rate payments.

We will now look at certain of the processes of change, and their impact, in a little more detail.

In regard to the shape and style of the cushions, in the past they were traditionally rectangular in shape, but over time the triangular and other forms were introduced, together with a greater diversity of sizes. The cushion cases were changed from cotton to polyester, and became more colourfully embellished with local artforms and motifs. The production system changed from a situation where one person was typically involved in all components of the production process to one where there was a certain division of labour system, where an individual would specialise on tasks in which they had greatest skills, flair or experience. This system contributed to an overall improvement in the quality of the cushions, because of the greater specialist skills involved, and also an increase in productivity.

Other adaptations have also taken place, some in response to changing prevailing circumstances. For instance, straw has been used in the stuffing of cushions, partly because of increasing shortages of kapok (with which the cushions have traditionally been stuffed), and partly also to add greater strength and firmness to the cushions. This innovation brought the parallel advantages of improving product quality and reducing production costs (because straw is cheaper than kapok, and also locally abundant after the rice harvest). Recycled kapok - derived from villagers who specialise in obtaining disused cushions and mattresses from Bangkok and elsewhere - also helps to minimise demands on locally-available sources of raw kapok, which is both scarce and expensive.

The marketing system has also changed from one, initially, where all production was channelled through middlemen from outside the village, to a situation where marketing is now taken care of by the village's entrepreneurs. In the past, middlemen came to buy products from the village, but nowadays this does not happen. The entrepreneurs effectively act as middlemen. They are responsible for buying the cushions from the producers and selling them in Bangkok and other provinces. The four large and three small entrepreneurs in the village (although this number had increased to ten at the time of a return visit to the village in 1992) have their own trucks to transport the cushions to the wholesalers in the capital city and in provinces around the country. Most entrepreneurs also provide raw materials for those producers who do not have enough money to invest in these things themselves, and purchase the items from them when their particular process is completed. This system can be considered to be appropriate and flexible for the cushion producers as it removes the capital constraint on production and expansion which is a common feature of other forms of handicrafts production - even though it determines that the entrepreneur generally does better out of the arrangement than the producer. The downside to this form of production organisation is that the producers appear to rue the shift in their identity from craftspeople to factory-like piece workers. Whilst this may erode their self-esteem, the economic benefits to them are undeniable. They are also absolved from a considerable degree of responsibility and risk, which is increasingly shouldered by the entrepreneurs.

Changes in the style of their products have been designed to expand the market range of the products from local to the national and international markets. This is all well and good, but such changes are usually quite difficult to effect where producers live in quite remote areas and are isolated from both market and market intelligence. This is one factor which underpins the remarkable nature of the cushion industry. Not only has it managed to penetrate the wider market in Thailand, but it is also strongly connected to the country's export market. Such success is primarily attributable to the role of the entrepreneurs and wholesalers. The former initially facilitated the penetration of the Bangkok market, from whence the latter linked the industry up to the export market, especially to such locations as the Middle-East and Japan. The wholesalers have also channelled requests from international customers (e.g. the desire for mattresses attached to the cushions) back to the producer villages, leading to changes in style and production method.

The volume of production has increased from 20-30 cushions per day to 200-500 cushions daily. Mr.Samrit Chanroung, an old man in Ban Sri-Than, said:

> "The change in cushion production started when the district government agency introduced cushion producers to outlets in Bangkok in 1980. Since the wholesalers in Bangkok were interested in our products, they have ordered often to sell in Bangkok and for export. Some producers in our village who had enough capital saw the opportunity for business. Then they became entrepreneurs to buy products from other producers and transport them to sell to the wholesalers in Bangkok and to the middlemen who come to buy from the village. Later the volume of trade increased because a lot of consumers got to know about our products, and because our producers were able to change the shape and style of cushions to order. The number of entrepreneurs then

> increased. These entrepreneurs competed to provide raw materials to the villagers who wanted to become involved in production as a means of increasing the number of producers and the volume of production under their control."

Such changes as have been described above may be considered crucial to the longer-term sustainability and vitality of the cushion-making industry. It has enabled the volume of production to be increased and the market to be expanded, particularly to the lucrative Bangkok and export markets. In this regard, the wholesalers have also played an important role. They know the market better than the producers, whose horizons, at least in a marketing sense, seldom extend beyond the locality.

However, if we focus too strongly on the entrepreneurs and wholesalers, we may overlook certain other factors which have contributed to the industry's success. It cannot be denied that government agencies have also been an important factor in co-ordinating linkages between the producers, wholesalers and consumers. Were it not for the role played by government agencies, it would have been very difficult for producers from a traditional industry such as this to have been put in contact with the Bangkok-based wholesalers. Without such connections with the external market, information leading to innovations in design might never have materialised. Direct contact with the wholesalers has also helped to increase producers' profit margins. In the past, marketing was principally conducted via middlemen who went to buy the products in the village. With no alternative major market outlet, and limited market intelligence, producers were in a weak bargaining position. The middlemen could, effectively, name their price. By expanding the market, and at the same time increasing the national and international profile of the product, the terms of trade have shifted significantly in favour of the producer and less in favour of the middleperson (although, of course, the latter's margins are still sufficiently attractive for them to continue their association with the industry). Interpreting this point of view: although not all producers were satisfied with the situation, having the potential to bargain with outsiders was to many like a new light or a 'breath of fresh air'. It may represent the beginning of their self-empowerment, enabling them to control the selling price to a much greater extent in the future.

These changes in marketing are also related to changes in production. When the market is strong, there is an incentive for the producers to produce more. This in turn has created the imperative of enhanced productivity, which has been a strong force behind the emergence of a division of labour within this traditional village industry. A pre-requisite for the (re)organisation of production along these new lines is the presence of people in the village who have both the organisational skills and flair to make this system work, and also the requisite capital to facilitate its introduction. As we have mentioned earlier, this modern organisational structure also helps to minimise the degree of responsibility and risk which is shouldered by the producers.

Thus, we argue that the expansion of the market and the division of labour have been crucial factors in the rapid and successful development of the cushion-making industry. Accordingly, we find two of our earlier hypotheses proven: (a) that "rural small-scale industry can be developed by initiating linkages with urban-centred industries, and by adapting market-oriented designs and methods of production"; and (b) that "rural small-scale industries represents a realistic means of promoting development 'from below' at the grass-root level." Production has been modified and modernised in such a way as to mesh with the tastes and needs of external consumers, and thus the industry has become successfully market-oriented. The industry's ability to change with the times is a promising sign for its future sustainability. Although the cushion-making industry is not, as we have seen earlier, necessarily typical of traditional industries in general - many of which have, for various reasons, been unable to adjust to changing circumstances - it does indicate that there is potential for *in situ* development at the grassroots level. However, the case of Ban Sri Than may be a special case that differs from others in respect of marketing and production management. Nonetheless, we can identify that the other villages may succeed in this situation too, if they have similar characteristics and production environment.

Based on the above evidence, we conclude that external market-orientation should represent the principal goal for rural industries, especially traditional industries, the economic horizons of which are quite typically quite parochial. Such a strategy clearly requires some quite fundamental changes to take place, not least in the nature and organisation of production - changes which some traditional producers may be unable or unwilling to contemplate. We have seen that a great many requisite changes can be accomplished within the natural mechanisms of the free market, but we also argue that there is an important role to be played by the government in providing market information and facilitating external market penetration by producers. Finally, the encouragement and facilitation of entrepreneurship *in situ* is also shown to be a matter of crucial importance to the longer-term vitality of traditional rural industries.

However, we need to temper our optimism by considering briefly the plight of other traditional industries which were the subject of our earlier discussion, such as mat-weaving, pottery-making and cotton-weaving. Most of these industries face considerable constraints in regard to many of the issues discussed above. Although their long establishment determines that the producers in these industries have at least as much experience as in the cushion-making industry, and although their products are quite well known within and, sometimes, beyond the locality of production, they nonetheless face many constraints to market expansion and an increase in the volume of production. These industries typically do not possess entrepreneurs who can organise and modernise production in the way that has happened in the cushion-making industry, and are not linked to wholesalers who can help with market penetration. They are principally organised in the traditional form where everyone is a producer, and where all components of the production process are undertaken by the same individual. Their products are still sold via middlemen who periodically visit their villages, and in whose favour the terms of trade strongly lie. There is no active marketing and promotion of their products, and little effort is made to match product styles and designs to the needs and tastes of the external market. Furthermore, as the needs and preferences of consumers change, which occurs quite often, the producers are unable to respond, remaining instead within the realm of traditional production methods and practices. Accordingly, the potential of these other traditional industries would appear to be very low and strewn with barriers and difficulties.

In many senses the producers of these traditional handicraft products are caught in a vicious loop. Without a wider and bigger market there is no incentive to change the structure of production. Without changes to the structure and form of production, there would appear to be little chance of penetrating a wider market. With low profits and incomes from cottage industry, there is little incentive to devote more time, energy and inspiration to handicrafts production, and yet without such inputs the prospects of gaining an improvement in profitability and income are very remote. If, on the other hand, they invest their energy in improving productivity, their efforts may be wasted by virtue of their inability to sell a greater volume of their production - as was clearly the case with the introduction of the potter's wheel in Ban Mor, which was discussed earlier. Without profit there is little incentive for the emergence of nascent entrepreneurship, and without entrepreneurs there would appear to be limited prospects for change to take place. Limited capacity to form capital is another constraint: even where producers may be inclined to improve the industry or increase their involvement in it, they may be prevented from so-doing by their inability to raise sufficient capital - a situation which, in turn, is related in no small measure to the present status and character of the industry.

By way of illustration, let us look briefly at Ban Nong-Pet (or Ban Pet), which is five kilometres from Ban Sri-Than, and is also involved in the cushion-making industry. Ban Pet has 180 households, 100 of which are involved in the cushion industry. The cushions made in Ban Nong-Pet are the traditional rectangular shape - the same as was produced in Ban Sri-Than before changing to the triangular shape. The producers in Ban Nong-Pet, however, have not changed the style of the cushions they produce, but continue with the styles, colours and designs which they have used ever since the industry's birth. The organisation of production also remains the same. There are no entrepreneurs in Ban Nong-Pet. Most producers use their own savings (which are very limited because agriculture in the village is poor) for investment in production. They sell the finished rectangular cushions to the entrepreneurs in Ban Sri-Than, but only the good quality items are selected (approximately 50% of all production). In fact, the principal problem of the cushion-making industry in Ban Nong-Pet is the low quality of their products. Also, the old style of their products does not match the consumers' needs, and there is little immediate scope for the volume of production to be increased, principally because of capital formation constraints. They are unable to sell their cushions in other provinces and Bangkok. This problem severely limited their opportunity to develop both their products and the scale and extent of their market.

This illustration highlights just how fine an edge there is between success and failure. Two villages involved in the same industry and separated by only a handful of kilometres, and yet they are light-years apart in terms of production organisation and orientation. Thus, there is no guarantee that the same kind of industry will succeed everywhere. To some extent the determining factor is serendipity: the fortunate combination of conditions and circumstances.

A similar set of circumstances emerges if we look at the mat-weaving industry in Ban Hua Sai, Nong Khai province, where the quality of the products is also not so good. Again, mats are still produced as in the past - the style, colour, shape and production techniques have not changed. The industry also faces a problem of marketing. Few middlemen come to the village to buy mats, and the producers do not know any wholesalers in town and in other provinces. Meanwhile, the market for its products is rapidly shrinking as consumers' tastes are changing, with an increasing preference for carpets, linoleum and other 'unnatural' manufactured floor coverings. Nonetheless, it does not inevitably follow that this industry can not succeed. The mat-weaving industry in Chantaburi province, for instance, is involved in the production of the same basic kinds of mat but the producers have refined and developed their products to a much greater extent. They produce many sizes and styles to serve the varied needs of consumers. The mats they produce can be easily folded and packed away, and thus suit well the needs of travellers and day-trippers, who need a portable and convenient product. Furthermore, the Chantaboon mats, as they are called, are produced in beautiful and vibrant colours which the consumers like very much. Accordingly, the Chantaboon mats have a much better market than those produced in Ban Hua Sai, whose products are poor in quality (which in turn links to the poor raw materials which are used in the production process) and backward in style.

The pottery-making industry in Ban Mor, Mahasarakam province, has encountered similar problems of marketing. The pottery products are sold via the same basic channels as we have seen above for other traditional products - i.e. through middlemen who visit the village. The quality of the pottery products of Ban Mor is relatively poor, and the styles and shapes used have not changed at all. Meanwhile, consumers are switching increasingly to non-pottery items, such as those made from aluminium and plastic, reducing further the potential market for pottery items. However, other illustrations highlight the fact that there is still some potential for the pottery industry. The industry in Ban Dan-Kwean, Nakhon Ratchasrima province, has been able to retain its market by shifting production away from traditional items such as stoves and water storage jars to kitchenware and earthenware pots for plants and flowers. The flowerpots of Ban Dan-Kwean come in many modern sizes, shapes and styles. These recent changes are partly attributable to the involvement of the Nakhon Ratchasima Technical College (a government-run institute), which has helped in improving production techniques, shapes and styles. They have also helped to promote and advertise the products, which in turn has helped the market to expand. Some of the pottery producers in Ban Dan-Kwean have become entrepreneurs, and have taken particular responsibility for marketing and trade. This success story suggests that there is still scope for Ban Mor to modernise and develop its own industry in order to match the taste of consumers, although the emergence of entrepreneurship, an essential ingredient of success, looks a fairly remote prospect in this particular location.

Finally, the same problem of low quality products is also observable in the brassware industry in Ban Pa-Aao, Ubon Ratchathani province. The technology used in the production process is little changed from more than a century ago, and the quality of the products suffers accordingly, especially in comparison with that available from urban factories. A government agency has attempted to promote the brassware products of Ban Pa-Aao, and has succeeded in raising consumer awareness of the industry's existence - principally by organising day trips for tourists who visit the village on days when the furnaces are functioning, watch the products being made, and usually purchase a few items before departing. As such, the village has carved for itself a little niche which allows products to be sold <u>because</u> of their poor quality - which helps to epitomise the stereotype of traditional, primitive forms of handicrafts production - rather than <u>in spite of</u> it. Without this niche, there is no doubt that the industry would not survive in the face of intense competition from Bangkok-produced brassware items. As it stands, the prospects for the penetration of a wider market would appear to be extremely limited unless improvements are made in the techniques of production. Should this happen, however, the industry may be in danger of losing the market niche which alone has sustained it in recent years.

We have seen, therefore, that entrepreneurship and a connection with the brokers (wholesalers) of the external market appear to be crucial to the vitality and development of traditional cottage industries. These are also two important areas where the Thai government might concentrate its energies as part of its support package for the rural industrial sector. Other areas which require attention include capital formation (e.g. through the provision of institutional credit), designs, quality control, and the supply and quality of natural raw materials.

(5) The Social Impact of Change in Traditional Industry

Finally, we briefly consider some of the social implications of changes of the kind outlined and recommended above. We have reached the conclusion that change is largely necessary if such industries are to be able both to survive in future and play an important developmental role. The question here is whether villagers are both able and willing to adjust themselves to these imperatives for change, and also whether such social effects of change can be seen as acceptable to the communities concerned.

The traditional way of life in Ban Sri-Than, for instance, has changed quite significantly as a result of the industry's recent transformation. However, only a relatively small proportion of villagers viewed such changes in a negative manner. Thus, more than half (52%) considered that the villagers enjoy better living conditions as a consequence of the industry's recent dynamism, in that they have increased their possession of household convenience items such as televisions, refrigerators, electric rice-cookers, electric water-pumps, etc (see Table 5.14). Around a quarter (22%) considered that one consequence had been that the number of households in the village had expanded, and that the provision of government services and utilities (such as a health centre, a child care centre, electricity service, etc.) had increased. Fourteen per cent considered that transportation and communication with outsiders had

Table 5.14
Change in Village Society as a Consequence of the Recent Boom in Cushion-Making, and its Impact on Cushion-Producing Households

Changes in village society after the cushion-making boom (producers' opinions)	
Villagers have better living condition	52%
Society expanded (no. of households increased)	22%
Transportation and communications have improved	14%
More reliance on money for purchases	12%
Total	100%
Impact of village social change on cushion-producing households (producers' opinions)	
Better standard of living (have more basic necessities)	46%
Spend more money (more expenditure)	38%
Work harder (to earn sufficient income)	16%
Total	100%

Source: data from questionnaire no.1

changed for the better. Only 12% thought that a negative consequence was that their society had come increasingly to rely on money rather than mutual self-help as in the past (almost everything needs money for its purchase now, whereas earlier there had been more exchange). In fact, this 12% mostly was made up of the older generation. They tried to draw comparisons between the old and the new society. Normally, Thai tradition requires humans to help others without recourse to monetary exchange, whereas in the modern society money tends to provide the principal basis for social reproduction (Buasri, 1990). The people whose lives have spanned both 'periods' accept this change without a great deal of dissatisfaction, but the ones who do not accept it may feel bad about it and may associate the change with the emergence of an 'industrial society'. In reality, this change may have little to do with the impact of industry *per se*, but may have more to do with broader changes taking place in Thai society which the older generation in particular may find it difficult to detect.

As a result of the above changes, 46% of cushion producers thought that their families now had a better life than before they became involved in the cushion-making industry - e.g. they could now afford electrical goods which freed up a lot of time from routine housework (see Table 5.14); 38% thought that they have to spend more money than in the past because they have to buy almost everything; and 16% thought that they have to work harder to compete with, or emulate, their neighbours because their neighbours have a better life (i.e. they have more possessions such as a new house, motorbikes, more cultivated land, etc).

Thus, development has inevitably been associated with change in Ban Sri-Than. However, most such changes were seen in a positive light because villagers had benefited from these changes. For instance, in the past there was a small laterite road link between the village and the main Patiew-Yasothon road. After Ban Sri-Than became well known among consumers and the business of cushion-making became prosperous, a large number of trucks and pick-ups visited the village on a daily basis, which severely damaged the laterite road. The district administration therefore built a bigger laterite road, and then in 1992 a concrete road, as a means of improving transportation facilities. This is one of many visible signs of the impact of the cushion industry's development which has brought more general benefits to the villagers (producers and non-producers alike). There is also now a public telephone within the village temple, which is something few other villages in the North-East of Thailand have. The telephone is useful in enabling the entrepreneurs in Ban Sri-Than to have regular contact with the wholesalers in Bangkok and other provinces, and represents another means by which the government has helped in the promotion of this traditional village industry.

In Ban Sri-Than there are also many shops (about 10 - whereas few villages in the North-East have more than 2-3) which sell household supplies (such as soap, washing powder, tooth paste, etc.) and food (such as drinks, canned food, etc). The proliferation of shops is a further indicator of and benefit from the prosperity of the village, consequent almost entirely of the development of the cushion industry. Moreover, there is even an evening market in the village, where villagers can buy fresh vegetables and meat, processed food, sweets, and so on. This, too, is a fairly rare event in Northeastern villages. Not only is it a reflection of the village's prosperity, but it can also be taken as a sign that the villagers are so fully occupied with cushion-making that they have little time available for raising preparing these foodstuffs themselves.

From my personal observations, almost every household in Ban Sri-Than has a colour television, a refrigerator, a motorbike or bicycle and an electric water-pump. This is a clear sign of the generally high incomes that the villagers enjoy, and certainly puts them in a much higher economic position than is more usual for the North-East region. There are also four motorcycle repair shops and three children's bicycle shops - a sign that even people who are not directly involved in the cushion industry in Ban Sri-Than are benefiting from the money which is entering circulation within the village economy.

(6) Conclusion

This chapter has shown that traditional industries can be found in many parts of the North-East of Thailand, where they have been established for decades and even centuries in some cases. Although villagers have occasionally benefited from recent developments in some of these industries - most notably the cushion-making industry in Ban Sri-Than - agriculture continues to occupy a significant amount of their time, and still figures prominently in the prioritisation of their activities. This is partly attributable to traditional cultural attitudes towards agriculture as both a source of livelihood and a way of life, and partly to the risks and uncertainties which tend to be associated with cottage industry, especially where there has been less dynamism than in Ban Sri-Than, and thus where the demonstration of economic benefits has been less strong.

In order to remove these uncertainties and increase the strength of the demonstration effect, clear attention has to be given to improving the organisation of production and the marketing of products, which this chapter has identified as being among the most significant constraints on the future dynamism of traditional cottage industries. In addition, producers will need to pay more attention to the styles and designs of the products they manufacture in order to engage with and remain in synchronisation with the nature of consumer demand. There also has to be a firmer dedication to the market orientation of production. In other words, these industries must adjust and adapt to survive.

The study has also found that government agencies potentially represent an important means of facilitating these industries' introduction to the wider market, and the promotion of the entrepreneurial ethic and skills in the villages concerned. There is a market niche for the products of Thailand's traditional material culture, but at present too few villages are exploiting the market potential for their products. The government can help to integrate production and market, but should be strongly aware of the folly of influencing individual elements of the production and marketing processes, taking instead a holistic approach which seeks to address simultaneously all of the issues and constraints which have been outlined in this chapter.

CHAPTER 6

ANALYSIS OF THE CONSTRAINTS AND POTENTIAL OF TECHNICAL SKILL INDUSTRIES IN RURAL NORTH-EAST THAILAND

This chapter presents the findings of an analysis into the characteristics, constraints and potential of what was described in Chapter 2 as "technical skill industry" in the North-East of Thailand. It will examine the background of the workers or producers, their income from various sources and the importance of the income they obtain from their involvement in rural industry, their past migration characteristics and the role played by industrial development in influencing these characteristics, the trend and prospects for rural skill-based industries in North-East Thailand, and also the role of government agencies in the development of this form of rural industry. The basic structure of the analysis is the same as in Chapter 5, but the details differ because of the different characteristics of the industries concerned.

As with Chapter 5, we shall look particularly closely at one form of technical skill industry, the cutting and polishing of gemstones and artificial diamonds (hereafter "gemstone-cutting") in Ban Sang-Ming, Ubon Ratchathani province, and Ban Non-Fun-Rua, Khon Kaen province. This industry will also be compared with other technical skill industries, most notably pseudo-ancient pottery making at Ban Chiang, Udon Thani province. The chapter is based upon data obtained from questionnaire number two, which was targeted at gemstone-cutters in Ban Sang-Ming and Ban Non-Fun-Rua.

(1) The Characteristics of the Industry and Background of the Workers

The gemstone-cutting industry at Ban Sang-Ming and Ban Non-Fun-Rua occurred after the return of villagers who had previously migrated to work in the same kind of industry in Chantaburi, Bangkok and Kanchanaburi. These return migrants brought their skills back to their home villages in order to establish the gemstone-cutting industry *in situ*, as we described earlier in Chapter 4.

Irrespective of this industry's predominantly urban location in Thailand today, the character of gemstone-cutting in these two locations in the North-East can most certainly be described as a "rural industry". The workers work in the small workshops within the village. The entrepreneurs use their own houses as workshops. The only form of infrastructure which is needed is electricity which is used to supply power to the electric gemstone-cutting machines. Quality road access is not a major locational factor as motorcycles can quite easily be used to transport raw materials into and the finished product away from the village. Ban Non-Fun-Rua, for example, only has a small laterite road to link it with the town, but this is not an impediment to its effective business.

There are 12 workshops in Ban Non Fun Rua, and we can also find workshops in neighbouring villages. These workshops moved from Chumpae district in 1983 after the government's rural electrification programme reached the villages in the area. Accordingly, we can suggest that the provision of electricity provided the most important catalyst for this particular rural industry's development. Before then, many of the villagers had routinely travelled to work in other places because there was little for them to do other than farming. However, with the arrival of the industry in their villages many of them returned, attracted by the combination of work and the opportunity to live in their home area - the latter factor being of particular importance to *khon isan* or the people of the North-East. This issue will be discussed further in the section on migration.

Ban Sang-Ming has no problems concerning infrastructure because it is located adjacent to a main road. Even though the two villages would appear to be rather dissimilar in terms of their accessibility, local economy and so on, the characteristics of the gemstone industry in the two villages are remarkably similar. Production is organised along the lines of relatively small house-based workshops which belong to various entrepreneurs. The entrepreneurs are faced with the requirement of capital formation in order to adapt their houses to be workshops, invest in machines and instruments, and also to adjust their enterprises to the needs and character of the external market. In this latter respect, the gemstone industry is quite similar to the cushion industry in that the entrepreneurs play a key role in the industry's vitality. However, in the gemstone industry the levels of investment (and also the levels of economic return) are much higher than in the traditional industries which were discussed in the previous chapter.

The organisational form whereby entrepreneurs structure production on the basis of house-based workshops can also be identified in other technical skill industries in the region. For example, the producers of the pseudo-ancient pottery making industry in Ban Chiang also use their houses as the production base for the manufacturing process. However, there are no entrepreneurs as such in the pottery industry - it takes the classical form of a cottage industry whereby production in home-based and functions on the basis of labour provided by household members. The gemstone industry, in contrast, is home-based but draws in units of labour from outside the household: there is thus a separation of ownership and production.

As with the gemstone industry, the infrastructure requirements of the pseudo-ancient pottery-making industry near Ban Chiang are quite modest. Electricity is not required in the production process, and the laterite road which passes the villages where the pots are produced, whilst rather basic, is sufficient for the industry's needs. Certainly, infrastructure has not been a constraint on development.

Turning now to the characteristics of the workers, we find that the workers in the gemstone-cutting industry in both Ban Non-Fun-Rua and Ban Sang-Ming are predominantly female (66% are female - see Table 6.1). Why should this be the case? Are females more interested in this kind of work than males? To answer this question we have first to consider the nature of the industry. When we look at the manufacturing process of this industry, females would appear to have quite an advantage. Its process is divided into 3 steps: the first is the cutting of the zirconium (raw material) into small pieces; the second involves the cutting of reflective angles onto the gemstones and 'diamonds'; and the third involves polishing and finishing. The first and second stages require approximately 2-3 workers in each workshop and, because they are quite dangerous (requiring the use of an open band saw, for instance), are usually undertaken by male workers. In contrast, the third stage requires much more precision, and proportionally more workers, and is usually undertaken almost exclusively by female employees - accounting for their numerical predominance. Men are also able to do this stage of the manufacturing process, but our field survey revealed that the entrepreneurs preferred female labour at this stage. This is quite beneficial to the young females in the village who traditionally have had relatively limited access to employment opportunities in the vicinity of their home areas.

For the pseudo-ancient pottery making industry, the producers of pottery are both male and female, but the painters are predominantly male. This has more to do with the fact that it is the head of the household who is usually also the head of the enterprise, and is also the principal bread-winner. The more skilled components of the production process centre around design and painting - tasks in which male workers tend to predominate, in contrast to the situation in the gemstone-cutting industry described above. Nonetheless, the two industries combined show that there is no clear barrier to entry, or to the acquisition and use of production skills, according to gender.

The workers in the gemstone-cutting industry are mostly aged between 21-25 years (see Table 6.1). This suggests either that the industry is particularly suitable for younger people or, alternatively, that few older people are interested in this particular kind of work. The reality is a combination of the two. The cutting and polishing of gemstones depends very heavily upon good eyesight. They have to be very attentive when facetting the stones, and also need keen eyesight to study the stones during the course of the production process. Because of this requirement, only very young workers are considered suitable. Paradoxically, it was found that the workers' eyesight deteriorated quite rapidly, partly as a consequence of the poorly-lit conditions in which they worked, which meant that a person's working life in this village industry was quite limited - thereby explaining the very small proportion of older people who are engaged in this technical skill industry. Another contributory factor is the need for gemstone-cutters to work for many hours each day in order to earn sufficient income from the piece-rate system which is widely operated. Again, long hours require stamina, and also freedom from other responsibilities, thereby favouring the younger age cohort.

Table 6.1
Sex, Age and Marital Status of Gemstone-Cutters

Sex	
Male	34.0%
Female	66.0%
Total	100.0%
Age	
Less than 20 years	24.6%
21-25 years	46.0%
26-30 years	17.3%
More than 30 years	12.0%
Total	100.0%
Marital status	
Single	81.3%
Married	18.7%
Total	100.0%

Source: data from questionnaire no.2

Table 6.1 shows that most of the workers in this industry are female. When this fact is combined with the generally young age of the employees, certain questions arise. Why do the entrepreneurs apparently prefer young women to work in their enterprises? It is possible that they are particularly suited to gemstone-cutting, which requires the meticulous attention to detail that women, generally, are perhaps better able to achieve. However, on further investigation, it was found that in fact the entrepreneurs did not mind whether their workers were male or female: their sole concern was to have high quality products. This was the principal criterion that the entrepreneurs employed in recruiting workers: it just happened that more young women were willing to engage in this kind of work, hence the over-representation of this cohort in the workforce.

Most (81.3%) of the gemstone-cutters are single (see Table 6.1). This statistic is obviously closely related to the conditions and characteristics described above. The young and single workers appear best suited for this job. Working conditions in the gemstone-cutting industry seem to be an important inhibiting factor for the involvement of a wider range of workers (which clearly has developmental implications in respect of the range of people who can potentially benefit from this industry's expansion). The workers have to sit and work at a machine almost all day long (daytime and half the night) in a stiflingly hot workshop. Married women find it difficult to combine factory work with their domestic and family responsibilities, and thus they are largely excluded from the industry. In contrast, many more married people are involved in the pseudo-ancient pottery industry, due in no small measure to the nature and structure of the industry. Working hours are much more flexible, and they can quite easily combine their industrial work with other tasks and chores. In some senses, therefore, the pottery industry may be seen as more suitable in terms of the range of people in the North-East who might benefit from the industry's development and expansion. However, one advantage of the gemstone-cutting industry was that it provided a source of employment and income for anyone who wished to join the industry - there were far fewer restrictions on entry than in some other forms of rural industry. It is this availability of alternative opportunities, and thus a greater degree of choice, which represents the singlemost important contribution of the gemstone industry in respect of rural and regional development. In this sense, therefore, it should be seen as a very appropriate direction for development policy-making. We will return to this policy issue again in Chapter 8.

The residential status of workers is another issue which is related to the age and marital status of the workers. The gemstone-cutters are mostly (57.3%) residents of the villages where the gemstone-cutting workshops are located, with the remainder coming from nearby villages (16.0%), other districts in the same province (17.3%), and other provinces (9.3% - see Table 6.2). Because almost half of the workers are not residents of the producer villages, this too can be seen to have an influence on the marital status of the workers - it is difficult for married women from other villages to come to work in this industry. Accordingly, most of the workers are single and young, especially those who are migrants from other areas. This point raises questions about the sustainability of the industry, given that nearly 50% of workers are non-residents. We can consider this issue in two ways: first, it may be seen as beneficial for the benefits of the industry, and indeed the industry itself, to disperse and diffuse more widely throughout the North-East - people taking their earning back to their home villages, and also taking with them the skills and experience needed to establish their own workshops; second, alternatively, the entrepreneurs may suffer a rapid turn-over of staff, and also lose the benefits of the training they have provided, and additionally may face intensified competition as their former employees become competitors in an already-saturated market. They may respond by substituting technology-intensive practices for labour-intensive methods, thereby eroding one of the most significant advantages that the industry has brought to the North-East - employment. Such a process of change has already taken place in and around Bangkok, where labour-intensive methods in the gemstone industry have been superseded by technology, partly in response to the situation whereby former employees in Bangkok have taken the industry back to their home villages. One consequence of this is that the factories in Bangkok now produce better-quality products, thereby maintaining their competitive position (Panpiemras, 1995). In many respects this may be seen as a positive response, but is not necessarily appropriate from the viewpoint of the employment and income needs of the rural areas.

Table 6.2
Home Place and Minor Occupation of Parents of Gemstone-Cutters

Home place	
Resident of village in which they work	57.3%
Resident of other village	16.0%
Resident of other district	17.3%
Resident of other provinces	9.3%
Total	100.0%
Minor occupation of parents	
Agriculture (maize, mulberry, etc.)	42.0%
Non-farm (employment, construction, etc)	58.0%
Total	100.0%

Source: data from questionnaire no.2

The fact that this industry draws people in from other parts of the North-East is interesting for a number of reasons. It points to the role played by the industry in generating work within this economically backward region, and also the considerable potential demand for *in situ* forms of employment in the North-East. However, we also need to ask why the industry is drawing in people from far afield when, presumably, there is a considerable pool of labour within the vicinity to be soaked up by the industry? In reality, there is a scarcity of workers in the local area - which at least means that the problem of local unemployment has been significantly reduced by this industry's rapid development. In the early period of the industry's development (indeed, as we saw in Chapter 2, an important factor in the industry's genesis in the North-East), local workers were used almost exclusively. However, the industry's success, and thus rapid expansion, led to local shortages or workers, and thus the need to import labour from elsewhere in the region. Recruitment took place via existing workers, who were asked to invite their friends and relatives to become involved in the gemstone-cutting industry. Although this spreading of the recruitment net has been essential for the industry's continued vitality, it has also contributed to an increase in the production and investment costs faced by the entrepreneurs: they have to provide accommodation and food for the non-resident workers. This may be seen as an unavoidable cost of the transformation of rural industry into the small-scale factory system.

If we now consider the occupations of the families from which the gemstone-cutters are drawn, we not unexpectedly find that the majority are involved in agriculture in one form or another. Almost all grow rice in the rainy season, and several have minor jobs during the dry season. However, and in contrast to our discussion of cushion-makers in Chapter 5, most of the young gemstone-cutters do gemstone-cutting work as their major form of work. Some of them leave the workshops seasonally to help their parents with the planting and harvesting of rice, but return to work in the industry once this agricultural work is completed. However, their parents still grow paddy as their major work, with occupations in the farming and non-farm sectors (e.g. growing maize, mulberry, rearing silkworms, etc) as their minor or supplementary source of livelihood (see Table 6.2).

This raises some questions. Are the workers in the gemstone-cutting industry also the agricultural workers of their households? If so, and they thus work in both sectors, there would appear to be a complementarity between agriculture and industry, with both satisfying their labour requirements, albeit at different times of the year. The workers can return to agriculture for a few days each year during the rainy season. Because the agricultural seasons and agricultural production, together with agricultural labour demands, are seldom constant and certain one year to the next, there is a clear need for rural industry to offer a fair degree of flexibility in respect of its labour inputs. Furthermore, one also needs to be aware of the socio-cultural context of agricultural labour provision, with kinship and familial obligations complexly interwoven with the economic needs of production. This is an aspect that rural industry has to contend with to a much greater extent than is the case with urban-based industries.

For the above reasons, the agricultural sector seldom loses labour to a significant extent as a result of the presence of rural industry. A certain degree of juggling takes place. Only where the economic gains from rural industry far outweigh those from agriculture may labour (and thus production) be sacrificed from the former to the latter. Generally speaking, however, it would appear that rural industry has a complex set of labour linkages with agriculture which are helping to preserve the socio-cultural context of labour allocation in rural North-East Thailand. On top of this, of course, families are able to remain spatially coherent to a much greater extent than would be the case if young people were migrating several hundred miles to work in Bangkok and elsewhere.

These occupational characteristics contrast with those of the producers of traditional industries who did agriculture as their major work. However, the character of the workers is not the same. In the gemstone industry there appears to be a generational division of labour, with the parents continuing to focus on agriculture and the children on industrial work (similar in many respects to what occurs with migration to urban areas). In contrast, the producers of the pseudo-ancient pottery making industry are more similar to the cushion producers in that they continue to see agriculture as their main occupation. The relative attention to agricultural and non-agricultural work would thus appear to be determined more by the demands of the industry concerned, rather than by the type of industry (i.e. technical skill industry, traditional, etc) *per se*. If the workers have to work all day and all year in the workshop, and they are able to leave their parents to be responsible for all agricultural work, then they will tend to rely exclusively on industrial work. However, we must also consider the income that they derive from industry which, we believe, has an important influence on its relative prioritisation over agriculture.

When we consider the major and minor occupations of the producers in rural industry, we usually find that agriculture continues to be quite predominant. Although the workers in the gemstone industry only occasionally are involved in agriculture, they nonetheless retain a close association with agriculture through their families. Accordingly, the amount of cultivated land possessed by their family may be considered one factor in determining the relative importance, and thus prioritisation, of agricultural and industrial work as it relates to the major and minor sources of family income. On average, the families of gemstone-cutters own rather more cultivated land than is the case with the cushion-

Table 6.3
Size of Land-Holding, Agricultural Production and Agricultural Income of Gemstone-Cutters' Families

Size of land-holding (cultivated land)	
Less than 10 rai	9.3%
10-20 rai	30.7%
21-30 rai	54.7%
More than 30 rai	5.3%
Total	100.0%
Agricultural production	
Sell a lot (much production)	34.0%
Sell some (not much production)	34.7%
Produce enough to consume (little production)	18.0%
Do not produce enough to consume (very little)	13.3%
Total	100.0%
Agricultural income	
0 (no income)	28.0%
1,000-10,000 baht	53.2%
10,001-20,000 baht	12.7%
20,001-30,000 baht	6.0%
Total	100.0%

Source: data from questionnaire no.2

making households (see Table 6.3 - we should, of course, be aware that the amount of land owned may be a consequence rather than a cause of people's involvement in the gemstone industry). However, in terms of agricultural production, only around one-third of households produce enough from farming to provide a source of livelihood: average earnings from agriculture were quite low - see Table 6.3. Thus the quality of the land is as important as the quantity owned - and clearly the land in the vicinity of the gemstone workshops is not of good quality. Indeed, this is one factor which contributed to villagers initially leaving the area to work in other provinces, including gemstone factories in Chantaburi, Bangkok and Kanchanaburi, which in turn contributed to the industry's genesis in the local area. Now, this village industry provides an important source of principal and supplemental income for a large number of households in the region. This is an important policy issue: the Thai government might look towards the potential of encouraging rural industrialisation in other agriculturally depressed areas of the North-East as a means of improving the welfare and income security of those involved.

Table 6.4
Reason for Coming from Home Village to Work in the Gemstone-Cutting Village

Reason for coming from home village	
Do not come from other villages (resident)	57.3%
There was no work in the home village	20.0%
Low earnings in the home village	18.6%
Want to have new experience	4.0%
Total	100.0%

Source: data from questionnaire no.2

Turning our attention now to non-resident gemstone-cutters, we find that 47% of them (20% of the 42.3% of workers who were not from the villages in question) came to work in the gemstone villages because their home villages had no work to do, especially in the dry season, and 43.6% came because they considered that they would earn more from gemstone-cutting that they could expect back in their home villages (see Table 6.4). In other words, a combination of push and pull factors was in operation in encouraging their decision to migrate to the gemstone-cutting villages. Many came from areas with very poor soils, irregular rainfall and no irrigation system. At the same time, active recruitment by entrepreneurs from the gemstone enterprises must also have played an important role in facilitating these migration decisions.

In contrast to the above, the study could detect no evidence of people migrating from other villages to become involved in the pseudo-ancient pottery-making industry. This may in fact be because the work was not so remunerative, and thus attractive, and also because the relatively small scale of the industry and volume of production meant that labour needs could quite easily be met from the local area. For the workers, a calculated decision is often made as to whether the time expended in learning new skills would be worthwhile in terms of the income and employment potential which would accrue from using these skills in the longer term. It appears that the gemstone industry was seen as a safer 'bet' in this regard that the pseudo-ancient pottery industry. A further consideration was whether they could potentially take their skills back to their home villages and open their own enterprises. This has clearly been the case with the gemstone industry, which has spread like wildfire throughout the North-East, but is largely impossible with the pottery industry, so closely is it associated with, and thus tied to, the historic interest value of the Ban Chiang area. The complex linkages between the gemstone industry and both factories and export outlets in Bangkok are another factor in underpinning the confidence of workers in the industry's potential longer-term economic vitality. No such linkages, and thus source of optimism, exist for the pottery industry. The future trends of these industries will be discussed later in this thesis.

(2) Migration

Some 55% of gemstone-cutters had previous experience of work before coming to join the gemstone-cutting industry, including experience of migration to work away from their home area (see Table 6.5). For the remainder, gemstone-cutting was their first formal form of employment. Whilst the latter may fall into the category discussed above, where people are making a skills-based 'investment' in their employment future, we can presume that many of the former have been attracted to/back to these villages in the North-East by the better income and working conditions that they can expect and enjoy in comparison with their previous jobs. Otherwise, there would have been no point in their returning to the North-East. However, the precise reasons for changing employment and location may be expected to vary from one person to another.

The returning migrants who have previously worked far away from their home villages expressed many reasons for returning: 47% of those who had migrated to work and returned home said they had done so because they wanted to work in their home village and became aware that their village had work available; 53% returned home because their relatives (parents, uncles, aunts, etc) have their own gemstone factories and required workers (Table 6.5). Mr. Wanchai Butsanavat, a worker in Ban Sang Ming said:

> "I worked as a construction worker in Bangkok for about six months. Three years ago, my friend told me that this job provided a fairly good income so I returned and tried to find work. I found that it was true. Up to now I have not remigrated anywhere. Although my earnings are a bit less than in Bangkok, I think I love to work here if there is a job available because it is my home."

Another worker in the same village, Miss Sommai Boonsaeng, said:

> "I worked in Ubon Ratchathani as a house maid. Last year, my uncle asked me to help him to work here. He is an entrepreneur, and at that moment there were not enough workers. I myself want to work in town, but my mother wants me to work with my uncle here."

Table 6.5 shows the reasons why gemstone-cutters returned to their home villages. We are particularly interested here in whether the availability of work in their village of origin was a factor in their return-migration. Although there were many reasons, two explanations were predominant: the availability of work at home, and the migrants' desire to avail themselves of such employment; and the migrants' continuing obligations to family members left behind in the village, determining that when their labour was needed, for whatever reason, they were culturally obliged to return to the village.

The above implies that the gemstone-cutting industry can help villagers who prefer to work in their home villages to achieve this objective. In this way, they are satisfied: people from the North-East express a strong preference for working at or near home rather than to migrate to work far away. An important element here is choice - something which was missing in the past, but which the gemstone industry has provided. Even if it means earning less than in town, many expressed a preference for working in their home area. This emphasises the social as well as economic dimensions of migration behaviour. *In situ* employment allows them to stay close to their families. Mrs. Somsri Kongsut, a housewife in Ban Non Sathorn said:

> "Nobody wants their husband to work far away if it is not necessary. To work near our home is better except we cannot earn much or earn very little. In that case, there is no other choice. We have to allow our husband to migrate."

In any case, the cost of living at home is substantially lower than, say, in Bangkok. This means that workers can typically save a much greater proportion of their earnings than is possible in town. This is another reason why some migrants have returned from town to become involved in the gemstone industry.

Table 6.5
The Past Job, Reason of Returning Home and Opinion of the Impact of Gemstone-Cutting Industry on Migration

Past job (of gemstone-cutters)	
None (never worked before)	45.4%
Agriculture	13.3%
Employment in North-East Thailand	20.7%
Employment in Bangkok and other regions	20.6%
Total	100.0%
Reason for returning home	
Never migrated	62.0%
Wanted to work at home (or nearby home village)	18.0%
Relatives asked to come back (relatives need workers)	20.0%
Total	100.0%
If there were no gemstone-cutting work, where would you go to seek employment?	
No idea (do not know)	27.4%
Go to work in Bangkok	47.3%
Go to work in town (in North-East Thailand)	25.3%
Total	100.0%
Can the gemstone-cutting industry stop migration (in the gemstone-cutters' opinion)?	
Can stop	86.0%
Cannot stop because it is not sustainable	8.0%
Cannot stop because the income is not high enough	8.0%
Total	100.0%

Source: data from questionnaire no.2

Were it not for the gemstone-cutting industry in the village, a large number of workers would be more or less obliged to migrate/return to Bangkok and elsewhere to obtain a source of livelihood. This feeling is supported by some of the figures in Table 6.5: 47% expected that they would have to re-migrate if there were no gemstone industry in their village. Thus, this rural industry can be argued quite strongly to have both helped prevent out-migration from the North-East and encouraged a not insignificant amount of return-migration. This is another quite important policy matter: planners should be looking seriously at the potential for influencing the incidence and form of migration by encouraging a greater development and diversification of the non-farm sector in peripheral regions such as the North-East.

Almost 90% of interviewees considered that migration can be inhibited by rural industrialisation (see Table 6.5). Although it is of course impossible, and not altogether desirable, to stop migration totally, the above discussion at least indicates that there is scope for influencing the scale and form of population movements by paying attention to the employment potential of the non-farm sector. Further analysis revealed a relationship between the opinions of gemstone-cutters in regard to the possibility in stopping migration through rural industrialisation and the previous employment experience of the respondents. The gemstone-cutters who have never previously migrated to work were more strongly of the opinion that the gemstone-cutting industry can stop migration than those who have ever migrated to work in Bangkok and elsewhere (see Table 6.6). This implies that those with previous migration experience may still be entertaining the possibility of returning to Bangkok, whereas those without prior experience may be content to remain *in situ* just as long as employment remains available. From a policy-making perspective, we might suggest that greater attention thus be given to rural industrialisation as a means of preventing out-migration, thereby potentially breaking what has become in many instances a self-perpetuating process of rural depopulation.

Migration from the villages which are involved in the pseudo-ancient pottery-making industry has also declined somewhat in recent years. In the past a high percentage of villagers migrated to work abroad, especially in the Middle East. Now, however, the availability of employment in the Gulf states has declined drastically. Instead of substituting internal for international migration, however, we can identify a lower overall volume of out-migration. this is because the villagers now have the opportunity to earn a source of livelihood from the pottery industry. Although some villagers still migrate, particularly when their earnings from migration are quite attractive, the number of villagers in this group is fewer than in the past. Rural industrialisation has made an important contribution in this regard.

Table 6.6
Relationship between Opinion on the Migration Impact of the Gemstone Industry and the Past Employment of Gemstone-Cutters

Opinion on Industry Stopping Migration	Past Job: Never Migrated	Worked in North-East	Worked in Bangkok	Total
Can stop	52.7	14.7	18.6	86.0
Cannot stop	6.0	6.0	2.0	14.0
Total	58.7	20.7	20.7	100.0

Chi-square 7.33954 significance 0.02548

(3) Income and Expenditure

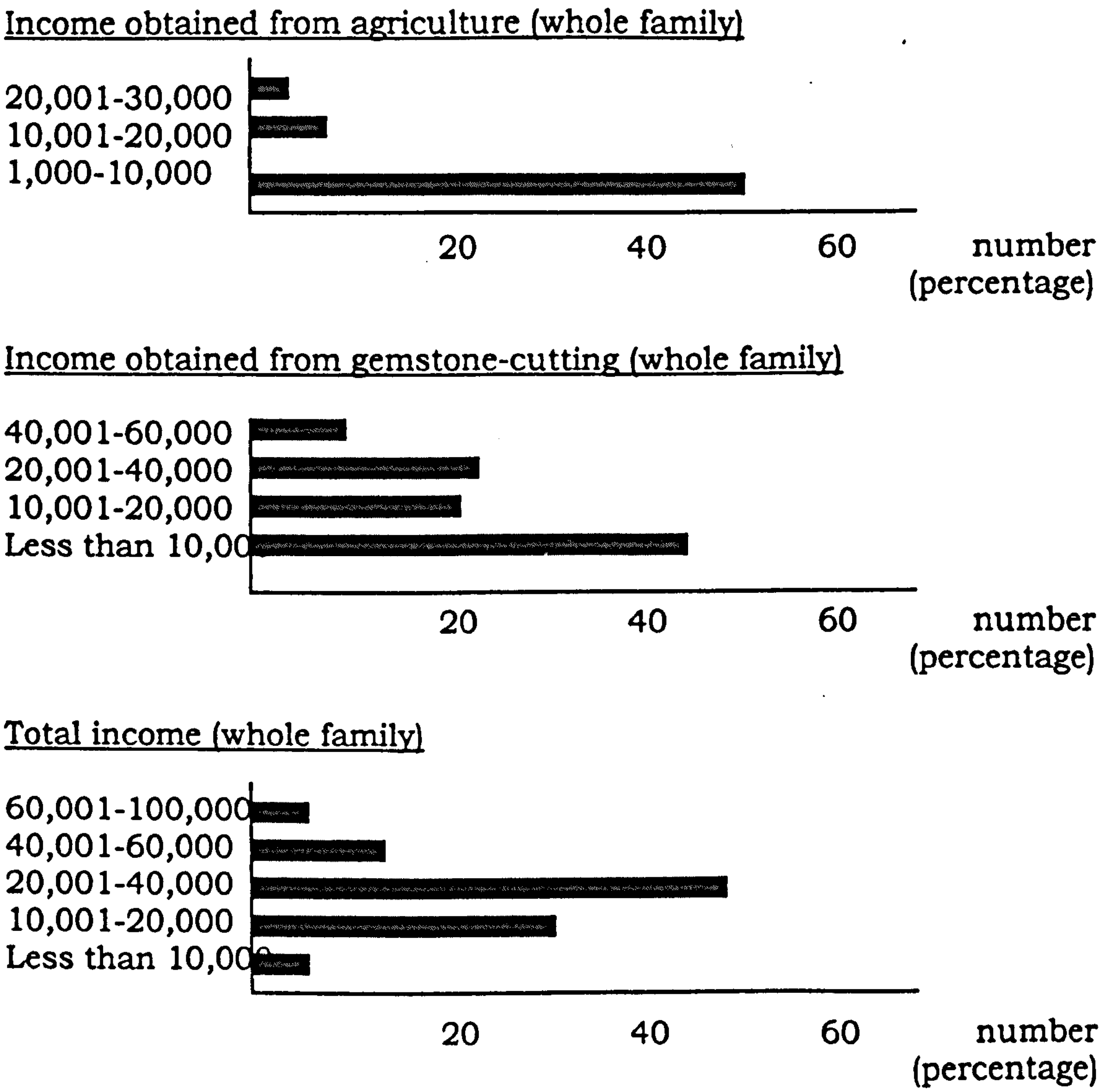
The average earnings of the families of gemstone-cutters are summarised in Table 6.7. When we consider the income obtained from gemstone-cutting industry, which averages about 20,000 baht (£500) per year per family, this is quite high when compared with other sources of income in rural North-East Thailand. This represents net income, as the workers can save virtually all of their earnings on account of the fact that the entrepreneurs provide food and accommodation for them. If we notionally add these costs to the wages that gemstone cutters earn, we could quite easily double their gross earnings to 40,000 baht (£1,000) per year per person, which is very high for the local area and is especially so in instances where there are 2-3 from a household working in the industry. This explains the current attractiveness of the industry to those involved, especially relative to the prospect of migration to Bangkok where the cost of living and the quality of life are considered by many in the industry to be unattractive. In contrast to the earnings from the gemstone-cutting industry, earnings from agriculture, as we indicated earlier, are quite low. For participants in the industry, income from gemstone cutting almost equated their total income (see Figure 6.1).

Table 6.7
Income Obtained from Gemstone-Cutting Industry and Total Income of Gemstone-Cutters' Families

Income obtained from gemstone-cutting industry (annual income of whole family)	
Less than 10,000 baht	46.0%
10,001-20,000 baht	19.4%
20,001-40,000 baht	25.4%
40,001-60,000 baht	9.2%
Total	100.0%
Total income (whole family)	
Less than 10,000 baht	6.0%
10,001-20,000 baht	29.9%
20,001-40,000 baht	44.1%
40,001-60,000 baht	14.0%
60,001-100,000 baht	6.0%
Total	100.0%

Source: data from questionnaire no.2

Figure 6.1
Graph Showing the Comparative Income for Gemstone-Cutters' Families from Many Sources



Source: data from questionnaire

Table 6.8
Monthly Income, Spending and Saving of Gemstone-Cutters

Monthly income (personal income)	
100-500 baht	10.6%
501-1,000 baht	36.0%
1,000-1,500 baht	27.3%
1,501-2,000 baht	13.4%
2,001-3,000 baht	12.7%
Total	100.0%
Duration of work (experience)	
Less than 1 year	18.7%
1-3 years	60.0%
4-5 years	14.7%
More than 5 years	6.6%
Total	100.0%
Monthly spending (expenditure)	
None	6.0%
100-500 baht	75.3%
501-1,000 baht	18.7%
Total	100.0%
Monthly saving (given to parents)	
None	1.3%
100-500 baht	20.6%
501-1,000 baht	45.3%
1,001-1,500 baht	17.4%
1,501-2,000 baht	13.4%
More than 2,000 baht	2.0%
Total	100.0%

Source: data from questionnaire no.2

If we look now more specifically at the earnings of the gemstone industry workers themselves, we find that most of them earn between 1,000-2,000 baht (£250-500) per month (see Table 6.8). Incomes from the gemstone industry vary quite widely, however. Although they may work in the same workshop and have the same status, workers may receive different incomes. This is explained by the nature of their work, and also varying levels of productivity. The gemstone-cutters with low average earnings were mostly the new workers who are still in the process of being trained. Accordingly, they do not work particularly quickly. Wages are paid on a piece-rate system, based on the weight of finished gemstones, normally at a rate of 3 baht per 20 grammes. Accordingly, efficiency and productivity are very important. If the gemstone-cutters can finish many pieces or many grammes they can earn more too. The average income per day per person was about 50 baht (£1.25). Earnings also varied according to the number of hours worked. Gemstone-cutters who needed a high income could also work at night. Most gemstone-cutting workshops set working hours from 7 a.m. until 12 p.m. and let the gemstone-cutters work as they pleased. The only fixed salaries paid were for the workers who were engaged in the first step of the manufacturing process (cutting gemstone from the large pieces of raw material). Because of the difficulty in calculating productivity, they are paid a salary of about 2,000 baht (£50) per month.

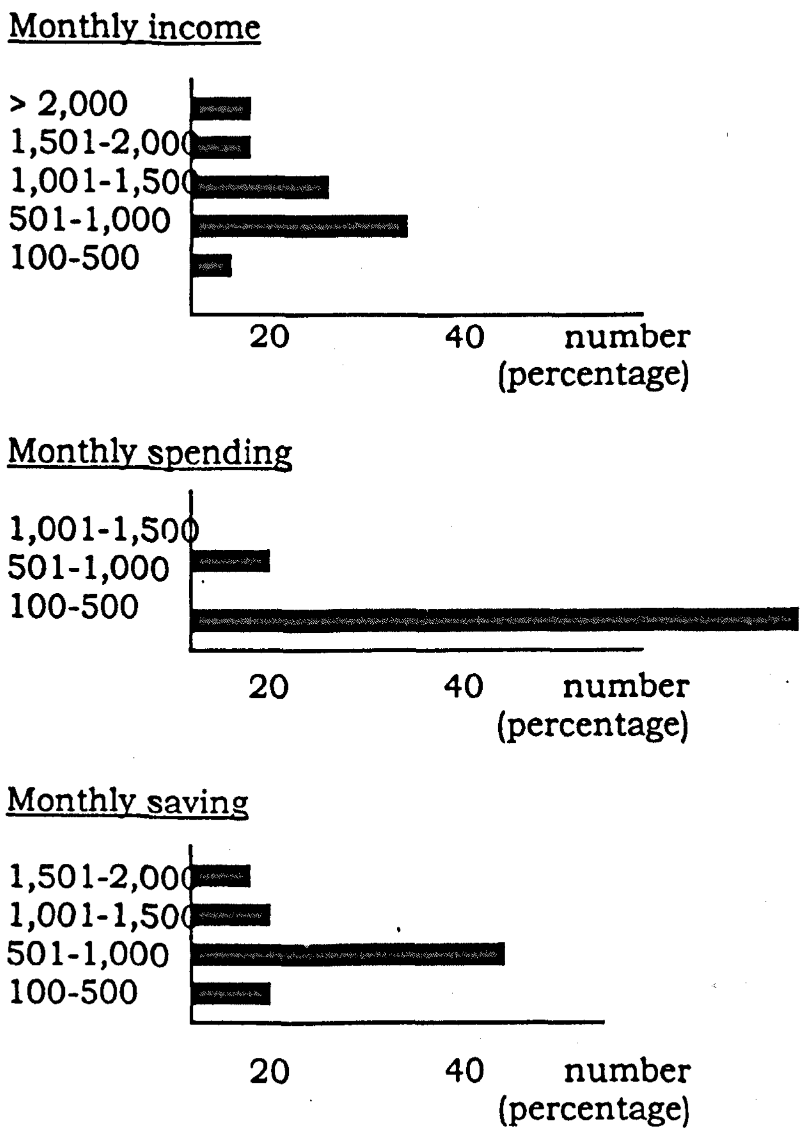
When we consider the income of gemstone-cutters, at around 50 Baht per day, it may be very low compare with that which can be derived from working in town or Bangkok. But if we combine the welfare (food and accommodation) which the entrepreneurs provided, the daily income per person may be more than 100 Baht. This income rate may in relative terms - taking into account differences in the cost of living - be better than earning 120 baht/day in Bangkok. The potential to save from one's earnings is much greater in the village than in the capital city (there are also, of course, fewer things to fritter one's wages away on). Added to this, the workers are also able to contribute, occasionally, to farm work, so the opportunity cost of their industrial employment is much lower than if they travel to work in Bangkok. On top of this, the more experienced the rural industrial workers become, the higher will be their earnings, thus narrowing the real income gap between the village and Bangkok. not surprisingly, the majority of rural industry workers were satisfied with their earnings and savings position, and on top of this they also appreciated the fact that they were closer to their families and placed within their familiar Isan socio-cultural context.

The entrepreneurs at Ban Non-Fun-Rua, Khon Kaen province, usually close their workshops on Sunday to travel to sell the finished gemstones and buy zirconium, so Sunday was usually a day of rest for the gemstone-cutters too. However, the entrepreneurs at Ban Sang-Ming, Ubon Ratchathani province, never close their workshops. The workshops are open every day and the gemstone-cutters can choose which day they would like for a holiday, or indeed whether or not they wished to take a day off. This further helps to explain variations in earnings levels. Although some people could earn considerable sums of money from the industry in a relatively short time, the fact that they were often working excessive hours to achieve this end must be viewed with some concern, not least in relation to the health consequences which were discussed earlier in this chapter.

In terms of work experience, most of the gemstone cutters have been involved in the industry for between 1-3 years (see Table 6.8). As we have indicated earlier, gemstone-cutting work has an adverse effect on the eyesight of workers. So most gemstone-cutters should be young people who have good eyes, as we discussed earlier. However, when these young people have worked for more than 3 years their eyes generally deteriorated, which in turn caused them to work fewer hours and less efficiently than they had done earlier. So, many of them worked for about 3 years and then moved on to work in other jobs because they suffered from eye strain. Many also suffered from fatigue on a regular basis. Some of them became entrepreneurs after they had obtained enough experience and had come to know the gemstone business. Very few workers could work for a long time. Thus if we consider this industry's development from a welfare perspective, it becomes rather less attractive than we have previously implied. From a policy-making perspective, therefore, attention should also be given to the regulation of this industry so as to avoid such undesirable health side-effects.

We turn now to look at the expenditure characteristics of gemstone cutters, which helps us both to double-check some of the above information on income and start to assess some of the developmental effects of this industry's development. The mean monthly expenditure of gemstone-cutters lies between 100-500 baht (£2.50-12.50 - Table 6.8), which is quite low. This is because the highest form of expenditure is typically for food and accommodation which, in this instance, are provided by the entrepreneurs. With relatively high earnings and low out-goings, the majority of workers in the gemstone industry are able to save a significant proportion of their wages. Most of their expenditure, and, over time, a significant proportion of their savings is spent on the purchase of clothes. Merchants were frequently observed visiting the study villages to sell fashionable clothes and other luxury items. This is an interesting development because, normally, the merchants only food and basic daily necessities in the villages of the North-East because the villagers do not have the disposable income for other non-essential items. Only those villagers with high incomes and savings can buy fashionable

Figure 6.2
Graph Showing the Comparative Monthly Income, Spending and Saving



Source: data from questionnaire no.2

clothes and luxury items. The young gemstone cutters in particular showed a strong desire to follow the latest fashions.

The workers also gave their parents a proportion of the money they were able to save from their earnings. Some of the more selfless (and perhaps less fashion conscious) workers gave their parents almost their entire monthly earnings (see Table 6.8). For parents to derive 50-1,500 baht per month from each of their children engaged in the gemstone industry represents a quite sizeable sum, and is generally higher than that which might be expected from a son or daughter working in Bangkok. This money was used according to the household's needs, being spent on basic necessities if there was insufficient income from other sources (such as the farm), or for investment in agriculture or small businesses if there was a reasonable surplus after basic living costs had been taken care of.

Figure 6.2 plots the comparative monthly income, monthly expenditure and monthly savings of the gemstone-cutters. The graph shows that the monthly income of gemstone-cutters and their saving are at almost the same rate - the group that earns a high income is often the group that has high savings as well. This issue relates to the expectations of gemstone-cutters. The study found that they did not work only to earn to survive but they also expected to be able to put aside some lump sum money to be used in the future. Some expected to invest this money in their own gemstone-cutting business or to buy more land in order to produce more agricultural products. If their expectations are realised, they expected thus to be able to derive sufficient income to provide for the economic security of their families, irrespective of the future trends in employment for gemstone cutters (details of the workers' expectations will be discussed later). So, most of them try to work as hard as they can in order to collect as much money as possible, even though this may often entail working night and day and every day of the week without a break. When we compare this issue with the age of workers, more points emerge. Most workers were young and worked principally in order to earn a target (lump sum) of money. This implies that, if the workers were not young, this outcome or objective might be different. This is due to local custom: the young tend to earn money for two reasons - first for their parents, as is prescribed by Thai custom, and second for their own future. For middle-aged people, the priority tends to be different, with satisfying the livelihood needs of the families to which they are responsible often representing their sole objective.

Table 6.9
The Importance of Income from the Gemstone-Cutting Industry to the Living Condition of Gemstone-Cutters' Families

Importance of income	
Very important	42.0%
Quite important	52.7%
Not important (not significant)	5.3%
Total	100.0%

Source: data from questionnaire no.2

The vast majority of gemstone-cutters considered that the income they obtained from gemstone-cutting was either "very important" or "quite important" to their families (see Table 6.9). Thus, referring back to the issue of distribution in development, we can argue that the spreading of economic activity into peripheral rural areas, so strongly manifest in the present case study, has brought considerable benefits - social as well as economic - to the communities concerned. Thus, from any contemporary perspective on development, rural industrialisation in this instance has been a developmental success story.

(4) Future Trends

In order to speculate about future trends in the technical skill industry, the survey ascertained workers' degree of satisfaction with the form of work in which they are presently engaged. The gemstone-cutters had a variety of opinions about their work: only a very small proportion (1.3%) said that they were willing to work in the gemstone-cutting industry forever; some 24% were willing to work in the industry until such a time as conditions become unfavourable or unattractive; 29% wanted to work in the industry until they had accumulated enough savings to allow them to leave the industry; and 10% said they would continue working while still physically capable of so-doing. 35% had no firm idea or no plan about their future work (see Table 6.10). Thus, generally, the workers are satisfied with their work as the industry presently stands.

Table 6.10
Gemstone-Cutters' Anticipated Duration of Future Employment in the Industry

The expected duration of working in the gemstone-cutting industry	
Forever	1.3%
No idea (no plan)	35.3%
Until there is no work in gemstone-cutting	24.0%
Until have enough savings	29.3%
Until cannot work any longer	10.0%
Total	100.0%

Source: data from questionnaire no.2

The gemstone-cutting industry may indeed be good for the villagers in the future, and its business may go on for many years because its market is still quite good. However, it is becoming increasingly unstable. The price of finished gemstones has tended to decline in recent years, and with it the earnings of gemstone-cutters. One factor which has contributed to this decline has been the rapid and unregulated expansion of gemstone workshops in the North-East, leading to a much higher level of competition than in the past. The market is becoming saturated - there is only so much volume of production which can be absorbed by the cosmetic jewellery industry in Bangkok. It has become a buyer's market, with middlemen being able to dictate the terms on which they are willing to operate. Nonetheless, the jewellery industry is still quite strong, with exports continuing to increase rapidly (Commerce Economic Department, Ministry of Commerce, 1992). Furthermore, the lower price of cut stones from the North-East is helping to underpin the continuing international competitiveness of the Thai cosmetic jewellery industry, and in turn its long term prospects. However, with a growing problem of over-supply, attention is increasingly turning to the quality of the finished stones and not just the quantity. It is not untypical for up to 50% of an individual's daily volume of production to be rejected by the entrepreneur because it does not come up to minimum quality standards. Because the market in Bangkok needs only high quality products for export, some producers who could not produce high quality stones are unable to compete in the Bangkok market. Accordingly, they have to sell their products only to the local market at a much lower price. Although the number of gemstone-cutting workshop has increased very fast in North-East Thailand, many of them face the problem of being unable to sell to the lucrative Bangkok market because of the low quality of their products. Although the local market can absorb all finished gemstones, the price obtained is often very low for poor quality stones. These low prices are passed on to the workers in the form of lower piece rates. Mr. Surat Arbboonma, an entrepreneur from a gemstone-cutting workshop in Ban Non-Fun-Rua, said:

> "In the past when the number of workshops was few, the income obtained from gemstone-cutting industry was very good. Each gemstone-cutter could earn an average of 4,000 baht (£100) per month and each entrepreneur could earn 15,000-20,000 baht (£375-500) per month. At present the income of each gemstone-cutter has been reduced to only 1,000-2,000 baht (£25-50) per month and each entrepreneur earns less than 10,000 baht (£250) per month because there are many workshops so the middlemen can reduce their purchasing price. I have gone to sell my products in Bangkok 2-3 times because the price was higher than the local market, but the buyers wanted only the beautiful pieces and I could sell only half of what I had. I did not know many buyers in Bangkok, so I prefer to sell at Nongkae district (local market). Even though the price is lower, I can sell all and need not to pay for the travelling cost involved in selling in Bangkok."

Thus, although the market for finished gemstones is still quite good, it is also becoming more competitive and selective. A clear preference is now being shown for beautiful, quality pieces. With such quality gemstones, the sellers of cosmetic jewellery will, in turn, be able to maintain their own price structures. Thus there is a strong imperative for the skills and techniques of production to be up-graded so that the prices, and wages, enjoyed by producers in the North-East can be sustained. Thus, if the producers want to sell at high prices they have to improve their quality of manufacturing. The problem to be faced by the government, and others interested in supporting rural industries, is how to achieve this objective.

If we return briefly to the manufacturing process, we find that wages were originally paid by entrepreneurs on the basis of the volume, and not quality, of production. Accordingly, the gemstone-cutters worked as hard and fast as they could in order to receive more wages. There was no requirement, nor incentive, to produce stones of utmost quality. This system has not encouraged the gemstone-cutters to improve their skills because they obtain no advantage for so-doing. Accordingly, the quality of gemstones produced in the North-East is generally inferior to that emanating from workshops and factories in Bangkok and Chantaburi. Although the present gemstone-cutters are satisfied with their income, they do not seem to realise that they can have an even higher income if they could produce better quality products. The entrepreneurs, once again, are in a crucial position of facilitating the up-grading of the gemstone industry. They have to change their organisational system in order to encourage their workers to produce better quality items. Mr. Uthai Sangprasert, an entrepreneur in Ban Sang-Ming Ubon Ratchathani province said:

> "My products have no marketing problems. I usually sell in Bangkok where the price is quite good. Some workshops had problems because they used the low quality material and their workers had low technical skills, so their products could not be sold at a good price. Although they could have a low cost of manufacturing, their low quality products could not compete with others. Most of the buyers in Bangkok are exporters and they want the good quality products. In my opinion, the gemstone market is still good but the problem is that the good skilled gemstone-cutters tend to be scarce."

This means that if the entrepreneurs want to sell their products at a high price they should improve the quality of the product. Besides improving the management system, providing greater incentive for the production of quality items, another future constraint is the supply of well-qualified and -skilled gemstone-cutters. Although many villagers want to work in this industry in order to earn a high income, they cannot immediately be involved. They have first to receive training before they can work as gemstone-cutters. Some workshop entrepreneurs are able to earn money by providing training courses for villagers who have no skills. The entrepreneurs charge 1,500 baht (£37.50) for a six month training course for each villager who wants to receive training. Some workshops provide free training to their new workers, but the workers must then guarantee to work for the workshop for at least one year. Also, they receive no wages during the first three month of training.

It can be said that there is no unique system of training. However, the government agencies have provided training courses in Ban Non-Fun-Rua for villagers who wanted to learn gemstone-cutting skills, but this was insufficient simultaneously to meet the needs of new entrants to the industry and the up-grading of the skills of existing workers. There is a pressing need for training courses for entrepreneurs to enable them to train others, and to improve their own management skills. The provision of such training courses would be seen as a crucial first step in allowing this kind of industry to increase product quality and quality control which, in turn, may be seen as crucial to its long-term vitality and viability.

The pseudo-ancient pottery-making industry in Ban Chiang also has problems relating to the quality of its products. Quality is a very important factor in helping the industry to remain engaged with the market, and to increase market penetration. If the manufacturing skills of producers are good, the products will generally be of good quality too. The buyers usually like to buy a good quality product rather than one which is shoddily made. For items such a pseudo-ancient pottery which are sold to discerning tourists, and which are supposed to depict the country's heritage, the skills of the craftsperson are often seen as an important if not crucial ingredient.

Although the producers of pseudo-ancient pottery in Ban Chiang were trained by a government agency in the past, it was clearly not enough to ensure that their products could compete with similar products from Bangkok (Ban Chiang does not have a monopoly on producing look-alike

Ban Chiang pottery). The producers in Bangkok can produce the same kind of pottery, but can also sell it at a higher price. The market will absorb higher prices if quality is good. Thus Ban Chiang would appear to be in a relatively weak competitive position for the production and sale of products which are intended to depict its own historical heritage! Thus, if the producers could improve their production skills they may be able to earn a higher income from a higher selling price. The improvement of technical skills rests in the hands of government training agencies. Training should not only be provided at the initial stage, but re-visits should also be made to maintain and up-grade producers' skills. New products have to be introduced (in a similar way to that which has occurred in the cushion-making industry) if the industry is to survive and thrive.

The market for the products is also quite important, particularly in the case of the pseudo-ancient pottery-making industry. In the case of entrepreneurs from the gemstone-cutting workshops, the principal marketing problem was their weak relations with and knowledge about the buyers. Some entrepreneurs did not know many buyers, and thus they had little bargaining power in business dealings, which in turn hurt their margins of profit. The market for pseudo-ancient pottery products is also poor. They can only really be sold to a local market (including the passing tourism trade). Marketing outside the local area is usually in the hands of middlemen, who come to the village of production and take the items for sale in Bangkok. The local producers have never sold to Bangkok directly because they do not know many buyers.

The future market for pottery products is reasonably assured, although less so than in the case of gemstones and 'diamonds'. The Ban Chiang facsimiles are still in demand in Thailand among those who understand local history and recognise the importance of the Ban Chiang site. There is also a limited export market, alongside other handicraft items representing Thailand's material culture. If government agencies could play a co-ordinating role, channelling information on supply and demand between the producers and buyers/exporters, it may help the producers to sell more of their products, or the same volume at higher prices, thereby allowing them to earn more. The producers in Ban Chiang have the advantage of possessing the basic production skills, and they are clearly more directly associated with the ban Chiang site than is the case with production elsewhere. If they can improve their production skills, this industry will be improved and will help the villagers to have a better income from this source in the future.

Thus, we can see that one of the principal constraints facing the technical skill industries is, in fact, the skills of producers which links, in turn, to constraints in the field of marketing. If production skills can be improved, perhaps with government assistance, the quality of their products will improve too, as will income-earning potential and the future stability of the industries in question.

There is also a clear need for better regulation of these industries' development. We have seen how the proliferation of production units in the gemstone industry in particular has significantly affected the prevailing terms of trade. Because earnings are much higher for entrepreneurs than workers, more and more people are seeking to make the transition from the latter to the former - including many of the non-resident workers (see Table 6.11). Although only a relatively small proportion wished to do this - others being deterred by such matters as capital and responsibility - 20% of an industry which already totals more than 1,000 people in the North-East alone still represents quite a sizeable number of potential new enterprises. Given the level of saturation that the industry is already facing, its future prospects without some kind of regulation would appear to be quite bleak. Whilst this is simply following the established process whereby the industry expanded from its quite humble origins in the late 1980s, bringing with it significant developmental benefits to the North-East, we cannot be confident that the same outcome will result from its continued expansion in the future.

Table 6.11
The Expectations of Gemstone-Cutters

The expectation in working in the present village	
Forever	31.3%
Will go to do gemstone-cutting work in other places (if better earning)	24.7%
Will change the job (if better one available)	18.0%
Not so long (will go back to work in the home village)	26.0%
Total	100.0%
The expectation of becoming an entrepreneur	
Do not want to be (no capital)	44.7%
Do not want to be (do not want to have responsibility)	34.0%
Want to be (am presently learning)	21.3%
Total	100.0%

Source: data from questionnaire no.2

In contrast, the expansion of the pseudo-ancient pottery-making industry is very unlikely to be so dramatic, partly because of the specialised nature of the products but partly also because the income "demonstration effect" is not nearly so strong. Nonetheless, if the range of products in increased as a means of expanding the market base, the industry could also face a similar problem of over-supply, unless the expansion is carefully planned and regulated. Particular attention must be paid to the training of unskilled workers: this will be of benefit to entrepreneurs and villagers alike. The entrepreneurs can improve the quality, and thus marketability, of their products, whilst the workers can enjoy the fruits of a successful and dynamic industry. To achieve this objective, it will be necessary for the government or the non-governmental sector to establish a training institute or technical skill training centre in order to improve and develop these technical skill based industries.

(5) Conclusion

Technical skill-based industries have occurred in North-East Thailand through many different processes. The gemstone industry was developed by returning migrants who brought back the technical skills from the places where they had worked in the past, creating their own business in their home villages. The pseudo-ancient pottery-making industry occurred as a result of the provision of technical skills training by a government agency. These industries have helped local villagers to increase their income, which in turn has enabled them to improve their living conditions and quality of life. Some have been able to make the transition from worker to entrepreneur, in the process considerably increasing their income-earning capacity. The high incomes derived from the gemstone industry have stimulated its rapid growth, with the number of workshops increasing very fast. Although the pseudo-ancient pottery industry has not been quite so dynamic and successful in income terms for those involved, there is still some potential for the industry's future expansion.

A major problem with technical skill industry lies in the quality of its products, which in turn is depressing the industries' earning potential and eroding its competitive position *vis à vis* urban-produced items. The analysis has shown that those producers who are able to produce good quality products are able to sell at higher prices and enjoy much more stable levels of demand. Thus, if the producers can improve the skills of their workforce, they stand to earn more from the higher prices that their products will command. In this way the developmental contribution of these rural industries will continue to build upon its already quite impressive foundations. To achieve this end, the organisation and management of production will also have to be up-graded, with entrepreneurs playing a crucial role, just as we saw was the case in the very successful transformation of the traditional cushion industry. In the case of technical skill-based industries, and in contrast to cushion-making where the private sector was responsible for almost all the changes which have recently occurred, there is a clear role to be played by government agencies in helping rural industries to become, and remain, competitive - most particularly by providing skills training and up-grading, and also putting producers into more direct contact with market brokers.

CHAPTER 7

ANALYSIS OF THE CONSTRAINTS AND POTENTIAL OF SUB-CONTRACTING INDUSTRIES IN RURAL NORTH-EAST THAILAND

This chapter presents the results of an examination of the nature of rural industries in the North-East of Thailand which employ the sub-contracting system. As with the earlier analysis chapters, we shall examine the background of the producers who sub-contract manufacturing work from urban factories to undertake in their home village, their income and attitude of migration, and also some of the likely future trends of this particular type of rural industry.

The analysis of sub-contracting system will use the silk-weaving industry in Ban Na-kae, Nakhon Ratchasima province, as the main focus of our enquiry, but will juxtaposition this against the fish-net finishing/repairing industry at Ban Savati, Khon Kaen province, and the blanket-making industry at Ban Ponsawan, Nong Khai province. These three kinds of rural industries all have the same basic characteristics of the sub-contracting system which, as described in Chapter 4, involves the manufacturing of products within the villagers' houses, allowing the producers a great deal of flexibility in terms of the amount of time they wish to devote to manufacturing, and when they want to be so-involved. The characteristics of this industrial system and the background of the producers, including their level of earnings, is very interesting and differs somewhat from the two previous types of industry that were discussed in Chapters 5 and 6.

The role of the sub-contracting system in the development of rural areas and its likely future trends are the main focus of the analysis in this chapter. The enquiry starts with a description of the background of the producers and discusses their agricultural occupations, their earnings from this type of industry, and their attitudes towards and behaviour with regard to migration. It will end with an assessment of the problems and constraints of the sub-contracting system, and also the trends in this form of manufacturing business. It will hopefully provide the reader with a clear view of this type of industrial system in North-East Thailand, and will facilitate comparison with and comprehension of the other types of rural industry which are found in the region.

(1) Background of Producers' Households

The background characteristics of the producers' households provides an indicator of the relationship between the sub-contracting system and the way of life of the producers, most of whom may be described as peasants. It will further relate to the earnings of producers which in turn may lead to an analysis of the role of the sub-contracting system in the development of the rural life of the region's peasantry.

Table 7.1
Age and Marital Status of Silk-Weaving Sub-Contractors

Age	
Less than 20 years	15.7%
20-30 years	54.3%
More than 30 years	30.0%
Total	100.0%
Marital status	
Single	44.3%
Married	54.6%
Total	100.0%

Source: data from questionnaire no.3

The sub-contractors of the silk-weaving industry are mostly in the 20-30 year age range (see Table 7.1). As we have seen with the other forms of rural industry in the region, the majority of workers thus come from the younger age range, with few old or very young workers involved.

When looking at the manufacturing process, we find that almost all of the sub-contractors in the silk-weaving industry are women. As explained in Chapter 4, people in this region traditionally believe that sewing and weaving is women's work, thus there are very few men involved. Moreover, silk-weaving as a sub-contracted form of production is a form of work that is well suited for women, as they can do it when they have free time at home. Normally it is the middle-aged women who are traditionally most represented in silk-weaving in the North-East, but the survey found that, in Nakhon Ratchasima at least, silk-weaving through the sub-contracting system mostly involves younger women. This is the age cohort which we would most expect to find working in urban factories rather than at home. Thus, in essence, we can argue that the sub-contracting system represents an 'urban' form of manufacturing which is transplanted to the rural setting. As such, it may be playing quite an important role developmentally, in that it is helping to retain in rural areas a number of young women who might otherwise be expected to move away towards the cities. Furthermore, it brings with it some of the benefits of urban factory work, including the opportunity to work full-time and to a dependable market system, in contrast to the more traditional forms of rural cottage industry in the North-East. The women involved may consider themselves in essence to be working in factories, but with the added benefit of their home 'comforts' and home environment, and surrounded by neighbours who are similarly involved.

Their wages are little different from those which might be expected from an urban factory.

When we look at the marital status of the sub-contractors, it reinforces the above point: there is little difference in the proportions who are single and married (Table 7.1). However, the proportion of married women involved is appreciably higher than would be the case for an urban factory, where the separation of work from home tends to filter out a high proportion of married women who have children and other duties which tie them to the home. By taking the work to the home village, they are better able to combine both activities. However, the single women generally earned more than the married women on account of the fact that the former were able to dedicate more time to manufacturing work because they were generally freer from other domestic responsibilities. Nonetheless, silk-weaving using the sub-contracting system may be considered beneficial to married women in that it gives them greater income-earning opportunities and, ultimately, a greater degree of financial independence. On the other hand, the high representation of young women is quite surprising, partly because they are more 'footloose' and thus could work more or less anywhere, and partly because younger women have not shown themselves to be particularly interested in silk-weaving *vis à vis* the older women. Why did they choose to work at home? It is possible to presume that this work is quite attractive when compared with other forms of industrial work which the young villagers in this region also like to do. If this is the case, we can say that this is a benefit of rural industry as the villagers are able to choose where they wish to work, rather than being obliged to leave their home areas, as has typically been the case in the past.

The fish-net repairing industry also has a good number of unmarried women involved. The character of fish-net industry is such that they can work at home in much the same way as with silk-weaving. The young women, who could be working in the city, worked at home in large numbers. This too is quite interesting. It shows that the sub-contracting system is not like the traditional forms of cottage industry in which housewives utilise their free time by making handicrafts, but instead it has developed into a major occupation for young and unmarried women to undertake at home, in the process earning them a livelihood which is broadly comparable with that which they might expect from working in town. We should not get carried away with optimism, however: the same set of circumstances could not be identified in the mat-making industry. Nonetheless, there could also be some potential for this industry to be developed in the way that has been described above for the silk-weaving and fish-net industries.

The size of the households of the sub-contractors in the silk-weaving industry was similar to that described for other forms of rural industry. Most of the households were quite large (see Table 7.2). Because people in the North-East prefer to live together as a large family, some of their sons or daughters still live with their parents even though they are married. The sub-contractors who have fewer than three family members are mostly the new families which have just been married. However, most of the families are between 5 and 6 persons. A large family is important in relation to the labour demands of agriculture, but too large a family may also be a factor in the poverty of the household, especially if they are unable to earn sufficient income to support every member adequately. However, the family size of the sub-contractors is not too large and, paradoxically, many families can benefit from the earning potential of a large number of family members. More than four-fifths of the sub-contractors have 1-2 family members involved in the same industry, and the remainder have 3-4 family members involved (Table 7.2). The numbers involved depends, to some extent, upon the number of daughters a particular family has. The sub-contracting system thus allows for the full mobilisation of household labour, in the interests of maximising household income. We will now explore the allocation of labour and the incentive effect of income from sub-contracting industries in a little more detail.

Table 7.2
Family Members of Silk-Weaving Sub-Contractors

Number of family members	
1-2 persons	4.3%
3-4 persons	44.3%
More than 5 persons	51.4%
Total	100.0%
Number of family members who do the same sub-contracting work	
1-2 persons	81.4%
3-4 persons	18.6%
Total	100.0%
The occupation of family members	
Agriculture	57.3%
Employment (daily employment)	21.4%
Factory work (permanent employment)	21.3%
Total	100.0%

Source: data from questionnaire no.3

Given the apparent attractiveness of employment in the various sub-contracting industries outlined above, it is interesting to ask why not everyone is involved? Linked to this is the extent to which agricultural work continues to occupy villagers' time irrespective of the opportunities presented by the sub-contracting system. The study revealed that agriculture continues to be important in spite of the availability of industrial work in the study villages. Some 57.3% of sub-contractors' families identified agricultural work as a minor occupation, whereas 21.4% relied on non-farm employment outside industry, and 21.3% were engaged in (urban) factory work as a minor occupation (Table 7.2). The families engaged in agriculture mostly grow maize and cassava from which they cannot earn much. The relatively high number of people engaged in factory work is attributable to the fact that Nakhon Ratchasima has many urban factories, due to its closest proximity (of all Northeastern provinces) to the prosperous Central Region. Thus there are plenty of opportunities available to compete with home-based industrial work. In essence, the latter has only been possible because of the former's initial expansion.

The families of sub-contractors in the fish-net industry and blanket-making industry also have the opportunity of factory employment because Khon Kaen and Nong Khai both have a number of factories located there, although the overall level of industrialisation is less than in Nakhon Ratchasima. However, the sub-contracting work was generally more attractive, not only because of the opportunity it provided to work from home but also because the earnings compared quite favourably with those which could be expected from factory work in these provinces. Also, the number of jobs available in these factories was quite limited.

Besides looking at the opportunity to earn a livelihood from the expansion of industry in the rural areas, we also need to consider the importance of agriculture and size of land-holding in relation to the incentive or disincentive for people to become engaged in sub-contracting arrangements with urban factories. We might hypothesise that, if the amount of cultivated land is rather limited, other sources of income such as from sub-contracting work may be quite important. In such cases, income from such industrial work will probably be considered to be their principal source of income, with farming a minor or supplementary occupation. If such an occupational transition is indeed taking place, this may provide certain pointers to the possible future role of rural industrialisation in the region in helping to diversify local economic structures. The families of those engaged in the sub-contracting system within the silk-weaving industry mostly have a relatively small amount of land (see Table 7.3): 73% cultivate less than 10 rai. The agricultural products of these sub-contractors' families were mostly consumed within the household and only a small amount was sold: 21.4% of households sell all of their products, 35.7% sell a small amount of their produce, and 42.9% of households consume all of their agricultural products. There is a close relationship between the amount of marketable surplus which is produced and the amount of land that a household has at its disposal. The households who can sell all their agricultural products mostly grow only maize and cassava. However, this group is not so big because most of the households still grow paddy for household consumption as a tradition.

Thus we again have a situation where rural households are unable to rely heavily on agriculture to support their growing income and consumption needs, highlighting once again the importance of rural industrialisation in helping to stabilise, diversify and improve income earning potential in the study area. If we look back to the cushion-making industry, where producers had quite large land-holdings, the industry was generally seen as a supplementary source of livelihood, in spite of its dynamism and success. But in the silk-weaving villages, the villagers tend to rely to a much greater extent on industry.

Table 7.3
Agricultural Production of Household

<u>Size of cultivated land holding</u>	
None	7.2%
Less than 5 rai	31.4%
5-10 rai	41.4%
11-20 rai	17.2%
More than 20 rai	2.8%
Total	100.0%
<u>Agricultural production</u>	
Sell all	21.4%
Sell some	35.7%
Consume all	42.9%
Total	100.0%
<u>Annual household income obtained from agriculture</u>	
None	42.9%
Less than 2,000 baht	2.8%
2,000-5,000 baht	21.4%
5,001-10,000 baht	28.6%
More than 10,000 baht	4.3%
Total	100.0%
<u>The use of hired agricultural labour by sub-contractors</u>	
Major work force	37.1%
Minor work force	77.2%
Total	100.0%

Source: data from questionnaire no.3

The next question is: does their income from industry allow them to depend on industry as a principal source of livelihood? When we consider the income of sub-contractors in the silk-weaving industry, their income from agriculture is quite low (see Table 7.3). When compared with the farmers in North-East Thailand, these households have an average agricultural income which is quite low. Without the income they derive from industrial work, they would be considered quite poor even by the standards of the North-East. The problem of having insufficient land and a low income from agriculture was a particular problem with sub-contractors from the fish-net and blanket-making industries. The sub-contractors here have very small amounts of cultivated land and have been quite poor in the past. This is because of the price of land in big provinces such as Nakhon Ratchasima, Khon Kaen and Nong Khai, which is very high. The poor farmers could not buy additional land for cultivation.

Even though agriculture does not provide an important source of livelihood for the sub-contractors' households, and although work in the industry is very important in this regard, we still find that a considerable amount of labour is routinely dedicated to farming work. The sub-contractors themselves were often engaged both in industrial and agricultural work, especially during the rainy season. However, most of them considered that this was supplementary work rather than their main occupation - in contrast to the case of cushion-making described earlier (see Table 7.3). They simply stop their industrial work during the rainy season. This seems to be quite a common characteristic of rural people in the North-East, irrespective of the dynamism and success of rural industry. However, in the present instance it appears that the level of seasonal drift from industry to farming was largely determined by the amount of land which was cultivated. Most of the families holding a small plot of land were able to complete planting and harvesting work without being too disruptive of work in the sub-contracting industries. Another reason why industrial work was sometimes halted during the rainy season was related to the nature of the work. Some sub-contractors considered that the silk-weaving work could not be done well in the rainy season because of high levels of humidity. Accordingly, they stopped their weaving and did agricultural work instead.

Although the sub-contractors had to help their family do agricultural work during the appropriate season, they did not consider farming to be their major work. This is an important matter: if the industry expands in the future, the factories will need more workers and sub-contractors who are able to do their jobs throughout the whole year. If the sub-contractors have to stop their work during the rainy season, the entrepreneurs of factories will not be so pleased and their work may suffer. So the policy to promote rural industry in this region should think about this issue.

(2) The Work and Income of the Sub-Contractors

The analysis above of the background of the sub-contractors presented a view of those villagers who were involved in the industry. However, the view of the sub-contractors themselves may not be enough, and does not tell us much about the nature of the work and especially the income they obtain. A closer examination of the nature of their work, including the means by which they joined the industry, and their levels of income, will add a further dimension to our enquiry, and will help in the assessment of policy implications. Is it possible to promote this type of industry in order to increase rural incomes? If so, how can we help the villagers to involve themselves in this form of industry?

According to the objectives of this thesis which intend to study the role of industry in generating employment *in situ*, the means by which people join an industry might be seen as an important issue for study. It can help to explain how rural people and industries can be brought together. It is pointless promoting rural industry if rural people are unaware of its existence, or how to go about securing such forms of employment. Thus it can be said that communication in an important factor in supporting the employment generating role of rural industry. Thus it should be interesting to study how the villagers in each area initially contacted the factory in order to obtain sub-contracted work; or, indeed, how the factory itself went about recruiting workers and sub-contractors from the local area.

The study of sub-contractors in the silk-weaving industry found that there were many ways of joining. Some 30% of sub-contractors joined the industry by means of an introduction by their friends; 45.7% joined by means of an introduction by their parents or relatives; and 24.3% of them joined by contacting the factory directly (see Table 7.4). None were recruited directly by the factories concerned, although the above essentially amounts to their indirect recruiting methods via people who are already established in or sub-contracted to the factory. Nonetheless, friends and relatives were the principal conduits through whom information about jobs and opportunities was channelled. Thus, although the factory needed many sub-contractors to enable it to keep up with increasing market demand, it did not employ formal means of worker recruitment, but instead relied upon word of mouth. Such a method provided no guarantee to either employer (contractor) and employee (contractee) that the workers would be of good quality or that the work would provide a fair wage. These matters would subsequently be dealt with, largely through trial and error. Workers who were not satisfied with their payments and conditions would quickly leave or would refuse to take up a contract, whilst employers would quite quickly wheedle out lazy or incompetent workers by not issuing production contracts. The situation was quite evenly balanced, with the employers needing contractees just as much as the workers needed employment. As such, neither side of the contract necessarily had the upper hand.

The fact that a greater proportion of villagers actually contacted the factory suggests, however, that their need for employment may be greater than the factory's need for employees. If this is indeed the case, then there may be implications in regard to the 'terms of trade' between the employer and the employee, with the latter in a slightly weaker bargaining position *vis à vis* the former. This may in fact be quite typical of rural industrialisation, given the general backwardness and lack of opportunities in the rural sector. Thus whilst benefits may indeed accrue to the workers concerned, the greater share of benefits is likely to accrue to the business enterprise. This, in turn, may help to off-set any disadvantages associated with location in a peripheral, underdeveloped area.

The character of information flow between factory and the potential workforce is the same in the fish-net and blanket industries, where there were a number of villagers who had worked for the factories since their inception. As the demand for sub-contractors increased, the villagers who were related to or acquainted with these pioneering workers were in a particularly advantaged position to benefit from the information they provided about new job opportunities. In regard to policy-making, it is suggested that attention to the provision of information, perhaps through more formal channels such as advertising, may be a crucial factor in facilitating the expansion of rural industry. However, we have also seen that informal channels appear to work quite effectively in bring factories and workers together.

Table 7.4
Means of Joining the Industry, and Experience of Sub-Contractors

Means of joining the industry	
By introduction from friends	30.0%
By introduction from relatives	45.7%
The factory came to contact directly	24.3%
Total	100.0%
The experience of sub-contractors	
1-2 years	10.0%
3-5 years	20.0%
More than 5 years	70.0%
Total	100.0%

Source: data from questionnaire no.3

Another requirement, obviously, is the need for new sub-contractors to learn the appropriate manufacturing techniques. In many cases this process was also accomplished by informal means, such as through the friends and relatives who were responsible for introducing them to the particular sub-contracting industry. Because most sub-contracting work needs no experience and does not use complicated technical skills, the new producers could learn their job very quickly. Sub-contractors who had experience after having worked for a long time in the industry were able to earn more money by working more quickly and efficiently - payment being made on a piece-rate basis. Thus there was an incentive to acquire and develop production skills as quickly as possible. Table 7.4 shows that most of the sub-contractors in the silk-weaving industry had at least 5 years of experience in their present sub-contracting work, which is quite a long period by normal industrial standards. A supplementary question here is whether or not they become bored or tired by their work after having been involved for so long in the same form of quite repetitive work? Do they have any alternative forms of employment to turn to? Can they use their experience to up-grade themselves to the status of entrepreneur, as we saw was the case in the gemstone industry for instance? This issue will be discussed later. However, their long experience in this kind of industry should benefit them. We can assume that if they work for a long time they should be capable of earning more. To confirm this assumption, we need to look at their levels of income. Are they satisfied with their income? One explanation for their remaining in the industry for so long may be that they are generally quite satisfied with their incomes, or that they have no alternatives to turn to. An examination of levels of income, satisfaction with their work and willingness to change their occupation will help to answer this question.

The income obtained from silk-weaving is a factor that can be used to analyse the success of the industry and its role in improving the living conditions of those involved. If the income is high, many sub-contractors will presumably be willing to remain in the industry for a long time, which may be seen as an important factor in the industry's stability and long-term sustainability in the rural setting. In contrast, if income is low, the sub-contractors will not be satisfied with their jobs and they will start to look for alternative forms of employment. In fact, the income obtained from silk-weaving under the sub-contracting system can be considered to be high. Most of them receive wages of more than 1,000 baht (£25) per month (see Table 7.5). This is a quite acceptable income in the rural context. When compared with other sources, this rate of income

Table 7.5
Income, Working Hours and Opinion on the Occupation of Sub-Contractors

Income obtained from industry	
1,000-2,000 baht per month	90.0%
2,000-5,000 baht per month	10.0%
Total	100.0%
Working hours	
Less than 8 hour per day	38.6%
8-10 hours per day	61.4%
Total 100.0%	
Working period	
Dry season	51.4%
Whole year	28.6%
No precise period	20.0%
Total	100.0%
Prioritisation of present job (sub-contracting work)	
Major occupation	51.4%
Minor occupation	48.6%
Total	100.0%
Previous job	
Never worked before	41.4%
Agriculture	38.6%
Employment	20.0%
Total	100.0%

Source: data from questionnaire no.3

is certainly more attractive than others which are available in the vicinity of their homes. This helps to explain why they remain in this kind of work for a long time.

When we compare them with workers in the factory, it is very interesting that the workers and sub-contractors have more or less the same status. They could earn at the same rate and thus receive the same income. This is because the industry pays wages on the basis of productivity, irrespective of where production takes place. For the silk-weaving industry, the weaver/sub-contractor receives 13 baht per one metre of woven cloth. The average capability of weavers 4-5 metres of silk cloth per day. Some weavers could weave 6-7 metres per day because they worked more than 8 hours a day. Some weavers could weave only 2-3 metres per day because they did other work at the same time or shared the weaving instruments with others. So the sub-contractors could have an income on average of 50-70 baht (£1.25-1.75) per day or 1,500-2,100 baht (£37.5-52.5) per month. The silk-weaving factories which sub-contracts to these villagers also have workers in the factory, but the wages paid are based on the same piece rate as that for the sub-contractors. So the workers in the silk-weaving factory could earn the same income as the sub-contractors who worked in the village. The workers in the factory might have a total income which is greater than the sub-contractors because they worked full-time, whereas the sub-contractors, who have no fixed working hours, might combine their work with other tasks. On the other hand, the sub-contractors would be able to work even longer hours if need or incentive demanded.

This rate of income was not so different from the sub-contractors in the fish-net and blanket industries. The sub-contractors in the fish-net industry could earn slightly more than this rate, and their average income was in the range of 1,800-2,200 baht (£45-55) per month. There was however a difference between the kinds of work which were undertaken by sub-contractors in the villages and workers in the urban factories.

Whereas the former received a salary for the repairing and finishing of the fishing nets, the latter received wages related to productivity. Accordingly, the villagers preferred to work as workers in the factory rather than as sub-contractors at home. But at the same time there were some constraints which prevented this. The work in the factory is limited: the factory cannot employ many workers because of the limited amount of work space. The security of work in the factory is another factor. Although this does not mean that the sub-contracting work is insecure, the work in the factory is more secure. Nonetheless, in spite of their frustrated ambitions in this regard, they are still satisfied to work as sub-contractors rather than in other forms of work.

When we consider the working hours of the sub-contractors, it was found that although they thought that their work was in many respects similar to factory work, the environment of the village forced them to work more along the lines of traditional cottage industry. They had no fixed working hours and stopped their work in the wet season. The time allocated to silk-weaving work by sub-contractors was as follows: almost two-thirds spent 8-10 hours a day so occupied, whilst the remainder spent less than 8 hours a day (Table 7.5). Most of them worked only in the dry season, but some of them worked the whole year round. Thus, although they generally worked hard, they were not apparently willing to deny their other work and domestic responsibilities, especially in agriculture. This point leads to an important question: does the spending of time in silk-weaving work have any relationship to their income? If they have long working hours or work a long time each day and work the whole year, do they earn more? From the study of rural life we know that peasants are unable to spend all their time in paid work because they have a lot of housework to do such as the fetching of water, feeding of cattle, washing clothes, and so on. Furthermore, they had to do agriculture in the wet season to secure their food supply for the following year. This work forced them to be busy and they could not do full-time work in sub-contracting work when working from home. This also implies that this kind of industry forced sub-contractors to work long hours each day - perhaps longer even than they might expect to work in an urban factory. Although the sub-contractor did not work full time, they had to work almost all day to earn at the same level as the workers in the factory.

The income of the sub-contractors may therefore be quite low when seen in relation to the number of hours that they work. This raises a question: is it possible for them to work more in agriculture in order to earn a supplementary income equal to or greater than that derived from industrial work? Sukesinee Supatheera (1987) studied the farming system in the North-East Thailand and found that undertaking a variety of forms of farm production could provide more income (approximately double) to farmers when compared with rice-production alone. However, this is quite difficult in some areas. When we look at agricultural production in the sub-contracting study villages, very few households employed a farming system which mixed rice and non-rice crops, or which only cultivated non-rice crops. The farmers were not engaged in fishing and livestock-rearing for sale, only a little for household consumption. In these villages the land is dry and there is not enough water to cultivate crops other than the staple rice. In such circumstances, having access to an additional source of income (through sub-contracting) is extremely valuable, allowing farmers to make a choice as to how much time they prefer to allocate to farming and non-farm activities. Policy-makers should thus focus on making such alternatives widely available.

From a policy perspective, by promoting rural industrial production using the sub-contracting system (provided it is fair and efficient), the government may be able to reduce some of the problems associated with industrialisation in urban areas, whilst at the same time allowing workers a greater opportunity to combine factory-type work with life in the traditional rural setting. Clearly, a number of workers appreciated this combination of home-based work, even though some of them privately aspired to work in the factories in town.

The number of sub-contractors in the silk-weaving industry who considered that their silk-weaving work was their major occupation or who considered it to be their minor occupation was quite similar (Table 7.5). This is interesting because most farmers understandably consider agriculture to be their major occupation and other jobs to be minor or supplementary occupations. The high percentage of peasants who considered sub-contracting work to be their major occupation means that these sub-contractors feel that such work is more important than agriculture. They paid greater attention to their industrial work than was the case with villagers who saw cottage work and handicraft production as their part time job. However, not all sub-contractors considered that their industrial work was their major work even though they spent almost all day and all year in this work.

Although the above analysis showed that many sub-contractors rely on their work rather than other villagers who mostly rely on agriculture, their experience in other jobs may be limited. Some sub-contractors have worked before coming to join the sub-contracting industry but some of the sub-contractors have never previously been employed (Table 7.5). 80% of them worked in the silk-weaving industry as their first job outside agriculture. So the assumption that many sub-contractors worked for this industry as their major occupation because they like it should be reconsidered. They may like it simply because they have no experience of other jobs. With wider experience, and a wider basis for comparison, perhaps they would not look at the sub-contracting system so favourably (although we should remind ourselves of the relative attractiveness of the cushion-making and gemstone-cutting industries *vis à vis* urban-based employment). Furthermore, the income obtained from sub-contracting industry remains their most important source of income, as discussed earlier.

(3) The Attitude of Sub-Contractors and Trend of Industry

The above discussion was focused on the income and working conditions of sub-contractors. Although the data were able to provide information on certain aspects of their attitudes towards their involvement in the industry, we need to look more directly at prevailing attitudes. These are used as an indicator as to the present situation of the industry and also its future prospects. If the workers are not satisfied with their work, it implies that the situation within the industry is not very strong, and that there may be difficulties in the future in underpinning the industry's sustainability. On the other hand, if they are satisfied and willing to develop and improve their involvement in the industry, such as by creating their own businesses, the future prospects of the industry may in fact be quite bright. Job satisfaction may be considered to be as important as income in this regard.

The figures in Table 7.6 reflect the level of satisfaction of sub-contractors in the silk-weaving industry: almost three-quarters were satisfied their work, but the remainder were not satisfied and wanted to change their work because they thought that they would earn more from other sources of employment. Those who were satisfied with their present jobs and did not want a change gave as the reason that they were worried about not being able to earn as much from other jobs. Some of them did not want to change because they had no skills to offer in other forms of employment. Thus generally, most workers were satisfied with their work, although sometimes more for negative than positive reasons. Although some of them wanted to change because they wanted to earn more from

Table 7.6
Satisfaction with Occupation and Willingness to Change

<u>Satisfaction with occupation</u>	
Satisfied	72.9%
Unsatisfied	27.1%
Total	100.0%
<u>Willingness to change occupation</u>	
Want to change	28.6%
Do not want to change	71.4%
Total	100.0%
<u>Opinion about changing occupation</u>	
Other occupations more interesting	8.5%
Other occupation give more income	20.1%
Do not want to change	71.4%
Total	100.0%
<u>Opinion about not changing occupation</u>	
Worried that new occupation will give less income	20.0%
No skill related to alternative occupation	51.4%
Want to change	28.6%
Total	100.0%

Source: data from questionnaire no.3

Table 7.7
Opinion Regarding Improvement of Work, Hope for the Future and Willingness to Develop Own Business

Opinion re. improvement of work:	
Want to have trained (in manufacturing technique or business skill)	8.5%
Want to work more (improve manufacturing techniques to work faster)	34.3%
Want to work better (improve in quality)	15.7%
Do not want to improve (present work is good)	41.5%
Total	100.0%
The need of help from government agency:	
Need training	18.6%
Need to increase the wage	48.6%
Need in development (for village)	32.8%
Total	100.0%
Hope in future life:	
Want to have own house	20.0%
Want to have larger plot of cultivated land	60.0%
Want to have more furniture and necessities	20.0%
Total	100.0%
Willingness to introduce others to join the industry:	
Want to introduce (if possible)	52.9%
Introduced many villagers	47.1%
Total	100.0%
Willingness to have their own business:	
Want to but not enough capital	40.0%
Want to have and are learning	10.0%
Do not want to have because fear of lose	20.0%
Do not want to have because do not want to have high/much responsibility	30.0%
Total	100.0%

Source: data from questionnaire no.3.

other jobs, the percentage of unsatisfied sub-contractors was not so high. When we consider the location of their home villages, we can see that they are not far from Nakhon Ratchasima where the number of factories is increasing and where some of the sub-contractors may have an opportunity to earn more. For this reason, some expressed a desire to change their jobs. However, the high percentage of satisfied sub-contractors showed that there will be many villagers who are likely to remain working in this industry in the future. Accordingly, there will not be a major problem of labour shortages.

The opinions of sub-contractors in respect of improving their career are summarised in Table 7.7. A small number wanted to have further training in manufacturing techniques such as new technology and in business management for their future career development, whereas one-third wished to have more work to do, 15% wanted to be able to work more skilfully and efficiently, and two-fifths considered that the present work was good enough and that there was no need to attempt improvements. Nonetheless, all were motivated by the desire to have more income, and several recognised that if they had better skills and knowledge of improved techniques they would be better able to achieve this objective. This said, most of the sub-contractors expressed a reasonable degree of satisfaction with their present work. The government might pay some attention to helping the sub-contractors to improve the production techniques in order to increase their income-generating capacity. A spin-off of this would be that levels of productivity in these rural enterprises would also increase, thereby helping to strengthen the competitive advantage of the rural industrial sector.

Most of the sub-contractors hoped that a government agency would help them, principally by increasing their earnings but also, to a lesser extent, by helping to up-grade their production techniques (see Table 7.7). One third expressed the wish that the government would help to improve the infrastructure of their village. Implicit in their comments on earnings is the widely-expressed feeling that the piece rates offered by the factories were not as attractive as they might have been, suggesting that the factory owners were taking advantage of the fact that there was a large potential workforce in the area. Without an increase in wages, doubts were expressed as to the industry's ability to continue recruiting workers into the sub-contracting system. Mrs. Pabu Pansungnern, a sub-contractor in Ban Na-kae, expressed her opinion:

> "In 1977 this wage rate might have been acceptable. At present the cost of living is quite high but the factory still pays the old rate ... I think that many sub-contractors will leave this job in the future because they can find a new job which pays higher wages."

When we consider the wage system as part of the business system, it depends on an agreement between the factory and the sub-contractors. The government has some potential for improving infrastructure in the study villages, which is largely its responsibility, but increasing the wages paid is largely outside the control of any particular government agency (although the Thai government does have a minimum wages policy). The improvement of infrastructure may help other factories to contact villagers in order to establish sub-contracting arrangements. this in turn may increase the level of competition for local labour, which in turn may slowly push up wage rates. however, the government can only realistically assist the villagers indirectly in this respect.

Looking at the fish-net blanket industries, most of the sub-contractors are satisfied with their income and the number of complaints about their wages was less than in the silk-weaving industry. This may imply that, because the sub-contractors in the silk-weaving industry live in an area where the number of factories is increasing, they can compare their wages with those available in urban other factories, and thus have a basis for their disappointment with their earnings. But the sub-contractors in the fish-net and blanket industries live in locations where the expansion in the number of factories has been much less dramatic than in Nakhon Ratchasima, so they are more easily satisfied with their earnings. They also have fewer alternative occupational choices.

In regard to the future hopes and aspirations of the sub-contractors in the silk-weaving industry, most of them plan to improve their quality of life and are trying to work hard and save as a means of achieving their aspirations: 20% of them hope to have their own house or a better house, 60% hoped to have their own cultivated land or to have a larger plot of land, and 20% hoped to have more furniture and necessities in the household (Table 7.7). Where sub-contractors had clear objectives for the future, it was found that their savings behaviour was quite clearly targeted, and their discipline in terms of the amount of time which was dedicated to their work was quite high. The fact that many wanted to accumulate more land suggests that they were thinking about a secure future for themselves and their families. Most of them felt that their current land-holdings were insufficient for their present purposes of consumption and income. It does not necessarily mean that they wanted to have more agricultural production to sell in the future, but it is more linked to the tradition of rural northeastern people to accumulate cultivated land whenever they have some savings. They may sell land when they have urgent need of money. Thus land is an asses which provides a sense of security. The fact that many sub-contractors hoped, and some expected, to be able to accumulate land through their involvement in the industry is indicative both of the current savings potential that the industry provides, and the workers' general level of confidence about the industry's future.

Some of the sub-contractors in the silk-weaving industry also expressed the hope of eventually having their own silk-weaving business (see Table 7.7). Several of those who expressed this hope, however, were concerned about the limited amount of capital they had at their disposal. On the other hand, a fair number indicated that they had no such intentions either because of the risk or the responsibility involved. From this we can deduce that a proportion of producers are aware of the differential rewards which accrue to involvement in the industry of workers and owners/entrepreneurs. If those who expressed this opinion are successful in making this transition, the future vitality of the industry would seem to be quite secure and assured. It also further reflects their confidence in the industry's future.

When studied in depth, it was found that many sub-contractors in the silk-weaving industry had become the entrepreneurs of small factories in their home villages, and were also acting both as brokers and middlepeople for the larger factories both in their province and in Bangkok. These small factories had workers, and also sub-contracted work out to people to undertake in their homes. Whilst this is an interesting and optimistic development, the scale of this development was still quite modest in comparison with the wider sub-contracting system: each of these small factories had between 5-20 workers and between 10-30 sub-contractors. Mrs. Suree Faitragoon one of entrepreneurs in Ban Na Kae, Nakhon Ratchasima, described her experience and ideas as follows:

> "I have worked as a sub-contractor in a silk-weaving factory for 5 years, but I thought that the wage was very low so I tried to be an entrepreneur ... My business has just started and, of course, income is better than the past but the work is harder too ... Many sub-contractors in the past tried to be an entrepreneur to escape low wages, but an entrepreneurship needs capital which only a few of us could afford."

Although many sub-contractors hoped or expected to become an entrepreneur, clearly not all of them could succeed. The study found that producers' expectations in this regard was quite closely linked to the amount of time they had been involved in the industry. More of the sub-contractors who had worked more than 5 years in the industry tended to expect to have their own business than the sub-contractors with less experience (see Table 7.8). Exposure, experience and knowledge are thus quite important factors in facilitating the producer-entrepreneur transition - or at least thoughts about it.

Table 7.8
Relationship Between Expectation/Willingness to have Own Business and Duration of their Work (Experience)

Expectation/Willingness to Have Own Business	Duration <5 years	>5 years	Total
Want to have, but not enough capital	10.0	30.0	40.0
Want to have, and in the process of learning	0.0	0.0	10.0
Do not want to have, because of fear of loss	10.0	10.0	20.0
Do not want to have, because do not want responsibility	10.0	20.0	30.0
Total	30.0	70.0	100.0

Chi-square	6.111111	Significance	0.1063

Source: data evaluated from questionnaire no.3

Table 7.9
Analysis of Variance: BUSS (willingness to have own business) by INC (income obtained from industry) and DURTN (duration of work)

Source of variation	SS	DF	MS	F	Sig. of F
Main Effects:	2.333	2	1.167	5.154	0.008
INC	1.500	1	1.500	6.626	0.012
DURTN	0.389	1	0.389	1.718	0.194
Explained:	2.333	2	1.167	5.154	0.008
Residual	15.167	67	0.226		
Total	17.500	69	0.254		

Variable	N	Deviation	Eta	Deviation	Beta
INC:					
1,000-2,000 baht	63	0.06		0.05	
2,000-5,000 baht	7	-0.50		-0.45	
			0.33		0.30
DURTN:					
less than 5 years	21	0.17		0.12	
more than 5 years	49	-0.07		-0.05	
			0.22		0.15

Multiple R Squared	0.133
Multiple R	0.365

Source: data evaluated from questionnaire no.3.

However, the expectations of the sub-contractors of the silk-weaving industry may have been influenced by factors other than knowledge, experience and exposure. By using the technique of Analysis of Variance and Multiple Classification Analysis, it was found that three variables have an influence on the expectations of these sub-contractors. The income obtained from silk-weaving, their duration of work and their hope for their future life are the three variables which can explain up to 40 per

Table 7.10
Analysis of Variance: BUSS (willingness to have own business) by INC (income obtained from industry), DURTN (duration of work) and LHOP (hope in future life)

Source of variation	SS	DF	MS	F	Sig. of F
Main Effects:	5.600	3	1.867	11.556	0.000
INC	0.000	1	0.000	0.000	1.000
DURTN	0.933	1	0.933	5.778	0.020
LHOP	2.100	1	2.100	13.000	0.001
Explained:	5.600	3	1.867	11.556	0.000
Residual	8.400	52	0.162		
Total	14.000	55	0.255		

Variable	N	Deviation	Eta	Deviation	Beta
INC:					
1,000-2,000 baht	63	0.07		0.00	
2,000-5,000 baht	7	-0.50		0.00	
			0.38		0.00
DURTN:					
less than 5 years	21	0.50		0.35	
more than 5 years	49	-0.07		-0.05	
			0.38		0.26
LHOP:					
house and necessities	28	-0.50		-0.45	
large cultivated land	42	0.17		0.15	
			0.58		0.52

Multiple R Squared	0.400
Multiple R	0.632

Source: data evaluated from questionnaire no.3.

cent of the variation in the sub-contractors' expectations (R square = 0.400). Although the percentage is less than 50%, it is the highest rate when compared with other variables or combinations of variables. For example, the two variables of income and duration alone can explain only 13.3% of the variation in the dependent variable (R square = 0.133 - see Tables 7.9 and 7.10). The implication is that the sub-contractors who have worked for a long time in the industry and have clear ideas and plans for their future life, including accumulating enough savings, tend to be those most likely to expect to have their own business in the future. Let us dwell on this point: if they had no plans/hopes and no savings, it would be difficult for them to think about starting up their own business. On the other hand, if they have plans and savings but very little experience it is also difficult for them to contemplate this move. So experience, savings and future plans can be seen as important factors in helping the sub-contractors to secure their future. By becoming entrepreneur they can expect to have higher incomes and a better quality of life.

There is a point worth dwelling on here. Table 7.7 shows that about half of the sub-contractors have expressed a desire or willingness to have their own business in the future. The three factors - experience, savings and future plans - had combined to influence their willingness in this regard (Table 7.10). These data do not mean that all of them had thought about the expansion of their involvement in the industry. But those who had thought about this must clearly have had some earlier thoughts about a future involvement in the industry as a precursor to their acquisition of capital, experience and future planning. If this is the case, why do not all producers who joined the industry as sub-contractors wish to progress in this way? In reality, not all of people who join the industry will have the ability or inclination to develop appropriate skills for the industry. Thus it tends only to be those producers who are able to develop appropriate skills who start to become inclined to see their future in the industry.

Otherwise, they may ultimately envisage a time when they withdraw from the industry and return to working full-time on the farm. Their principal motivation is simply to obtain a supplementary source of income. Once they have attained a certain income or savings target, they will leave the industry. This raises questions as to what the government should do about the people who simply use the industry as a source of earnings. It should be remembered at this stage that sub-contracting represents just one model of rural industrialisation. The government should thus develop a multi-strategy approach in order to provide support for all types of rural people and their varying motivations, abilities and potential. Sub-contracting should be promoted for those who wish to become increasingly involved in rural industry as entrepreneurs, with the government focusing upon how to help sub-contractors to progress to become entrepreneurs, whereas other systems of production should also be facilitated for those who wish to use rural industry as a supplementary source of livelihood.

From the above analysis it was found that many entrepreneurs had emerged from their former status as sub-contractors. In this way there is a sense that the sub-contracting system may be playing an incubating role for the entrepreneurs of the future. Hence, the promotion of the sub-contracting system, if successfully accomplished, carries many potential benefits to village and industry alike. This said, there may also be potential market constraints which have also restricted the expansion capacity of other rural industries. Simply creating more entrepreneurs without ensuring that the market will absorb the additional volumes of production that they will generate would lead to the risk of unregulated overproduction which is already threatening to blight the gemstone industry. Nonetheless, there is no reason for not exploring the potential for the promotion of entrepreneurship through this production system. Mrs. Jamjan Hommuangpak, an entrepreneur in Ban Na Kae who was also originally a sub-contractor, said:

> "Splitting from contact with a large factory in order to do our own business has created a problem in marketing. When we were sub-contractors there was no need to be responsible for marketing. But at present we have to be responsible for our own sub-contractors. It is difficult to compete with large factories because of low capital so mostly we sell to the local market which is quite small ... It will be good if a government agency can help us in marketing. At least, this industry can grow."

For the fish-net industry, there are not any sub-contractors who have become entrepreneurs in the manner described above for the silk-weaving industry. This may be because this kind of industry has only recently started, so the sub-contractors do not have much experience and do not yet know the business very well. Moreover, the sub-contractors who were poor farmers in the area have just begun to have high income from their involvement in the industry. Principally, they have no substantial savings as yet, so their earnings have to be spent on their basic household necessities. So the opportunity to start their own business has not yet occurred in the area.

Unfortunately, the blanket-making industry, which was introduced a number of years ago, then stopped because of the lack of a market for the products. It too does not yet have any entrepreneurs emerging from among the sub-contractors. However, it is possible for sub-contractors in both the fish-net and blanket industry to become entrepreneurs in the future, after they have been involved in the industry for a while and have accumulated sufficient savings to make a start in the business.

(4) Conclusion

We can thus consider that the sub-contracting system is good for new villagers, or farmers, who have never previously obtained experience of off-farm or non-farm work. It provides them with the opportunity to earn a good income when compared with other potential sources of livelihood in the vicinity of their homes. This is particularly so with farmers who own plots of land of sub-marginal size, and who thus earn insufficient income from agriculture. Proximity and relative ease of access to an urban factory are the only principal pre-requisites.

The silk-weaving, fish-net and blanket industries are examples which highlight the ways in which the sub-contracting system can be of benefit to villages and large factories alike. The villages help to overcome labour supply constraints when these factories are expanding quickly, with minimal investment requirements for social infrastructure, and at the same time it provides much-needed jobs, *in situ*, for villagers who want to work at home. The villagers too need not invest much, except in the purchase of some manufacturing instruments - the raw materials are provided by the factory. Within this system the producers also do need not to look for markets for their products themselves as the factory takes responsibility for this activity. In spite of the wages they could command through their involvement in this industry, the feeling of it being a minor occupation remains in the minds of many sub-contractors, even though they often spend almost all day and all year doing their sub-contracted work, and focus on farming only during the peak agricultural seasons.

We have also seen how some of the sub-contractors have become entrepreneur, establishing their own businesses and small factories in their home villages, taking on their own sub-contractors, and taking fuller responsibility for the marketing of their products. Many present sub-contractors also expressed a willingness to become an entrepreneur and establish their own business, encouraged by the prospect of higher earnings and supported by their length of exposure to the industry and their clear sense of purpose with regard to the future. Lack of savings, and a disinclination to take on risks and responsibility were preventing others from considering this possible future development.

As the number of entrepreneurs and factories increases, the villagers will receive greater benefits. The villagers who become entrepreneur will have an opportunity to earn more than they did as sub-contractors. The villagers who are sub-contractors will also have an opportunity to receive higher wages because of increased competition for labour. However, there are also constraints. The number of sub-contractors may be inadequate. Principally, most sub-contractors who are farmers will stop their work and shift to agricultural work in the rainy season which may cause the factory to have low production during that period. For some kinds of products, factory production cannot stop production or produce only during the dry season. It has to continue year-round, and thus it may create management or organisational difficulties if the producers/sub-contractors cannot work continuously. So the sub-contracting system may not be so good for the factory in this sense because they factory owners cannot control these workers to the same extent that they can their own full-time workers in the factory. Such is the nature of rural industry: it has distinct advantages, but also a number of constraints to its further expansion. It is these latter which should provide the focus of attention for government planners.

CHAPTER 8

A COMPARATIVE ANALYSIS OF RURAL INDUSTRY TYPES, AND ASSESSMENT OF POLICY FORMULATION POSSIBILITIES

Chapters 5-7 analysed three somewhat different types of rural industry in the North-East of Thailand - traditional, technical skill-based and sub-contracting industries. The analysis of each type focused on the characteristics of the industry, the involvement of local people in manufacturing, the role of the industry in increasing income and improving the living condition of local people, the marketing of products, the potential of producers to become entrepreneurs, the role of government agencies in co-ordinating and developing the industry, and ended with an assessment of the problems, future trends and possibilities for policy formulation in developing each type of industry.

This chapter will include a comparative analysis of the three types of industry, and will compare the advantages and disadvantages of each type in relation to its occurrence, benefit to local people, future possibilities and potential to develop. The comparative analysis will help us to build up a model for policy formulation in order to promote rural industry as part of a wider strategy of rural development policy, with the principal objective of increasing rural incomes and opportunities. The analysis will highlight the possibilities for promoting suitable types of rural industry in areas which have similar conditions and characteristics. The analysis will be based on the assumption that some advantages of each type can apply to other area if the prevailing conditions are similar: the experience of local people from one place might also apply to other places. This means that the experience of the present industrial villages might be applied more widely, to include other poor village which might also have the potential to become part of a wider rural industrialisation strategy. The discussion of policy formulation for the promotion and development of rural industry in this chapter will be based on the concept of grassroots development, wherein local people in peripheral regions such as the North-East provide the principal unit of study, and whose individual needs and aspirations provide the focus for stimulation and support, in contrast to the blanket macro-level, bureaucratic top-down approach which is still widely applied in Thailand today.

(1) The Occurrence and Implementation of Industry

The evolution and expansion of rural industry has been shown to be important in providing supplementary sources of livelihood for the peasants of North-East Thailand, and even in this narrow respect can be argued to have brought considerable developmental benefits. However, rural industrialisation has not occurred universally and homogeneously throughout the region: as we have seen, its occurrence depends on the prevailing conditions of the location, its resources and its people. Many kinds of rural industry in North-East Thailand have been implemented for a long time. The cushion-making industry is a very good example. It has been present for many generations. The discussion in Chapter 5 showed that the production techniques of traditional industries have largely been transferred from the older generations, and the process of manufacturing has for a long time formed part of the community's tradition. The mat-making industry, cotton-weaving industry and brassware-making industry all display similar characteristics in this regard. These traditional industries have the same character of long establishment and the use of quite simple production instruments and local raw materials.

The occurrence of these traditional rural industries can be said to occur 'naturally', which is very different from the case of the technical skill-based industries and sub-contracting industries. The analysis in Chapter 6 of the gemstone-cutting industry and pseudo-ancient pottery-making industry showed that these technical skill-based industries did not occur naturally but were introduced into the rural areas or villages. They neither engage in manufacturing as a tradition nor do they predominantly utilise natural raw materials. Another characteristic is that they do not produce for consumption by the producers' household, nor is a single household involved in all components of the production process.

Industries using the sub-contracting system can also not be considered to have occurred 'naturally'. Although the silk-weaving industry is a traditional cottage industry in the region, the character of the sub-contracting system now dominates its character to the extent that the factory now totally controls the manufacturing process and production decisions, even though manufacturing takes place within the sub-contractors' households. Most of the producers did not previously produce silk as a tradition, nor did the initiative for the transformation of the manufacturing process come from themselves. It occurred through the endeavours of urban-based factories. The imperatives of increased production did not originate from, for example, the over-supply of local raw materials which forced the local people to try to utilise these local materials by introducing a new, more efficient production system. For this reason, the technical skill-based industry and sub-contracting industry have no traditional and natural characteristics, but they do have the character of factory work which broadly imitates the urban style of working. This means that rural industry in the North-East Thailand has many styles. Some kinds of industry have occurred from the initiative of the local people, and some kinds have occurred by importing the manufacturing system from urban areas. These latter industries have essentially copied the factory style to work in the village. Production management also has many styles. We can identify the factory system, which works much like an urban industrial enterprise, and the cottage system, which takes the form of an old, traditional style of rural manufacturing. Production management through sub-contracting falls under the control of the factory system, to which the home-based producers are associated as out-liers, with little say in production decisions and little control over wage levels, conditions and the like. In contrast, traditional industry is like cottage industry which is managed by household members.

Another interesting point here is the way that rural industry often harmonises, to a greater or lesser extent, with the rural way of life, in spite of the quite widely differing character of the varying types of rural industry in this region. Traditionally, rural industry existed in harmony with rural life and the rural environment, whereas that which has been brought in from outside or built up by imitating urban industrial systems may be expected to be less in harmony. Accordingly, one particular advantage of the development of traditional industries is that their growth and evolution might be expected to occur without undue disruption or contradiction to rural life.

In contrast, some types might create tension with rural life, and thus be less harmonious. Some kinds of technical skill-based industry, such as gemstone-cutting, must use complicated instruments or machines in the production process - items which have to be bought from outside the village. The contradiction between rural life and industry is greater here. The peasants have never previously used these machines and complicated instruments - unless they gained exposure to them through migration. They therefore have to be trained before becoming involved in the industry. However, if we take a more positive or optimistic perspective, we might argue that the villagers may become familiar with the system over time as the industry becomes established and mature, and benefits will thus accrue in the longer term. In the traditional industries most of them are already familiar with the simple production techniques and simple instruments which are used, because they have been surrounded by them, and have even used them, since they were young. Hamoniousness with the rural way of life is one factor that we should think about when we consider the potential for promoting rural industry in certain places. Although the villagers may be able to adapt themselves over time, the use of machinery may sometimes create problems. The unfamiliarity with machines, instruments, and chemical products has also caused some producers to experience problems with their health. The young peasants who are involved in the gemstone-cutting industry were not aware of the harm that their work could do to their eyes because their rural lives have not encountered such problems previously. So they did not protect their eyes while they were working - nor, it should be said, were they required or even encouraged to do so by their employers. Sometimes this created more serious problems than we might have anticipated. It caused many gemstone-cutters to work for only 3-5 years before they had to leave because their eyes became weak and strained. Furthermore, some problems were sudden and serious. Many gemstone-cutters who worked with the cutting-machine hurt their fingers because they had no protection while they were working with the sharp band-saw. Some problems were virtually unseen and even unknown. The producers of pseudo-ancient pottery hurt their health by inhaling fumes from chemical paints which they used to colour the pots, and they too were unaware of the hazard. It is possible that these problems appeared to be more serious to outsiders than they did to the villagers themselves, because different criteria on knowledge of safety standards may have applied. Nonetheless, on observation it appeared that the traditional forms of industry tended to be better than the other two types in this regard. These dangerous events did not occur within the traditional industries because the materials they used were natural and benign, and because the peasants were already familiar with the production process and knew how to use and protect themselves from any potential dangers.

The working hours in the technical skill-based industry and sub-contracting industry represent another visible problem which highlights their lack of harmony with rural life. The producers in many kinds of industry in these two types had to work almost all day. The workers in many of the gemstone-cutting workshops had to work more than 10 hours per day and often had no holiday or break. The sub-contractors in the silk-weaving industry also worked more than 8 hours per day. This limit to their personal freedom is quite a contrast with rural life, which is very simple and where work usually takes place only during the daytime. From this point of view, is it possible for them to work harder than when working in an urban factory? Does this issue create any problems for them in their lives? By having to work all day and night, the workers are often unable to do the household work which they had to do in the past before joining the industry. Thus is it possible that the development of the industry caused them to change their rural lifestyle and way of life. The problems here are the closeness and cohesiveness of relationships between villagers may decline if they have to work all day and night and have no time to make friends or to have close relations with their neighbours and family members. Although they can choose to do the industrial work any time they like, the limitations imposed by their low income forced them to work more and more in order to earn as much as they can, and caused them to work all day and including night time, mostly with no holiday. Thus the development and further promotion of the technical skill-based industry and sub-contracting system draws people closer into the realm of the 'urban', in terms of social organisation and economic orientation. Although there are undoubted economic benefits associated with this - as is also the case with migration - there are also certain social costs. Thus we are not necessarily faced here with a 'win-win' situation.

If we consider the harmony of industry and rural life, it is difficult to deny that traditional industry has distinct advantages because it does not appreciably change rural life while at the same time satisfying people's various economic needs. Local raw materials can be utilised and the peasants can become involved quite easily. Principally, their rural way of life is not interfered with. Traditional industry might thus represent the best model to promote if, in our definition of development, we also include some intention to help preserve the essence of rural life. This may be one factor which supports the argument that rural industry which is created/initiated by villagers could be harmonious with the agricultural way of life of the peasants, although the villagers may initially be somewhat unfamiliar with some forms of rural industry. This is an issue that the planners should consider if they wish to develop rural areas by this means. They should think about the appropriateness of harmony with rural life. Therefore, rural industrialisation should not simply be implemented in a blanket form but should be carefully planned, taking into account prevailing local conditions. Rural industry is a model which requires the least intervention by government because the foundation of this form of rural industry is already well-established in the rural setting. Government agencies might thus promote existing cottage industries.

However, we should be aware that the harmony of industry with rural life can not be considered the only factor to be considered in policy formulation. Income-earning is also an important criterion, as we shall discuss later. The ideal model should thus be one which helps to improve income-earning potential at the same time as helping to preserve rural traditions and the established way of life, allowing farming and non-farming activities to co-exist, and even to improve together.

(2) Communication and Infrastructure

Infrastructure is another important factor in the development of rural industry. Industry requires a location which has good road access for the transfer of raw materials from plant or field to the production areas, and the transfer of its products to the market. Furthermore, it typically needs electricity and a water supply in the production process. Communication is another indispensable requirement for industry. We have seen how important communication with outsiders is in conveying information between producers and the market, particularly in relation to the changing needs of consumers. If the production areas have adequate infrastructure, and can communicate easily and efficiently with the outside world, the prospects for industrial development will be good. Such criteria are clearly important for urban industry: it would appear to be quite difficult to initiate industry without them. In contrast, this is not always true for rural industry. Some types need infrastructure, but some types have occurred in locations with very poor infrastructure. This point should be taken into consideration by those planners whose conventional thinking may predetermine that it is difficult, if not impossible, for industry to locate and develop in rural areas with poor infrastructure and poor communications. Looking at rural industry in the North-East Thailand, we have seen that many kinds of industry are located in areas that have infrastructure which may be considered inadequate - nonetheless, the industries have, to a greater or lesser extent, emerged, evolved and developed. Traditional industry, by its very nature, is mostly located in fairly remote areas. Although some urbanised areas still have old traditions, their traditions are changing as a result of rapid urbanisation, and production traditions are disappearing. It is a wonder that traditional rural industries can survive and in some cases even thrive in the remote areas which are served with poor infrastructure. The cushion-making industry at Ban-Sri-Than has been in existence for a long time even though this village is located in a remote area and the infrastructure was not so good at the time that the industry started to take off. Infrastructural improvement has followed, rather than preceded, the industry's development. Other kinds of traditional industry, such as mat-weaving, brassware-making, cotton-weaving, etc. are also mostly located in remote areas, and their occurrence too did not require much initial investment in infrastructure.

The technical skill-based industries were also located mostly in remote areas. The evolution of the industry was partly predicated upon the importation of techniques and machines from outside the village. Although some kinds of industry in this type do require infrastructure (the gemstone-cutting industry requires electricity to power the cutting-machines, for instance), it required neither good roads nor communication infrastructure. Ban Non Fun Rua and Ban Nong-Toom of Khon Kaen province could introduce the gemstone-cutting industry even though they were located far from the city and there were bad road links between the village and city. In the past when Ban Non Fun Rua had no electricity, the entrepreneur and workers of this village could adapt their manufacturing location by producing in Amphur Chum Phae, which had electricity available and is located not so far from their home village. Ban Mor and Ban Pulu of Udon Thani province which produces pseudo-ancient pottery is also not located near to a city or a place that has a lot of infrastructure, but the peasants in these areas could still produce and sell their products.

The sub-contracting industry type is not so different from the above two types of industry. The villages in which it has developed also had insufficient infrastructure. However, it does differ from the other types in that its location has to be quite close to the city or town where the factory is located. Although proximity is an important factor, this does not means that infrastructure necessarily has to be good too. Ban Na Khae and Ban Nok Ork of Nakhon Ratchasima province, Ban Savati of Khon Kaen province and Ban Pon Sawan of Nong Khai province are all located in the areas that have very poor road links with the city. Although these villages have an electricity supply, the other communication and transportation infrastructure are still not so good.

The above suggests that, unlike urban-centred industries, infrastructure is not a major factor in the occurrence and success of many rural industries. Most of them could become established and developed in locations which do not have sufficient infrastructure. Although some rural industries in North-East Thailand do require infrastructure, such as electricity, the requirements of these rural industries does not compare with urban industry which requires good roads and sufficient electricity and water supply and excellent communication facilities. If the government were to set up a policy to promote rural industry under a broader scheme of rural development, it need not invest so heavily in infrastructure as part of this policy, in quite stark contrast to urban industry. Electricity supply which is necessary for some kinds of industry is already supplied as part of the Thai government's rural electrification programme, and now covers almost every village in the region. Thus the required basic infrastructure is already largely in place. The cost effectiveness of investing in rural industry, at least in this particular respect, would be very high.

However, if it is possible to improve infrastructure, there is little doubt that it would help rural industries further to improve production, productivity and profitability. The improvement of roads can support transportation which, of course, can help to expand the market for their products. The improvement of communication (e.g. in the form of a telephone network) can help provide the producers with market information. If the government is serious about support the development of rural industries by providing or improving infrastructure - such as improving the quality of link roads - it can help significantly to develop the manufacturing and marketing of these industries. This is because the outsiders, who may be wholesalers, will make contact more often and the producers will be able to transport their products more quickly and frequently to the market as well. Such infrastructure is not needed at the first stage in the promotion or creation of industry; they can come after the industry has started to evolve or develop. This means that the government needs not find huge sums for investment in the initial stage, and can be quite selective about the support it provides in due course. In some senses, this selective and targeted support approach would differ significantly from that which has been more commonplace in the past - with blanket, region-wide infrastructural development policies, the impact of which was often disappointing in relation to the investment made. Furthermore, the government responding to the needs of the people, and supporting industries which they have helped to develop themselves, may be seen as preferable to the orthodox approach whereby the government seeks to initiate industrial development and provides the people with a packaged model. Such an approach often comes along with an excessive and unnecessary - by the modest needs which we have identified in our own study - investment in infrastructure. This raises the question as to how the government can know which villages to target and support? In actual fact, the local government and local officials know their locations very well, but in the past development efforts have concentrated on the creation of strategies for which suitable locations have been sought, rather than the other way round - suitable plans and strategies being identified for particular locations. A reversal of thinking and doing is all that is needed to bring about more appropriate forms of local development: as we have said, the local knowledge is already available, it is simply that it has been underutilised because of the prevailing development planning and implementation orthodoxy.

The analysis above has showed that if the government acts as a supporter rather than a creator of rural industry, it will be appropriate and advantageous. It is not necessary for the government to provide infrastructure as an objective in the creation of industry in the rural areas, but to support those industries that have shown themselves to have a good developmental future. This strategy can provide investment at a lower cost because it is only necessary to invest in the areas in which industry has already begun to emerge and evolve. This does not mean that infrastructural investment can be completely neglected, however. We have seen that, at a later stage, transportation and communications are essential as a means of easing market constraints which our study has shown often represent the most significant barrier to development and success in the rural industrial sector.

(3) Participation of and Benefits for Local People

In addition to the location and characteristics of rural industry being matters of concern in the formulation of policy, the participation of people in the industry's development is another important factor. Participation is a key to the developmental benefits of rural industrialisation: without it, or if certain groups are excluded from it, the advantages in terms of improving people's livelihoods, opportunities and prospects will be very limited. Our analysis in Chapter 5 showed that most of the traditional industries involve local people. However, local participation rates in some of these industries are rather low: in the brassware and mat-making industries only some 5-10% of villagers are involved, principally because the income levels are insufficiently attractive. But in the cushion industry, more than 30% of the villagers are involved because they are satisfied with the incomes they obtain. The same situation applies in the technical skill-based and sub-contracting industries, where some have high participation rates and others are disappointingly low. Nonetheless, on average, the level of participation in the latter two types of industry is higher than for the traditional forms of manufacture. These two types mostly gave a satisfactory income.

From the perspective of genuine grassroots development, the involvement of local people should mean more than their simple participation in the production process, but should also include participation in thinking, planning, implementation and management.

The technical skill-based industry is interesting and attractive to the villagers, and more than half of them in the village will participate if they have sufficient skills and they are appropriate to the demands of the industry (e.g. not too old). The sub-contracting industry is also quite interesting because the income obtained from most industries in this type is better than other jobs, and the opportunity to work from home is an added attraction, particularly for young married women.

Thus, local participation rates relate closely to the income that is obtained from a particular type of industry. If the villagers can obtain more, or at least not less, than other jobs, they will participate. If a government agency were able to promote rural industry so that it offered sufficient and attractive incomes to villagers, there is no doubt that villagers will participate more than at the present time. It is also possible that people from outside the vicinity of the industry might also be attracted to work there. At the moment all three types of industry in this region are implemented by local people. Outsiders are involved primarily in providing contacts but are not much involved on the 'shop floor' (except in the case of the gemstone-cutting industry). Thus, a wider section of the population of North-East Thailand would benefit if the size and dynamism of the rural industrial sector were to expand.

Although some types of rural industry in this region, such as those which use the sub-contracting system, are quite similar to the other forms in that the system is based principally upon villagers selling their labour, we have also seen that the sub-contractors have a much greater opportunity to up-grade themselves to become entrepreneurs and business owners, especially after they have worked for a long time and have enough savings to invest in their own businesses. This provides a much better income, and seems to be an opportunity which only the rural sub-contractors have access to: the urban factory workers do not. We can use the example of sub-contractors in the fish-net industry in Khon Kaen province as a case in point. They could up-grade to become a job distributor (sub-contract the job from factory and sub-contract again to the villagers to undertake).

However, there are factors other than income, such as the suitable condition for rural life, their ability and health, etc that encourage the local people to participate in rural industry. The villagers in and around the gemstone-cutting villages want to participate in the industry but some of them could not work because of their poor eyesight. In fact, this kind of industry needs good eyesight for the cutting and polishing processes, as we discussed earlier, so the new workers who have poor eyesight, as well as the old workers whose eyesight deteriorated because of working in the industry, have limited potential for participation for this reason. Limitations on participation also occurred in other kinds of industry. The villagers in Ban Pon Sawan wanted to participate in the industry but its marketing potential was not so good and their village was far from town, so they could not find sub-contracting work to take the place of blanket-making. Thus, some are drawn towards these industries by their positive attributes, whereas others are motivated more by negative factors, such as their inability to do anything else. Others would ideally wish to be part of the dynamic rural industries but are unable to gain access for various reasons. If a government agency tries to promote rural industry and encourage local villagers to participate with the objective of increasing their income, they must consider the degree to which the incomes available will satisfies the producers' needs and desires. They must also consider other circumstances. For example, the villagers may not be satisfied to be involved in their traditional industry, but they continue to be involved because they have no other choice. The promotion of industry that villagers are not satisfied with will therefore be unlikely to increase the number of producers who are willing to participate. Thus only the present producers could be helped, without any real guarantee of future success. So the government should think about the capacity for 'peoples participation' before planning the promotion of rural industry.

The analysis in Chapters 5-7 also showed that these rural industries have an important role to play in the development of rural society. The impact in increasing household income is quite clear. The impact in the pattern and scale of migration is also another benefit. Some kinds of industry can reduce the pressures which are leading to out-migration to work in the capital city and other big cities. But some kinds of industry have no effect on rural migration. The traditional industry has a low effect in terms of decreasing the impetus of migration compared with the technical skill-based and sub-contracting industries. Many kinds of traditional industry have a low percentage of local people who participate, so the impetus for migration remains. Because it could motivate the peasants to involve themselves at a low level, the villagers who need more income in the villages of the traditional types of industry will still want, or need, to migrate. In comparison, the technical skill and sub-contracting industries provide a much higher degree of motivation for involvement. The peasants were more satisfied to work in the villages that had these types of industry than they were to migrate. Not only were they satisfied by the incomes available but also the situation of the industry. These industries need a large labour force and the situation is open for them to become involved, so the villagers are satisfied to work in the villages rather than to migrate. Moreover, the condition of work which is like the factory work can be another factor of motivation because they feel that they are working more or less as they would in town, as discussed in Chapters 6-7. So these two types of village industries can reduce some of the forces behind migration. Although traditional industry has a low effect in reducing these forces because of low motivation, some kinds of industry in this type, if they have a good market, can reduce the need for migration because the middle-aged and old peasants in particular feel happy to work at home rather than migrating to work in other places. This implies that, although the impetus driving migration in this region in the past may have come predominantly from the prevailing economic conditions as well as the social drive to obtain experience and prestige, rural industry has had quite a significant influence on reducing this drive or impetus. The economic incentive has been much reduced, and at the same time young villagers are able to work at home in the company of their friends.

There is other clear evidence of the developmental effects of rural industrialisation. The villagers who are involved in the industry not only have a higher income but they also have more furniture and household possessions than the villagers who have no minor job. We have seen that, beyond rural industry, there is typically next to nothing which can provide villagers with a dependable income *in situ*. In some of the more remote villages that are located far from the city, industry is the only source of secondary or supplementary income. For this reason, those who are involved in these industries have a much better prospect of obtaining the material possessions to which most in these rural areas aspire.

It can be said that rural industry in North-East Thailand could thus help to improve rural conditions, not only in the economic but also the social sphere. But some kinds of industry have a low local participation rate because they are not able to provide sufficient income to the producers or because the income so-derived could not improve rural conditions. So the promotion of rural industry to increase incomes as the central aim of rural development must choose only certain kinds of industry which have good future prospects and where the villagers intend fully to participate. This is preferable to a blanket policy which seeks to provide assistance to all forms of rural industry.

(4) Potential for Production and Expansion

4.1 Raw Materials

The next issue that has to be discussed, in addition to the source of income of peasants, is the situation of its production. It is not useful to promote rural industries if the prospects for production and business are not very good. The peasants may benefit for a very short period during the promotion process, but will hardly benefit in the longer term if the business goes bankrupt.

The lack of raw materials was identified as a serious problem in the analysis contained in Chapters 5-7. Traditional industry was particularly affected by this problem because most of its raw materials come from locally available natural materials the supply of which has either tended to decline in recent years or has been unable to keep up with the pace of the industry's expansion. Some kinds of traditional industry had to buy materials from outside their home village because there was not a sufficient supply in their area. The producers in the cushion-making industry had to buy kapok from many parts of the region to support their production. At the moment, kapok supplies tend to be insufficient, so the producers have to use recycled kapok instead the new and fresh kapok. The tendency is to utilise a large amount of kapok but not to replenish the original sources.

Were the producers in this kind of industry worried about this issue? Have they managed to find any solutions? Are there any alternative sources of raw material that they might use instead once local sources have become depleted? Whose responsibility should it be to find substitute materials - the villagers, the government, technical research centres? If we look back to the cushion-making industry, we find that the producers themselves have found ways to solve their raw materials problem, such as by recycling kapok. It tends to be that the more serious the shortage, and thus problem, the more urgent becomes the search for alternatives. A certain, understandable complacency sets in when raw material supplies are abundant. Unfortunately, there does not appear to be any sense of anticipating when a supply is likely to become scares; the tendency seems to be to react once a problem occurs, which may severely constrain an industry's development until alternatives can be brought on stream.

Problems have not been restricted to the cushion-making industry, but have also been identified elsewhere. Other kinds of traditional industry also face problems with the lack of raw materials. The producers of the mat-making industry are facing shortages of the reeds from which they weave their mats. The producers of pottery industry are facing the problem of shortages of clay. Likewise, the producers of the cotton-weaving industry are facing the problem of a lack of raw cotton. This problem is more serious when production increases, which causes natural raw materials to be consumed at a higher rate, while the supply of these materials is limited and inadequate attention is given to maintaining sources of supply. In the past, people tried to utilise natural material to produce furniture and household necessities and did not worry about the insufficiency of these natural materials. They did not plan to grow or provide them for future use because they did not think that it will become a serious problem of present production. However, when the problem becomes really serious they may be forced to find new raw material sources, or change the nature of their products: necessity is the mother of invention.

If we look at the large industries and factories, the entrepreneurs have to plan to secure raw materials by themselves. Some kinds of raw material they have to grow. If the traditional industries expand and increase their production but do not have any plan to secure the supply of raw materials, it will severely constrain their capacity for expansion. It is thus good, where possible, for producers to try to utilise substitute materials, but in the case of traditional industries there are few conveniently available substitutes. Thus the most effective short term measure is to plan to secure the raw materials needed for their future expansion of production, such as by producing new materials themselves.

When we consider the producers of most traditional industries, there is only a few that have the potential to secure their own raw materials. Most producers are in a situation of day-by-day earning. Their economic conditions do not allow them to invest much. The reason why they utilise natural material in their production is its low cost. If they have to pay or invest a lot in raw material they may constrain their potential to support other aspects of their industry's development. On the other hand, if they have no raw material to supply their production in the future, they will also run the risk of constraining the income-earning potential of their enterprises. It may be impossible to expand production if the problem of a lack of raw materials cannot be solved. This may, in turn, force the producers to find a solution. We might be quite optimistic about their ability to do this: after all, their involvement in non-farm activities itself represents a fairly innovative response to the constraints imposed by farming.

The technical skill industries did not experience such problems with the supply of raw materials, but instead faced a problem with the increasing prices of raw materials. While the selling price of their products has tended to decrease because the number of producers has increased, increasing prices for raw materials causes them a considerable headache - a cost-price squeeze. Consider the system of production of this type of industry: the producers have to buy raw materials from the merchants or middlemen who are quite powerful in controlling the price. The producers of the gemstone-cutting industry had to buy zirconium and also machines from the merchants in town. Although the number of merchants has increased, the number is still small when compared with the increase in the number of producers. So the price of zirconium increases because the demand for it is high. If we consider this problem from another perspective, it may be seen as a catalyst which forces producers to find alternatives, just as we have seen in the case of traditional industry. We may see the producers buying these materials from the original cheaper sources or selling these materials themselves when they find that they are disadvantaged by having to buy expensive materials from middlemen who benefit considerably from the transaction.

The producers of pseudo-ancient pottery also had a problem relating to the increase in the price of raw materials. They use chemical colours to paint their pottery. When the price of paint increased it made the cost of production for their products increase. While they could not increase their selling price because of a small market, the increase of investment cost was, quite obviously, a problem. The producers might be able to find substitute forms or sources of paint in the future, responding to the forces of necessity just as we have seen with other rural industries. If the producers return to use natural paints, such as that derived from haematite clay, instead of using chemical paints, it may have the additional benefit of adding to the traditional or natural charm of their products (using the original, local raw materials, as was the case in ancient times), which could be a strong positive selling point, enabling to producers to maintain or increase their earnings whilst marginally reducing production costs. However, the problems of the technical skill-based industries may not be as serious as with the problem of a lack of raw materials on the traditional industry, but it is still a problem which is leading to a decrease in producers' profits.

The sub-contracting industry has no problems of raw material supply because it is provided by the factory. The producers do not have responsibility for this aspect of the production process. They received only wages paid and raw material provided by the factory. By this system, the producers should not be affected when the price of raw materials increases. It should be the problem that the factory has to face, although of course the producers may well also feel the effect by having to accept reduced piece rates as the factory seeks to maintain its margin of profit. The reduction in the piece rate has a direct effect to the income of sub-contractors. When the factory reduces the rates paid, and thus their incomes, this in turn may be expected to reduce their incentive to continue or increase their involvement in the industry. However, if there were other factories in the vicinity, creating competition for labour, this problem might be overcome.

Thus, as we have seen, the supply of raw materials is one, sometimes quite significant problem faced by rural industry. It can be a source of boom or bust as far as the future expansion of the rural industrial sector is concerned. Government agencies should thus have a role to play in helping producers in securing their supply of raw materials for their future production or helping them to utilise other materials, perhaps provided by scientists and officials, of by encouraging the producers to seek other sources for themselves. One thing that the government agency can do is the promotion of co-operation among producers of the same kind of industry, especially the producers of traditional industry where most of them have limited potential to do things entirely by themselves. For the technical skill-based industry and sub-contracting industry, if they can encourage more co-ordination among producers, they will have stronger bargaining power over outside merchants or middlemen which may help to stabilise the price of raw materials and, indirectly, wage levels. However, they must be careful because the involvement of government agencies in this issue should not involve too strong and direct a form of intervention, otherwise the potential for producers to develop and evolve by themselves may be compromised.

4.2 Labour Force

Labour supply is another very important factor of production which is significant to the future development of rural industry in the North-East. When rural industry becomes bigger or expects to expand its size, the producers or entrepreneurs need to think very carefully about the quality and availability of labour in the vicinity. If the labour supply is not sufficient, the expansion of the industry will be impossible - unless it is accomplished by means of technology, which we argue is not necessarily appropriate to the conditions and needs of the rural sector. When rural industry changes to become machine or technology intensive, local people will have limited benefit unless they are entrepreneurs. The aim in rural industry promotion should be to provide jobs for the peasants in order to help them to increase their income. If the kind of industry which the government tries to create in rural areas is not labour intensive, the aim in providing jobs and income will not be realised.

The analysis in Chapters 5-7 showed that most of the industries in the North-East are labour-intensive. It is quite clear that it can accordingly help to increase rural income, and this it would be useful for the peasants if the government were able to develop its status and spread it out more widely within the region. Although the basic concept of rural industry is providing jobs for peasants who earn insufficient income from their major occupation in agriculture, this concept is sometimes constrained by the lack of labour supply in some kinds of industry. Traditional industry seems to have few problems in labour supply compared with the other two types because most of them utilise local labour. The labour in this type of industry needs few technical skills, so additional labour can become involved quite easily when production requires an increase in the size of the workforce. The serious problem of labour supply tends to occur in the technical skill industry. Due to its nature, it needs skilled labourers, which can not so easily and readily be supplied. Although there are a lot of people in rural areas available for work, especially in the areas where most of the people are poor, most of these potential workers are unskilled labourers. Some kinds of technical skill industry need a lot of labour, but the supply of appropriately skilled and able labour is very insufficient. The new workforce could not involve themselves immediately when industry needed them, so they have to be trained before they can work. Moreover, some kinds of industry need a lot of young workers which the local labour pool could not adequately supply. Put together, these problems obstruct the expansion of rural industry, particularly of the technical skill type.

The analysis in Chapter 6 showed that the villages that have the gemstone-cutting industry need a lot of young workers, but local labour was not sufficient. Some entrepreneurs had to recruit workers from other villages and some of them had to ask their young cousins to become workers, otherwise they could not expand their production. Because the gemstone-cutting industry has expanded so fast, it has needed a lot of young and skilled workers which the local areas could not supply. Thus, whilst there is considerable potential for the technical skill industries to contribute to local development, its potential is not being fully realised on account of skills and training bottlenecks in the local labour force.

Similar problems were identified in the pseudo-ancient pottery-making industry, which also faced a problem of a lack of skilled workers. However, in this case the incomes which peasants obtained from this kind of industry were quite low when compared with the gemstone-cutting industry. Accordingly, it was not facing the same pressures of expansion which had exposed the weaknesses of the labour force in the case of the gemstone industry. Nonetheless, in the future if the pseudo-ancient pottery industry booms, the labour problem may be expected to become more serious.

If the government intends to promote the technical skill-based industry, they will have to think about the problem of the lack of an appropriately trained labour force. They should plan for labour supply before taking any action to promote the rural industrial sector. If labour problems occur during the promotion, the effort of supporting agencies will be largely wasted. Many of these industries had to train their workers through 'on-the-job -training'. This kind of training may reduce the degree of the labour problem, but it also constrains production output because the workers who are training cannot work quickly. Furthermore, when the factory has a lot of these 'on-the-job-trainees', the quality of product will not reach acceptable standards. This in turn may have a knock-on effect in relation to marketing.

If the government aims to help this type of industry by increasing training programmes, it will be difficult for them because they cannot forecast future market trends and future production targets. Look back to the nature of this type of industry. Its expansion largely took the form of a fashion or fad. A lot of peasants became involved in this type of industry by following friends and relatives. If we increase the number of skilled workers, it will ultimately (at least without adequate regulation) also increase the number of entrepreneurs, as workers will become entrepreneurs when they have enough experience. That will contribute further to the problem of high competition in production. If the market does not expand, it will lead to falling prices as in the past. So the creation of skilled workers is good to support the industry and help workers to have jobs, but the plan to increase the number of skilled workers must take place in conjunction with attempts to address the marketing problem. It is useless to solve the problem of a lack of skilled labour at present whilst running the risk of creating unemployment in the future of a possible recession of collapse in the industry. Co-operation between entrepreneurs in training their workers may be the best way to solve this problem. It will help to avoid the problem of over-production because the entrepreneurs can share information about future market trends with government agencies which are attempting to tackle the skill and training issue. Thus partnership between business and government is preferable to either going it alone in the training sphere.

The other problems of the skills of workers which planners should think about is the duration of work. Some kinds of technical skill industry do not allow workers to work for a long time because of their declining health. The planners should either seek to ameliorate the factors which contribute to these problems, or they should help plan for the support of these workers after their retirement from the industry. Workers in the gemstone-cutting industry can work only 5 years on average because they will develop poor eyesight, so the planners should prepare some job for them after they cannot work in the gemstone industry. Another way to help these workers is to provide knowledge. The training programme of the government should add the techniques of how to keep their eyes from being hurt, or how to preserve their eyes to work longer. Decreasing their working hours is another way to help keep the workers' eyes stronger. If a government agency can make an understanding with entrepreneurs on the reduction of working hours, it may help both to preserve the health of the workers, and thus their jobs, and also solve a problem of rapid labour turnover for the entrepreneurs. This will benefit both sides. Ideally, any agreement on the reduction in working hours should not also make the income of the workers decrease, otherwise this solution will not succeed because workers will think about their income more than their health. Trying to work more than 10 hours per day will not benefit either entrepreneur or worker. The worker cannot work such a long time and the entrepreneur has to find new workers all the time.

Regarding the problem of labour supply in the sub-contracting industry, some kinds of industry have problems too. Many kinds of sub-contracting industry tend to expand their size, and of course, this means they need more sub-contractors. The silk-weaving industry, which is labour-intensive, needs a lot of sub-contractors to work at home. This kind of industry is facing quite a number of problems with labour supply. The wages paid are a major factor because the factory pays quite low piece rates and the villagers have no strong incentive to work there. The fish-net industry also needs more sub-contractors, but the problem of labour supply is not so serious as in the silk-weaving industry.

The location of the industry is a factor in this problem. The industry that is located close to town faces a high degree of competition in terms of hiring workers. The industry which pays higher wages will also have an advantage in this respect. But the wages paid are also dependent on the business. If the business is not so good it is impossible to pay high wages. The sub-contracting industry is not the same, and some kinds can have good profit and can pay high wages to their sub-contractors but some kinds cannot. The industry that is located in a big town but has low profit finds it difficult to survive. When it pays low wages the villagers will not work for it very long because they can move to sub-contract in other factories which pay higher wages. If we compare the problem of the lack of labour supply in sub-contracting industry with the technical skill-base industry, the former has fewer problems. It mostly needs no experience and technical-skills in its production process, so it is not difficult to replace workers with new labour when the old sub-contractors move on to other factories or when the factory needs a larger labour force. The technical skill industry has some difficulties because it needs to provide training before workers can commence productive employment.

4.3 *Marketing*

The marketing of industrial products is quite important for the expansion of industry. The expansion of industry is impossible if the total sales of the product are low. We can say that good marketing can guarantee the stability of a business, and it will provide an incentive for entrepreneurs to expand their production. A lot of rural industries in North-East

Thailand could not increase their production because of poor market conditions. Only some kinds of industry could compete with urban industry because of their special character of cheaper costs of production. Although these industries can survive with their special character, the important factor that backs-up their future is marketing.

The above analysis showed that rural industry in North-East Thailand faced the problem of a lack of raw materials and an inadequate labour supply. Those problems will be an inducing factor in the expansion process, if the producers/entrepreneurs can solve or manage them, because this underpins the competitive advantage of rural industry over urban industry. It can produce products at a lower unit costs because it utilises local materials and cheap local labour. But when we compare these two factors of expansion with marketing, the marketing will be the more powerful factor.

One factor that makes the cushion-making industry have a good future is its market and marketing. Not only does its special character as a traditional product help to sustain and expand its market, but also it has wholesalers who help to promote and market their production throughout the country and for export too. The gemstone-cutting industry also has middlemen or merchants to help sell and distribute the producers' products. The silk-weaving industry and fish-net repairing industry have the same character. The factory which sub-contracts to home-based producers is responsible for marketing. Because these people have experience in marketing and know the channels of the market very well, they can help to sustain the market outlets for the villagers' products. Consider the rural industry in this region. There must be an influential factor which prevents some industries from expanding their production. The small size of the market is one such factor. The brassware-making industry, the pseudo-ancient pottery-making industry and mat-making industry could not expand their production because their marketing was not aggressive, or their products not marketable.

It is quite important to promote marketing in order to allow the expansion of production of rural industry. If its marketing is good, it will be a factor in the growth of the industry. The middlemen and wholesalers are key factors in the growth of the market. The traditional and technical skill-based industries should have middlemen and wholesalers in the marketing system. On the other hand, the sub-contracting industry does not need this because the marketing duties are not the producer's responsibility. By this rationale, the industry that invests in and produces through the villagers should seek middlemen and wholesalers to help them in marketing in order to enable their production to expand. Although the middlemen and wholesalers may eat into the profit of producers, the total profit accruing from a greater volume of sales will compensate them for their losses. If they can sell a lot, their profit will be better than to sell little. The government should help the producers to contact wholesalers and middlemen in order to increase their competitive position.

So we can conclude that marketing is the most influential factor for the future of rural industry. The industry which can have wholesalers and middlemen to help in marketing will have a promising future and can confidently plan to expand their manufacturing. In contrast, the industry which has none of these people will have some difficulties in developing and expanding its production. It also is the duty of producers, in addition to the government, to find suitable ways of marketing their products. They may choose to have wholesalers or middlemen to help them in marketing or choose to change themselves to be sub-contractors if their areas are located nearby a factory. The government agencies have to support this by increasing the number of wholesalers and middlemen in the system too. If the number of middlemen and wholesalers is too few, the producers will have no bargaining power and they cannot have high profits because the large proportion of profit will fall into the hands of the small number of middlemen and wholesalers who control the market and thus the terms of trade. The strategy to do these duties will be discussed later in the section of policy-making.

(5) Role of Government Agency in the Promotion of Rural Industry

From the analysis of rural industry in North-East Thailand, we have learned that rural industry could occur in the remote areas. So it is suitable to use its promotion as a strategy to increase rural incomes. Which kind of industry should be promoted, or which strategy should be used to promote are important policy questions. Ideally, after the promotion of industry rural incomes must increase and rural conditions must be improved, otherwise the aims of rural industry promotion will not be met.

At the beginning of this chapter, an analysis of the occurrence of rural industry in this region found that traditional industry was easy to initiate. It was harmonious with rural life, but there were many problems facing its expansion such as the lack of raw material and the limited market. The technical skill-based industry could provide the villagers with a high income, but the industry itself could not expand very fast due to a lack of a skilled labour force. The sub-contracting industry could provide jobs to a lot of villagers who live near to the factory, but the wages paid must be adequate. It means that rural industry overall is good and benefits the peasants in remote areas in different ways, but there are also many problems which government agencies have to take some actions to solve. By formulating an appropriate policy to solve these problems, means can be found to promote rural industry which can help these industries survive and develop. The ultimate strategy may be to create quite large industry in the rural areas in the future, whereby these industries may have a strong potential to develop by themselves: in other words, rural industrialisation becomes self-sustaining and self-generating.

The strategy that can tackle the small size of the market for their industrial products may be where government agency acts as the co-ordinator to introduce more wholesalers to the producers, especially the producers of traditional industry who rarely meet the wholesalers and have low potential to do their own marketing activities. Although the introduction of producers to the direct consumers, which forms the basis of the present activities of government agencies can increase total sales, it is impossible to introduce producers to all consumers. By the system of the free market, the wholesalers know the channel of marketing and have better potential to approach consumers than the rural producers. So it is better to use these wholesalers to expand the market for these rural products.

As we discussed in last section was about the necessity of having middlemen and wholesalers, but the disadvantage is that the producers in this system may receive less net profit than through direct sales to consumers. Because the wholesalers need some part of profit and try to take advantage of this arrangement, this problem will decrease when the number of wholesalers in the system increases. Competition between wholesalers will reduce the disadvantage of producers because they will have greater bargaining power over those wholesalers rather than be controlled by them. The creation of trade fairs will be one way to increase contact with wholesalers. It should be a duty of a government agency to facilitate this. Moreover, the government agency should provide some technical knowledge to the producers to improve the quality of their products together with the advice of wholesalers to help improve the size and style of their products. The improvement in quality will increase the market and can help promote the industry to become larger and more dynamic.

The second problem is a lack of raw materials. This problem could be alleviated by the action of government agencies in giving advice about recycling of materials. It is impossible to try to promote industry without attempting to ease bottlenecks in the supply of raw materials. As discussed in the section on raw materials, when the industry expands both in number and size, the need for materials will increase. The advice of government agencies to the producers is necessary because the producers themselves may have limited knowledge in introducing recycling or new planting techniques.

Training courses should be provided. The government agency should contact the local institutions or the regional university to create or improve recycling techniques and inform the producers in all areas. The areas which have serious problems of raw materials supply should be the first priority for the development and improvement of recycling techniques. The raw material that cannot use recycling techniques or substitute materials should have a plan for cultivating or otherwise providing the requisite materials. The government agency which has technicians should work together with the producers to plan to stock and produce raw materials. They should also grow trees that provide the necessary material for future production. The plan to produce, stock and grow material is better than to find materials from other areas which tend to be scarce. This plan will help the producers secure their rural industry from lack of supply of materials, thereby underpinning the long-term sustainability of production.

The third problem is labour supply. Many industries are facing a lack of a qualified and skilled labour, especially the technical skill industries which need a lot of skilled labour but the supply of skilled labour in the rural villages is insufficient. For a solution to this problem, the government agency should have a role to cater for this need by creating some more training courses to increase the supply of skilled labour to serve industry. Although training courses are now being implemented in the areas which have this service, it is still insufficient. If the government intends to promote rural industry, it should have a role in improving human resources to serve industry sufficiently and efficiently. Local institutions and the local university can also help the government agency in the function of improving recycling techniques.

Another role which a government agency should do to solve the labour problem is to provide knowledge of health care to the workers. One problem of the workers in the gemstone-cutting industry was the deterioration of their eyesight. They could not work so long because of poor eyes and there was not any protection of their eyes during work. This problem causes a lack of labour supply because the factory has to recruit new workers every 3-5 years due to the failing eyesight of the workers. The training skills will not be sufficient if the factory utilises too many workers and has no long-term employment strategy. If a government agency provides the protection knowledge and encourages workers to work shorter hours, it will save their eyes and enable them to work a longer time rather than to work hard each day but for only a few years. Safety glasses are also necessary for the workers to wear during cutting the gemstone to prevent strong light that can destroy their eyes.

The fourth problem is low wages. Industrialisation is quite good when it can provide better income to the villagers. In contrast, it will not have any benefit if villagers who involve themselves in the industry receive low wages. The sub-contracting industry should be the best way to promote this because the villagers can receive benefits without the need for initial investment. But the big problem of this type of industry which can reduce the incentive of villagers to remain involved is the low wages paid. If the government can solve this problem, the villagers will involve themselves more in this kind of industry. In the past the wages paid might have been attractive, but when piece rates do not keep pace with the rising cost of living they will feel that it is not fair and their income is not as good as in the past. The government agency should have some role to help these sub-contractors. The best way to solve this problem should be, first, to use the demand-supply system to increase the need of sub-contractors which will promote the wage increase too. This means that the government should take action to encourage new factories in the region and use the sub-contracting system which will be the way to increase the need/demand. Second, government agencies should negotiate with the factory by trying to point out the losses when sub-contractors drift away from the business, in the process seeking to motivate the entrepreneurs to increase the wages as much as possible. Such negotiations will help to increase the wages in the short run, but in the long run the demand-supply system will have a more powerful influence than the other factors.

However, the policy formulation to promote these rural industries, which mostly concentrates on the appropriate role and action for the government agency to use as a promotion strategy, should be harmonious with the promotion of huge industries (large-scale production) in the region. In the future, it may be possible for the large industries to grow and expand in this region. When the capacity to expand industry in the capital city is reduced, the huge industries will be located in the up-country regions. If the government plans to link these huge industries and rural industries, it will help both of these industries to develop, symbiotically. The plan should try to encourage these coming large-scale industries to use the sub-contracting system which can help producers in the region to develop their production. For example, if the government encourages a huge industry such as in pottery-making to locate in an area that has a traditional pottery industry, it will help the producers of that kind of industry to secure the market of their products by sub-contracting from the larger factories. The producers will be encouraged to improve their skills and quality of production. Furthermore, they will not need to worry about the markets for their products because this will be taken care of by the larger enterprise. At the same time, the large factory will have no problem with labour supply because they will be able to incorporate their rural hinterland areas through the subcontracting system.

(6) Policy Formulation by using the Grassroots Development Concept

Section 4 discussed the role of government agencies in the promotion and development of rural industry in North-East Thailand. It is now important to set its role and formulate policy within the grassroots development concept. Past development has had some weak points in planning because it was largely planned from the top downwards, by central administration in the capital city. As we saw from the discussion in Chapter 3 the past rural development strategy tried to use the diffusion concept such through adopting the 'growth-centre' model, but as time passed the development effect occurred slowly and with few satisfactory results. The grassroots development concept tries to change the pattern and direction of planning from the development of an economic system at the macro level to focus on the peasants directly. Theoretically, this should benefit them more directly than the alleged diffusion effect. Rural industrialisation is one rural development strategy that focuses on the peasants who are directly involved in industry. The study of rural industry will help the government agency to formulate appropriate policies for its promotion and development.

The last section discussed is the role of the state in this regard. However, these actions and roles should not conflict with the concept of grassroots and sustainable development. It is useless to develop rural industries by taking action to help the producers of these rural industries to survive today if they cannot have potential to develop by themselves in the future. The policy to promote and develop industry is quite important, but the policy to develop it has to have a high component to allow enterprises to develop by themselves. The production techniques, marketing channel, raw material planning and training programmes for the supply of labour should be provided through the government support. Its agency should play these roles to develop rural industry, but the policy-makers should be careful not to destroy the producer's potential to stand by themselves in the future. The support of a government agency to help these producers have the potential to find markets by themselves and to make decisions as to which kind of product they should produce should be part of their plan. Support to help producers to design the types and shapes of products and to create stocks of raw materials or find substitute materials by themselves should also be important activities to be set up under the promotion policy. In the first stage, such support may come from producers working together rather than relying on government officers. This would be desirable in terms of fostering self-reliance for future development.

The provision of information is the most important thing that government agencies could provide producers, rather than effectively taking their work and production decisions over on their behalf. Such information will help them have a better opportunity to decide on the direction and form their manufacturing ought to take in order to serve the needs of the market. Sufficient information will help keep them abreast of new manufacturing techniques and technology, new materials, market needs, trends and potential, and the requirements and location of wholesalers and middlemen. Armed with such information, the producers can make better decisions in regard to the orientation of their production organisation, which raw materials they should plant and grow, where the market for their products is - including who their customers are and what prices the market will support - how to improve the quality of their products, and so on. By this strategy the government act as a co-ordinator, facilitator and information centre and provides support only as necessary whilst resisting taking a controlling interest in rural industries or planning without the participation of the producers. In support of this proposed co-ordinating role, the government could organise trade fairs, create meetings between producers and wholesalers, organise seminars to allow the producers to share the ideas and experiences, and so on. This promotion and development policy could represent the cornerstone of a strategy to improve and develop rural industry. The peasants will benefit directly and it will also help to underpin sustainable development and to draw out the peasants' own potential. By this strategy they should be able to stand on their own two feet.

In Thailand, the government agency that concerns itself with this kind of activity should be the Industrial Promotion Department of the Ministry of Industry, which has a branch in every region: the North, South and North-East. Its branch in the northeastern region is located in Khon Kaen province. Its major function is to promote rural industry directly, but its situation has not yet incorporated on the abovementioned activities (this agency also provides technical assistance to the large factories that want to locate in the provincial areas). The activity of information provision is not yet sufficient. Their activities hitherto have principally centred around the production process, such as the subsidised provision of industrial instruments, and marketing products on behalf of the producers. It seems that they plan and act by themselves because there is a very low level of participation from the producers in the planning process. The direct provision of industrial instruments has caused a lack of self-reliance among producers because the government agency has planned and intervened in the manufacturing process for them. Similarly, the function of 'product seller' which could help in marketing in the first stage, but in the longer term could be counterproductive because it insulates the producers from the true situation, if anything increasing their dependence on the government's continued involvement in this regard - which can be seen as unhealthy both for the producers and the government. If they can adapt their activities to follow the abovementioned model of working with and playing a facilitating and co-ordinating role for local producers, it may stand a better chance of reaching the objective of rural industry promotion on the basis of self-reliance. We tend also to find that local administrators, such as district officers, head of *tambol*, village headmen, etc. are more familiar with the villagers than the officers and planners who are principally based in the towns and capital city. The more local the government official, the more they are in tune with the problems and needs of local people.

Another government agency that is concerned with this function should be the Community Development Department which has officers working in every *tambol* and village. Their officers are very familiar with the villagers and they always have many projects to develop rural conditions and to increase incomes. If the Industrial Development Department co-operates with these community development officers, it will further help the activities of support for the development of rural industry to operate more smoothly and efficiently. It will also allow the paradigm of people's participation to be more directly realised. There could be a genuine two-way communication of information via these two institutions, with market and production information being provided from above, and information about needs, potential and constraints being channelled upwards from the producers and villagers. By using this strategy, it is possible that rural industry could have a more promising future.

(7) Co-operation with Non-Government Organisation (NGOs)

Rural development is a big responsibility and cannot be performed by any single agency. This policy will only succeed with co-operation of myriad agencies involved. At the moment, there are many government agencies and non-government organisations working in this field. There are more than 200 non-government organisations working in the rural areas of Thailand with an general objective of developing rural conditions. Most of these non-government organisations work in the North-East. If government agencies and these non-government organisations can understand that rural industry can provide part of the foundation for the improvement of rural conditions, and if they can co-operate to achieve this objective, it will be of undoubted benefit to the rural industrialisation strategy. In the past, we have to accept that many policies and projects did not reach their objectives adequately because of the unfamiliarity of government officers with the villagers and their needs. This unfamiliarity caused a significant barrier to villagers' participation in government projects, even though those projects were formulated to benefit them directly. Non-government organisations have show that they can often succeed in this duty rather more effectively and directly. Villagers seem far less reluctant to participate in the NGO's projects because of the degree of familiarity that the NGO workers have with their situation, and degree of empathy that they show to their plight. However, one of the main disadvantages that the NGOs face is their limited budget, and also their lack of power to influence and control the macro-level context within which many of these rural development problems are placed. Many NGO projects are quickly terminated because the donor agency stops supporting it. If we can use the advantage of the NGOs' familiarity with the villagers ameliorate some of the disadvantages of GOs in respect of rural development, whilst at the same time incorporating the undoubted advantages of GOs in respect of budgetary support, national co-ordination and so on to cope with the disadvantages of NGO in this regard, we might argue that the objective of both organisations will be more effectively achieved.

Thus the government agencies with responsibility for the promotion and development of rural industry should implement their policies and projects by co-operating with NGOs which are working in broadly overlapping areas. The government agencies might even provide the NGOs with a budget to be utilised directly in the targeted villages, in the expectation that the NGOs may more effectively attract local involvement and use of the services and support which is being channelled indirectly from the government in this way. Furthermore, the NGOs could help to encourage producers to become involved in the trade fairs that the GOs will organise. By this co-operation strategy, the objective of both organisations in respect of rural industry promotion and support, and more generally in regard to rural development promotion, might be achieved.

where it is difficult for them to increase the level of agricultural productivity.

Rural industry is one of the major sources of non-farm income. Rural industrialisation is not only a means of increasing rural income away from the farm, but it is also a strategy for improving the condition of the rural sector - at least where its implementation is feasible. The areas which have a high degree of migration of people to work in the large cities because of a lack of seasonal or permanent employment opportunities *in situ* can help to ameliorate the conditions which lead to out-migration by giving more attention to the rural industrial sector. It becomes a cumulative process: the increase in rural income which accrues from rural industrialisation helps to stimulate the *in situ* demand for other goods and services, thereby extending the number of beneficiaries from this strategy. Farmers will also enjoy an improvement in their material well-being and welfare. They will have sufficient food and household necessities, better clothes and houses, better health (through better access to health care activities such as sanitation, better nutrition, disease protection), and so on. All of these improved conditions relate directly to the better quality of life which is the highest objective of rural development philosophy.

Our study also showed that rural industry could be complementary to, rather than in conflict with, the needs and demands of agriculture. Where rural people were predominantly engaged in farming, rural industry was shown to provide a useful source of supplementary income. The combination of these two factors was a further means of improving conditions for the villagers who were involved. Unfortunately, state rural industrialisation policies and the administration of rural development both appear to overlook the sectors important contribution in this regard.

Development administration is a duty of government in formulating policy and setting up projects to facilitate the development of the countryside. Rural development is one of the most important of such policies, and, because the majority of the populace still resides in the countryside, must continue to be the first priority of government policy-makers, at least in the immediate future. The strategy to develop rural areas has been implemented for a long time in many ways with the purpose of facilitating the distribution and growth of rural incomes. But in reality, the effect of policy on the of dynamism and distribution of rural livelihoods in some countries has often been rather disappointing. The peasants in the peripheral or remote areas, in particular, have received few direct benefits. The strategy of facilitating the diffusion of growth via the promotion of growth centres in regional cities, which provided the cornerstone of policy in several countries in the 1970s and early 1980s, had little effect on the peasantry. Accordingly, it is clearly necessary to change the strategy if this persistent problem of rural backwardness, stagnation and relative deprivation is to be adequately addressed. The strategy of grassroots development, which focuses directly on the remote areas and peasants, and uses the peasants as the focus of development decision-making, may be one such alternative. Rural industrialisation falls within the framework of grassroots development.

This study of rural industrialisation and policy formulation used the case of the North-East of Thailand to examine this issue. North-East Thailand is the poorest region among the four regions of Thailand. The Thai government has tried to develop this region by investing in infrastructure, such as in irrigation projects which might increase agricultural productivity. The big problem of this region, however, is the poor soil and arid land. Irrigation projects could provide water in only a limited section of the cultivated area. The cost of investment in the provision of agricultural infrastructure has often been much greater than the production benefits, even taking a long-term view. One problem has been that the price of agricultural products is not so high, so there has been little incentive for farmers to seek to increase productivity. Migration to the cities, especially Bangkok, was often a more attractive proposition.

The government then changed its policy towards the development of regional growth centres during the course of the 4th and 5th National Development Plans (1976-1985) for the purpose of encouraging the diffusion of growth from the growth centre to the surrounding rural areas. Investment in infrastructure was provided in support of these growth centres, with the principal aim being to encourage the rapid development of industry and business therewithin. Although this policy was essentially focused at the provincial level, the real peasants in these provinces could receive very little benefit. The large proportion of benefits fell into the hands of urban people.

The question thus remains as to how the benefits of industrialisation, including that occurring at the national and regional levels, could be converted to be of direct benefit to the peasantry. At the moment, the government is formulating policy to promote rural industry with the aim simultaneously of developing further the regional economy and improving the livelihoods of rural people within these regions. The rationale is that people will benefit from the value-added that people will gain from development activities, such as by selling their raw materials, the income they obtain from employment, the value-added and profit which accrues from production, the skills they obtain as employees, sub-contractors and entrepreneurs, and so on.

This study has attempted to examine whether or not rural industry promotion is of direct benefit to the peasantry. If the government promotes and develops rural industry in such a way that peasants become entrepreneurs, or are centrally involved in the production process, is it likely that this strategy will reach its aim? The objective of this study was to study the nature of genuinely rural industry - i.e. that which is found within the villagers of North-East Thailand, rather than the regional urban centres, which is more akin to the Thai government's own understanding of the notion of 'rural industrialisation'. Additionally, the study sought to explore its role in rural development and appropriate policy formulation in order to promote and develop these industries with the objective of increasing and expanding production. A fundamental pre-requisite - within the grassroots development notion - was that the policy must increase the potential of producers to develop by themselves in the future. A cumulative and sustainable process of development should be set in train which allows momentum, and ultimately scale and dynamism, to be built incrementally into the future. This, in the opinion of the author, is appropriate development - and lies in stark contrast to the prevailing top-down orthodoxy and large enterprise bias which is widely observed in Thailand today.

This study started with a description of the background of North-East Thailand and its rural development projects and then studied the rural industry in the region, which we classified into three types. The study tried to analyse each type and then compare the advantages and disadvantages of all three. Because this thesis has been written from a 'development administration' perspective, in line with the researcher's own academic identity and the requirements of his home institution, the study ended with a discussion of policy formulation for the promotion and development of rural industry as a cornerstone for future rural development policy. The methodologies incorporated in this study concentrated on a balance between quantitative and qualitative techniques. The qualitative data were based on observations and case studies of entrepreneurs, producers and workers, and these were used to counterpoint some of the more general observations which were gleaned from the analysis of quantitative data obtained from the various questionnaires which were used in this study.

The past rural development projects of the Thai government in the northeastern region have concentrated on the construction of infrastructure and increasing peasants' income by providing special jobs (under the Rural Job-Creation Programme). Another policy to develop this region was the creation of growth centres with an aim of diffusing the growth to the surrounding rural areas. Unfortunately, these policies and projects had few positive effects on the peasants. Tired of waiting for effective policy intervention, and displaying their characteristic determination and endeavour, peasants from the North-East increasingly sought to help themselves. Rural industry was one of the non-agricultural activities which the peasants in the region tried to develop as a means of increasing their income because of the dawning realisation that they could not rely solely on agriculture. Rural industry was not, to any great extent at least, constrained by the regions poor soils and insufficient irrigation infrastructure. Industry could occur in even the most remote areas of this region, even though the infrastructure was very poor.

From a study which extended ultimately into 43 of the region's villages it was found that there were a great diversity of rural industries which, for the purposes of our own enquiry, were grouped into three broad types on the basis of their production characteristics: traditional industry, technical skill-based industry and industrial production incorporating the sub-contracting system. Ten kinds of rural industry in 17 villages and 7 provinces were selected for in-depth study. Three kinds of questionnaires were used to collect 320 interviews with household heads who were involved in rural industry. The SPSS computer programme was adopted to analyse the resulting quantitative data.

The study found there were high levels of involvement in some of the traditional industries which, in many cases, had been established for decades or even centuries in the North-East. Their principal function, which in some cases remains today, was to supply utilitarian products to the producer household and other households in the vicinity. Peasants had become involved because of the ease of entry into traditional cottage production, and also because this type of industry is quite harmonious with rural life. The techniques of production are relatively basic and straightforward, and mostly the skills and requisite knowledge has been passed down through the generations from parents and relatives. This type of industry was famous in the past because it could supply rural households with items at low, and thus affordable, prices. It utilised local raw material and a local labour force.

There were many advantages of this type of industry: first, its low investment requirements; second, its utilisation of locally available raw materials which are otherwise underutilised and thus, in economic terms, wasted; third, it incorporates simple techniques of production which most local people can quite easily acquire; and fourth, this form of rural industry can very easily be synchronised with the labour and other requirements of producers main agricultural occupation. Such advantages caused a large number of peasants to become easily and readily involved in this form of rural industrial production.

Although it provided a convenient source of supplementary income, many industries of this type have tended to go bust, or have had problems with the development of the production process, or have encountered difficulties which will serve to restrict their capacity to invest in the industry in the future. The quality of products, which may not have been an important consideration in the past, is crucial now that these industries are much more directly exposed to the competitive outside world, with the myriad sophisticated products which are available from large urban industries. The higher level of technology which is used in the production in these factories enables them to produce better quality products and also products of a modern style which is of more interest to the market than the cut-dated products of traditional industries. However, there are some kinds of products which are still marketable by virtue of their association with traditional material culture, and which may be considered to have a quite promising future if they are able to expand their markets and modify production and productivity in support of this. However, it is not so easy: the small size of existing markets, shortages of raw materials, low levels of technology in production, low quality of products and poor designs are among some of the major problems faced by this type of industry.

The study found that these problems could be eased by using middlemen and wholesalers to channel their products to the market, and to help them to expand and sustain their market outlets by providing up-to-date market intelligence. Although the wholesalers would unavoidably cream off some of the profits for the services they provide, it was felt that the increased volume of production that this arrangement would support would more than compensate. The alternative, direct selling, might provide higher per unit returns, but this may be valueless if the volume of sales remained minuscule, as would be the case with a market which continues to be tied to the local area. The problem of shortages of raw materials could be solved by using recycling, or by better planning in respect of the provision of fresh supplies or the identification of substitute materials. The problem of poor design could be solved by co-operation between the wholesalers and the producers to help promote and introduce designs required by customers, both in Thailand and overseas. Government and non-governmental agencies could play an important role in helping to improve production techniques and expanding markets by providing training courses and co-ordinating with wholesalers.

Peasants who have technical skills either from their migration in the past or from training have in some instances involved themselves in rural industry which incorporate the use of technical skills. This type of industry has played an important role in providing a satisfactory income to the villagers involved and, as the study showed, generally much higher than other income sources available in the local area. This provided a strong incentive for others to become involved in the industry and was an important source of industrial expansion in the region. However, the industry's expansion soon led to shortages in appropriately-skilled individuals, and thus in labour supply. At the same time, high earnings from the industry encouraged a number of workers to change their position to become entrepreneurs in this lucrative business. We also found that the dynamism of the gemstone-cutting industry in particular had played quite an important role in reducing the forces behind out-migration to work in the big cities, especially during the dry season, because workers could earn broadly comparable incomes without the need even to leave their home villages.

The major problems of this type of industry concerned the low and falling prices received for its products and also problems of low quality. The lack of regulation behind the industry's dramatic expansion was one factor behind a glut of production and falling piece-rates as demand readjusted to supply. Moreover, the rapid expansion in the labour force had led to many poorly skilled and undertrained individuals being drawn into the industry, which had contributed to declining quality standards within this rural industry. Rates of economic return emphasised quantity over quality, but now the weaknesses of that situation have been exposed under conditions of enhanced competition. Government agencies have just come to realise the importance of providing adequate training and quality control, and has sought to provide assistance with training courses. however, it has as yet been unable to do anything effective about falling prices and declining wages for workers.

The last type of rural industry in this region which was considered in this study was identified as having the best potential for helping to achieve a number of the objectives of rural and regional development policy. The sub-contracting system is crucially important in strengthening the linkages between urban and rural areas - a factor which was sadly missing from the growth pole policies of the 1980s. The peasants who live near the large urban factories are able to engage with these industries' dynamism by sub-contracting some parts of manufacturing process to be undertaken at home. This type of industry is able to provide villagers with fixed jobs in much the same way as if they were working in factories, but from the social comfort of their own homes. The villagers who were sub-contractors were generally satisfied with this type of work because they could involve themselves in industry and could earn a reasonable livelihood without having to worry about marketing and investment. However, one problem of this type of industry was the low wages which workers received. It was suggested that increased competition might help to solve this problem. As the number of large factories increases, competition among them will lead to pressure mounting for piece-rates to be increased in order to give people the incentive to work for a particular factory. At present we have something akin to a 'buyer's market' where the factory is able to set the terms and conditions of employment; with increasing industrialisation and a dwindling number of people who are not yet involved in this system, the terms of trade may gradually shift rather more in the favour of the seller of labour.

The study generally supported each of the hypotheses which were presented at the outset cf this thesis, especially in relation to the role of rural industry in the improvement of rural incomes, the development of the rural and regional economy, role that rural industrialisation can play as part of a wider strategy of rural development.

It can be concluded that most rural industries in North-East Thailand are able to provide a higher income for the region's peasants. This income in most cases is used to supplement that which is derived from agriculture which, as we have seen, is rather low and unreliable because of prevailing environmental conditions. It does not mean that industry is necessarily better than agriculture, or that it can completely replace it. Agriculture remains an important occupation because almost all peasants see agriculture as their main source of livelihood and farming as their principal occupation. It is the source of their staple food and is also an integral part of their way of life. Rural industry can be considered as a supplementary source of income which may help to improve the rural condition. When comparing rural industry and other non-farm sources of income, rural industry has been shown to be particularly attractive to the local peasants. It can reduce the motivation or need for them to migrate to work in the capital city which, in turn, has created many social problems both in the cities and in migrants' home areas. So, the reduction of the migration may also help to ameliorate, to a certain extent, certain social problems.

The important issue, however, revolves around how to formulate policy to promote and develop these rural industries both as a means of increasing the peasants' income and to increase the potential of producers to build momentum into their enterprises in the longer term. The linkage between urban industry and rural industry represents on very important - indeed almost indispensable - means of helping rural small-scale industry to improve in terms of production techniques and technology, product quality, product design, and the supply of raw materials. Principally, this linkage will lead the rural small-scale industries to learn from their larger urban counterparts, and in the process to improve their potential especially in the field of marketing. Some kinds of industry - particularly the traditional industries - may not need/be able to link with larger industries because of the special character of products. These industries cannot be improved by following the lines of large-scale industry, but must instead be improved from within. They will probably only survive by retaining the special charm and character of their hand-made and village-produced products. Nonetheless, they also need to adapt with the times, in which case they could do no better than follow the excellent example of the cushion-making industry.

Policy formulation for the promotion and development of rural industry in the North-East, and other regions, might be guided by the following suggestions:

(a) For those areas that have traditional industries with products of a particular and special character, improved access to wider markets could be facilitated by putting producers and entrepreneurs in contact with wholesalers and middlemen who specialise in the marketing of traditional crafts. Such co-ordination might take the form of trade fairs, which the government can take particular responsibility for organising. Government agencies should also change their role from that of actor to that of co-ordinator or facilitator. By taking too strong and direct a role in support of rural producers, for instance in respect of production and marketing, the government may stifle the potential for producers to help themselves within a free market system. A co-ordinating role will encourage rather than stifle initiative, and will also allow unviable enterprises to die a natural death. In this way, the rural industrial fabric which emerges will be better equipped to face the vagaries and vicissitudes of the future.

(b) The gathering and provision of information, perhaps through a rural industry information centre, is very important as a means of supporting producers' potential. Many kinds of information should be provided, such as in relation to marketing, technology, the tastes of customers, channels of business, sources of funding, sources of raw materials, recycling techniques, names of wholesalers and middlemen, names of exporters, and so on. The government provides such support for large urban-based industries, so there is not obvious reason why the same service should not also be provided for rural enterprises. Government officials should change their duties from being planners and implementors to becoming information collectors and providers, allowing more scope and room for the producers themselves to play a role in the planning process.

(c) Co-operation with non-government organisations which work in the villages should also be promoted as a means of increasing and improving channels of communication. These NGOs could serve as excellent conduits of information from government agencies to the producers, and of information about the villagers' needs, constraints and potential to government agencies.

(d) The provision of training courses is one of the support items that government agencies should provide. The lack of a skilled labour force in the technical skill-based industries, including a lack of familiarity with new techniques of production in some kinds of rural industry, could be solved by more and better training. The government should set up a network of continuous training for every kind of rural industry by co-operating with the local universities and institutions to provide sufficient and appropriate training. An adequately skilled labour force will help industry expand efficiently and effectively, and will ease potential future labour bottlenecks which could constrain the scope for future rural industrial expansion. It will also allow more people from the potential labour force to become involved in rural industry, with all the attendant benefits this would bring.

(e) The policy to promote regional or provincial (urban) industry to boost the economy of up-country areas or to help decentralise industry from the capital city should be more directly and effectively linked with the promotion of rural industry. The government should encourage provincial industries to use the sub-contracting system, to the direct benefit of rural areas. The provision of information about potential producers in the rural areas to the urban factories, including their ability and location, will be the good way of co-ordinating efforts in this regard.

(f) The development of rural infrastructure will be another way to help improve communication and transportation, even though we have seen that this is not a crucial factor in the initial occurrence of rural industry. The government should try to provide better infrastructure to the rural areas where industries have already become established and are showing signs of promise. The provision of infrastructure not only benefits the rural producers but also the wider rural community in general. If the government doesn't have an adequate budget, co-operation between government and producers may be the possible way to effect this strategy. Some producers have the potential to contribute towards the improvement of infrastructure.

(g) Rural development policy should include a strategy to promote and develop rural industry because it can help to improve rural conditions and the quality of rural life. It also links into the concept of grassroots development which places peasants at the centre of development activity, rather than as an insignificant component of macro-level strategies. Development in the past has achieved rather disappointing results in terms of the trickling-down of benefits from urban-focused development initiatives. The development of rural industry represents a much more direct and effective means of bringing economic and social benefits to where they are most sorely needed.

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