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The Long-term View on Growth and Income Distribution

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THE LONG—TERM VIEW ON GROWTH

AND

INCOME DISTRIBUTION

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Paper on

THE LONG-TERM VIEW ON GROWTH AND INCOME DISTRIBUTION

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PREFACE

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CHAPTER 1
INTRODUCTION

This report is concerned with examining some of the factors influencing income inequality over the longer time frame. There appears to be relationships between the level of income distribution and the level of economic development. To be sure, these relationships are clearly very complex, and some of the important factors may be specific to particular societies and time period. Nevertheless, the idea originally propounded by Kuznet that there is an inverse U-shaped relationship between the level of development and income inequality may be of particular relevance in the context of Thailand's current pattern of economic development.

As clear from the paper by Hutaserani and Jitsuchon (1988), income inequality had been widening in Thailand over the last decade or so. A study of the relationships between income inequality and the level of development may therefore help to clarify the forces at work that have led to the worsening of income inequality in Thailand, and the factors and policies that would help solve the problem.

In our analyses of cross-country data from 45 countries, we found, as have many researchers, that the Kuznets relationship appears to hold. Further, Thailand was found to be on the rising trend of the curve, i.e. the portion where inequality increases with the level of development. This apparent normality of the current trend of development with increasing inequality in Thailand should not however be taken to mean that the pattern is inevitable, and therefore that

nothing can be done about it. This would be rather dangerous. There are, in fact, examples of countries who have been more successful at marrying growth with distribution. Rather the value of the analysis lies in highlighting a number of factors that lie behind the relationships between income distribution and the level of development.

Our findings highlighted a number of important factors which tend to contribute to inequality; the higher the share of labor in agriculture (at given GDP level), the lower the ratio of secondary education enrollment to primary enrollment, and the higher the fertility rate. These findings are of particular relevance for understanding the Thai situation. While the National Family Planning Program in Thailand is one of the most successful example of a voluntary family planning program in the World, the situations concerning agricultural employment and enrollment in secondary education are very different. At Thailand's current share of agricultural in GDP, the share of the labor force in agriculture is tremendously high. While some of this may be due to data problems, there are also good economic reasons why it is the case.[1] Similarly, at Thailand's current level of economic development, the secondary enrollment ratio is very low when compared to most of our neighbors, and particularly when compared to the Asian NICs. Both these factors, the high share of employment in agriculture and the low secondary enrollment ratio would contribute to the inequality in Thailand.

The significance of the share of agricultural employment to income inequality highlights the importance of migration as an equilibrating factor to counteract sectoral and regional

1. See the argument in TDRI (1988b).

disparities. We therefore tried to quantified the impact of migration for the Thai economy, and showed that it had been a favorable factor for both the rural and the urban economies. On education, we discuss the close relationships between the pattern of educational enrollment and the structure of the economy, and highlights a number of key policy issues in education that should be tackled to ensure a more equitable development pattern for the future. Thus, in this paper, we draw upon the lessons that can be learned, through the comparison of the experiences in many countries, about the factors important in the relationship between development and income inequality, and highlight the key issues in Thailand related to these factors.

The next chapter discussed the Kuznets curve hypothesis; the theoretical views on the concept, and the empirical support for the hypothesis. After finding that the hypothesis appears to be confirmed, we carried out simple simulations about when the turning point is likely to occur in Thailand based on alternative assumptions about the future growth path. Chapter 3 turns to discuss the migration issue, and education is covered in Chapter 4. Finally Chapter 5 concludes.

CHAPTER 2

THE LONG-TERM VIEW ON GROWTH AND INCOME DISTRIBUTION

2.1 The Kuznets Hypothesis

The hypothesis that income inequality tends to increase during the early phases of development and later decline after income per capita has reached a certain level (the turning point) has been advanced, often referred as the Kuznets curve. Explanations for this phenomenon are to be discussed in the following section. By and large, analysts seem to agree that: "The initial phases of the development process, during which a mostly agrarian economy starts industrialization, are almost inevitably marked by substantial increases in the inequality of income distribution" (Adelman, 1986,p.51). There is, however, conflict of opinions among experts about the income inequality in the later phases of development. Adelman (1986) expressed her view that:

> There is no automatic tendency for the distribution of income to improve as countries enter the later phase of their transition to the status of industrial countries. Whether inequality does or does not increase depends upon the policies that countries follow. In particular, it depends upon the extent to which the policies adopted narrow the income gap between the sectors, the extent to which

> they decrease the dispersion of income within the modern sector, and the relative speed of absorption into the modern sector. Thus, the plot of the income share accruing to the poorest, as a function of development can be either U-shaped, as hypothesized by Simon Kuznets from a comparison of a sample of developed with mid- to high-income developing countries, or J-curve, depending on the nature of development strategies chosen.

There is a contention under the theme "redistribution with growth", which attracted much attention, that the inverse U-shaped pattern can be avoided, or at least flattened out by appropriate policies [Ranis (1975), Adelman and Morris (1971, 1973)].

Income distribution is a particularly relevant topic for the Thai economy at the present time. The economy achieved a respectably high rate of growth at 7.02 percent per year in the period 1960-1987; even in the recessional years after the second oil shock real GDP still grew at 6.03 percent annually, the highest among the ASEAN countries. Transformation from an agricultural based to an industrial based economy had been steady over the past two decades, and accelerated in the last few years. There are high expectations that in the 1990s Thailand may repeat the Asian NICs rapid industrialization of the 1960s and 1970's. In any transitional state, population redistribution and labor migration are normally expected. These are likely to affect growth and income distribution, so it is necessary to bring them into consideration.

This chapter will examine the growth and the income distribution performances in Thailand in comparison with other

countries over the past three decades. The model extends the Kuznets hypothesis by including other economic and social factors as explanatory variables. Secondary education enrollment, the labor share in agriculture, population fertility, the size of the government, and the degree of export-orientation are among the variables included in this exercise. Data from 45 countries over the period 1965-1986 are drawn to examine whether the growth and income distribution performances conform with the Kuznets hypothesis, and if so, at what income level the turning point lies (in other word when income inequality starts to fall). Another topic of our interest is to mainly to learn policy lessons from the experience of other countries regarding income distribution.

2.2 Growth and Equity: Theoretical Discussions

The topic on growth and equity in the course of economic development is hardly new. Views and approaches to the study of this topic however changes. The first strand of literature dates back to Simon Kuznets' presidential address to the American Economic Association in 1955 during which he presented his famous hypothesis that the pattern of inequality over time roughly follows an inverse U-shape. The hypothesis was originally propounded in the light of the historical experience of the United States, the United Kingdom and Germany, where a trend towards a reduction of inequality was observed after the First World War. He showed that the distribution of personal income was more unequal in the less developed countries than in the developed countries. The explanation was given by Kuznets

himself. His model was based on the division of the national economy into two sectors: the agricultural sector (A) and the nonagricultural sector (B). Development entails a transfer of population and labor force from A to B. If the average income in sector A is lower than in sector B, and if the degree of inequality in each sector are the same, the transfer of population starts by giving rise to an increase of general inequality and subsequently reducing it. If inequality is greater in sector B than in A, the shift of population generates an increase of inequality that is not automatically followed by a tendency for inequality to contract. In brief, the outcome depended upon the relative incomes of the two sectors, the degree of inequality within each sector and the proportion of the population in each sector. This pioneering work stimulated a number of empirical studies in the following decades.

The Kuznets hypothesis is generally presented as a non-linear relationship in which income per head is taken as the principal independent variable and a measure of inequality of the distribution of incomes as a dependent variable. It may be represented by an inverse-U shaped curve (Figure 2.1a). This relationship can also be presented in alternative forms, for example Figures 2.1b and 2.1c.

Oshima (1962) commented that inequality is not necessarily more pronounced in the comparatively less developed countries: In the initial stages of development, he argued, income inequality was indeed generally slight. The expansion of trade, industrialization and urbanization led to an accentuation of the general dispersion of incomes. Once the economy reached the stage of semi-development, the tendency for

Figure 2.1a

Hypothetical Inverse-U Shaped Kuznets Curve

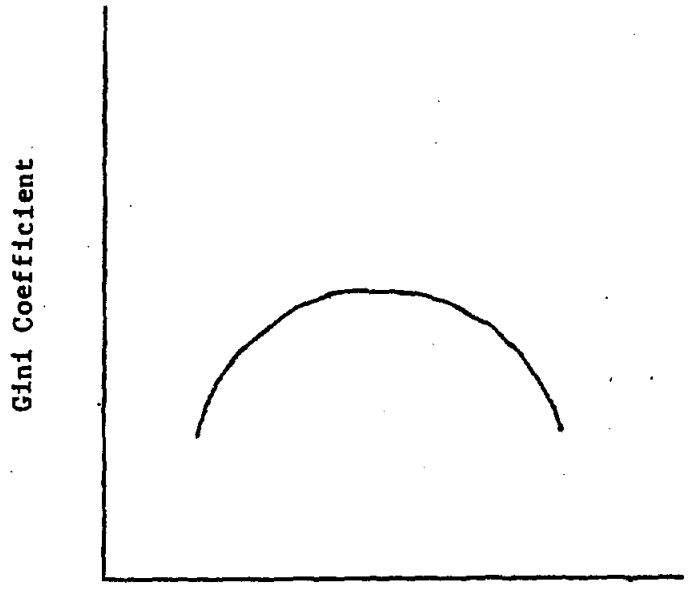


Figure 2.1b

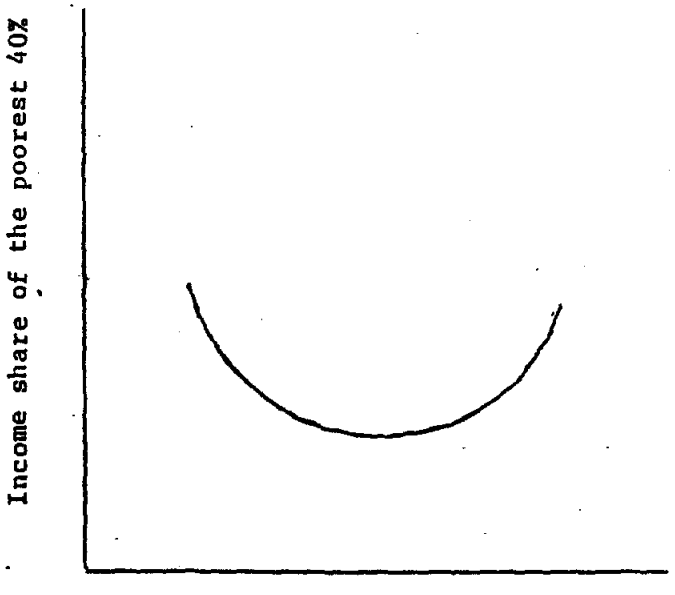
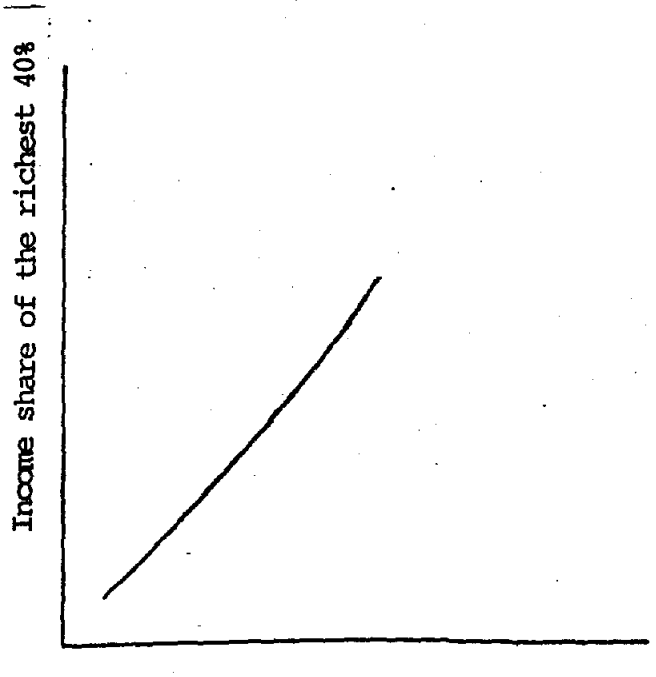


Figure 2.1c



the dispersion of capital per head to increase in the urban sector was counterbalanced by an increase in average income from agriculture and by a flight from the land; inequality then ceased to grow and subsequently declined, while at the same time there was generally a spreading of education.

A systematic empirical study was carried out by Paukert (1973) within the framework of the International Labour Organization's World Employment Programme based on data from 56 countries, including over 40 developing countries. He showed that the Gini ratio is linked to the level of GDP per head (expressed in 1965 U.S. dollar). A sharp increase in inequality was observed as one moved upward from the group of countries with a GDP of under 100 dollars per head to the 101-200 dollars group of countries. Inequality increased further, though less sharply, in the 201-300 dollars group of countries. Differences in incomes were most pronounced in the group of countries with 301-500 dollars per head. And a clear reduction of inequality in the group of countries with an income per head beyond 2,000 dollars was found. These findings were consistent with the Kuznets hypothesis.

In 1974 the World Bank took up an examination based on data from 66 countries, with the results published in Chenery, et al. (1974). This study confirmed that relative inequality is markedly greater in most of the underdeveloped countries than in the developed countries. Explanation was provided that: "The poor are prevented from sharing equitably in a generally increase in output by a number of specific disabilities that can be summed up as lack of physical and human capital and lack of access." The study questioned the idea expressed earlier by Kuznets that the greater dispersion

was due mainly to greater inequality between the high-income group and the middle-income group. They contended that there was a high degree of inequality in both the middle-income group and the lowest-income group.

The Kuznets hypothesis seems to have strong support from the dualistic models that were developed to model the developing economies. The well-known Fei and Ranis model (1964) distinguished two phases in the development of the dual economy: phase 1, when there was surplus labor, and phase 2, when the supply of unskilled labor no longer exceeded demand. They attached a great deal of importance to the transition from the first to the second phase, a moment in the development of an economy that they call the turning point. Before the turning point, growth was almost sure to widen the wage differentials, and very likely increased income inequality as well.

Similarly Morley (1982) explained: In a dual economy with surplus labor in the agricultural sector, the supply of unskilled labor exceeds demand, and the wage settles at a subsistence level. If some sort of growth process begins, it is natural to expect that the skill differential would increase. The unskilled wage is anchored by the existence of the surplus, but workers lucky enough to be educated or to find high-productivity jobs in the expanding modern sector will receive a higher wage. The growth process in a dual economy is like an escalator, taking a few out of the crowd at the bottom up to a higher level of income and productivity. For as long as the queue remains at the bottom, a gap opens up between those lucky enough to get a place on the escalator and those still waiting for a ride.

The next strand of literature investigated whether the inverse U-pattern can be avoided or at least flattened out by appropriate policies. Fei, Ranis and Kuo (1979, p.310) argued that it was possible for economic growth to be compatible with an improved distribution of income during every phase of the transition from colonial to modern growth. Their study was based on data from Taiwan after the Second World War. They claimed: "Taiwan's experience demonstrates that if assets are not distributed too unequally, a growth path initially based on a flexible version of primary import substitution, followed by the timely reduction of the veil between a changing endowment and relative factor and commodity prices, can yield this result..." In the past decade, models and policy simulation experiments have been increasingly applied to the income distribution analysis of alternative policies; for instances, Morley and Williamson (1974) presented such a model for Brazil, and a large simulation model was developed for Korea by Adelman and Robinson (1978). The latter model consisted of a static wage and price endogenous, computable general equilibrium model, linked to a partially adaptive dynamic model. The model traces out direct indirect influences of economic growth strategies on the distribution of income and the extent of poverty. For Thailand, the first general equilibrium model with sufficient details that could fruitfully be used to analyze the impact of policies on income distribution was the SIAMII model, built as a joint effort between the NESDB and the World Bank, see Amranand and Grais (1984).[1]

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1. For a recent analysis of tax incidence using a general equilibrium model of the economy, see Sussangkarn, Tinakorn and Chongpeerapien (1988), a paper in this conference.

Dualistic models predicted the tendency for the transfer of labor from the traditional (agricultural) sector to the modern (industrial) sector, and this flow is considered rational as it raises output and efficiency in both sectors, Lewis (1954). Later, labor segmentation models explained that migrants, failing to find an urban job at the minimum wage, were forced into what has come to be known as the informal or traditional sector. In the language of labor economics, the informal sector was seen as the port-of-entry job for rural migrants. It provided the initial exposure to the urban economy and also some minimal training or at least experience that would fit rural migrants for jobs in the modern sector after a time.

In principle, labor mobility should lessen wage/income differential between region/sector and hence set some limit to income inequality. There are, however, obstacles to migration (e.g., information is imperfect, cultural tie, etc.). Yet, it is usually easier to observe the over supply of urbanward migration (unemployment) than the actual amount of labor shortage. Todaro (1969) explained this phenomenon that he observed in Africa by introducing the notion of the expected wage differential. The model assumed that the potential migrants had some expectation of their chances of getting jobs at the destination; but the perceived probability can be significantly different from the actual probability. His model predicted that one additional formal sector employment induced more than one new migrants, and hence the high unemployment rates observed in big cities, whereas the rural area faced farm labor shortage. So in the view of some experts, migration, especially the rural-urban type, may be socially inefficient. If such a situation exists then policy may be justified to limit the flow of rural-urban migration. There are however

many ways of designing the policies. Lipton (1980) emphasized the importance of providing accurate information concerning the urban labor market to people. Suits (1985), while adopting the Harris-Todaro model in analyzing migration in ASEAN countries, stated that: "..although wage differentials and job probabilities are important, the rural-urban migration process is more complex particularly in a culturally-pluralistic society such as ASEAN" (p.143).

2.3 The Evidence

2.3.1 International

Comparative studies on income distribution have been carried out by numerous authors and international organizations. The followings are drawn from some selected previous studies.

Table 2.1 presents a global view on income distribution and poverty over the past decades. Statistics show that: a) Between 1960 and 1980, income inequality in the entire group of non-communist developing countries increased substantially; b) Income concentration increased markedly in the group of low-income non-communist countries and in the group of oil-exporting countries, and it decreased significantly in the middle-income, non-oil exporting countries. c) The percentage of population falling below the poverty line declined.

Table 2.1: Trend in income distribution and poverty: global view

	Overall		Eliminating Inter-Country Inequality		Eliminating Within-Country Inequality	
Income distribution (Gini coefficient)	1960	1980	1960	1980	1960	1980
All non-communist developing countries	.544	.602	.450	.468	.333	.404
Low-income	.407	.450	.383	.427	.113	.118
Middle-income, non-oil	.603	.569	.548	.514	.267	.251
Oil-exporting	.575	.612	.491	.503	.328	.375
Poverty (poverty ratio--%)						
All non-communist developing countries	46.8	30.1	5.2	.90	8.8	3.5
World	39.8	22.4	9.9	1.6	6.3	2.

Source: Irma Adelman (1986) "A poverty-focused approach to development policy," in DEVELOPMENT STRATEGIES RECONSIDERED, eds. by John P. Lewis and Valeriana Kallab, Overseas Development Council, p.53.Note: The third and the fourth columns reflect the estimate which based on controlling per capita income in each country equal to the average income of the world; hence the figure reflects inequality in the size distribution within each country. The fifth and the sixth columns based on the estimate while controlling all individual income in each country equal to the country average so that the figure reflects inequality between countries.

Table 2.2: Distribution of income by households by country groups

GDP per head (US dollar)	Gini coefficient		
	Paukert	Ahluwalia	Lecaillon
Less developed countries			
Group 1 = under $ 200	.419	.438	.437
Group 2 = $ 200-330	.499	.505	.521
Group 3 = $ 331-700	.494	.500	.545
Group 4 = over $ 700	.438	.491	.487
Developed countries	.383	.378	.381

Source: Jacques Lecaillon, et all. (1984) INCOME DISTRIBUTION AND ECONOMIC DEVELOPMENT: AN ANALYTICAL SURVEY, Geneva: International Labour Office, p.41

Africa

Lecaillon, et al. (1984) noted that this continent had two extreme situations: There was the group of countries whose income distribution were less unequal than the developed countries, with the Gini coefficients below, or equal to, 0.41. Chad and Togo belonged to this group. And at the other extreme, there was the group of countries, mostly in the eastern and southern Africa, with the least equal income distribution, where the Gini coefficient reached the global maxima (0.6-0.64); Kenya, Swaziland, Zambia, Zimbabwe belong to this group.

Latin America

Income distribution in Latin American countries in general are less equal than in other regions. Argentina, Costa Rica and Uruguay are among the countries with a moderate income concentration; the Gini coefficient for households and also for individuals in this group does not exceed 0.466, while the Theil index does not exceed 0.437; Lecaillon, et al. (1984). These figures are higher than those found in the developed countries. The highest rates of income concentration are found in Ecuador, Honduras, Mexico and Peru with the Gini coefficient surpassing 0.55. The other countries (Chile, Colombia, Panama, El Salvador, Venezuela) are in many cases closer to Brazil and Mexico than to the first group of countries.

Asia

The Asian countries have a relatively equal distribution of income. The Gini coefficient is lower in Taiwan, the Republic of Korea and in Sri Lanka than in several developed countries. It should be noted that the preconditions were more favorable in Taiwan and Korea as there was a combination of agrarian reform, many measures of rural development and a high

rate of enrollment in primary and secondary schools. Hong Kong approximates to the former group (Gini coefficient 0.434), but its circumstances are rather special, being the only country where agriculture is virtually non-existent. India likewise shows a moderate Gini coefficient, though the distribution there is to the advantage of the top 5 percent, which explains why the Theil index for that country is much larger than it is for the Republic of Korea or Sri Lanka. The countries where income distribution is most unequal are Iran and Turkey, followed by Lebanon and Malaysia [Lecaillon, et.al. (1984,p.37)]

2.3.2 Thailand

Empirical studies on income distribution in Thailand can be traced back to the 1960s. The most recent study is by Hutaserani and Jitsuchon (1988).[2]

It can be seen from Tables 2.3 and 2.4 that the income distribution in Thailand had been getting more unequal, as a the richest group obtained an increasing share of incomes over time, and the Gini coefficient rose over time (see Figure 2.2).[3]

2. This is a paper in this conference. See also studies by Meesook (1979), Wattanavitukul (1978), Krongkaew and Tinnakorn (1985), Ikemoto and Limskul (1986), and Jitsuchon (1987)

3. For detailed decomposition of inequality and changes in inequality, see Hutaserani and Jitsuchon (1988).

Table 2.3: Income Distribution in Thailand in the past three decades

	Income share by quintiles				
	poorest 20%	lower-middle	middle	upper-middle	richest 20%
(percent)					
1963 a	7.90	8.60	12.10	21.60	49.80
1976 b	6.05	9.73	14.00	20.96	49.26
1981 b	5.14	9.10	13.38	20.64	51.47
1986 b	4.55	7.87	12.09	19.86	55.63

Source:a Dowling, J.M (1984), Income Distribution and Poverty in Selected Asian Countries, Asian Development Bank Economic Staff Paper No.22, Philippines, pp.15

bSomchai Jitsuchon (1988), Thailand's Change Income Distribution Pattern: 1975/76 to 1985/86, TDRI Quarterly Newsletter, September 1988 vol.3 number3, pp.15

Table 2.4: Gini coefficient in Thailand, 1962-1986

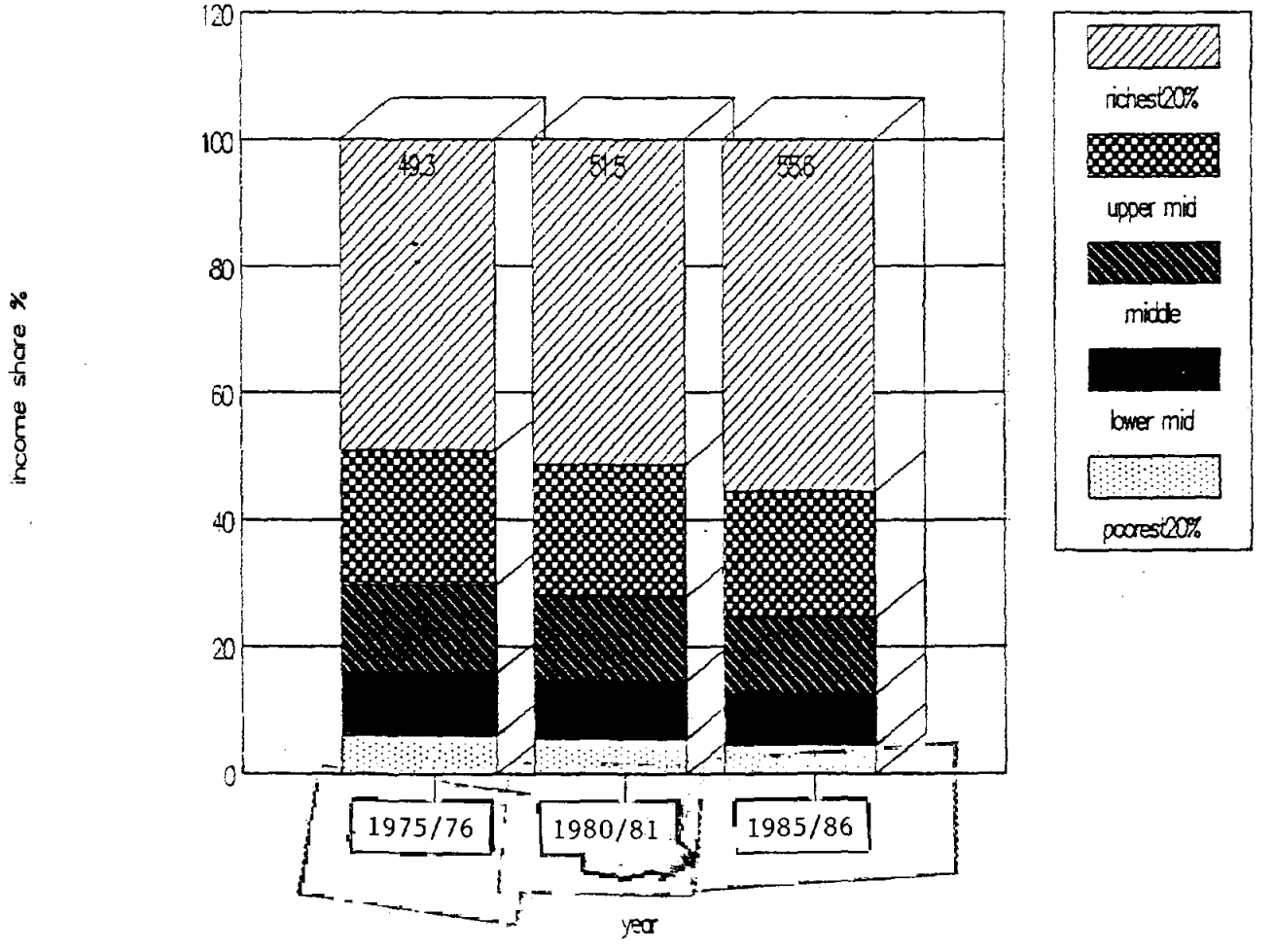
1962/63	.414
68/69	.429
1975/76	.439
1981	.446
1986	.500

Source: Somchai Jitsuchon (1987) SOURCES AND TREND OF INCOME INEQUALITY: THAILAND 1975/76 AND 1981, Thammasat Master thesis, p.108.

Figure 2.2

Income Distribution in Thailand

1976-1986



Functional income distribution is another topic which used to receive attention from theorists but seems now to be less popular than the size distribution of income, which is understandable. Figures in Table 2.5 are drawn from the national income accounts. It appears that: a) the compensation to labor (this should be interpreted as only including the renumerations to employees) has been rising; b) a very large share of national income goes to the own-account workers (e.g., farmers, unincorporated enterprises), of which farm income shows a significant declining trend; c) the interest income shows a strong increasing trend, while income from rent shows a declining trend. Despite imperfection in this crude functional income data, one can sense that the increasing importance of capital income.

Table 2.5 Functional Income Distribution in Thailand 1970-1987

source of income	1970-1974			1975-1980			1981-1987		
	million baht	share in national income %	growth annually %	million baht	share national income %	growth annually %	million baht	share national income %	growth annually %
Compensation of employee	37,640	23.6%	17.5%	105,726	28.2%	22.3%	280,946	33.2%	10.1%
-wages and salaries	34,768	21.8%	17.7%	99,287	26.4%	22.7%	265,557	31.4%	10.1%
Income from farm, professions and unincorporated enterprises	98,246	61.6%	16.7%	217,442	57.9%	13.7%	365,632	43.2%	5.7%
-farms	41,888	26.3%	17.5%	88,117	23.5%	11.4%	121,135	14.3%	1.0%
Income from property	17,709	11.1%	14.9%	38,288	10.2%	17.4%	102,934	12.2%	8.3%
-rent	14,445	9.1%	12.4%	25,791	6.9%	11.4%	49,797	5.9%	6.6%
-interest	2,722	1.7%	27.5%	14,708	3.9%	41.4%	52,981	6.3%	5.9%
-dividends	661	0.4%	27.4%	1,744	0.5%	16.1%	3,531	0.4%	9.4%

source: NESDB(1988), National Income of Thailand new series 1970-1987

2.4 Income Distribution and Growth: Another Regression

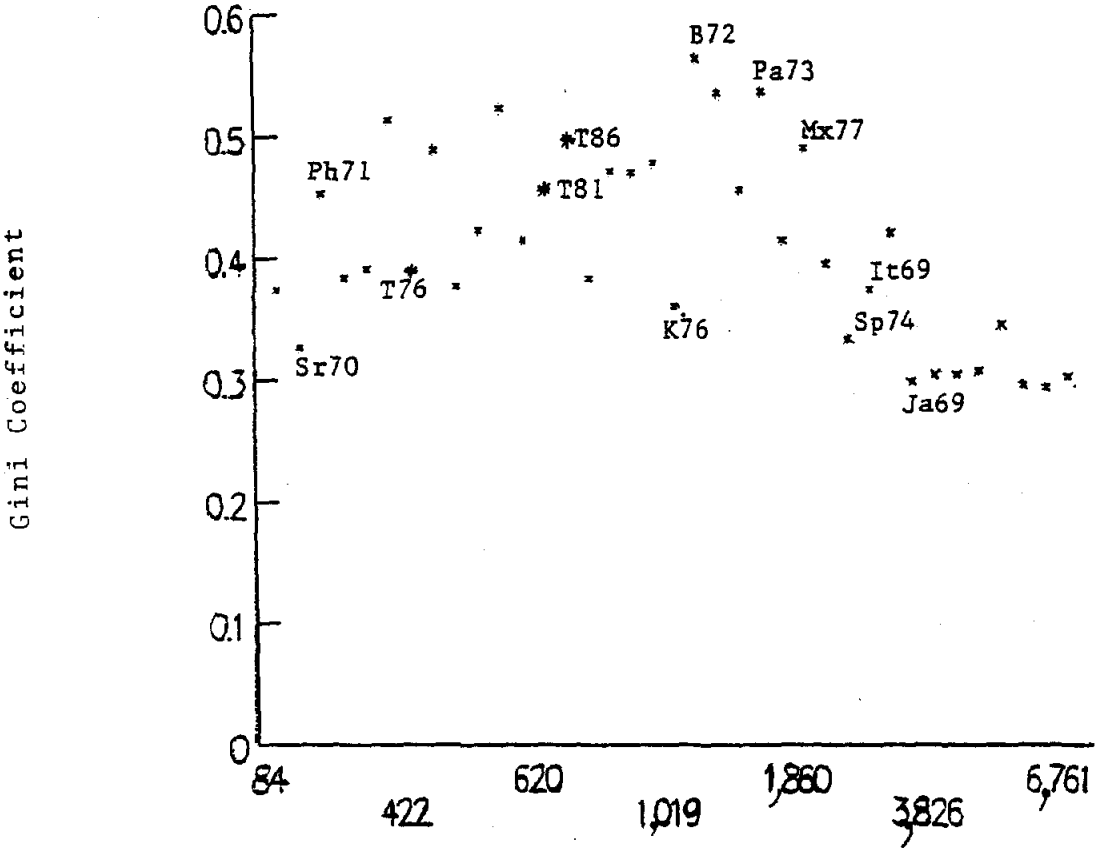
Based on data from 63 observations (from 45 countries) during the period 1965-1986[4] (list of the countries are given in Appendix), regressions were run to examine the relationships between inequality, the real per capita national income level, and other economic and social characteristics that might affect the distribution of income. Essentially, this model extends the Kuznets hypothesis by including economic and social variables which are available.

Two measures of income disparities were used in this study, viz., a) the Gini coefficient, and b) the income share of the poor (the bottom quintile). Other explanatory variables included education (the ratio of secondary enrollment to primary enrollment), fertility, the relative size of agriculture (measured by the ratio of agricultural worker in the total labor force), relative size of government (direct tax/GDP and government expenditure/GDP), regional dummies (for Latin American and African countries).

4. The list of the countries is given in the Appendix.

Figure 2.3

Income and Inequality : International Evidence



B - Brazil
Pa - Panama
It - Italy
Ph - Philippines
Ja - Japan
Sp - Spain
K - Korea
Sr - Sri Lanka
Mx - Mexico
T - Thailand

Table 2.6: Regression estimate of the income inequality in 45 countries

	specifications			
	(1)	(2)	(3)	(4)
Dependent var.:Gini coefficient				
Constant term	-.042	-.089	.037	.010
	(-.24)	(-.549)	(-.241)	(.062)
Economic factors				
- Income per capita	.108	.114	.107	.084
	(2.54)	(2.89)	(2.75)	(2.15)
- Income per capita squared	-.007	-.007	-.007	-.005
	(-2.46)	(-2.74)	(-2.65)	(-1.83)
- Share of agr. labor	.043	.05		.301
	(.836)	(1.04)		(2.94)
- Share of agr. labor squared				-.335
				(-2.74)
- Export/GDP	.005			
	(.130)			
- Manufactured exports				
Government role				
- Direct tax/GDP	.054			
	(.469)			
- Public expenditure/GDP	-.054			
	(-.97)			
Social variable				
- regional dummies				
- Latin America	.055	.054	.048	.04
	(2.61)	(2.73)	(2.54)	(1.84)
- Africa(South of Sahara)	.072	.068	.062	.074
	(2.62)	(2.79)	(2.61)	(3.18)
- education	-.091	-.0968	-0.106	-.122
	(-2.67)	(-3.04)	(-3.48)	(-3.87)
- fertility	.014	.016	.019	.016
	(1.99)	(2.46)	(3.27)	(2.68)
No. observation	63	63	63	63
R^2	.782	.7717	.7672	.7996
Adjusted R^2	.729	.7426	.7423	.7699
F-statistic	14.9	26.6	30.8	26.93

remark: figures in the parenthesis are t-test

Table 2.7: Regression estimate of the income inequality in 45 countries

	specifications (1)	(2)	(3)	(4)
Dependent var: Income share of the poorest 40 percent				
Constant term	40.955	42.73	39.26	17.47
	(4.13)	(4.64)	(4.46)	(10.22)
Economic factors				
- Income per capita	-5.652	-5.84	-5.36	
	(2.35)	(-2.60)	(-2.41)	
- Income per capita squared	.003	.339	.322	
	(2.14)	(2.25)	(2.19)	
- Share of agr. labor	-3.153	-3.35		-12.315
	(-1.08)	(-1.22)		(-2.25)
- Share of agr.labor squared				16.61
				(2.47)
- Export performance	-.213			
	(-0.10)			
- Manufactured exports				
Government intervention				
- Direct tax	-3.693			
	(-.57)			
- Public expenditure	2.411			
	(.76)			
Social				
- regional dummies				
- Latin America	-3.25	-3.18	-2.78	-3.24
	(-2.71)	(-2.83)	(-2.58)	(-2.82)
- Africa South of Sahara	-3.25	-3.16	-2.73	-3.85
	(-2.08)	(-2.26)	(-2.01)	(-2.75)
- education	3.401	3.725	4.36	4.38
	(1.77)	(2.06)	(2.51)	(2.47)
- fertility	-.880	-.992	-1.19	-.697
	(-2.183)	(-2.67)	(-3.58)	(-1.94)
R^2	.7248	.7104	.7025	.6963
adjusted R^2	.6587	.6735	.6706	.6638
F-statistic	10.97	19.27	22.04	21.40

Findings :

Our results lend support to the Kuznets hypothesis, as it appears that income inequality tends to rise as the income per capita increases but tends to decline after income per capita reached a certain level (see Figure 2.3). In technical terms, the quadratic functional specification outperforms the linear specification. See the details in Tables 2.6, 2.7 and in the Appendix.

The results also showed a relationship between education and inequality, with high secondary enrollment associated with better income distribution.[1]

Fertility was found to be important and negatively related to income distribution performance, i.e., the higher the fertility rate the higher the Gini coefficient.

Our results also showed that the countries with a larger portion of labor force engaged in agricultural activities (at given per capita GDP level) tended to have more unequal income distribution. This should not be interpreted to mean that the agricultural sector has a strong bias towards greater inequality in income distribution; but rather that if the industrial/service activities are open for limited groups of peoples for what ever reason, then, there is a good chance that income distribution would perform poorly. In general, there will be a strong association between per capita GDP and the share of agriculture in GDP, simply reflecting different stages of industrialization. The findings then indicate that if the share of labor in agriculture does not fall in line with the

1. Of course, the causation is probably two ways. See the discussion concerning education in Chapter 4.

declining importance of agriculture in incomes, then one can expect large differentials between agricultural and non-agricultural incomes, and hence more inequality. There could of course be many reasons for an imbalance between the share of labor in agriculture and the share of agriculture in GDP, and it will generally depend on specific conditions within various countries, for example the abundance of land, the size of the country, socio-cultural factors etc..[2]

Two measures were used to represent the size of government, viz., the ratio of non-defense central government expenditure to GDP and the ratio of direct tax to GDP. Our results failed to find any strong conclusion from this variable although the sign is positive; i.e., it is not necessarily true that an increase in the size of government would result in a more equal income distribution. Similar result was also reported in Papanek and Kyn (1986).

The results confirmed the common view about the highly unequal income distribution in the Latin American and Sub-saharan African countries.

Finally, we failed to find any strong evidence to support the hypothesis that the degree of export-orientation might have a desirable impact on income distribution; i.e., the higher the ratio of export to GDP, the more equal the distribution of income.

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2. For a discussion of the imbalance between the share of agriculture in GDP and the share of employment in agriculture, see, for example, Sussangkarn (1988a).

2.5 Turning Point in the Kuznets Curve for Thailand

The "turning point in the Kuznets curve" can be estimated from the regression results present above. There are of course many qualifications that one should bear in mind. The first is that the cross-country results may be rather misleading for the development over time within countries. Second, many of the variables that were treated as independent variables in the above estimates are actually endogenous. For example, the ratio of enrollment in secondary education to that in primary education had been found to be closely related to the share of agriculture in employment, see Chapter 4. Also, inequality itself may have effects on the variables treated as independent variables. A full analysis would require estimating a simultaneous system.[3]

In spite of the above qualifications, an exercise to estimate the turning point in Thailand from the above results appears to be worthwhile for many reasons. First, the variables that were pointed out above as important in influencing inequality, eg., the share of labor in agriculture or the secondary enrollment ratio, are variables of particular relevance for Thailand. Thailand has a much higher share of employment in agriculture than what one would expect from the

3. Preliminary estimations of simultaneous structures involving inequality, share of labor in agriculture, and secondary enrollment appeared not to have changed the conclusions above regarding the signs of the various variables that were used in the above analyses in influencing inequality. More refined analyses will be carried out in the future.

share of agriculture in GDP, and it also has a much lower secondary enrollment ratio that most countries at similar levels of development. Thus, the impact of how changes in these ratios will affect inequality is of considerable interest. Thailand is also at the stage where future growth prospects is bright, so how the rates of growth of GDP toghether with the other variables alter the path of inequality is also of great interest.

The results were based on our estimate of the Kuznets curve in Table 2.6. If only GDP changes while other factors in the equation are held constant, then the equation would suggest that the turning point will occur when per capita GDP reached the level of 2,086 US dollar at 1980 prices. However, GDP per capita is clearly related to the other factors, so that some assumptions about how these variables are likely to change as a set have to be made.

We made five alternative projections for the "turning point" for Thailand. The cases may be grouped under **the base case**, the **optimistic scenario** and the **pessimistic scenario**; these are based on alternative assumptions about a) the future growth of real GDP, b) the labor share in agriculture, and c) secondary education enrollment ratio. For all these cases, we made the same assumptions about the rate of population growth and fertility decline. Fertility rates were assumed to reach 2.1 percent by the year 2000 from 3.1% in 1986, and the population growth rate was assumed to decline from 1.5% currently to only 1.1% by the year 2000. It was felt that because of the past success of the family planning program and the already very high levels of contraceptive prevalence in the country, future changes in real GDP growth of the magnitude

assumed in the experiments would not affect these population variables too much.

The base case projection assumed that: a) real GDP will grow by 7 percent per year continuously, b) a decline of agricultural labor share from 67 percent in 1986 to 50 percent by the year 2000,[4] and c) the ratio of secondary education to the primary education enrollment will increase from 31 percent to 38 percent. The result: the turning point is likely to happen 9 years from now, that is to say, in 1997, or just at the beginning of the Eighth 5-Year Plan. See Table 2.8.

Two projections under the optimistic assumptions were as follows: First, assuming a) the growth of real GDP at a 10 percent per year; under this assumption there will be strong demand for labor, and hence labor will be drawn from agriculture sector more rapidly than in the base case, so b) the share of labor in agriculture was assumed to be only 43% by the year 2000, and c) the ratio of secondary enrollment to primary enrollment was assumed to increase from the present rate (31 percent) to 45 percent in the year 2000. Result: The turning point is likely to occur in 1995 under these assumptions, or towards the end of the Seventh 5-Year Plan. We also made an intermediate optimistic scenario with the following assumptions, a) the growth rate of real GDP at 8 percent per year; b) the labor share in agriculture falling to 47 percent by the year 2000, and c) the ratio of secondary to primary enrollment will increase to 42% be the year 2000. Under these conditions the turning point turned out to be 1996.

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4. This was the expected share of labor in agricultural according to recent analysis at the NESDB under similar GDP growth assumptions to our base case. See NESDB (1988).

Table 2.8 The Estimate of Thailand's Turning Point

	turning point year	assumption: annual real growth of GNP (%)	assumption: share of labor in agriculture in the 2000 year (%)	assumption: ratio of secondary to primary enrollment in the 2000 year
base	1997	7	50	.38
pessimistic				
(1)	1998	6	52	.35
(2)	1999	5	54	.33
optimistic				
(1)	1995	10	43	.45
(2)	1996	8	47	.42

Two projections under the pessimistic scenario were follows. In the first, we assumed that a) real GNP will grow by 6 percent per year, b) the labor share in agriculture will decline from the present level to 52 percent by the year 2000, and c) the ratio of secondary to primary enrollment will increase to only 35% by the year 2000. The turning point was likely to occur ten years from now (1998). The second projection assumed a slow growth of real GDP at 5 percent per year, the labor share in agriculture at 57 percent in the year 2000, and the ratio of secondary to primary enrollment at 33

percent by the year 2000. Under these pessimistic assumptions the turning point turns out to be in 1999.[5]

From these exercises, one can anticipate that it may take between 7-11 years before the turning point is reached in Thailand. Although these projections are beset by all kinds of difficulties as mentioned above, this range of values appeared to be fairly sensible in the case of Thailand. Currently, although the economy is booming, there appears to be lag in the transition of labor from the agricultural sector. This leads to increasing inequality in aggregate, but it means that the pool of labor still in agriculture will dampen the tendency for the mean wage (for the whole country) to rise rapidly as a result of strong industrial growth. As development continues, however, a point will eventually be reached when sufficient labor has made the transition from agriculture that the labor supply situation starts to get tight. In estimates by the NESDB (1988) using similar GDP growth to our base case, it was found that the absolute level of labor in agriculture will decline sometime during the Eighth 5-Year Plan. This may be the key point when general shortages of labor begins to develop.[6] Our findings are consitent with this.

Once again our study lends strong support to the common view that education, labor transformation out of agriculture, and fertility rates have significant impact on income distribution, not to mention their impact on growth. On

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5. Of course one might now fell that a 5% expected growth in real GDP is pessimistic. However, it can be recalled that this was the original expected rate for the Sixth 5-Year Plan.

6. This was suggested by Dr. Ammar Siamwalla to one of the authors in private conversation.

population, Thailand has been particular successful in its family planning program. According to the above analysis, this has helped eased the problem of increasing inequality from what it otherwise would be. The issues concerning migration and education in Thailand will be taken up in the next two chapters.

To end this chapter, however, we should point out that our intention is certainly not to give the impression that the Kuznets curve path as outlined above is inevitable. This would be totally wrong, and may lead to apathy and could be dangerous. Behind each scenario lies many implict assumptions about the needed policies necessary to bring about the changes. Government interventions, whether good or bad, can affect the sustainability and equity of the future development path. In the annex, we discussed the experiences of two countries who appearred to have been reasonably successful at reaching some consisteny between growth and distributional objectives; Taiwan and South Korea. This should indicate that there is nothing inevitable about moving along the Kuznets curve. With the right preconditions and policies, more equitable growth can be attained.

For Thailand, some of the important policy issues concerning migration and education are covered in the next two chapters, and the impact of some other policies on income distribution are discussed in the other reports of the conference.

Appendix A

Table A1 Regression estimate of the income inequality in 45 countries

Dependent var: Income share of the poorest 60 percent	
Constant term	62.66
	(4.34)
Economic factors	
- Income per capita	-7.52
	(-2.15)
- Income per capita squared	.466
	(2.04)
- Share of agr. labor	-6.787
	(-1.597)
- Export performance	-0.886
	(-.289)
- Manufactured exports	
Government intervention	
- Direct tax	-5.535
	(-.586)
- Public expenditure	3.074
	(.669)
Social	
- regional dummies	
- Latin America	-5.41
	(-3.101)
- Africa South of Sahara	-5.797
	(-2.55)
- education	6.561
	(2.346)
- fertility	-.9302
	(-1.584)
R^2	.7743
adjusted R^2	.7201
DW	1.63
F-statistic	14.29

remark: figures in the parenthesis are t-test

Table A2:Regression estimate of the income inequality in 45 countries

Dependent var: Income share of the richest 20 percent	
Constant term	15.412
	(.873)
Economic factors	
- Income per capita	8.151
	(1.903)
- Income per capita squared	-.523
	(-1.871)
- Share of agr. labor	8.728
	(1.679)
- Export performance	1.085
	(0.289)
- Manufactured exports	
Government intervention	
- Direct tax	-.922
	(.0798)
- Public expenditure	-2.18
	(-.389)
Social	
- regional dummies	
- Latin America	6.297
	(2.953)
- Africa South of Sahara	9.236
	(3.322)
- education	-9.392
	(-2.742)
- fertility	.754
	(1.05)
R^2	.7910
Adjusted R^2	.7409
DW	1.58
F-statistic	15.77

Appendix B
I. Details of data

The regressions are used on pooling cross-section and time series of forty-five countries. Twenty-eight countries 'have one year observations, while sixteen countries have two year observations. Thailand's data has three year observations. The details of data are as follows.

	country	base year
1	Argentina	1970
2	Australia	1967
3	Australia	1976
4	Bangladesh	1982
5	Belgium	1979
6	Brazil	1972
7	Canada	1969
8	Canada	1981
9	Costa Rica	1971
10	Cote d'ivoire	1986
11	Denmark	1981
12	Egypt	1974
13	El Salvador	1977
14	Finland	1981
15	France	1970
16	France	1975
17	Germany, Fed.	1973
18	Germany, Fed.	1978
19	Hong Kong	1980
20	India	1965
21	India	1976
22	Indonesia	1976
23	Ireland	1973
24	Israel	1980
25	Italy	1969
26	Italy	1977
27	Japan	1969
28	Japan	1979
29	Kenya	1976
30	Malaysia	1970
31	Malaysia	1973
32	Mauritius	1981
33	Mexico	1977
34	Netherlands	1967
35	Netherlands	1981

36	New Zealand	1982
37	Norway	1970
38	Norway	1982
39	Panama	1973
40	Peru	1972
41	Philippines	1971
42	Philippines	1985
43	Portugal	1974
44	Spain	1974
45	Spain	1981
46	Sri Lanka	1970
47	Sri Lanka	1981
48	Sweden	1972
49	Sweden	1981
50	Switzerland	1978
51	S.Korea	1976
52	Thailand[a]	1976
53	Thailand[a]	1981
54	Thailand[a]	1986
55	Trinidad and Tobago	1976
56	Turkey	1973
57	United Kingdom	1973
58	United Kingdom	1979
59	United States	1972
60	United States	1980
61	Venuzuela	1970
62	Yugoslavia	1978
63	Zambia	1976

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source: World Bank, World Development Report 1979-1987 and World Tables 1976,1980,1987

[a]income distribution data complied by TDRI

CHAPTER 3
MIGRATION, URBANIZATION AND POVERTY

3.1 Introduction

People move from place to place in response to economic/social opportunities; hence it would be quite misleading to analyze growth, income distribution, and poverty without consideration to migration--particularly an emigration out of rural areas. In principle, migration should narrow income disparities if laborers strongly respond to wage/income differentials and move from area where return is low to a better paid place. In reality, however, the impact of migration on regional and personal income distribution is a highly complex issue. To answer this question, one needs to knows more about migrants--whether they are young or old, rich or poor, inert or highly motivated, well educated or poorly educated etc. Equally important, one also needs to know whether or not people who left behind can effectively manage their housholds (productive) assets.

In this chapter, attempts have been made to quantitatively analyze the impact of population movement--particularly the rural-out migration--on both the urban and rural economies. Also discussed is the effect of movement among sectors of production especially the shifting of labor from traditional sector to modern sector as it has found, in the previous chapter, that this particular type of movement is a prerequisite condition for a decline in income inequality.

3.2 Cause of Migration

There is no consensus over what is the cause of rural-urban migration. Some people believe that the pulling factors of cities is the main factor inducing rural-urban migration while others stress that the pushing factors such as poverty and lack of productive job in village is the force that

drives rural workers and their families to move into town. An empirical study conducted by Sussangkarn and colleagues (1986) indicates that while rapid increase in urban wage is likely to stimulate fairly large rural-to-urban migration, increasing in urban unemployment appears to have negligible effect to deter in-migrants from rural areas. The study by Tirasawat (1985) finds that there are substantial evidence especially in the "less developed villages" that poverty has been the main pushing factor that drives the young and less educated persons to search for unskilled work in urban places. In more developed villages, however, it is found that many households send their children to obtain higher and better education in urban areas, and many of the students remain there after the graduation to work in occupations suitable to their training.

Education is considered as another importance factor that influences migration out of rural areas. Tirasawat (1985) shows that out-migrants are better educated than those they left behind. Two interpretations are suggested: first, the urban-ward migration is the means by which educated persons maximize returns on their knowledge and skills; second, the supply of educational services are concentrated in urban areas.

Labor mobility has been considered as desirable and necessary from an efficiency viewpoint [see Lewis (1954), Fei and Ranis (1964)]. But not all agrees to this view. The message from Todaro (1969) model suggests that the perceived demand for labor in urban areas appears to exceed the actual economic opportunities available. One additional formal employment raises the expectation about getting a job and induces further migration into cities, perhaps more than one, so the massive urban unemployment and underemployment continue as evidenced in many big cities. In addition, Todaro points to the necessity of adapting development strategies emphasizing regional or rural growth as he sees that it is much less costly from the social viewpoint to correct the over urbanization problem by promoting rural development. Lipton (1980) stresses

the importance of information on actual employment opportunities and points that this is the area which the public sector can play more active role.

3.3 Migration Trends

Table 3.1 to Table 3.3 show the patterns and trends of Thailand's regional and rural-urban migration during the 1970s and 1980s. Major changes in migration trends during this period can be summarized as follows:

(a) Interregional migration has become increasingly important while the significance of intraregional migration has continued to decline. In 1960, only 42% of all interprovincial migrants moved between regions, whereas 58% moved within the region. Between 1965 and 1970, the percent of movement between regions increased to 46%. This changing trend continued into 1980 when, for the first time, the evidence indicates that there was more interregional migration than intraregional migration. (See Table 3.1.)

(b) Concurrent with the decline in intraregional migration, rural-rural migration (which usually involves a short movement within the same region) also declined when compared to other intersectoral flows. The shifting importance of migration streams from rural-rural to other streams might suggest that fewer opportunities are seen as being made available through movement within rural areas and urban centers are increasing their attraction to rural residents. Such a change may be related to the diminishing availability of new land for cultivation. (See Table 3.2.) However, it is interesting to note that the rural-to-urban migration in Thailand during 1960 to 1980 was the lowest among heavily populated Asian countries--Indonesia, Philippines, and Korea--all of which had the net rural-out migrants more than twice higher than Thailand. This rather low level of (net) rural-out migration in Thailand was partly ascribed to its geographical

characteristic of having such an abundance fertile agricultural land that the Thai population had relatively few little pressure to move out.

(c) The attractions of the BMR exert the strongest pull on migrants from all parts of Thailand. The data on five-year interregional migration streams during the 1975-80 period show that, on a net balance, the BMR gained approximately 286,000 persons from other regions. This net inflow accounted for about 90% of the country's interregional migration. Furthermore, the largest stream was the exchange between the BMR and the Northeast Region, accounting for 46% of the total net inflow to the BMR. (See Table 3.3.)

Table 3.1 Interprovincial Recent Migration by Region: 1955-1960, 1965-1970, 1975-1980

Unit: '000

Region of Residence	Migrants Within Region	Migrants Between Region	Total Provincial Migrants
1955-1960			
Northeast	180 (87)	26 (13)	206 (100)
North	91 (58)	66 (42)	157 (100)
South	59 (69)	26 (31)	85 (100)
Central	124 (59)	86 (41)	210 (100)
Bangkok	--	131 (100)	131 (100)
Whole Kingdom	454 (58)	335 (42)	789 (100)
1965-1970			
Northeast	330 (77)	100 (23)	430 (100)
North	196 (62)	120 (38)	316 (100)
South	131 (75)	43 (25)	174 (100)
Central	248 (54)	208 (46)	456 (100)
Bangkok	--	299 (100)	299 (100)
Whole Kingdom	905 (54)	770 (46)	1675 (100)
1975-1980			
Northeast	241 (77)	74 (23)	315 (100)
North	166 (61)	104 (39)	270 (100)
South	130 (71)	54 (29)	184 (100)
Central	218 (43)	285 (57)	503 (100)
Bangkok	--	341 (100)	341 (100)
Whole Kingdom	755 (47)	858 (53)	1613 (100)

Sources: 1955-1960 data from Thailand, National Statistical Office cited in Goldstein and Goldstein (1986), 1965-1970 data from Arnold and Boonpratuang (1976) and 1975-1980 data from Pejaranonda, Goldstein and Goldstein (1984)

Table 3.2 Urban-rural Migration Streams: 1965-1970 and 1975-1980

Migration Streams	1965-1970 %	1975-1980 %
Rural-rural	62.60	52.00
Rural-to-urban	10.50	14.30
Urban-to-rural	5.40	9.40
Urban-urban	8.90	17.20
Stream unknown	12.60	7.10
Total	100.00	100.00

Sources: 1965-1970 data from Arnold and Boonpratuang (1976) and 1975-1980 data from Pejaranonda, Goldstein and Goldstein (1984).

Table 3.3 Five-year Interregional Migration Streams to and from the BMR, 1975-1980

Region and Type of Migration	Province/Region of Destination	
	Bangkok	BMR
In-migration from		
Central	46,114	63,847
East	35,260	47,368
West	39,022	58,320
Northeast	131,819	158,882
North	47,895	61,202
South	36,978	43,510
Total	337,080	433,129
Out-migration from		
Central	13,756	18,071
East	19,964	27,881
West	14,125	25,934
Northeast	23,729	27,442
North	24,373	28,387
South	15,546	19,139
Total	111,493	146,854
Net-migration from		
Central	32,358	45,766
East	15,296	19,487
West	24,897	32,386
Northeast	108,090	131,440
North	23,522	32,815
South	21,432	24,671
Total	225,595	286,275

Source: 1980 Population and Housing Census, recited from Ashakul, 1985.

3.4 The Impact of Rural-out Migration on the Rural Economy

The rapid increase in the flow of interregional migration (particularly from the Northeast Region to the BMR, on one hand, and from rural areas to urban areas, on the other) is often seen as highly undesirable. Emigration out of rural areas is blamed as the cause of rural stagnation and excessive urban growth as well as urban unemployment and poverty. These claims, however, require further discussion.

For rural areas, evidence on out-migration strongly contradicts this belief. Large emigration from rural areas (especially from the Northeast Region) together with the expansion of cultivated land and the shift of the employed work force toward non-agricultural activities, have prevented land fragmentation despite the high rural population growth of the last three decades. Emigration seldom caused a drop in farm output. 1/ In fact, the increase of Thai farmer productivity over the last three decades was partly the result of rural-out migration and the shift of agricultural labor into other activities.

Table 3.4 shows the actual cultivated land per person during 1970-1985. Also shown is the estimated land per person under the assumptions that: (a) there was no rural out-migration from 1970 to 1985; (b) there was no shifting of agricultural labor to other sectors from 1970-1985; and (c) there was no land frontier expansion from 1970-1985. Under a "no migration" assumption, cultivated land per person declined moderately. The decline was the highest around 10% in the Northeast Region, the major migrant-sending area of Thailand, followed by the Southern and the Northern Regions. 2/

1/ In a study of rural-out migration impact on agricultural output, Pityanond and Chanchareon (1980) concluded that rural emigration has not caused labor shortage within the locality as workers can usually be drawn from poorer (rural) districts to the needed area.

2/ The projected working age population and the share of agricultural employment in the total labor force are given in the Appendix to this chapter.

Between 1970 and 1985, the shift of agricultural laborers to non-agriculture activities also contributed to a significant expansion in land per person. Had there been no shift of labor out of agriculture, the average cultivated land per person in the Central, the North, the Northeast, and the South in 1985 would have been 6.4, 5.2, 4.6 and 5.8 rai instead of 8.8, 6.1, 5.2, 7.5 rai, respectively. These figures represent a reduction of 37%, 18%, 12%, and 28% of cultivated land per person of the Central, the North, the Northeast and the Southern Regions, respectively. It should be noted that the combined effect of rural out-migration and the shift of agricultural labor to other sectors on cultivated land per person is not equal to the added effects of these two components. This is due to differences in labor force participation rates between migrants and non-migrants and the disproportionate concentration of agricultural labor among migrant workers. During this period, the combined effect of rural out-migration and the shiftof labor out of agriculture resulted in a 39%, 24%, 22% and 38% increase in land per person in the Central, the North, the Northeast and the Southern Regions, respectively.

Obviously, the expansion of the land frontier, the most important phenomenon in Thai agriculture in the last three decades, contributed significantly to the increase in cultivated land per person. Without the drive into virgin land, the average land per person would have been reduced by 27% in the South, 41% in the Central plains, 65% in the Northeast, and as high as 76% in the North.

Results of the regression analysis conducted by the Agricultural and Rural Development Program (TDRI, 1988) indicate that one of the most important factors contributing to the increase in farmer productivity in Thailand during the last twenty years was the expansion of cultivated land per person. The expansion of land per person induced farmers to adopt more labor-saving technologies such as farm mechanization which,

Table 3.4 Projected Land per person Under Various Assumptions

	Rai per person				% Decrease as Compared to Actual Land per person Case			
	1970	1975	1980	1985	1970	1975	1980	1985
Actual Land per person								
Central Plain	8.59	9.67	9.10	8.80	--	--	--	--
North	5.21	5.96	6.20	6.14	--	--	--	--
Northeast	4.87	5.39	5.44	5.15	--	--	--	--
South	8.15	8.05	7.96	7.50	--	--	--	--
Estimated Land per person Under No Migration Assumption a/								
Central Plain	8.59	9.55	8.91	8.67	--	1.34%	2.12%	1.50%
North	5.21	5.78	5.94	5.82	--	2.96%	4.39%	5.49%
Northeast	4.87	5.26	5.07	4.70	--	2.40%	7.18%	9.60%
South	8.15	7.94	7.69	6.95	--	1.40%	3.45%	8.00%
Estimated Land per person Under Fixed Shares of Agricultural Labor in Total Labor Force b/								
Central Plain	8.59	8.79	7.45	6.40	--	9.99%	22.19%	37.43%
North	5.21	5.66	5.58	5.21	--	5.27%	11.13%	17.68%
Northeast	4.87	5.19	5.04	4.59	--	3.78%	7.86%	12.27%
South	8.15	7.46	6.79	5.84	--	7.95%	17.28%	28.38%
Estimated Land per person Under No Mig Ass and Fixed Shares of Agricultural Labor in Total LF								
Central Plain	8.59	8.68	7.30	6.31	--	11.44%	24.71%	39.41%
North	5.21	5.50	5.35	4.95	--	8.31%	15.86%	23.91%
Northeast	4.87	5.07	4.72	4.21	--	6.18%	15.14%	22.36%
South	8.15	7.36	6.56	5.42	--	9.45%	21.27%	38.36%
Estimated Land per person Under no Expansion of Land Frontier Assumption c/								
Central Plain	8.59	7.75	6.95	6.20	--	24.87%	30.97%	41.79%
North	5.21	4.56	3.99	3.48	--	30.57%	55.58%	76.40%
Northeast	4.87	4.21	3.63	3.13	--	28.01%	49.86%	64.70%
South	8.15	7.32	6.57	5.89	--	9.94%	21.09%	27.36%

Data on regional agricultural labor and cultivated land compiled by the Agriculture and Rural Development Program, TDRI.

Notes: a/ Agricultural labor was estimated by multiplying the potential work force at the regional level (population age 11+) by regional labor force participation rates and (fitted) shares of agricultural labor in the total labor force. The potential work force was estimated by using a cohort population projection technique under the assumption that there was no interregional migration between 1970-1985. It was assumed that the average labor force participation rate of working age migrants is 7% higher than that of the working age population. The projected regional potential labor force and share of agricultural labor in the total labor force are shown in Appendix A.

b/ Shares of agricultural labor in the total labor force were assumed to be unchanged from the levels observed in 1970.

c/ Cultivated land was assumed to be unchanged since 1970.

in turn, enhanced labor productivity. The impact of land/farmer expansion on farmer productivity is significant and very strong even when compared to the effect of increased capital stock. An expansion of the land/farmer ratio by 10% would increase labor productivity by 5.3% while a ten percentage point increase in the level of capital stock is expected to associate with only a 0.7% increase in farmer productivity.

The above regression results combined with the estimates shown in Table 3.4 made it possible to calculate the contribution of labor movement out of agriculture and land frontier expansion on labor productivity. Assuming that there was virtually no rural-to-urban migration from 1970-1985, productivity gains in all regions would be reduced at varying degreesdepending on the extent of actual rural out-migration in that particular region. In percentage terms, farmer productivity in the Northeast Region would be affected the most. The productivity gain of this region would be reduced by one third--from a gain of around 20% to 14%. Productivity gains of the North and the Southern Regions would also decline considerably, but the productivity gain of the Central Region farmer would be minimally affected. (See Table 3.5.)

The effect of rural emigration on labor productivity is quite significant; however, the combined effect of rural emigration and the shift of agricultural labor to other sectors is much stronger. Without the transfer of labor out of agriculture either by rural emigration or the shift of agricultural labor to other sectors, farmer productivity in the Central plains, the North, and the Northeast from 1970-1985 would have increased by only 8%. For the Southern Region, the improvement would have been around 15%. And, these productivity gains are about 2 to 3.5 times lower than the observed rates of increase during the same period.

Needless to say that emigration is not without its cost. Urban-ward migrants and their families often suffer from temporary period of separation, although there is evidence that woman left behind efficiently manage the household and family assets, including agricultural land (World Bank, 1984). The suffering is (partly) compensated by remittance from migrant workers back home. The 1985/86 Socio-economic Survey data indicate that the net rural-bound income transfer ("transfer in" minus "transfer out") amounted to a fairly large proportion of rural household money income. Specifically, the net transfer amounted to around 8% to 9% of total rural household money income in the North, Northeast and Central Regions. For the Southern Region, the net transfer accounted for less than 3% of total rural household money income. (See Table 3.6.)

Thus, basing on the above discussion, it can be concluded that the increase in the productivity of Thai farmers and the reduction of absolute rural poverty over the last three decades were partly due to the movement of labor out of agriculture--either by rural out-migration or the shift to non-farm activities. The expansion of cultivated land alone would not have been sufficient to offset population pressure to the extent that labor-saving techniques (such as farm mechanization) could have been introduced on a wide enough scale to raise overall labor productivity. More importantly, the transfer of resources out of agriculture is quite crucial now that it has become increasingly difficult to find new land to farm--the traditional approach to increasing labor productivity in the past. Seen in this light, what is often considered the transferring out of resources from agriculture for which rural stagnation and multiple problems of urban management are blamed becomes a necessary and desirable contributor to raising relative rural per capita income and alleviating rural poverty.

Table 3.5 Projected Labor Productivity Under Various Assumptions

	Baht per person				% Change from 1970		
	1970	1975	1980	1985	1975	1980	1985
Actual Labor Productivity							
Central Plain	4,071	5,101	6,076	5,248	25.31%	49.25%	28.91%
North	2,403	2,723	2,855	2,896	13.34%	18.84%	20.55%
Northeast	1,554	1,719	1,805	1,863	10.61%	16.19%	19.90%
South	2,204	2,221	2,310	2,977	0.79%	4.85%	35.12%
Estimated Labor Productivity Under No Migration Ass. a/							
Central Plain	4,071	5,061	6,011	5,202	24.60%	48.13%	28.12%
North	2,403	2,669	2,776	2,797	11.77%	16.51%	17.64%
Northeast	1,554	1,691	1,721	1,750	9.34%	12.38%	14.48%
South	2,204	2,198	2,252	2,844	0.05%	3.02%	30.88%
Estimated Labor Productivity Under Fixed Shares of Agr. Labor in Total Labor Force b/							
Central Plain	4,071	4,794	5,394	4,098	20.02%	37.49%	9.07%
North	2,403	2,627	2,654	2,575	10.55%	12.94%	11.18%
Northeast	1,554	1,674	1,713	1,719	8.61%	12.02%	13.40%
South	2,204	2,088	2,023	2,505	-3.42%	-4.31%	20.08%
Estimated Labor Productivity Under No Mig. and Fixed Share of Agr. Labor in Total LF.							
Central Plain	4,071	4,751	5,317	4,037	19.25%	36.15%	8.02%
North	2,403	2,573	2,567	2,463	8.94%	10.43%	7.88%
Northeast	1,554	1,646	1,628	1,600	7.33%	8.17%	8.05%
South	2,204	2,063	1,956	2,338	-4.22%	-6.42%	14.79%
Estimated Labor Productivity Under No Expansion of Land Frontier Ass. c/							
Central Plain	4,071	4,336	5,123	3,963	12.13%	32.84%	6.76%
North	2,403	2,168	1,847	1,510	-2.86%	-10.62%	-19.94%
Northeast	1,554	1,390	1,220	1,104	-4.24%	-10.24%	-14.39%
South	2,204	2,056	1,959	2,521	-4.48%	-6.33%	20.62%

See notes to Table 3.4

Table 3.6 Net Income Transfer to the Rural Areas of Thailand (1985 Prices)

Region	(1) Annual Household Net Monetary Transfer	(2) Annual Household Net Non-monetary Transfer	(1)+(2) Annual Household Net Total Transfer	Household Net Total Transfer as % of Total Money Income
North	1452.57	562.55	2015.12	9.24%
Northeast	990.98	252.04	1243.02	7.98%
Central (Exclude the Greater Bangkok Metropolitan Area)	2195.66	208.06	2404.26	7.55%
South	1249.72	(565.60)	684.12	2.74%

Source: 1985/86 Socio-economic Survey, NSO.
Note: Net monetary transfer includes remittance and assistance from persons living in Thailand and abroad and (net) monetary transfer from institutions.

3.5 The Impact of Rural-out Migration on the Urban Economy

It is often alleged that migrants, especially those from up-country, burden the BMR with a flood of unskilled, unmotivated, unemployed people who worsen the poverty situation. The argument made to support this concern is found in the Fifth National Economic and Social Development Plan (1982-1986).

> "There is up till now only one primate city which is Bangkok Metropolis.... The rapid increase in urban population is putting greater pressure on the services sector which has reached the limit to satisfy the urban demands. A section of the urban poor population is inevitably condemned to be without proper housing. The problem is particularly acute among the migrant laborers from up-country, most of whom are unskilled and are more unlikely to be given temporary jobs. The housing shortage has forced them to live in slums and shanty towns, which are already known to be breeding grounds of problems."

Evidence from the 1980 Population Census, Survey of Migration in the Bangkok Metropolis, Nontha Buri, Pathum Thani, Samut Prakan, Nakhon Pathom, and Samut Sakhon and the 1981 Socio-economic Survey data seem to be against this claim. Migrants to the Bangkok Metropolis and its vicinity tend to be young. The bias toward a younger age of migrant seems to be strongest in the Bangkok Metropolis where 80% of in-migrants were under 30 years of age. (See Table 3.7) Not only were migrants into the BMR positively selected among the relatively younger population but also among people with a relatively high education. Among people with a secondary education and above, migration was more than twice as prevalent as for those at lower levels of educational attainment. Aside from the fact that upper school levels in Thailand are highly concentrated in urban areas, Pejaranonda, Goldstein and Goldstein (1984) also suggest that positive educational selectivity might be because people with secondary and university educations often learn specialized skills which are demanded only in select locations. In addition, it has been found that the effect of higher education on earning is greater in large urban centers--especially in the BMR--than in smaller centers. (Ashakul and Ashakul, 1986). Therefore, it is logical for educated workers to migrate to the BMR in order to realize more benefit from their education.

Table 3.7 Age Distribution of Migrants by Region 1975-1980

Unit: percent

Age	Region of 1980 Residence					
	Northeast	North	South	Central	Bangkok Metropolis	Whole Kingdom
under 10	13.82	11.04	10.50	10.87	5.69	10.37
10-19	24.63	23.59	24.86	24.76	34.03	26.51
20-29	35.04	36.79	38.65	35.56	40.39	37.07
30-39	14.14	14.10	14.32	14.62	11.67	13.77
40 and over	12.37	14.47	11.68	14.19	8.22	12.27
Total	100.00	100.00	100.00	100.00	100.00	100.00

Calculated from Pejaranonda, Goldstein and Goldstein (1984), Table 9.

Surveys of in-migration during 1981 to 1983 indicate that migrants to the BMR, with the majority of them coming from the rural areas of the Northeast Region, tend to be highly motivated. The data show that "economic considerations" was the most important motivating factor dominating all other reasons. About 67% of the in-migrants to Bangkok from 1981-1983 came to find jobs and to improve their economic status and another 5% came on job assignments. (NSO, 1985b). It should also be noted that a significant percentage of migrants--particularly female--stated "accompanying a person in the household" as the reason for migration. Nevertheless, it is quite likely that the movement of migrants who cited "accompanying a member of the household" as the reason for moving were, in fact, motivated by economic reasons, since a large percentage of their spouses might migrate directly in response to the economic situation.

As per capita income in the BMR is higher than in other parts of the country, it is of no surprise that the main reason for migrating into the region was to improve household's economic situation. What is rather astonishing is that the unemployment rate of in-migrants to Bangkok is even lower than

that of natives. During the period 1981-1983, the unemployment rate of in-migrants to Bangkok was only 2.3% compared to a fairly constant rate of around 3% of the Bangkok Metropolis labor force over the period 1977-1984.

Table 3.8 shows a percentage distribution of poor and non-poor by migratory status. If poverty were evenly distributed between native-headed households and migrant headed households, the percentage of poor and non-poor in each type of household would be equal. In contrast, if the percentage of "poor" in a specific type of household is larger than that of "non-poor," it would indicate that the poor are more concentrated within this specific group. From this Table it can be inferred that natives are more likely to fall under the poverty line than migrants, suggesting that migrants generally respond to the superior employment opportunities encountered and/or they are better able to improve their economic situation than natives.

In the 1970s and 1980s, employment in the non-agricultural sectors of the Bangkok Metropolis and five surrounding provinces grew around 5% to 12% per annum while the natural growth of the working age population of the Bangkok Metropolis and its surrounding provinces grew around 2.5% and 2.9%, respectively. (See Table 3.9 and Table A1 in the Appendix to this chapter.) Thus, it would be quite accurate to say that the BMR would have been faced with a severe shortage of labor had there been no in-migration into the region. The influx of migrants provides the BMR with a relatively low-wage and highly trainable work force, enabling the region to develop labor-intensive manufacturing industries (textiles, garment, electronics assembly, toys, food processing, and jewelry) for both domestic consumption and export.

Table 3.8 Percentage Distribution of Poor and Non-poor by Migratory Status [a/]

Unit: percent

Area	Native	Lifetime [b/] Migrant	Total
Bangkok Metropolis			
Poor	27.8	72.2	100
Non-Poor	12.0	88.0	100
Other Five Surrounding Provinces			
Poor	45.0	55.0	100
Non-poor	36.8	63.2	100

Notes a) Reproduced from Ashakul and Ashakul (1986), Table 2.20, p. 21.
b) Lifetime migrant is defined as person whose province of residence was different from her/his province of birth.

Table 3.9 Changes in Employment, 1970-1980

Unit: Growth Rate, % per annum

Place of Residence	Agriculture, Mining	Manufac turing	Others Sectors	Total
Bangkok Metropolis	-0.9	7.2	6.0	5.7
Nonthaburi	-0.7	8.4	7.6	4.2
Pathum Thani	1.3	12.6	7.6	4.5
Samut Prakan	-1.7	10.5	6.8	5.4
Samut Sakhon	0.6	8.2	5.0	3.0
Nakhon Pathom	1.8	10.5	6.3	3.5
Total, BMR	0.4	8.0	6.2	5.2

Source: Census 1970, 1980. Reproduced from NESDB (1986), Table 2.8.

3.6 Summary, Conclusions and Policy Recommendations

3.6.1 Summary of the Study

The relationship between population movement -- whether in the form of geographical movement or movement among sectors of production--and development is long-term, iterative, and complex. Not all of the relationships are fully understood. Spatial policies are often formulated on the basis that rural-to-urban migration and transferring resources out of agriculture are highly undesirable events. As a consequence, many development policies are designed to stem rural-out migration and limit and diffuse growth of the capital region. However, evidence discussed above points to the conclusion that migration is a self-corrective mechanism and contributes to a better balance of resource utilization and improved overall welfare for the Thai population.

Emigration from rural areas, especially from the Northeast Region, seldom causes a drop in farm output. In fact, over the last three decades, the concurrent increase of Thai farmer productivity with the reduction in rural poverty was partly the result of rural out-migration and the shift of agricultural labor into other activities. As for the urban economy, evidence from various surveys clearly indicates that migrants are assets not burdens to the urban economy. Most of the migrants into the Bangkok Metropolitan Region (BMR), the majority of them coming from rural areas in the Northeast, are mostly between the ages of 14 and 29 and, in general, are better educated and more motivated than non-migrants. 3/ The unemployment rate of in-migrants to Bangkok during 1981-1983 was 2.3% compared to around 3% for natives. Indeed, it is hardly likely that the capital region--and Thailand for that matter--would have been able to develop its highly competitive

3/ The Bangkok Metropolis Region (BMR) comprises six Provinces--Bangkok Metropolis, Nakhon Pathom, Nontha Buri, Pathum Thani, Samut Prakan, and Samut Sakhon.

manufacturing export industry had there been no influx of upland migrants into the capital region.

3.6.2 Policy Recommendations

It is beyond the scope of this study to discuss any specific development policy in detail. However, some development issues emanating from the discussion above are listed below.

(a) Urbanization policy should not only originate from concerns with the financial costs of urbanization (such as the costs of providing urban infrastructure, urban public utilities and services) and the economic costs of urbanization (associated with pollution and congestion) of the BMR. Urbanization policy should also consider the benefits of the BMR in terms of economy of scale (associated with increased market size and improved communication) and its contribution to increased national income, productive employment, and foreign exchange and, hence, improved overall welfare improvement and the alleviation of the poverty.

(b) Although it would be poor policy to attempt to stem migration into the capital region and to limit its growth, this does not mean that we should overlook some aspects of national economic policy which may spatially favor the BMR at the expense of other regions. The list of major potentially distorting policies includes industrial tariffs and agricultural export taxes; investment incentives; biases toward the manufacturing sector especially for large firms; policy decisions affecting the rural sector; and the concentration of decision making in the capital city. 4/

4/ For instance, simulation results based on rural-urban migration model estimates (Sussangkarn, Ashakul, and, Myers, 1986) indicates that a slight deterioration of rural wages and income in relative to those in urban areas would likely induce a fairly large rural-to-urban migration as income elasticities of rural-to-urban migration are quite elastic. Specifically, it was found that some 0.5 million persons would be added to the Bangkok population if the income differential between Bangkok and Thailand's rural areas were to widen by 10% from

(c) Urban and rural economies are intertwined in many ways in which rural-urban migration is one of the main interlinking factors. It should be pointed out that an urban poverty reduction program and/or program to improve urban labor productivity and employment would reduce poverty not only in urban but also in rural areas as well. Raising the income of urban laborers would remove beneficiaries out of the poverty group gain by definition. However, those that move up will be replaced by new arrivals as long as the rural poor see an opportunity to improve their welfare by migrating to towns. Thus, a significant part of benefits from urban income enhancement will accrue through a reduction of rural poverty.

(d) Public-sector investment in programs such as the Rural Communities Development Program and land resettlement program should be judged on the program's own merits and benefits (in terms of income and employment creation) in relation to the cost of intervention--not on the basis of restricting capital region growth and slowing down rural-urban migration. There is evidence that the impact of these programs on rural-to-urban migration has been rather limited and it is very costly to make these programs effective. 5/ More importantly, it is not clear whether the program objective of limiting capital city growth and stemming rural-to-urban migration is desirable from an overall social point of view.

(e) Limiting the growth of the Bangkok region is not an appropriate strategy to deal with the urban-based problems of pollution and congestion. Appropriate policy intervention should, instead, focus directly on the sources of the

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normal trends. Thus, the rice premium and the rice export tax imposed during the mid 1960s to early 1980s, which according to the World Bank estimates (World Bank, 1983), amounted to a total burden to farmers of approximately 10 to 18 billion baht in 1981 prices, significantly contributed to rapid urban growth during the last three decades.

5/ For a detailed discussion of Rural Communities Development Program and land resettlement programs see World Bank (1983) and Institute of Population Studies, Chulalongkorn University (1981).

inefficiency. If prices for the use of private automobiles and motorcycles are set at levels reflecting the social costs which include the external costs of congestion and pollution, then traffic demand would be curbed. In addition, the revenue generated from price increases could be plowed back into investment in transportation.

(f) A program to improve urban employment and labor productivity should be given high priority as a means for alleviating poverty. In 1985, the value-added per worker in the agriculture sector, the backbone of the rural economy, was 10 to 12 times less than the value-added per person in industry and services. Furthermore, not only is the level of agricultural per-person value added the lowest, its growth is also relatively slow compared to other sectors. If one assumes that per-person value-added sectoral growth trends during last two decades will continue well into the future, one will find that it will take more than one-and-a-half centuries for per-person value-added of agriculture to increase to 1985's industry level. However, by that time, the per-person value-added of industry will have grown to fourteen thousand percent higher than its 1985 level.

The above discussion points out the difficult task of raising the income of rural laborers to levels comparable to their urban counterparts. The task is even more formidable now than in the past as the land frontier has been approached making it difficult for Thai farmers to expand cultivated land, a traditional method of increasing agricultural output. Thus, it is apparent that a substantial reduction in regional and/or sectoral income disparities will only occur if the growth of urban-based employment is accelerated and thus, a large shift of employment out of agriculture is induced. 6/

6/ The shares of off-farm employment in rural areas of Thailand have increased significantly during the last two decades, but according to the World Bank rural employment study (World Bank, 1983), the rapid expansion of rural non-farm employment during this period was, in fact, based on the multiplier effect of rapid agricultural growth rather than on

(g) It would be poor policy to curb the growth of Bangkok and its vicinity by limiting improvement and/or deferring the provision of urban services, in the belief that investment in urban services would accelerate the flow of migration, since evidence from many surveys shows that the availability of urban services such as residential and transportation services has little impact on migration decisions. (Linn, 1985) Therefore, this measure would impede well-being (especially of the urban poor who have to rely more on public services) but does not substantially serve the goal of limiting migration. Measures to improve urban services and urban infrastructure are very vital as they will enhance employment and labor productivity--a direct means of alleviating poverty. In this respect, the development of neighborhoods in the fringe areas of large and well established urban centers should be given high priority. Indeed, the return on investment in public utilities, public services, and other urban infrastructure of these areas is likely to be much higher in comparison to the return on investments of relatively isolated places.

(h) The government should adopt measures that encourage efficient use of urban/industrial land. Large portions of Bangkok land are being held idle either by land speculators and/or land developers; and many areas in the middle ring of the city are largely underutilized because of deficiencies of access and distributor roads. The opportunity loss of employment and income generation associated with this ineffective land-use pattern is considerable, especially in areas that are relatively well served by basic infrastructure. Therefore, it may be of strategic importance to encourage new development in unused areas of the city.

A useful starting point is the urban land taxation. The imposition of an urban land tax and a land development tax, in general, would lower the expected future yield stream on

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factors or policies fostering the growth of off-farm activities independent of agricultural growth.

land and would therefore reduce land speculation. Higher than average tax rates on vacant land and lower tax rates on developed land can be levied to encourage earlier release of vacant land for subdivision and development. Moreover, evidence from developing countries, on balance, indicates that land taxes are capitalized into lower land value. This lower land price may be important for low income households that do not have access to capital market, because it reduces outlay required for land purchase and thus facilitates the acquisition of land for housing (Linn, 1983). Therefore, the imposition of urban land taxes would not only improve the urban system in the name of economic efficiency, but would also improve overall equity as well.

(i) Many urban land-use controls and zoning regulations are primarily based on physical considerations without sufficient economic justification; thus, it is likely that many of these controls are without merit if matched against their costs. For instance, the building code restrictions on the inner core area of the Bangkok Metropolis--the area whose physical conditions have been deteriorating during the last three to four decades without any major renovation--might be one the factors that prevents this area from being renovated. 7/ In order to keep the city core area (which is known to be the most important breeding ground for employment) from further deterioration, it might be necessary for land-use controls to be modified to lessen their impact on land-development incentives. Additionally, large suburban areas of Bangkok are under blanket zoning regulations designed to limit the expansion of the city and to reserve land for agricultural purposes. However, it is possible that such areas may no longer be appropriate for such intended use or have such high alternative social use value that it becomes sensible to release them for other purposes. It is, therefore, essential to assess the effective demand of land for various uses and to

7/ The city core area is defined as including Phra Nakhon, Pom Prap Sattrupai, and Sampantawong.

comprehensively evaluate the social costs and benefits from imposing land-use controls and zoning regulations. 8/

(j) The role of the public sector in providing public utilities and public services should be clearly defined. Where services can be better supplied by the private sector, the government should adopt a hands-off policy. Substantial financial loss, not being able to cope with the growing demand, and poor services are some of the common problems created by inappropriate policies concerning the role of the public sector in the provision of public utilities and services. Obviously, the perpetuation of these problems negatively affects output, employment, and labor productivity and obstructs the process of poverty eradication in both urban and rural areas. 9/

8/ For more details on "improving the utilization of urban land" see Ashakul and Ashakul (1986).
9/ For a detailed discussion of the inappropriate role of the public sector in the provision of urban services (such as public transportation, low-income housing and, water supply) see NESDB (1985), Ashakul and Ashakul (1986) and, Ashakul and Ashakul (1988).

APPENDIX

Table A1 Working Age Population (11+) by Region

Year	Bangkok	Central	North	Northeast	South
1970	2,467	4,708	4,863	7,629	2,581
1971	2,576	4,868	4,999	7,864	2,659
1972	2,689	5,033	5,138	8,107	2,740
1973	2,808	5,203	5,282	8,357	2,824
1974	2,932	5,380	5,429	8,614	2,909
1975	3,061	5,562	5,581	8,880	2,998
1976	3,196	5,751	5,737	9,154	3,089
1977	3,337	5,946	5,897	9,436	3,183
1978	3,485	6,148	6,062	9,727	3,280
1979	3,638	6,356	6,231	10,027	3,379
1980	3,799	6,572	6,405	10,336	3,482
1981	3,909	6,741	6,538	10,660	3,579
1982	4,022	6,914	6,674	10,994	3,679
1983	4,138	7,092	6,812	11,338	3,782
1984	4,258	7,275	6,954	11,693	3,887
1985	4,381	7,462	7,098	12,059	3,996

Table A2 Projected Working Age Population (11+) Under No Migration Assumption

	Bangkok	Central	North	Northeast	South
1970	2,467	4,708	4,863	7,629	2,581
1971	2,537	4,877	5,026	7,888	2,661
1972	2,608	5,052	5,193	8,159	2,746
1973	2,679	5,236	5,365	8,442	2,837
1974	2,751	5,425	5,539	8,740	2,932
1975	2,823	5,622	5,717	9,054	3,032
1976	2,897	5,826	5,900	9,390	3,136
1977	2,969	6,032	6,080	9,737	3,242
1978	3,043	6,246	6,265	10,113	3,353
1979	3,116	6,464	6,453	10,514	3,467
1980	3,189	6,682	6,635	10,927	3,579
1981	3,261	6,896	6,806	11,338	3,688
1982	3,341	7,055	6,956	11,715	3,822
1983	3,421	7,218	7,110	12,116	3,962
1984	3,502	7,384	7,265	12,539	4,106
1985	3,583	7,549	7,415	12,977	4,251

Table A3 Fitted Percentage Share of Agricultural labor in Total labor Force

Year	Central	North	Northeast	South
1970	83.68%	91.96%	95.61%	89.42%
1971	82.16%	91.03%	94.92%	88.10%
1972	80.64%	90.11%	94.22%	86.79%
1973	79.12%	89.19%	93.52%	85.47%
1974	77.60%	88.27%	92.83%	84.15%
1975	76.08%	87.35%	92.13%	82.83%
1976	74.57%	86.43%	91.43%	81.51%
1977	73.05%	85.51%	90.74%	80.20%
1978	71.53%	84.59%	90.04%	78.88%
1979	70.01%	83.67%	89.34%	77.56%
1980	68.49%	82.75%	88.65%	76.24%
1981	66.97%	81.83%	87.95%	74.93%
1982	65.45%	80.90%	87.25%	73.61%
1983	63.93%	79.98%	86.56%	72.29%
1984	62.41%	79.06%	85.86%	70.97%
1985	60.89%	78.14%	85.16%	69.65%

Note The fitted shares of agricultural labor in total labor force was calculated from the regression results based on the data from the Labor Force Survey, Round 2, 1970-1985. The regression results could be obtained upon requesting to the authors.

CHAPTER 4
EDUCATIONAL ISSUES AND INCOME INEQUALITY[1]

4.1 Introduction

The importance of education, both for the individual and for economic development, has long been recognized. Education is an important part of "human capital". It gives access to the better paying jobs, and can increase productivity in self-employed occupations. The relationships between education, the economic and social structure, and inequality are complex and of a long-term nature. The economic and social structure influences the perceived rewards to education and hence the demand for education. The resulting educational pattern will lead to changes in the quality of the population, and may also affect social and cultural values. These in turn will affect the pattern of development.

The analysis of the Kuznet's hypothesis in chapter 2 suggested that there is a relationship between a country's educational attainment and the degrees of income inequality in the country. Of course, the inter-relationships between education and inequality are complex, and each influences the other. If educational attainment within the population are very unequal, then, because education affects incomes, the incomes are also likely to be unequal. On the other hand, if the economic structure is very unbalanced, with small pockets

1. Much of this chapter was reproduced from Sussangkarn (1988b), and TDRI (1988b). The latter included parts of a background paper by S. Chutikul (1988).

of prosperity amid poverty, then the resulting demand for education will also tend to be unbalance. Those who are poor need to make use of most of their human resource to generate current income purely to survive, the education of the children, which is like an investment in the future income of the children and hence of their family, simply imposes too much opportunity cost. The imbalance in the economic structure may also be reflected in an imbalance on the supply of education. The good schools, universities, and teachers, will be located in the properous parts of the country, leading to difficulty in access for the population in the poorer areas, which adds to the effective inequality in education.

Table 4.1 Gross Enrollment Ratios

	1965	1970	1975	1980	1985
PRIMARY TOTAL	78	83	83	99	97
MALE	82	86	87	NA	NA
FEMALE	74	79	80	NA	NA
SECONDARY TOTAL	14	17	26	29	30
MALE	16	20	28	NA	NA
FEMALE	11	15	23	NA	NA
TERTIARY TOTAL	2	1.7	3.4	13[a]	20
MALE	NA	1.9	4	NA	NA
FEMALE	NA	1.4	2.7	NA	NA

Source: Various issue of UNESCO Statistical Yearbook, IBRD World Development Report, and World Tables.
Note: a=1979.

Over the past two to three decades, while Thailand had been fairly successful in expanding the provision of basic education to the population (see table 4.1), and adult literacy

rates have increased satisfactorily,[2] there are still several problems with the education system; problems that are important for the sustainability and equity of future development in Thailand. This chapter will discuss a number of the problem areas, focussing particularly on the relationship to the issue of equity.

4.2 Low Secondary Enrollment

While basic education and literacy rates have improved satisfactorily in Thailand, the situation at the secondary level is more problematic. Even though enrollments at the lower secondary level doubled during 1960 to 1970, and tripled at the upper secondary level, with secondary enrollment as a whole growing at an annual rate of 12% through out the 1970's, the gross enrollment ratios (which in any case overstates the numbers that remain in school) were still low. Table 4.1 shows that in 1985, the gross secondary enrollment ratio in Thailand was about 30%. This is a big drop from the almost universal enrollment at the primary level. Statistics on continuation rates by cohort also support the conclusion based on the gross enrollment ratio. That is while the percentage of students continuing to the next grade is high, between 85-98%, in the primary grades (Pratom 1 to Pratom 7 from 1976 to 1980), the percentage of those continuing on to secondary schools after completion of the final primary grade drops dramatically. Most of those who have completed primary education do not continue

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2. See TDRI (1988b).

on to the secondary level. While there are differences in reported transition rates from the primary level to the secondary from different sources (eg. see Phananiramai and Mason [1987] and Kiranandana [1988]), all sources report transition rates of less than 50%.[3]

Table 4.2 Gross Enrollment Ratios For Selected Asian Countries

	LEVELS OF EDUCATION		
	PRIMARY	SECONDARY	TERTIARY
THAILAND	97.0%	30.0%	22.5%
SOUTH KOREA	96.0%	94.0%	26.1%
TAIWAN	100.0%	91.0%	12.5%
SINGAPORE	115.0%	71.0%	11.8%
HONG KONG	105.0%	69.0%	12.8%
INDONESIA	118.0%	39.0%	6.5%
MALAYSIA	99.0%	53.0%	6.1%
PHILIPPINES	107.0%	68.0%	29.1%

Source: IBRD World Development Report, 1987.

Thailand lags behind other countries in ASEAN, and far behind the Asian NIC's as far as secondary enrollment is concerned. Table 4.2 shows that the gross secondary enrollment ratio was 94% for South Korea, 91% in Taiwan, 68% in the Philippines, 53% in Malaysia, and 39% in Indonesia.

3. In fact, Phananiramai and Mason appeared to show a declining transition rate from the primary to the secondary level in recent years. See table 11 in their paper.

This is particularly worrying as Thailand is currently undergoing a phase of rapid industrialization. While it has been able to perform very well in the international export market for manufactured goods, there are fierce competition from other countries such as the Philippines, Malaysia, Indonesia, and China, who are also trying to take advantage of the market made available by the graduation of the Asian NIC's towards more skilled and technologically intensive products. Thai industries will need to diversify into the more skilled intensive products to keep ahead of Thailand's competitors. Here the available quality of the human resource base may be crucial. If enrollment at the secondary level continues to be low as in the past, then this may become an important constraint to future development efforts.

4.2.1 Cause of Low Secondary Enrollment

In previous studies (Sussangkarn, 1988a, 1988b), it was shown that the low level of secondary enrollment in Thailand could be explained by the employment and labor market structures in Thailand, and also by factors relating to characteristics at the household level, and the availability and quality of the schooling.

Concerning the labor market, Sussangkarn (1987) showed that returns to education above the primary level are low or almost nil for employees in the informal sector. A detailed study by Jamison and Lau (1982) regarding farm productivity in Thailand also showed that in traditional agriculture there are no clear evidences of any returns to education above the primary level.[4] Only in the formal part of the labor market

4. See Jamison and Lau (1982), table 6-2. In the recent study of income determination for farm households (Hutaserani and

(the public sector and the larger private firms) are there clear returns to education. This will tend to make the expected reward for education just above the primary level rise rather slowly, as most workers with education just above the primary level will be employed in the informal part of the labor market, and only a small percentage will be able to get into the formal sector, thereby getting a higher wage than those with just primary education. As the level of education becomes greater and greater, however, more will be able to find jobs in the formal labor market (the public sector and the larger private firms employ most of the better educated in Thailand), and thus the expected reward for education rises faster. From this pattern, one would expect that relatively few people will desire secondary education (certainly lower secondary education) for its own sake, as the expected reward will be very low (even before taking into account the opportunity costs). However, the expected rewards for higher levels of education are much higher, because it gives access to the formal part of the labor market, and therefore one would expect that many of those who are at the secondary level will want to go on to the tertiary level.

Thus, the labor market structure where there are low returns to education in the informal sector and high returns in the formal sector, and where most of the better educated are employed in the formal sector, will tend to lead to a situation where enrollment at the secondary level is fairly low, yet at the same time the transition from the secondary level to the tertiary level is quite high. This is precisely the situation

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Jitsuchon, 1988, table 3.3.3), the education of the head of the household also did not appear to improve farm income per worker.

one finds in Thailand. It can be seen from table 4.2 that while Thailand lags behind other countries in secondary enrollment, it is doing fairly well at the tertiary level, with an enrollment ratio that is only behind those of the Philippines and South Korea. In fact, the ratio of tertiary enrollment to secondary enrollment, which can be a crude proxy for the transition from the secondary to the tertiary level, is by far the highest for Thailand compared to other countries in the table.[5]

The low enrollment at the secondary level in Thailand is also related to the very high share of employment in agriculture in Thailand, and the disparity in value-added per

Table 4.3 Regression Result Explaining Sscondary Enrollment

DEPENDENT VARIABLE

SCON = Secondary Enrollment Ratio/Primary Enrollment Ratio

INDEPENDENT VARIABLES

SEMAG = Share of Employment in Agriculture
RSVSE = Ratio of Share of GDP From Agriculture to Share of Employment in Agriculture

Data from 66 Low, Medium and Upper-Medium Income Countries

VARIABLE	B	T-RATIO
SEMAG	-0.534	-8.2
RSVSE	0.0961	1.6
CONST	0.6043	11.2

ADJUSTED R SQUARED = .5756

5. The presence of open universities do not contradict this argument, as the large enrollment in the open universities simply reflect the demand from the students.

Source: Sussangkarn (1988a).

head between agriculture and non-agriculture. Cross-section analysis of the ratio of secondary enrollment to primary enrollment[6] for 66 countries show that the two most important factors explaining the ratio are the share of employment in agriculture, and the ratio of the share of GDP from agriculture to the share of employment in agriculture. Result of the analysis is reproduced in table 4.3.

Countries with a high employment share in agriculture and low value-added per head in agriculture compared to non-agriculture will tend to have a low ratio of secondary enrollment to primary enrollment. Thailand has both a high employment share in agriculture, and a large difference between value-added per head in agriculture and non-agriculture, so that both factors would lead one to expect a low secondary enrollment ratio; which is the case.

The importance of the employment share in agriculture and the disparity between agriculture and non-agriculture is clearly related to the previous discussion concerning the labor market. If value-added per head in agriculture is much lower than that in non-agriculture, then it is likely that most of agriculture in the country is still using rather traditional technologies (as in Thailand). From the findings of Jamison and Lau, one would then not expect education above the primary level to increase productivity very much. If the country also has a lot of workers in agriculture, then for most people the

6. Again, this can be regarded as a crude proxy for the transition to the secondary level from the primary level.

reward for education above the primary level would be low, and demand for secondary education would also be low.[7]

These findings show that there is a clear link between the imbalance on the employment side and the imbalance on the education side. Thailand appears to be an outlier in having a very high share of employment in agriculture in relation to the share of agriculture in GDP when compared to other countries. It is also somewhat of an outlier in having a rather low secondary enrollment ratio for its level of economic development. These are related. Ihe findings also supplement the findings in chapter 2, which had shown that the educational enrollment pattern influences inequality. Here, it also shows that inequality affects enrollment. A large differential between the share of employment in agriculture and the share of agriculture in GDP indicates large inequality between agriculture and non-agriculture. This leads to lower enrollment at the secondary level. The findings also show that the issue of human resource development is intimately tied to that of human resource utilization, so that human resource policies should treat these issues in an integrated fashion.

Apart from factors in the labor market which will influence the demand side of education, there are also factors at the household level which are important. Analyses of data from the Socioeconomic Survey (1981) show that the following household and community characteristics are important in

7. Of course, supply side factors, such as the availability of schools, the quality of the schools etc., may also be correlated with the agricultural indicators.

determining whether the children in the household continue in school beyond the compulsory level.[8]

1. The higher are the parents' educations, the more likely are the children to continue beyond compulsory education.

2. The larger are household income and wealth, the more likely for the children to continue.

3. If the household is an own-account household, then the children are less likely to continue. This reflects the higher opportunity cost of time for the children in attending school.

4. The more children a household has the less likely for the children to continue. This suggests a link between fertility and demand for education.

5. The lower are the student/teacher ratios at the primary and secondary levels in the community, the more likely are the children to continue. This suggests that the quality of schools are important, if the student/teacher can be regarded as a crude indicator of quality.

6. Continuation rates are lower in the rural areas compared to the urban areas. This a both a supply effect, and also reflects differences in labor market structure, with more access to formal sector employment in the urban areas.

These findings from household surveys point to another important link between education and the problem of income inequality. Poor and less educated are less likely to send

8. See Sussangkarn (1988b), and Sussangkarn, Phananiramai, Chalamwong, Behrman and Pattamakitsakul (1988).

their children to the secondary level. Thus, there is a tendency for low income to perpetuate itself across generations.

The Survey of Children and Youth (NSO, 1977) also found that financial difficulties were a major cause of non-continuation into secondary schools. In addition, even when remaining in school, children from poor families do not perform as well as other children. The main causes of drop-out and repetition of grades were found to be poverty, malnutrition, illness and absenteeism, and parental preference. In order to progress up the education ladder, several screening examinations have to be passed. A National Education Commission Survey (NEC, 1977) of performance in these examinations showed that children from lower socio-economic backgrounds invariably registered lower scholastic achievement than their more advantaged classmates. A limited survey relating nutritional status to school grades (Chutikul, 1986) also showed that malnutrition has a negative impact on examination scores, independent of family income and other socio-economic variables.

The link between education and income inequality is an important one. As can be seen from the paper by Hutaserani and Jitsuchon (1988) inequality in Thailand has been widening over the last decade or so. The problem is that current income disparities will tend to persist across generations through education, unless educational policies can counterbalance this tendency.

4.3 Education and Income Inequality

4.3.1 Fortunes of Those with Just Primary Education

Because of the low enrollment at the secondary level in Thailand, more than half of the population in Thailand have just primary education. Thus, the major implication of low secondary enrollment on income inequality has to do with the fortunes of those who do not proceed further than primary education relative to the groups with better education.

According to the Labour Force Survey, in 1986 27.6 millions of the 51.9 million people in Thailand have just primary education.[9] The economic role of those with just primary education is much greater. Of those age 11 and above who are no longer studying, the proportion with just primary education is 72%. 76% of those employed in 1986 have just primary education, and of those in the labor force[10] 75% have just primary education.

In a recent study (Sussangkarn, 1988b), it was shown that most of those who do not continue on beyond the primary level go directly into the labor market, and most of these have a job. The first entry into the labor market for those with primary education is predominantly as unpaid family workers,

9. The population figures from the Labour Force Surveys are estimates made by the National Statistical Office, and are used to weight the samples in the Labour Force Surveys.

10. Including those with a job, those without a job who looked for work or who said they were available for work.

working on the parent's farm or household enterprise. As these individuals get older, the main changes are a shift in status from being an unpaid family worker to being an own-account worker as an individual gets older. This simply reflects the process of family formation, with individuals more likely to become head of the household as they get older. While more also becomes employees (private and public) as they get older, by far the majority of those with lower primary education remain as workers in the family enterprise (farm and non-farm) whether as head of that enterprise (own-account worker) or as an unpaid family worker in the enterprise.

To look in more detail at the employment status of workers with primary education, table 4.4 and table 4.5 gives the detailed employment patterns of workers with different education levels by work status and industries for 1986. In table 4.4, the workforce for each education group is divided into those who work for the government ,state enterprises, and the private sector[11]; with the latter divided between agriculture, industry and service. A clear pattern is that as the level of education increases, the role of the public sector as employer also increase. 98% of those with primary education works in the private sector. The share decreases to 79% for those with secondary education, 63% for vocational education and 50% for university education.[12] Another pattern is that as the level of education increases, the share of employment in agriculture declines. 75% of those with primary education in

11. Including own-account and unpaid family workers, private employees and private employers.

12. The share of teachers in the private sector is least at 17% and simply reflects the government's dominant role as the provider of education.

Table 4.4
Workforce 1986 : July-September
Aggregated Sectors

EMPLOYMENT

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
GOVERNMENT	15,610	319,750	330,190	185,270	432,410	282,110	1,565,340
ST.ENTERPRISE	6,550	87,230	60,270	52,660	4,980	56,240	267,930
PRIVATE							
AGRIC	1,978,980	15,167,590	533,920	48,240	24,330	24,150	17,777,210
INDUS	223,600	1,900,070	365,000	102,150	11,270	68,950	2,671,040
SERV	483,670	2,751,870	597,420	248,430	56,880	252,510	4,390,780
TOTAL	2,686,250	19,827,530	1,496,340	398,820	92,480	337,610	24,839,030
TOTAL EMPLOYMENT	2,708,410	20,234,510	1,886,800	636,750	529,870	675,960	26,672,300
OPEN UNEMPLOYED	7,900	122,300	69,400	65,600	21,800	62,500	349,500
AVAILABLE FOR WORK	54,990	440,300	77,170	16,280	10,380	20,070	619,190
WORKFORCE	2,771,300	20,797,110	2,033,370	718,630	562,050	758,530	27,640,990

COLUMN SHARES

EMPLOYMENT

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
GOVERNMENT	0.58%	1.58%	17.50%	29.10%	81.61%	41.73%	5.87%
ST.ENTERPRISE	0.24%	0.43%	3.19%	8.27%	0.94%	8.32%	1.00%
PRIVATE							
AGRIC	73.07%	74.96%	28.30%	7.58%	4.59%	3.57%	66.65%
INDUS	8.26%	9.43%	19.34%	16.04%	2.13%	9.02%	10.01%
SERV	17.86%	13.60%	31.66%	39.02%	10.73%	37.36%	16.46%
TOTAL	99.18%	97.99%	79.31%	62.63%	17.45%	49.95%	93.13%
TOTAL EMPLOYMENT	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
OPEN UNEMPL RATE	0.29%	0.59%	3.41%	9.13%	3.88%	8.24%	1.26%
RATE AVAIL. WORK	1.98%	2.12%	3.80%	2.27%	1.85%	2.65%	2.24%

ROW SHARES

EMPLOYMENT

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
GOVERNMENT	1.00%	20.43%	21.09%	11.84%	27.62%	18.02%	100.00%
ST.ENTERPRISE	2.44%	32.56%	22.49%	19.65%	1.86%	20.99%	100.00%
PRIVATE							
AGRIC	11.13%	85.32%	3.00%	0.27%	0.14%	0.14%	100.00%
INDUS	8.37%	71.44%	13.67%	3.82%	0.42%	2.28%	100.00%
SERV	11.02%	62.67%	13.61%	5.66%	1.30%	5.75%	100.00%
TOTAL	10.81%	79.82%	6.02%	1.61%	0.37%	1.36%	100.00%
TOTAL EMPLOYMENT	10.15%	75.86%	7.07%	2.39%	1.99%	2.53%	100.00%
OPEN UNEMPLOYED	2.26%	34.99%	19.86%	18.77%	6.24%	17.88%	100.00%
AVAILABLE FOR WORK	8.88%	71.11%	12.46%	2.63%	1.68%	3.24%	100.00%
WORKFORCE	10.03%	75.24%	7.36%	2.60%	2.03%	2.74%	100.00%

Source: NSO, Labour Force Survey 1986, July-September.

Table 4.5
Private Sector Workers 1986 : July-September

PRIVATE EMPLOYEES

FORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
INDUSTRY	23,060	164,830	83,100	35,840	1,010	46,440	354,280
SERVICES	13,610	158,970	138,540	106,750	24,250	165,710	607,830
TOTAL FORMAL	36,670	323,800	221,640	142,590	25,260	212,150	962,110

INFORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	335,890	1,458,130	45,710	5,060	1,030	60	1,845,880
INDUSTRY	127,290	1,155,940	208,780	51,100	7,870	3,730	1,554,710
SERVICES	73,960	664,280	117,590	65,270	11,240	14,430	946,770
TOTAL FORMAL	537,140	3,278,350	372,080	121,430	20,140	18,220	4,347,360
TOTAL PRIVATE EMPLOYEES	573,810	3,602,150	593,720	264,020	45,400	230,370	5,309,470

OWNACCOUNT AND UNPAID

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	1,643,090	13,709,460	488,210	43,180	23,380	24,090	15,931,330
INDUSTRY	73,250	587,300	73,120	15,210	2,390	10,780	762,050
SERVICES	396,100	1,928,620	341,290	76,410	21,390	72,370	2,836,180
TOTAL	2,112,440	16,225,380	902,620	134,800	47,080	107,240	19,529,560
TOTAL PRIVATE	2,686,250	19,827,530	1,496,340	398,820	92,480	337,610	24,839,030

Table 4.5 (Continued)
Private Sector Workers 1986 : July-September
(Shares By Sectors)

ROW SHARES

PRIVATE EMPLOYEES

FORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
INDUSTRY	6.51%	46.53%	23.46%	10.12%	0.29%	13.11%	100.00%
SERVICES	2.24%	26.15%	22.79%	17.56%	3.99%	27.26%	100.00%
TOTAL FORMAL	3.81%	33.66%	23.04%	14.82%	2.63%	22.05%	100.00%

INFORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	18.20%	78.99%	2.48%	0.27%	0.06%	0.00%	100.00%
INDUSTRY	8.19%	74.35%	13.43%	3.29%	0.51%	0.24%	100.00%
SERVICES	7.81%	70.16%	12.42%	6.89%	1.19%	1.52%	100.00%
TOTAL FORMAL	12.36%	75.41%	8.56%	2.79%	0.46%	0.42%	100.00%

TOTAL PRIVATE EMPLOYEES	10.81%	67.84%	11.18%	4.97%	0.86%	4.34%	100.00%

OWNACCOUNT AND UNPAID

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	10.31%	86.05%	3.06%	0.27%	0.15%	0.15%	100.00%
INDUSTRY	9.61%	77.07%	9.60%	2.00%	0.31%	1.41%	100.00%
SERVICES	13.97%	68.00%	12.03%	2.69%	0.75%	2.55%	100.00%
TOTAL	10.82%	83.08%	4.62%	0.69%	0.24%	0.55%	100.00%

TOTAL PRIVATE	10.81%	79.82%	6.02%	1.61%	0.37%	1.36%	100.00%

Table 4.5 (Continued)
Private Sector Workers 1986 : July-September
(Shares By Education)

PRIVATE EMPLOYEES

FORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
INDUSTRY	0.86%	0.83%	5.55%	8.99%	1.09%	13.76%	1.43%
SERVICES	0.51%	0.80%	9.26%	26.77%	26.22%	49.08%	2.45%
TOTAL FORMAL	1.37%	1.63%	14.81%	35.75%	27.31%	62.84%	3.87%

INFORMAL LABOUR MARKET

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	12.50%	7.35%	3.05%	1.27%	1.11%	0.02%	7.43%
INDUSTRY	4.74%	5.83%	13.95%	12.81%	8.51%	1.10%	6.26%
SERVICES	2.75%	3.35%	7.86%	16.37%	12.15%	4.27%	3.81%
TOTAL FORMAL	20.00%	16.53%	24.87%	30.45%	21.78%	5.40%	17.50%
TOTAL PRIVATE EMPLOYEES	21.36%	18.17%	39.68%	66.20%	49.09%	68.24%	21.38%

OWNACCOUNT AND UNPAID

	<P4	ELEMENT	SECONDARY	VOCAT	TEACHER	UNIVER	TOTAL
AGRICULTURE	61.17%	69.14%	32.63%	10.83%	25.19%	7.14%	64.14%
INDUSTRY	2.73%	2.96%	4.89%	3.81%	2.58%	3.19%	3.07%
SERVICES	14.75%	9.73%	22.81%	19.16%	23.13%	21.44%	11.42%
TOTAL	78.64%	81.83%	60.32%	33.80%	50.91%	31.76%	78.62%
TOTAL PRIVATE	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: NSO, Labour Force Surveys 1984 and 1986, July-September.

the private sector are in agriculture. The share declines rapidly to 28.3% for secondary education, 7.6% for vocational education and 3.6% for university education. Another pattern is that unemployment is not a problem for the less educated group. The open unemployment rate for those with primary education was only 0.6% in 1986, and even including those who report as available for work as part of the unemployed still only give an unemployment rate of 2.7% for this group, which is less that any other group with a greater amount of education.[13]

Table 4.5 looks further at the pattern of private sector employment for the various educational groups. As already discussed, the vast majority of those with primary education are in household enterprises as own-account workers and unpaid family workers. In 1986, 81.8% of those with primary education in the private sector are own-account or unpaid family workers, the majority of whom are in agriculture (69.1% of those in private sector employment). For the rest, the private employees, it is necessary to distinguish the labor market between "formal" and "informal".[14] Basically, the "formal" part of the private employee labor market consists of the unionized sectors, the larger firms, and the professional occupations. Behaviourally, the differences are that the formal part is hard to get into, pays better, has more stable

13. This refers to unemployment during the peak agricultural season. In the dry season, there are severe problems of seasonal unemployment in many areas of the country. For detailed analyses of the labor market in Thailand focussing on differences by educational groups, the role of the public sector, unemployment, and seasonal effects, see Sussangkarn (1987).

14. For detailed discussions of "formal" and "informal" sectors, and the implications for labor market behaviours and unemployment, see Sussangkarn (1987).

employment patterns, and the wage structure is fairly rigid, while the informal part is characterized by easy entry, unstable employment, and flexible wages. Table 4.5 splits up the private employees into the formal and informal part.[15] The main pattern is that the formal labor market for private employees is not very important as far as those with primary education is concerned. Of 3,602,150 private employees with primary education, only 323,000 or 9% are in the formal sector. As with government employment, as the level of education increases, so does the share in formal sector employment. For those with secondary education, 37.3% are in the formal sector, for vocational education, 54%, and for university education, 92.1% are in the formal sector. The pattern of employment within the formal sector tends to favour those with more education. Whereas 67.8% of all private employees have primary education, only 33.7% of employees in the formal sector are those with primary education. Thus, the formal sector resembles the public sector; there is a preference for better educated workers.

The overall pattern in the economy for those with just primary education is that they are more than proportionately to be found in the relatively less-prosperous segments of the economy. In jobs which pay well (public sector and the private formal sector), there is a preference for the better educated

15. A split of private employees into formal and informal sectors in the municipal areas was given for 1984 in Sussangkarn, Ashakul and Myers (1986) based on additional questions attached to the July-September Labour Force Survey as part of a joint World Bank - NSO - NESDB project. Here, the structure derived for 1984 was generalized to the non-municipal sectors and updated to the employment structure in 1986. See NESDB [Forthcoming]. It should be noted that the private employees in the agricultural sector was assumed to be part of the informal sector.

workers. The workers with just primary education end up mostly in agriculture and in the informal sector part of the private employee labor market.

Because a very large part of those with just primary education are in agriculture, it is clear that the fortunes of the majority of the primary educated workers are tied to the development of agriculture. Unfortunately, this is the sector with the lowest value added per head by far. Further, income gaps between agricultural households and non-agricultural households have been widening since the mid 1970's.[16] Thus, is should not be surprising to find that the income gap between those with just primary education and those with more education have also been widening. This has indeed been the case.

Table 4.6 shows the per capita household income for households headed by people with various levels of education for 1981 and 1985/6.[17] It can be seen that the higher the level of education of the head of household, the faster has been the increase in per capita household income between 1981 and 1985/6. For households with primary educated heads, nominal per capita household income increases by 6.5% between 1981 and 1985/6. This compared to an increase of 12.4% for all households as a group. The widening gap between those with just primary education and the rest is a reflection of the worsening income inequality in the country as a whole.

16. See Hutaserani and Jitsuchon (1988).

17. In the 1975/6 Socio-economic Survey, data on the education levels of the household members were not collected, so similar data as in table 4.3 are not available for 1975/6.

Table 4.6 Mean Per Capita Household Income: By Education of Head of Household

EDUCATION LEVELS	SES 1981	SES 1985/6 BATH PER MONTH	% CHANGE
LT. PRATOM 4	641.3	641.3	0.00%
PRIMARY	651.6	693.9	6.49%
SECONDARY	1,446.0	1,642.0	13.55%
VOCATIONAL	1,771.0	2,065.0	16.60%
BACHELOR DEGREE	2,337.0	2,925.0	25.16%
HIGHER THAN BACHELOR	3,683.0	5,710.0	55.04%
TOTAL	743.0	835.2	12.41%

Source: NSO, Socioeconomic Surveys, 1981 and 1985/6.

From the above, it is clear that those with primary education are falling further and further behind those who are better educated. This is part of the national problem of worsening income distribution. The issue is to make sure that those with relatively low education levels, which comprise most of the population, can increase their participation in the more prosperous parts of the economy in the future. This is necessary in order to allow the more disadvantaged segments in the population to look forward to a less dismal future over the longer term.

4.3.2 Equity in Higher Education

Even though the enrollment at the tertiary level has increased rapidly with the establishment of the open

universities,[18] there are still problems regarding access for the low income groups, and the fact that the richer segments of society who benefit most from higher education are still highly subsidized.

The inequity induced by the present system of access to university education is apparent when we examined who the beneficiaries of the current system are. It can be seen from table 4.7 that students from professional and commercial backgrounds are substantially over-represented in the population of university students. A value of one for the Selectivity Index would roughly indicate equality of access; that the proportion of the university student population from a particular background corresponds to the proportion of that occupational category in the total population. An index value above one indicates over-representation, and below one, under-representation. Even though the index ignores possible deviations due to factors such as differences in family size and age structure, the magnitudes are such as to indicate that differential access is likely to be a major consideration. It is clear that students from farming and working class backgrounds are under-represented in the population of university students, with indices of 0.16 and 0.12 respectively.

Inequality of access is further is evident in table 4.8. This table compares the average family incomes of university students' families and other population groups. It shows that the average family income of university students exceeds that of the population at large by 5-7 times. And compared with

18. These two universities accounted for 56% of the tertiary enrollment in 1978 and 85% in 1985.

Table 4.7 Distribution of University Students by Father's Occupation, With Selectivity Index, 1983

	POPULATION DISTRIBUTION	STUDENT DISTRIBUTION	SELECTIVITY INDEX
PROFESSIONAL	3.05	27.35	8.97
COMMERCE	8.99	45.36	5.05
FARMING	68.52	11.15	0.16
PRODUCTION WORKERS	10.41	1.29	0.12
OTHERS	9.03	14.85	1.64

Source: National Statistical Office (1984), National Education Council (1985).

Table 4.8 Average Family Income Per Month of Students and Other Population Groups, 1983

POPULATION	AVERAGE FAMILY INCOME (BAHT/MONTH)
STUDENTS IN PUBLIC UNIVERSITIES	11,197
STUDENTS IN PRIVATE UNIVERSITIES	15,477
TOTAL POPULATION	2,380
FARMERS	578
MANUAL/PRODUCTION WORKERS	1,362

Source: National Statistical Office (1984), National Education Council (1985).

Table 4.9 Tuition Fees as a Percentage of Annual Family Income

INSTITUTION	AVERAGE ANNUAL FAMILY INCOME	TUITION FEES	RATIO
ALL UNIVERSITIES	137364	3328	2.42%
LOWEST TUITION (THAMMASAT)	155505	2455	1.58%
HIGHEST TUITION (KING MONGKUT)	97774	6103	6.24%

Note: The level of tuition fees mainly reflects the nature of the courses offered (eg. humanities as opposed to the sciences).
Source: National Education Council (1985).

farming and working class families, the university student population has considerably higher family incomes, up to 10-20 times higher.

Given that the better off households benefit disproportionately from higher education, the situation is made worse when account is taken of the private cost of higher education. It can be seen from table 4.9 that on average tuition fees amount to only 2.5% of the annual family income of the student population!

It is clear that the main beneficiaries of the present situation of low fees and heavy government subsidy of higher education in Thailand are not the low-income families. However, if fees are raised, a main concern is whether such increases would further limit the chances of the poor. Clearly, the problem of access to higher education has its roots further down the education ladder. Because of low

continuation rates into secondary education, a lower proportion of children from poor families proceed far enough up the education ladder to become candidates for higher education. Nevertheless, it does not seem justifiable that the State continues to subsidize the well to do children to the extent that it is now doing. Given, the very low levels of fees, and the fact that only a small proportion of university students are from poor background, it should be possible to make university education free for the poor students, by giving full scholarships, without having to raise fees very much for the richer students.

4.3.3 Lack of Flexibility

In Thailand, education at all levels is mainly provided by the government. In 1984, the proportion of enrollment in public institutions in total enrollment ranged from 50.85% at the pre-primary level to over 93% at the tertiary level. Even for private providers, the government imposes many rules and regulations. The global structure of the education system is highly complex and fragmented.[19] At least four government agencies are responsible for the administration of the formal education system; the Prime Minister Office (including the National Economic and Social Development Board, and the National Education Council), the Ministry of Education, the Ministry of Interior, and the Ministry of University Affairs. In addition, the layers of government administrative control extends all the way down to the district levels.

This fragmented and highly bureaucratic nature of the education system leads to too little coordination between

19. See the detailed descriptions in TDRI(1988b).

different levels of education, and too much uniformity in curriculum for the diverse needs of different parts of the country.

It would not be too far off the mark to characterize the education system as being driven from the top. The most important goal for students beyond the primary system is to finally take and pass the entrance examination into one of the prestigious "closed" university, eg. Chulalongkorn University or Thammasat University. Choice of schools, even at the pre-primary level is often crucial in order to get into the "right" stream to get into good primary and secondary schools, and finally to pass the university entrance examinations. What makes things worse is that the control of the university system is divorced from the control at the lower levels, and each of the lower levels have a great deal of independence from the others.

This top heavy system is not particularly flexible, and leads to difficulties in developing consistent planning for education. In a system such as education in which one level acts as a stepping stone to the other levels, an integrated planning approach is needed. In addition, as the structure of the economy changes, the importance given to different levels and between various fields of study within a level may have to change in line with economic changes. Being too fragmented and bureaucratic, each organization will be too concerned with its own domain, and plans to reallocate expenditures, reducing expenditures for some part and increasing for others, very rarely come from within the system.

As Thailand takes the road towards more intensive industrialization, the educational system must be flexible

enough to keep up with the rapidly changing economic and social structures. Different and more advanced skills will be needed in the process of industrialization. This will be true for all segments of the labor market. At the higher end, the current rapid pace of industrial growth has already led to shortages of key skills in science and technology (see TDRI, 1988a). For those in the industrial sectors, their skills have to keep up with the rapidly changing pace of technology and product sophistication. In agriculture, the need for more skills also exists, as agriculture is current undergoing a rapid phase of diversification into more higher-value added, and more technologically intensive products; products that require more skills and knowledge to produce efficiently.

There are many of our neighbouring countries who also have cheap labor, who will be competing more and more with Thailand in the export market, eg. The Philippines, Malaysia, Indonesia, and China. Because of this, Thailand has to be continually trying to improve the quality of her products, otherwise the current rapid boom may turn out not be long sustainable. This may be a blow to the strive for more equal income distribution, as the analysis in chapter 2 indicated that better growth performance will bring the "turning point" nearer. Here, the education system is particularly important. There is a need to make the education system more responsive to the needs of the broad mass of the population. A situation in which a large number of people choose not to progress beyond the primary level reflects in some way on the low perceived value of secondary education. Those who feel that university education is simply beyond their reach will simply exit from the education system after the compulsory level, as they may perceive that the secondary system and curriculum cater

primarily to the needs of those taking the university entrance examination, and have limited value for anything else.

4.4 Some Policy Issues in Education

This last section examines some policy issues in education. Four major areas will be discussed; the policies on secondary enrollment, on informal education and the primary school leavers, on vocational education, and on higher education.

4.4.1 Secondary Enrollment

The low level of secondary enrollment is a major source for concern. The low enrollment at this level may have been appropriate for the past economic structure in Thailand, with the reliance mainly on traditional agriculture. However, it may become a major weakness for future development in Thailand, as there is a real need for ungrading the skills of the workforce in line with more advanced technology, as discussed above. Clearly, as the level of development proceeds, and as the importance of industries and modern services for employment become more and more important, the demand for secondary education will increase. However, there are long lags involved, and more active government policies to encourage greater enrollment at the secondary level appears to be needed, particularly as the recent pace of structural transformation of the economy is so rapid.

4.4.1.1 Compulsory Lower Secondary Education

Policies to generate greater secondary enrollment has to be thought about carefully, however. A simple method, and one that has often been suggested is to increase the number of years for compulsory education to 9 years, rather than 6 years as at present. Thus, compulsory education would go up to the lower secondary level. It seems that this is the worse possible way to go.

Education choices are made by households based on its perceived best interest at the time the choices are made.[20] One of the reason that secondary enrollment is low is that poor households cannot afford the monetary and opportunity costs of sending their children to school, particularly with the rather uncertain benefit that the current secondary education curriculum gives, except as a stepping stone into higher education. The better off households, on the other hand, normally see education for their children as starting in kindergarten and ending in universities. The imposition of a 9 year compulsory education would therefore not affect the rich households very much, but would severely harm the poorer households. It would make education policy even more regressive than it already is, and at a time when income inequality is widening, and is a major area of concern for the government.

4.4.1.2 Semi-Formal System

As an attempt to design a secondary system that fits the needs of more of the rural children, the Ministry of Education

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20. The last chapter has already indicate several important factors that govern the household choice concerning education of the children.

has been experimenting on a limited and trial basis with something called a semi-formal system. This is a system where school hours can be more flexible so that children can easily help the household with farm (or other) work, which would normally conflict with regular school hours. It is also possible for a child who cannot come to school for the required number of days, as required by the curriculum, to make up the loss attendance by "approved" activities, which are regarded as equivalent to what he or she missed by not attending school.

Presumably, the idea behind this approach recognizes the large opportunity costs of school attendance for many of the rural households, and attempts to lower this opportunity cost by making schooling more flexible and consistent with the need of the children to help out in the household enterprise. This is clearly to be commended, for these opportunity costs are very real and is one important reason for low secondary enrollment. However, the quality control over implementation is formidable. It is difficult to standardize on what the "approved" activities that would make up for lower days of attendance should consist off. It will tend to be up to the judgement of the schools involved, and somewhat arbitrary. Here, there may certainly be a conflict of interest between the need for schools to show that their enrollment have been increasing satisfactory, and the control over the quality of those who graduate from the schools. The design of the incentive system for schools is all crucial, and certainly not a trivial task.

Another source of possible difficulty is that secondary schools will be recognized as either "formal" or "semi-formal", with clear connotations regarding quality. The semi-formal system may then simply become a low grade secondary school, and

recognized as such, with employers placing a premium on those who have been through the formal schools.

This idea of a semi-formal system is nevertheless an interesting one, and once the experiments have been tried for sometime, intensive studies are needed to evaluate the outcome.

4.4.1.3 Subsidies

Recognizing that the poor need to make great sacrifices to send their children to secondary schools, one may think about schemes to subsidize school attendance. Simply giving free tuition is not enough. In fact, households still have to pay for books, uniforms, as well as the opportunity cost of the time the children spend at school. Thus, households are actually paid to send their children to school. Clearly, this would be an expensive proposition, and would require major reallocation of resources from other levels of education.

However, different methods of subsidizing households are possible. One interesting and rather successful attempt involves the organization of extra-curricula activities in which students and teachers participate together in some marketable agricultural or non-marketable activities, which are then sold, and the profits given to the students households. This is a promising approach in that apart from the usual academic learning, students also learn about production and marketing techniques, which will benefit them after they leave school, and may even provide useful information that the children can take back and help the parents. Parents seem to have liked the idea, and are more willing to send the children to school, both because they believe that their children are learning something useful, and also because the children actually "earn" income to give to the family, however slight.

This approach, however, requires tremendous dedication from the teachers. To be successful, the teachers have to be willing to learn about the production and marketing techniques of the various commodities that are produced as part of the extra-curricula activities. For example, they may have to learn how to raise chickens, or to make baskets etc.. Further, where these activities involve continuous care, the teachers will have to shoulder the entire burden during the school vacations.[21]

As with the semi-formal system, the various schools that have attempted this type of approach need to be studied carefully to see if a wider implementation is feasible.

4.4.2 Non-Formal Education for Primary School Leavers

The second priority area for human resource development concerns what to do with those who leave school with only primary education. Clearly, whatever the success is increasing secondary enrollment, those who leave school after the primary level will remain sizeable, currently estimated at about 500,000-600,000 per year. If ones looks at the employment structure of this group, it appears that over time they are being pushed more and more into the low paying and least prosperous parts of the labour market.[22] The problem for this group is closely linked to the problem of widening income disparity that is occurring in Thailand.

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21. These types of schools have to provide board to the students during the school term, so that the students can fully participate in the extra-curricula activities.

22. See Sussankarn (1988b).

There is a clear role for non-formal education. In an economy in which most of the workers have just primary education, and which is changing rapidly into an economy where the need for greater skills and knowledge is essential, non-formal education has to play a key role in improving the skills and knowledge of those who left school after completing just primary education.

In fact, non-formal and adult education have progressed steadily in Thailand. These programs have grown from traditional intensive-learning schools, to various services which seem to be both diverse in nature and comprehensive in area coverage. In 1980, there were a total of 3,784 schools offering courses to almost half a million adult students. Many programs are noticeably established outside Bangkok, such as the 829 functional literacy schools, and the mobile vocational-training units. Informal learning groups sponsored by the Ministry of Education have grown rapidly, and now number in the thousands. At present, training in vocational skills at correctional institutes is also widely organized, and some 14 schools have been set up.

For the future, the good progress made in the past must be maintained. This is particularly important due to the rapid changes in the economy. Those in agriculture must be given the opportunity to participate productively in the more modern farming practices required in the process of shifting away from a reliance on the traditional crops. And those in industries should have the opportunity to upgrade their skills and knowledge, in order to have better access to the better paying and more prosperous parts of the economy.

4.4.3 Vocational Education

The group of vocational school leavers is the group with the severest problem of open unemployment.[23] Because of this, some fundamental re-examination of the vocational system appears to be in order. By definition, vocational schools are meant to prepare students for productive employment. If the potential employers reject the output, then clearly the preparation is not what is needed. In a recent study of the science and technology (S&T) manpower situation in Thailand, (TDRI, 1988a), it was found that while there is an overall shortage of S&T manpower, there was a surplus at the vocational level, and that from the projections ahead, the surplus is likely to remain for some time. This obviously reflect partly on the quality of output of the vocational schools, although obviously there are some very good vocational schools, but they appear to be the minority.

It has to be recognize that firms do a lot of their own training. This is natural since the specific skills required for different industries, and even for different firms within an industry are different. The real question is what type of training is appropriate in the vocational schools so that they will have the basic skills required by industries, and also be flexible enough to be trainable in the specific needs of the firms or industries.

In general, firms would be unwilling to undertake general training which can easily be transferred to other firms, since workers may leave and so the firm will lose the investment that was put into the worker. However, because of the highly

23. See eg. Sussangkarn (1987).

diverse nature of the industries in Thailand, and the speed with which technology is changing, it may be very difficult to draw a fine line between what is general training and what is specific training. The key is adaptability. It is difficult for vocational schools to continually make large investments in equipment which through the speed of technological progress or technological assimilation becomes obsolete quickly. What seems to be require is greater participation of the potential employers in vocational education. Unless, clear specific roles can be defined for vocational education, and for this the participation of potential employers is crucial, firms may simply bypass the vocational system by recruiting from the academic stream (which on average would be expected to have the brighter students in any case), and do most of the required training themselves. Clearly, a lot more explorations and experiments are needed on the coordination between firms and vocational institutions, and it may have to involve financial incentives to be successful.

4.4.4 Higher Education

The key policy issues for higher education are involved with the question of flexibility and equity. These are however related. To be flexible generally require more resources, so that the areas needing expansion can be accommodated. This is particularly true in a bureaucratic structure in which it is very difficult to contract any part of the system. Obtaining the required resources by raising fees would be a way to redress the stark regressivity of higher education.

Of course, the raising of fees have been debated about for many, many years. In fact, universities have also been raising tuition whenever they have good excuses and can get

away with it. The Ministry of University Affairs does not profess to forbid fee increases. However, there seems to be a general feeling that this is an area to be avoided if at all possible. Student protests are often raised as likely reactions. Even more perversely, equity considerations for poor students are sometimes used to counter suggestions for fee increases.[24]

The real problem with fee increases appears to be that there is no major incentive for university administrators to carry it out. The government is subsidizing higher education. If fees are increased, then there is no guarantee that the total funds to the university will be corresponding increased. The government may simply subsidize higher education less, or worse shift some of the savings from the university that increased the fee to a rival university. Thus, the university has to go through all the trouble with possible student unrest without real substantial benefit. It may be similar to the situation regarding the control of wages in state enterprises. Higher wages simply lead to higher losses for the state enterprise, and higher subsidy from the government. Losses can always be justified by appeal to the fact that the state enterprise is providing public service.

The equity issues can no longer be ignored. In a society that is becoming more and more unequal, but one in which the mass-media, and in particular television, has pervaded into most villages, concerns over equity will become stronger and stronger. The rural population cannot help but be brainwashed

24. As discussed in section 4.3.2, because the proportion of students from the poorer households are small, minimal increases in fees for the better off students can compensate for completely free tuition for poor students.

into desiring the lifestyles of the urban middle to upper-middle class through watching soap operas, advertising and the like. Even news announcers wear dresses that would cost a substantial part of a poor farmer's annual income.

CHAPTER 5
SUMMARY AND CONCLUSIONS

The empirical analysis of income distribution in the course of economic development, the impact of rural emigration on poverty and income distribution, and the relationships between education and income distribution in Thailand can be summarized as follows:

1. The regression analyses based on data from 45 countries over the 1965-86 period suggested that income distribution largely follows the Kuznets curve and that Thailand is on the rising trend of the curve. Factors that were found to be important in explaining inequality were GDP per capita, the share of labor in agriculture, the ratio of secondary enrollment to primary enrollment, and fertility rates.

2. Using the Kuznets curve equation to simulate the likely trend of income distribution in Thailand led to the conclusion that the turning point towards better income distribution may be of the order of 7-11 years away depending on the assumptions about real GDP growth, the share of employment in agriculture, the ratio of secondary to primary enrollment, and fertility and population growth rates.

3. The transition of the economy to the point where labor begins to be in short supply is the key to reversing the trend in income inequality. Rising real wages as a consequence of labor shortages and the shifting of labor from the

traditional sector to the modern sector is considered to be the prerequisite condition for a decline in income inequality.

4. A number of qualifications to the analyses were pointed out, and it was stressed that there is nothing inevitable about following along the Kuznets curve. Appropriate government policies are also important to the trend in income distribution. The examples of the successful marriage of growth with distribution in Taiwan and South Korea were raised to show that improved income distribution during the industrialization phase of the development is possible, provided that appropriate economic strategies are followed and the right preconditions exist.

5. Evidences on out-migration indicate that emigration from rural areas seldom causes a drop in farm output. In fact, over the last three decades, the concurrent increase of Thai farmer productivity with the reduction in rural poverty was partly the result of rural out-migration and shifting of agriculture labor into other activities. In addition, there is evidence that migrants are assets not burdens to the urban economy and it is hardly likely that the capital region--and Thailand for that matter--would have been able to develop its highly competitive manufacturing export industry had there been no influx of upland migrants into the capital region.

6. Urban and rural economies are intertwined in many ways, and rural-urban migration is one of the main interlinking factors. Programs to improve urban labor productivity and employment would reduce poverty not only in urban areas, but in rural areas as well. Raising the income of urban laborers would remove the beneficiaries out of poverty. However, those who move up will be replaced by new arrivals as long as the

rural poor see an opportunity to improve their welfare by moving into towns.

7. Thai agricultural worker productivity is the lowest of all sectors; further it has proved to be extremely difficult to raise agricultural worker productivity to match levels in other sectors. In addition, not only is the agricultural worker productivity level the lowest, the sector's employment growth is also much slower than growth of other sectors. Thus, it appears that a substantial reduction in regional (urban-rural) and/or sectoral income disparities will only occur if the growth of industrial and service employment is sufficiently large to induce a large shift of employment out of agriculture. The resources in the agricultural sector do not seem large enough to support a rapid growth of the real incomes of those in agriculture.

8. The analysis of the Kuznets curve showed the ratio of secondary enrollment to primary enrollment (an indicator of the transition rate from the primary level to the secondary level) to be an important factor influencing the distribution of income. The problem for Thailand is that the secondary enrollment rate in Thailand is amongst the lowest in the region, and much lower than the Asian NICs.

9. It was shown that the educational enrollment patterns are closely related to the economic structure. There are factors on the labor market side, and on the household side which can explain reasonably well why about half of those who finish primary education choose not to go on beyond the primary level. The opportunity costs of sending the children to secondary schools can be very high for the poorer households.

10. The education system is top heavy, with the system catering for the competition to get into the good universities. Curriculum at the secondary level are designed mostly for taking and passing the university entrance examinations, and does not appear to suit the needs of the majority of the population.

11. Those who attain only primary education end up working in the least productive and least properous parts of the labor market. Their incomes have been falling further and further behind those with better education. This is an important factor contributing to the worsening in income inequality in Thailand.

12. Most of those who managed to get into universities come mostly from the better off households. This selectivity bias arises well before the university level, as those who can not envisage themselves going to universities drop out at or soon after the primary level. What is worse is that children from the better off households are highly subsidized to benefit from university education, thus in effect the education system serve to contribute to the transmission of inequality over time.

13. Problems concerning education are considered to be crucial. How these are dealt with may govern the sustainability and equity of future development in Thailand.

A number of policies concerning migration and education were discussed in Chapters 3 and 4. Here we end with a few general observations.

14. As the prerequisite condition for a reduction in income disparity is likely to be an increase in real wages and an increase in the general shortage of labor. A strategy to improve income distribution and alleviate poverty, therefore, should focus on **employment creation and improved labor productivity.** Improved employment and labor productivity must be sought through an action program that is directed toward improving the balance between the growth of labor supply and labor demand.

15. Efforts to improve employment and labor productivity should be balanced. That is it should encourage rural industries where possible. At the same time, it has to be recognized that the obstacles to mass rural industrialization are severe, and the costs involved may be prohibitive. Thus, schemes to encouraged alternative growth poles to the capital region should be encouraged so long as they attract the more labor intensive industries and generate significant employment opportunities. However, it will still likely be the case that the overwhelming advantage of the capital region will still attract much of the future industrial growth. Therefore, the infrasture developments within the capital region has to receive sufficient attention.

16. The bottle necks to growths, whether they be infrastructure bottle necks, or skill shortages have to be tackled to ensure the sustainability of the current growth. Even though Thailand may be on the rising trend in terms of income inequality, growth based on labor intensive industries, such as appears to be the current pattern, can generate higher incomes for all, and may lead to a shortening of the time that it takes for inequality to improve.

16. Finally, it should be borne in mind that changes in income distribution take time, and are related to the pace and pattern of development. Therefore, policies for distribution should not be evaluated within the context of a short time frame. Some of the more important policies concerning income distributions may in fact have their full effects across generations.

ANNEX 1

GOVERNMENT INTERVENTIONS

AND

INCOME DISTRIBUTION IN TAIWAN AND SOUTH KOREA

In most developing countries, government plays a nontrivial role in the economy, although this may not necessarily be reflected in the ratios of tax to GDP or government expenditures to GDP. In principle, there are many areas in which government interventions play a role in income distribution. Ahluwalia (1974) outlines six areas: a) factor markets, b) ownership and control of assets, c) taxation of personal income and wealth, d) provision of public consumption goods, e) commodity markets, f) state of technology.

This section will review the case of two countries which have been able to achieve very high growth and fairly satisfactory income distribution. This should indicate that there is certainly no inevitability with the Kuznets hypothesis. The reviews are of necessity brief, and is intended only to provide a broader perspective on some of the policies that may help achieve better distribution in the course of economic development.

Taiwan

Taiwan is one the most successful countries in terms of the rapid growth and income distribution. In fact, Taiwan is

often cited as an example that "growth can accompanied with the equal income distribution" (Fei, Ranis and Kuo, 1979). The success story of Taiwan in regard to income distribution was largely because of the favorable preconditions before growth really took place. Land reform, irrigation, education are often cited by experts as the favorable preconditions for income distribution in Taiwan.

Land reform in Taiwan was carried out in three phases between 1949 and 1953. There was first a rent reduction which set a limit on rent at 37.5 percent of farm yield; second, the sale of public farmland; and third, a "land-to-the-tiller" program which forced landholders to sell all private farmland to the government in excess of two hectares of paddy or 4 hectares of dry land. The land reform was considered: "the most important factor in improving the distribution of income before the beginning of the subphase of export substitution in the early 1960s" (Fei, Ranis, and Kuo, 1979, p.38).

Irrigation was also praised by Fei, Ranis and Kuo (1979) as another that brought about a more equal income distribution.

> The irrigation system, which extended over more than half of Taiwan's cultivated area, proved valuable in ensuring the equitable distribution of benefits of green-revolution technology. Linkages between agriculture and the rural-based food-processing industry led to a marked spatial dispersion of economic growth. This pattern late enabled the provision of substantial nonagricultural employment to farmers (p.34)

Progress in public health and education during the colonial period in Taiwan provided the basis for a highly

productive labor force in both agriculture and industry. In addition, the overwhelmingly Japanese ownership of manufacturing enterprises contributed to a more equal distribution of income in two ways: it reduced the concentration of industrial assets in private Taiwanese hands in the period immediately after independence; and it provided a source of industrial assets that could be distributed as compensation to landowners under the program of land reform. The preconditions for rapid economic growth and an improved distribution of income thus were considerably more favorable in Taiwan than in a typical developing country.

Similarly to the situations in other countries, the government involvement in non-agriculture was initially very high: In 1952, the public sector's share was 56.6 percent in industrial production; in manufacturing 56.2 percent; 28.3 percent in mining; and 100 percent in electricity, gas and water. The Taiwanese government had gradually reduced role of the public sector in production. Fei, Ranis, and Kuo (1979) wrote:

> During the early 1950s government began transferring the four public enterprises under its control to private ownership: Taiwan Cement Corporation, Taiwan Pulp and Paper Corporation, Taiwan Industrial and Mining Corporation, and Taiwan Agriculture and Forestry Development Corporation. This transfer was not easily accomplished. Government had difficulty finding buyers because of the lack of accumulated private wealth and entrepreneurial expertise and because of the poor track records of these enterprises... As a result of this transfer and such other factors as the increasingly rapid growth of private industry, the government owned share of total industrial

> production fell to 43.7 percent in 1964." (p.52)

The decline in income inequality was strongly observed in Taiwan after 1968.

Korea

South Korea achieved both a high growth rate and a relatively equal income distribution similarly to Taiwan. At the time of independence and partition, Korea was primarily an agricultural country with three quarters of its population engaged in farming. In 1945 the first step of the land reform was to reduce rents to one-third of the production income. This was not widely respected and had little effect. A first movement toward land reform came in 1947 with the sale of half a million acres of confiscated Japanese lands to more than 700,000 tenants farmers. As a result the full-time tenancy rate was sharply reduced from 70 percent to 33 percent in 1948. The law imposing a 33 percent ceiling on rents was also enacted and enforced, vastly improving tenancy conditions.

A push for education is another factor which made the precondition favorable for Korea with respect to income distribution. Between 1953 and 1963 Korea's literacy sharply rose from 30 percent to over 80 percent, implying that the access to education were available to nearly all. This program was not without cost as it had brought about the very high unemployment rate among the college graduates, similarly to what is happening in Thailand now; the Ministry of Education accepted that: "50 percent of all college graduates were unemployed in 1964... [And] only 5-10 percent found suitable (white collar) jobs."

The experiences in Taiwan and Korea suggest that a more equal distribution of assets at the initial stages of industrialization had significant impact on income distribution in the following years; Adelman (1986) aptly used the term "redistribution before growth" to describe the situation in these two countries, and she strongly felt that the equally distributed asset made the task of allocating the benefits from growth more equally to all much more simple. She expresses her view as follow:

> My own position is based on the experiences of the noncommunist newly industrializing countries, notably Korea and Taiwan, that have successfully combined no deterioration in the relative incomes of the poor with accelerated growth. These examples lead me to advocate 1) tenurial reform in agriculture before implementation of policies designed to improve the productivity of agriculture, and 2) massive investments in education before rapid industrialization. My rationale for this sequence, which I have called "redistribution before growth," is twofold: First, a better distribution of the major asset whose productivity is about to be improved, together with more equal access to markets and to opportunities for improving the productivity of that major asset, will obviously diminish the adverse effects of unequal asset distribution on income distribution. Second, the redistributed asset is not as valuable before improvements in productivity as it is after. Redistribution with full compensation would therefore be possible, at least in principle." [Adelman (1986, pp.57-58)]

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