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Thailand

Growth, Poverty and Income Distribution

An Economic Report

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CURRENCY EQUIVALENTS

Currency Unit = Baht

Average 1995	-	US\$1.0	=	Baht 24.90
		Baht 1.0	=	US\$ 0.04
Average 1994	-	US\$1.0	=	Baht 25.15
		Baht 1.0	=	US\$ 0.04

GLOSSARY OF ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BMA	Bangkok Metropolitan Area
BMR	Bangkok Metropolitan Region
BoB	Bureau of the Budget
CDD	Community Development Department
CV	Coefficient of Variation
DPW	Department of Public Welfare
ECOT	Employers Confederation of Thailand
FGT	Foster-Greer-Thorbecke
GEP	Green Esarn Program
ILO	International Labor Organization
IPEC	International Program on the Elimination of Child Labor
LFS	Labor Force Survey
LIC	Low Income Card
MLD	Mean Logarithmic Deviation
MOE	Ministry of Education
MOI	Ministry of Interior
MoLW	Ministry of Labor and Social Welfare
MoPH	Ministry of Public Health
MUV	Manufacturing Unit Value
NGO	Non Government Organizations
NICs	Newly Industrializing Countries
NSO	National Statistical Office
OECD	Organization of Economic Cooperation and Development
OPM	Office of Prime Minister
PAP	Poverty Alleviation Program
RJCP	Rural Job Creation Program
SD	Standard Deviation
SES	Socio-Economic Survey
SLP	School Lunch Program
TDP	Tambon Development Program
UNICEF	United Nations International Children's Education Fund

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MAP

EXECUTIVE SUMMARY

1. Thailand is among the success stories of the past decade in terms of economic growth. Since 1986, real GDP has grown at almost 10% annually, implying that real per capita income has more than doubled. Sound macroeconomic and sectoral policies have allowed Thailand to take advantage of favorable external conditions and a vibrant domestic private sector. There has also been significant structural change in the economy. Agriculture now accounts for less than 10% of GDP (compared to 16% in 1986) and its employment share has fallen by over 10 percentage points. Manufacturing, on the other hand, accounts for over 30% of GDP and 18% of employment. Export growth has underpinned much of this economic expansion, and the share of exports in GDP is now about 38% (up from 26% in 1986). Exports are also more diversified with the share of manufactures having doubled in the past decade.

2. Despite this export-led boom, there remains a nagging sense that its benefits have not trickled down to the poorest groups in Thai society, and that income inequalities, both within and between different regions, have been rising rapidly. Much of this disquiet stems from the slowdown in poverty reduction during 1981-88, when poverty incidence fell only slightly and the number of poor as well as the severity of poverty actually rose, despite annual GDP growth of almost 5%. Moreover, the distributional trends during the period were also anti-poor in that the gap between the poorest and richest regions widened as did the divide between the richest and poorest income groups.

Trends in Poverty Incidence and Income Inequality

3. The question raised by those patterns was whether they represented a permanent weakening of the links between poverty reduction and growth. The analysis of household-level data in this report indicates that the downturn in poverty reduction in the early- and mid-1980s was only transitory.¹ The rapid growth during 1988-92 translated into a sharp reduction in poverty incidence. The proportion of individuals below the poverty line in the Kingdom fell from just over 22% in 1988 to about 13% in 1992, with significant declines occurring in all regions, including the Northeast and North. This reduction in the *number* of poor was also reflected in decreases in the *depth* and *severity* of poverty.² This conclusion that poverty fell during 1988-92 also holds irrespective of the precise income level at which the poverty line is set, which is an issue that remains unsettled in Thailand. Looking further at the profile of the poor in 1992 indicates that the association of certain

¹ While it would be desirable to include the data from the 1994 SES, this has not been possible since the National Statistical Office (NSO) had still not completed the compilation of the entire survey by mid-1996 when this report was prepared. It has not been possible to identify the main reasons for this long lag in processing the SES data. Detailed analysis of options to improve the design and timeliness of the survey remains an important area for follow-up work.

² See Chapter 1, and Table 1.2 in particular, for details.

attributes with poverty has strengthened since 1988. The poor are still most likely to live in the Northeast and North, which together accounted for over 80% of the poor (compared to 53% of the population). Also, they are most likely to be located in villages, being engaged in agriculture with most owning and operating medium-sized plots of land, and having completed primary schooling or less.

4. While the overall reduction in poverty is good news, less reassuring is the increase in income inequality during 1988-92. Just as consistently as poverty fell, income distribution in Thailand (and in all regions) became more skewed. For the Kingdom as a whole, the Gini coefficient rose from 0.485 to 0.536; the ratio of income received by the richest fifth of the population to that received by the poorest fifth increased from 12 to 15; and, the relative share of the richest tenth of the population to that of the poorest tenth rose from about 21 to 28. These trends towards greater income inequality perpetuate a longer-term trend, dating at least from the mid-1970s. These patterns are also mirrored, although to a lesser extent, in the distribution of household expenditures.

5. These trends showing rising income inequality are of concern for a number of reasons. Had inequality not risen, the reduction in poverty during 1988-92 would have been even greater. The sharp decrease in poverty that occurred despite the distributional shift only shows just how strong was the effect of income growth. This increase in inequality (and its apparent persistence over at least two decades) also distinguishes Thailand from its middle-income neighbors in East Asia. In most of those countries, income inequality has fallen while economic growth has remained rapid, and although in some countries (such as Korea) inequality rose, it did not persist for such long periods. What is worrying about the Thai experience is that there is evidence emerging that rising inequality could hamper the prospects for sustained medium-term growth. Societies with less inequality appear to find it easier to make the investments and to manage the trade-offs necessary for sustained growth. This link could be particularly relevant to a society like Thailand that has traditionally emphasized equity. Growing income disparities might damage the implicit social contract that has allowed a remarkable consensus on the adoption of growth-oriented policies.

6. To design and implement policies to address rising income inequality, it is necessary to identify its sources clearly. Distinguishing among sources of income, the most significant sources of higher overall inequality were wages and salaries, and entrepreneurial income. The *disequalizing* effect of wages and salaries comes from its rising shares in total incomes (from about 34% to over 40%), which reflects expansion of the formal labor market. Moreover, this shift from informal to formal employment has occurred more among better-off households, and, in this sense, they have been able to take more advantage of growing formal-sector opportunities than poorer households. These factors also contributed to the *inequalizing* effects of entrepreneurial incomes. The difference was that wages and salaries were distributed more *equally* while the distribution of entrepreneurial incomes became *less equal*. Another feature of higher inequality was that it was not uniform across the Kingdom. Wider income differentials *between* households in different locations (both rural/urban and by region) accounted significantly

for the *increase* in overall income inequality. Hence, differences between regions became more prominent during 1988-92 as sources of higher inequality.

Labor Markets, Inequality and Poverty

7. The policy implications of this relationship between overall income inequality and labor market outcomes are of particular importance. In part, this is because Thailand's successful development strategy has been built mainly on the exports of labor-intensive manufactures, and questions have been raised as to whether workers, especially those with few skills, have shared equitably in the resulting growth. Also, since it is difficult to alter directly the distribution of land and capital assets, it is tempting to try to influence labor market outcomes as a means of enhancing distributional equity. To evaluate the efficacy of such measures, the distribution of labor earnings and its determinants are examined in more detail.

8. The structural changes in Thai labor markets during the period of rapid growth since 1986, point collectively to workers as a group having benefited from economic growth. The share of the labor force in agriculture has shrunk dramatically--by between 10 and 14 percentage points (depending on the season) during 1985-94, while industrial employment has grown correspondingly. Formal (wage) employment has grown--by almost 10 percentage points, primarily in manufacturing and construction, and has been almost exactly offset by the reduction in informal (own-account and unpaid labor), mostly in agriculture. And, real wages, on average, and in all regions and almost all subsectors, have risen sharply since the late-1980s.

9. Inequality in labor earnings. *Individual and household labor earnings* have become *less unequal* since the late-1980s. The consistency of these findings at the individual and household levels, (where household labor earnings include wage incomes and earnings of self-employed workers) provides strong support to the generally equalizing nature of labor market outcomes (when these are separated from the structural changes noted earlier). For individual wages, the decline in individual inequality occurred despite the strongly *inequalizing* effects of education. Almost half of individual earnings inequality reflected differences in the endowment of education. Moreover, although primary and junior secondary education were equalizing in their effects, university education in particular was strongly inequalizing. These effects were more than offset because all the other main determinants of (formal-sector) wages were *equalizing*. For instance, the structural changes in the composition of formal-sector employment that expanded manufacturing and construction were equalizing, as was the expansion of wage employment in the poorest regions (the Northeast, the North and rural areas).

10. Policy implications. In summary, this analysis suggests strongly that growth in Thailand has benefited workers in the formal and informal sectors, both in terms of the level and distribution of earnings. Growth resulted in rising real earnings, on average, and the distribution of labor earnings across individuals and households became more equal in 1988-92. But, as noted earlier (para. 6), wages and salaries have contributed to aggregate income inequality for *two* reasons. With structural change, formal-sector employment has

grown rapidly, thereby increasing the share of wages in total incomes. And, these increased formal-sector jobs have **not** been allocated equitably across households, with poorer ones getting *relatively* fewer of these opportunities. But the policy answer is not to attempt to alter labor market outcomes directly. Such measures would most likely slow the expansion of formal-sector jobs, thereby hurting workers. Rather, the most promising role for policy would be to ensure that the future expansion of wage employment occurs more equitably. Hence, policy should aim at removing supply-side constraints to participation in wage employment rather than trying to affect directly the allocation of labor and levels of earnings. Given the inequalizing effects of educational differences and the role of education in determining earnings levels, the most substantial role for policy is to improve the access of those from poorer households and in lagging regions to secondary education. Expanding access to secondary education not only would help sustain growth, it would also promote equity across income groups and regions.

11. Although these findings indicate little *prima facie* justification for tighter regulation of labor markets to achieve distributional goals, there remain areas where well-designed government policies can enhance equity. The enactment and enforcement of adequate standards in areas such as workplace health and safety, and the establishment of upgraded mechanisms for wage determination, collective bargaining arrangements and social insurance are examples.

12. Policies to address child labor. Another important public policy goal, and one that is related closely to the goal of poverty alleviation, is the reduction of child employment. Since the incidence of child labor is connected closely to per capita income and poverty levels, the number of working children in Thailand as well as their labor force participation rates (for ages 13-14) fell sharply as growth accelerated in the early-1990s. Correspondingly, there were increases in the transition rate from primary to junior secondary education as well as enrollment rates. Rapid economic growth (and the consequent fall in poverty) has contributed to these trends, along with the decline in fertility and the policy commitment to expanding secondary education.

13. Despite these beneficial impacts of rapid growth, there remains a compelling case for government intervention to deal with child labor. About 1.6 million children (below 15 years) remain out of school, and most of them still work although the official statistics do not fully capture their participation.³ Further, many of these working children are employed under conditions that are harsh. They work long hours, with few breaks, are often engaged in risky activities or exposed to hazards, and suffer mistreatment and violation of labor standards. There is also evidence to suggest that these conditions have become worse rather than better, possibly because children who work are now drawn increasingly from the poorest sections of society.

³ In 1989, the Labor Force Survey (LFS) definitions were altered to include only those above the age of 13 (compared to 11 in earlier surveys). In 1993, the LFS data showed that about 530,000 children aged 13-14 years were working, down from over 900,000 in 1990.

14. Looking at the counterpart to child labor, which is non-attendance of primary and junior secondary school, the main constraint appears to be the ability of households to finance education. The expansion of secondary education facilities already underway should be complemented by a reorientation of the focus of public education policies towards rural areas, especially in poorer and more remote locations. Better-targeted policies are also needed to reach the hard-core rural and urban poor. One promising measure would be a direct subsidy for junior secondary school attendance. Its main justification is that, especially for poor families, there are likely to be market failures that lead to an under-investment in education. And, if targeted to the poor (for instance, on a geographical basis), such a subsidy would be justified on both efficiency and equity grounds.

15. Measures are needed in two additional areas to supplement such a subsidy. *First*, regulations that aim to improve employment conditions for child labor and prohibit its use in certain areas (that are especially harmful) should be enforced more vigorously. Experience has shown that such efforts are likely to be more effective in improving the welfare of children who work than attempts to ban child labor, which are often impossible to enforce and succeed only in driving it underground. *Second*, specific project interventions also have a role to play. Such programs (of which several already exist in Thailand) would involve communities in partnership with non-government organizations (NGOs) and government agencies, and focus on particular activities or areas in which child workers face persistent problems.

Evaluation of Targeted Anti-Poverty Programs

16. Despite the substantial reduction in poverty during 1988-92, the income shares of the poorest in the population have fallen consistently. This relative deterioration in the position of those at the bottom of the distributional scale is one reason that it is timely to evaluate the effectiveness of the government's anti-poverty programs. Recent calls to expand the volume and scope of such public spending in light of the recent economic success and the government's fiscal surpluses provide another rationale, especially since many observers believe that existing programs do not reach the poor because they are implemented in an uncoordinated and haphazard fashion.

17. Regarding the level of spending on the main cash and in-kind transfer programs targeted to the poor, and on income-generation programs, both targeted and non-targeted (i.e., those with broader developmental goals), the main finding is that it has remained modest (about 1.6% of total government expenditures) between fiscal 1990 and fiscal 1995, and actually fell slightly during 1990-95.⁴ Hence, the perception that a considerable amount of resources are being devoted to assisting the poor, and that these levels have risen substantially is not borne out by our evaluation.

⁴ Although these levels are budgeted to rise significantly in 1996, whether such an increase will occur remains to be seen given the historical tendency to underspend.

18. These modest levels of public spending make it more critical that the programs be well targeted to the poor and improve their welfare. The evaluation here argues that the major programs need to be reoriented by tightening their focus on poverty reduction. The government must identify the major schemes by which the poor are to be assisted and define clear poverty-oriented goals for these. An important implication of such a change is that, unlike current practice, budgetary resources for programs would be allocated across districts and provinces primarily to those where the levels and severity of poverty are the greatest. The main impact of this change would be in the way in which spending for the main *cash and in-kind transfer programs* is allocated. Currently, these budget allocations are determined on the basis of population or other criteria (as with a uniform allocation rule) that are seen as assuring balance. Taking account of inter-provincial differences in poverty incidence and severity would allow improved targeting of the poor without substantially raising administrative costs. Information for such geographical targeting can be assembled from the Socio Economic Survey (SES) data, and by working with NGOs that already have accumulated grass-roots knowledge and experience.

19. Specific design changes in programs are also needed to improve the efficiency with which various programs target the poor and enhance their effectiveness in improving the welfare of the target groups. Among the cash transfer programs, the goals of the *village revolving fund scheme* need to be clarified. Although its aim, as defined by the central implementing agency, is to provide resources to be used for emergency relief for the poor, it seems to be viewed at the village level, as intended to provide seed money for income-generating projects. This reduces the clarity of its poverty focus. The effectiveness of the *low-income card for medical services* would be enhanced if improved means testing (based on ability to pay) were used to deny the benefits that the card confers to the non-poor. Reducing the current income threshold for program eligibility would be a step in this direction in addition to a review of the rationale for providing subsidized medical care to groups that are clearly not poor. Moreover, the value of the benefits from the card to the poor would be enhanced if the costs associated with acquiring and using it were reduced. Finally, the *school lunch program* would be better targeted if, as in similar programs in some OECD countries, cost sharing were introduced so that while non-poor children are also served a meal at school, their parents pay at least part of the cost. More cost recovery from the non-poor would also make it feasible to provide better meals without necessarily increasing budgetary outlays, which is also needed since the current cost of a meal is insufficient to provide a nutritious meal.

20. The design changes in the *Poverty Alleviation Program* should aim at better identifying the poor households for whom limited access to production credit is the binding constraint on their abilities to raise incomes. Cross-country experience suggests that such credit-based livelihood programs are more effective when aimed at poor households that are already endowed with such complementary inputs as entrepreneurial abilities, and that the provision of interest-free loans is less important than such support as the provision of program-specific training and marketing outlets. Collaboration with experienced rural NGOs in implementing this scheme would help in this regard. For the Tambon Development Program, it would be desirable to reduce the program wage to a level below the average wage in various regions, and to expand the role of private

as the provision of program-specific training and marketing outlets. Collaboration with experienced rural NGOs in implementing this scheme would help in this regard. For the Tambon Development Program, it would be desirable to reduce the program wage to a level below the average wage in various regions, and to expand the role of private contractors. Although this could be politically sensitive since the program wage would be less than the minimum wage in several regions, it would ensure that the poor would self-target themselves into participating in the program. And, using private contractors more would enable the market wage to be paid more easily, and with suitable monitoring, create jobs at lower cost than at present.

21. Finally, it is necessary that systematic and periodic evaluations of these anti-poverty programs be undertaken so that those that are ineffective can be discontinued while more promising initiatives could be expanded and funded more generously. Over time, decisions based on such evaluations would also allow for a reduction in the current proliferation of anti-poverty programs. Such a framework should ensure, at a minimum, that information concerning beneficiary characteristics is collected systematically over time. Defining poverty-oriented targets for each program would enable such evaluations. To make the SES more useful for policymaking, the questionnaires and data collection should be modified so that the role of public transfers in reducing poverty is better illuminated. Also, the reasons for the long delays in the compilation and dissemination of the SES survey results and data (which meant that this study could use SES data only up to 1992) should be identified and addressed to ensure that the considerable expenditures in undertaking these biennial surveys and their potential usefulness are not dissipated.

1. GROWTH, POVERTY AND INCOME DISTRIBUTION TRENDS

A. BACKGROUND

1.1 By any measure, Thailand has been among the most successful economies in the world over the past decade. Real GDP has grown at an annual rate of almost 10% since 1986, meaning that real per capita income has more than doubled. Moreover, the past decade of rapid growth was not an aberration but rather an acceleration of Thailand's growth performance since the 1960s. In the last three decades, real per capita incomes have grown *every* year, and even during the period of stabilization and adjustment in the early-1980s, real GDP growth averaged over 5% p.a.. And despite a slowdown in export growth this year, there are no signs that the engine of economic growth is faltering with medium-term growth (in 1996-98) expected to average about 7% p.a..

1.2 This economic success is not to be dismissed lightly, and Thailand's recent performance stands out even in East Asia in which several of the world's most dynamic economies are located. This remarkable economic performance allows Thai policymakers a luxury few of their counterparts elsewhere enjoy--that of focusing on the quality of growth, especially issues related to poverty and more generally to the distribution of income.

1.3 As growth has accelerated in recent years, there has been a growing sense of disquiet as to whether the benefits from rapid growth have been trickling down to the poorest sections of Thai society. There is also skepticism as to whether the Government's efforts to improve the conditions of the poor have been effective and their results commensurate with the budgetary outlays on such programs. Finally, as incomes have grown rapidly and visibly, particularly in and around Bangkok, questions are being raised as to the extent to which the higher incomes and improved living standards are being distributed equitably across income classes and to different regions. Many observers and academics believe that the pace of poverty reduction slowed sharply in the 1980s despite the upswing in growth at the end of the decade, and that most of the benefits of rapid growth have gone to those at the very top of the income distribution. Moreover, to the extent that much of the poverty in Thailand is rural and concentrated in the Northeast and North, there is a concern that the recent growth has magnified the disparities that already existed between the richer and poorer parts of the country, as is highlighted by news reports bearing such titles as "The Two Thailand's".

Stabilization and Adjustment in the 1980s

1.4 Uneven economic growth. The first half of the 1980s was a period of stabilization and structural adjustment in Thailand.¹ But although economic performance was uneven, GDP growth in 1981-86 still averaged 5.5% p.a. (compared to about 7% p.a. in the latter half of the 1970s), and never fell below 3.5% (Table 1.1). In 1982-84, a series of stabilization measures and structural reforms was implemented to rectify the imbalances and distortions in the economy that had worsened since the first oil price shock in the mid-1970s. The policy reforms instituted during this period corrected fiscal imbalances, realigned the exchange rate, enhanced incentives for export production, and improved the climate for private investment. As the next section describes, these policy reforms provided the basis for the rapid expansion of the Thai economy since 1987.

1.5 Slowing poverty reduction. While the stabilization and adjustment efforts themselves were successful, the uneven growth record during this period was mirrored in the slowing pace of poverty reduction. Between 1981 and 1988, poverty incidence fell only by a little over a percentage point, and the number of absolute poor actually rose by about a million. And since this period was not marked by economic stagnation (with average GDP growth of over 5% p.a.), the responsiveness of poverty reduction to economic growth had clearly slowed relative to the previous two decades, which had seen poverty incidence fall from 57% in 1962 to 23% in 1981.²

1.6 The concern raised by this slowing pace of poverty reduction was sharpened by two other trends during this period. *First*, the regional income disparities that characterized Thailand were perpetuated and even sharpened. Poverty incidence in the poorest region--the Northeast--remained far higher than in the rest of the country while average incomes in this region lagged farther behind the national average (and especially that in and around Bangkok). And, *second*, the distribution of income within the Kingdom continued to become more unequal. The implication of this trend for poverty incidence was that measures of intensity and severity of poverty deteriorated between 1981-88. In terms of the intensity and severity of poverty, Thailand actually regressed in its poverty reduction efforts during 1981-88.³

1.7 The question that concerned policymakers towards the end of the 1980s, therefore, was whether this experience represented only a hiccup in Thailand's medium-

¹ Economic developments during this period are described and analyzed in World Bank, 1989.

² For details of the poverty estimates and their trends until 1988 as well as a discussion of the problems in comparing poverty incidence over time, see World Bank, 1993.

³ The head-count ratio measures the number of poor as those with incomes (or consumption) below the defined poverty line. The poverty gap measure is an indicator of the depth of poverty and reflects the average distance of the poor below the poverty line. The Foster-Greer-Thorbecke (P_2) or FGT index not only measures these poverty gaps of the poor; it also weights them by the poverty gaps themselves. Hence, this index measures the severity of poverty by taking account of (income or consumption) inequality among the poor. For precise definitions of these measures, see Ravallion, 1993.

Table 1.1: Economic Developments 1981-1995

	1981-86	1987-90	1991-94	1994	1995
Real Growth (% p.a.)					
GDP	5.5	11.6	8.3	8.8	8.7
Agriculture	4.1	3.2	3.5	4.2	3.3
Industry	5.1	15.8	9.1	11.2	11.3
Services	6.3	12.0	9.0	8.1	7.8
Economic Structure (% of GDP in current prices)					
Agriculture	18.7	15.2	11.4	10.5	10.9
Industry	30.7	34.5	36.5	37.0	37.6
Services	50.6	50.3	52.1	52.5	51.5
Current account balance (% of GDP)	-4.4	-3.9	-6.1	-5.7	-8.1
Manufactured exports (real growth % p.a.) ¹	16.1	30.2	19.0	18.7	20.9
Manufactured exports/Merchandise exports (%)	36.4	54.4	65.9	68.6	81.5
Savings and Investment					
Gross national savings/GDP (%)	20.2	26.6	33.2	32.9	33.4
Gross domestic investment/GDP (%)	24.3	29.6	41.1	41.2	43.1
Private fixed investment (real growth, % p.a.)	4.6	27.3	7.9	11.5	12.8

¹ Calculations based on MUV growth rate.

Source: Bank of Thailand; Staff estimates.

term success in reducing poverty or pointed to a longer-term weakening of the link between growth and poverty reduction. Even in the late-1980s, there were reasons to believe that this lull was temporary. One was that Thailand had achieved remarkable success in reducing absolute poverty over the longer term. Poverty incidence had fallen from over 57% in the early-1960s to about 22% in 1988. And significant complementary gains had been made in social indicators such as infant mortality, primary school completion, adult literacy, maternal health, and life expectancy. In addition, much of the slowdown in poverty reduction in the 1980s appeared to be attributable to the decline in the terms of trade for the agricultural sector. Since the poor in Thailand are mostly dependent on agriculture, and are net producers of crops, their real incomes fell as a result

of these unfavorable price trends. And these price movements were due mostly to changes in the world prices of the major agricultural products rather than due to the trade and pricing policies of the government, which were actually reformed during this time so as to tax producers (especially of paddy and rubber) less heavily.⁴

B. THE HIGH GROWTH PERIOD

Economic Developments

1.8 Rapid growth. GDP growth accelerated in 1987, and since then, the Thai economy has grown at almost 10% p.a. and has been among the fastest growing in the world. This remarkable growth performance has been built on favorable external factors and sound policy fundamentals. The domestic policies included conservative fiscal management (especially in controlling public expenditures), aggressive export promotion (including the maintenance of a realistic exchange rate), and market-friendly sectoral interventions. Hence, Thailand was well placed to take advantage of accommodating external conditions in 1987-88 including the appreciation of the yen (relative to the dollar and the baht), rising labor costs in the NICs, the fall in oil prices and strong growth in the OECD. Combined with a period of political stability and a vibrant and responsive private sector, large inflows of foreign direct investment resulted after 1987 and facilitated a boom in manufactured exports.

1.9 Following the double-digit growth rates of the late-1980s (Table 1.1), financial policies were tightened so that domestic demand grew less rapidly and growth returned to a more sustainable pace in 1991. The economy still expanded by over 8% p.a. in 1991-94, and at about 8.7% in 1995. In addition to this robust and steady growth record, fiscal performance has remained sound, export growth has been rapid, domestic savings and investment rates are remarkably high (although investment remains far higher than savings), and inflationary pressures have been held in check. Judged by these key indicators, therefore, the Thai economy remains among the best-performing in the world.

1.10 Significant structural change. This period of rapid growth has transformed the Thai economy. In 1981, the agricultural sector produced almost a quarter of GDP and was much larger than manufacturing. By 1994, agriculture accounted for less than 10% of GDP whereas the manufacturing sector contributed over 30%, and was the largest among the ASEAN economies. In terms of employment, agriculture remains the largest sector, but its share has fallen by almost 12 percentage points during 1985-94--to about 58%.⁵

⁴ See Siamwalla, 1991, for the details of this argument.

⁵ These shares refer to Round 3 of the Labor Force Survey (which is close to the peak season). A decline of almost the same proportion is also evident in the Round 1 data, which corresponds to the lean season, but the share of agricultural employment is lower (44%).

1.11 The outward orientation of the economy has also increased markedly with export growth averaging over 17% annually (in real terms) since 1987, and leading the expansion of the economy. Exports (of goods and non-factor services) in 1994 accounted for over 38% of GDP, up from less than 18% in 1980. The structure of merchandise exports is also more diversified, with manufactures now accounting for over two-thirds of merchandise exports compared to with about a third a decade ago. And within manufactures, a broader range of products is now being exported than in the 1980s. Finally, while per capita incomes have almost doubled since 1988, this growth has also been strongly labor intensive with over half a million new jobs created each year.

Poverty Trends

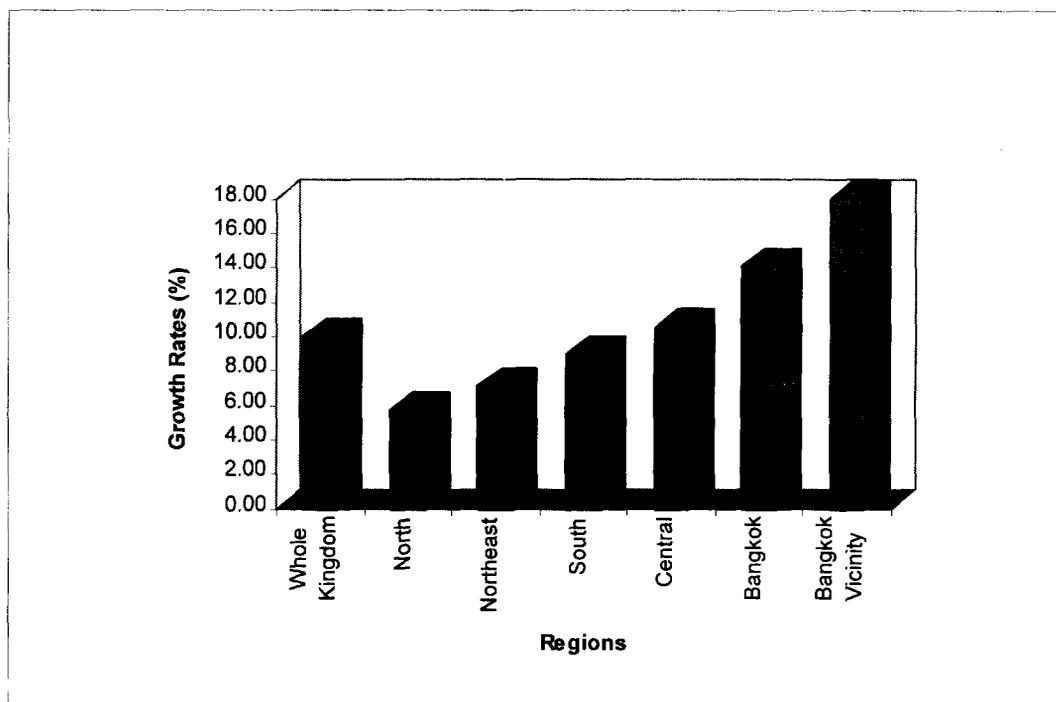
1.12 Most of the analysis in this study is based on the Socio-Economic Surveys (SES) for 1988, 1990 and 1992. These surveys have been conducted by the National Statistical Office (NSO) since 1962/63, with those since 1986 being at two-year intervals. Although the sample size has increased (from about 6000 to about 13,500), there have been no significant changes in sampling techniques during 1988-92. Hence, the survey results are comparable over this period.

1.13 Despite the slowdown in poverty reduction during 1981-88, Thailand's longer-term record until the late-1980s had been impressive. Poverty incidence had fallen from 57% of the population to just over 22% between 1962 and 1988, representing an average annual decrease of about 1.4% in the share of the poor. While less dramatic than the pace of poverty reduction in Indonesia or Malaysia over comparable periods, this performance was far better than most other developing countries. And it meant that, despite annual population growth of almost 2.5% during this period, the number of poor people fell by almost 3 million.

1.14 Household income growth. Turning now to the trends between 1988-92 the levels and growth rates of per capita household incomes can be computed from these SES data, and are shown in Figure 1.1 and Annex Table 1.3. In nominal terms, these grew at an annual rate of over 15% during 1988-92, much faster than the 4% annual growth they registered during 1981-88. Similarly, real per capita household incomes also grew at double-digit rates during 1988-92 (compared to just over 1% in 1981-88), while real per capita household expenditures rose at almost 7% p.a. These averages mask significant differences both in income levels and their growth during this recent period. In 1992 (as in 1988), average household incomes were almost three times higher in the BMA and more than twice as high in the surrounding provinces than for the Kingdom as a whole. Conversely, in 1992, average incomes in the North East were about 57% and those in the North were about three-quarters of the Kingdom average. Moreover, this disparity in average incomes worsened during 1988-92 since the highest annual growth occurred in the BMA and its vicinity while income growth in both the North and the North East lagged behind, although even in these regions it was significant. A similar pattern held for more urbanized locations--municipal areas and sanitary districts--relative to villages. In municipal areas, for instance, average household income grew in 1988-92 at an annual

rate of about 20% -- almost twice as fast as in villages, again exacerbating the large income differential that already existed.

Figure 1.1: Annual Growth Rates of Real Per Capita Household Income by Region, 1988-92



Source: SES, 1988-92.

1.15 Poverty lines. An issue that has generated considerable discussion concerns the definition of the poverty line that should be used in characterizing poverty in Thailand. Much of the analysis in the past two decades has used the “official” poverty lines (including the Government in its publications and analyses), which specifies different levels for rural and urban areas (to take account of cost of living differentials).⁶ In this report, this approach is maintained, rather than attempting to define new poverty lines for two reasons. *First*, using a common yardstick in this way it enables the findings here on changes in poverty incidence during 1988-92 to be compared to the trends during the earlier part of the 1980s. And, *second*, the decline in poverty incidence during 1988-92 is such that the overall findings would not be reversed irrespective of the particular level at which the poverty line is set.

⁶ This poverty line was first proposed in Meesook, 1979, and uses the standard approach. The level is adjusted over time to take account of inflation, using the respective consumer price indices for rural and urban areas. See Krongkaew, 1995, for a discussion of the derivation of an alternative, and higher poverty line.

1.16 **Poverty incidence.** Using these poverty lines (and adjusting them for inflation), poverty incidence in Thailand fell sharply during 1988-92⁷. Measured by the head-count index ratio (the proportion of individuals below the poverty line), poverty incidence fell from a little over 22% in 1988 to about 13% in 1992. Moreover, this decline occurred across all regions of the country, including the relatively poorer regions such as the North East and the North (Table 1.2 and Annex Table 1.4). For instance, while over a third of the population in the Northeast was poor in 1988, this proportion fell to just over 22% in 1992.

Table 1.2: Poverty Measures by Region, 1988-92

Region	Poverty Indices (%) 1/								
	Incidence			Depth			Severity		
	1988	1990	1992	1988	1990	1992	1988	1990	1992
Whole Kingdom	22.23	17.97	13.13	6.54	4.81	3.48	2.74	1.94	1.38
of which:									
North	20.66	16.61	13.60	5.75	4.25	3.73	2.27	1.65	1.52
Northeast	34.51	28.27	22.31	10.55	7.48	5.59	4.49	2.97	2.08
Central	15.96	12.92	6.04	4.55	3.82	1.52	1.83	1.69	0.62
South	21.47	17.55	11.82	6.16	4.57	3.72	2.53	1.81	1.60
Bangkok	2.92	2.04	1.12	0.84	0.69	0.49	0.40	0.34	0.31
Bangkok Vicinity	6.50	2.81	1.25	1.56	0.81	0.47	0.67	0.32	0.24

1/ Poverty incidence is measured by head count ratio (the proportion of individuals below the poverty line); depth of poverty is measured by the poverty gap index (the average distance of the poor below the poverty line); and, severity of poverty is measured by the Foster-Greer-Thorbecke (P2) index (the poverty gaps of the poor are weighted by these gaps).

Source: SES, 1988-92.

1.17 However, the reduction in poverty was not uniform across the country. By 1992, poverty incidence was very low in and around Bangkok (just over 1.1%). But, more than a fifth of the population in the North East and a seventh of those in the North remained poor. And, in all regions, the incidence of poverty remains much higher in villages than in municipal areas.⁸

1.18 In addition to evaluating the trends in the number of poor, what are also relevant (and maybe even more so) are changes in the *depth* and *severity* of poverty. The analysis

Poverty lines are as follows (Baht/month):	1988	1990	1992	
	Rural	340	367	414
	Urban	517	583	636

⁸ The reasons that poverty incidence in sanitary districts is higher than in villages is because these are treated as urban areas here, and the (higher) urban poverty line is applied to them.

of the SES data shows that the dramatic reduction in the *number* of poor is matched by declines in both these measures as well (Table 1.2). And, as with the incidence of poverty, these declines occurred throughout this period and across all regions and community types, including the poorest communities such as those in the rural Northeast. These consistent declines in all three of these indices of poverty during the 1988-92 period also point to the conclusion that no matter where the poverty line(s) are drawn, poverty fell between 1988 and 1990, and then again between 1990 and 1992.⁹

1.19 Who are the poor? An important prerequisite to designing effective policies to reduce poverty is to characterize the poor in terms of such attributes as location, education, occupation and family size. From the SES data, a profile of the poor along a variety of descriptive characteristics has been assembled (Table 1.3 and Annex Table 1.5) and this profile can be compared for the period, 1988-92 to the earlier part of the decade.

1.20 The most distinctive characteristic of the poor in Thailand remains where they live. In 1992, over three-quarters of the poor lived in the Northeast and the North, significantly more than the population shares of these regions. And the Northeast alone accounted for over 58% of the poor. Moreover, the shares of these regions of the poor population grew between 1988 and 1992. The other notable locational feature is the concentration of poverty in rural areas. Even excluding sanitary districts, almost 85% of the poor lived in rural areas in 1992, and this proportion had also risen since 1988.

1.21 Educational attainment is another attribute that differs significantly between the poor and non-poor. While almost 85% of household heads in 1992 had a primary education or less, this proportion among the poor was over 98%. Similarly, the share of household heads without any formal education is almost twice as high among the poor than the non-poor. Related to this difference in education, the occupational status of the household head also differed between the poor and non-poor. Almost three-quarters of the heads of poor households in 1992 were involved in agriculture (compared to half those in the overall population)--again an increase since 1988.

1.22 The link between poverty and agriculture is further illustrated by the relationship between the household's socio-economic status and income level. While about a third of the population in 1992 was in households that owned and operated land, almost 58% of the poor were in such households, and this share rose from about 52% in 1988. However, unlike in many other countries, the link between land ownership and poverty is not monotonic with the ownership of smaller plots corresponding necessarily to a greater incidence of poverty. In the 1988-92 data, the proportion of poor households *rises* with land ownership up to 10 rai (4 acres) and *falls* beyond that. A possible explanation for this is that those with smaller plots of land also have other sources of income and thus are

⁹ More precisely, as Annex Figure 1 shows, the poverty incidence curve for 1992 (which represents the cumulative distribution function for per capita income for that year) lies everywhere below that for 1990, which in turn, lies everywhere below that for 1988.

able to climb out of poverty whereas those with medium-sized plots are more susceptible to being in poverty since they depend exclusively on agricultural incomes.

**Table 1.3: Distribution of the Poor and Non-Poor by Various Characteristics, 1992
(% of total)**

Household Characteristics:	Poor	Non-Poor
Region		
North	19.8	19.0
Northeast	58.3	30.7
Central	8.5	19.9
South	12.0	13.6
Bangkok	0.8	10.8
Bangkok Vicinity	0.5	6.0
Community Type		
Municipal Areas	3.4	21.3
Sanitary District	11.8	8.9
Villages	84.8	69.9
Socioeconomic Class 1/^v		
Farm Operators	57.5	30.4
Renters	6.4	4.0
Other Farm Operators	0.3	0.8
Entrepreneurs	5.2	15.8
Professionals	0.2	6.6
Laborers	16.4	9.0
Other employees	7.0	25.8
Education of Household		
No formal education	16.3	9.5
Primary	81.9	72.8
Secondary	1.7	8.3
Vocational	0.1	4.7
University	0.0	4.7

^v Does not add up to 100% because economically inactive household heads are not shown.

Source: Annex Table 1.5; SES, 1988-92.

1.23 The poor also differ from the non-poor in terms of certain aspects of demographic structure. Poor households are larger -- on average, they have almost one additional person. And this pattern holds across regions.¹⁰ However, there has been almost a 20% drop in household size among the poor during 1988-92, which is larger than among the non-poor. Poor households also have higher dependency ratios (the proportion of non-earners to household size) than the non-poor (Annex Table 1.6). Although this pattern also holds across all regions, the poor in the lowest-income regions (the Northeast and North) have the lowest (rather than the highest) dependency ratios, thus illustrating the

¹⁰ The only exception is Bangkok, but the small sample size for the poor in 1992 makes this finding unreliable.

two-way link between dependency and poverty. Two demographic features, however, that do *not* appear to distinguish poor and non-poor households are age of the household head and gender. With regard to age, the structure of poor households is almost the same as that for the non-poor with the only emerging exception being that a larger (but still small) proportion of poor households are headed by individuals over 60. Moreover, this proportion has risen since 1988. The association between gender and poverty is even weaker. As was the case in 1988 and before, the proportion of poor households headed by women is roughly the same as that for the non-poor. This finding contrasts with that in many other developing countries where female-headed households are over-represented among the poor.

1.24 In conclusion, therefore, the characteristics of the poor in Thailand in 1992 were almost unchanged from those in 1988. The poor are still most likely to live in the rural Northeast or North, engage in agriculture where they own medium-sized plots, and are headed by individuals with primary education or less. Over the period considered here, the association of these characteristics with poverty has strengthened rather than weakened indicating that in a dynamic sense, the households with these attributes have found it harder to pull themselves out of poverty than others in the population.

Income Distribution Trends

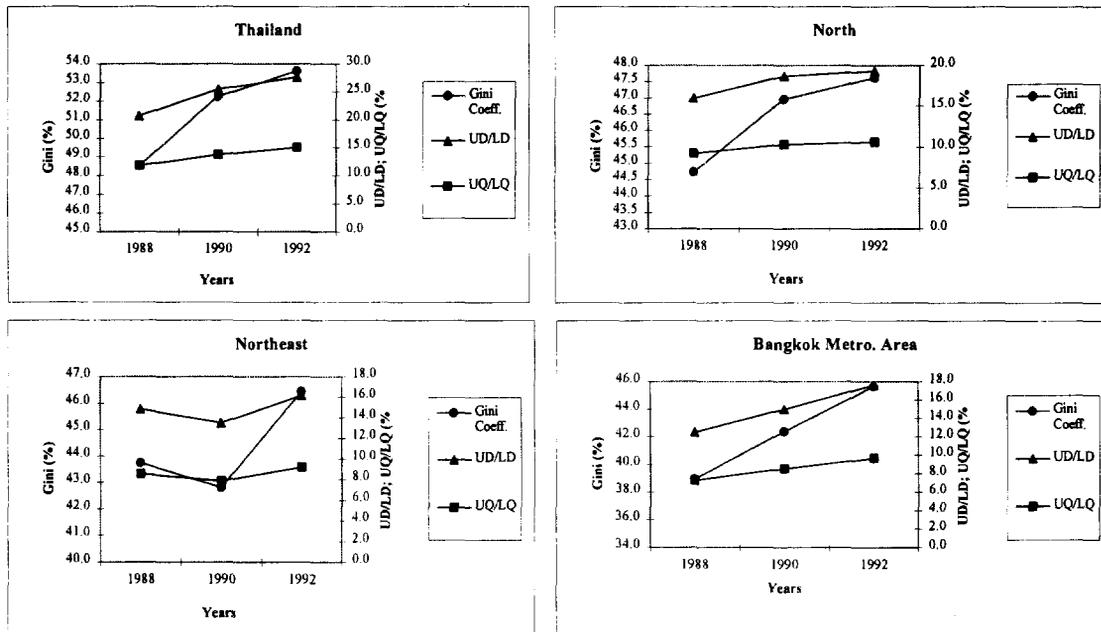
1.25 Higher inequality. Not as reassuring as these poverty incidence trends, however, have been the changes in the distribution of income during this period. By **all** of the measures that are typically used in judging the unevenness in income distribution, per capita household income in Thailand was distributed in a more skewed manner in 1992 than in 1988. The Gini coefficient of this distribution for the entire Kingdom rose from 0.485 in 1988 to 0.536 in 1992. Similarly, by 1992 the share of income received by the top quintile (20%) of the population was 15 times the share of the bottom quintile, up from about 12 times in 1988. And the top decile (10%) of the population received almost 28 times the income share of the poorest decile. Obviously, these ratios were smaller, as was the Gini, for per capita household expenditures. However, these measures too rose consistently during 1988-92. For instance, the Gini rose from 0.44 to 0.45, and the ratio of expenditure shares of the top to the lowest decile rose from 14 to 15.¹¹ Even more worrying, as noted below, is that this increase in income disparities perpetuated trends in Thailand that go back at least to the mid-1970s. Finally, this consistent pattern of rising income inequality was observed across all regions during this most recent period (Figure 1.2).

1.26 What it has meant for poverty reduction. An important implication of this shift in income distribution towards greater inequality during 1988-92 has to do with poverty

¹¹ Also, these inequality estimates refer to nominal incomes and expenditures. Similar trends emerge if incomes and expenditures are adjusted for price level differences (for rural and urban areas, by region). For example, the Gini rises from 0.463 to 0.526, and from 0.415 to 0.438, for adjusted per capita incomes and per capita expenditures, respectively. See the background paper by Kakwani for details.

incidence. Had such a distributional shift not occurred, poverty (measured by any of the three indices used before) would have decreased even more sharply than was actually the case. This statement can be made more precise by using the poverty data to decompose the effect on poverty incidence into its growth and redistribution components (see Annex Table 1.7 for details). The growth effect is defined as the change in poverty incidence that would have resulted had no redistribution occurred during the period while the redistribution effect measures only the effect on poverty incidence of the changed distribution assuming that average household incomes are constant. The results are shown separately for rural and urban locations since separate poverty lines are defined for each of these. For the period as a whole, the reduction in poverty (irrespective of which index is used) would have been greater had no redistribution occurred. For instance, the redistribution muted the poverty-reducing impact of growth (in terms of the number of poor) by almost 3 percentage points in urban areas (including sanitary districts) and 15 percentage points in rural locations. In this sense, therefore, the redistribution of income that has occurred during the high-growth period has been skewed against the poor, particularly in rural areas. That poverty still fell so dramatically during this time is testimony to the strength of the growth effect during this period, which more than outweighed the impact of redistribution against the poor.

Figure 1.2: Income Inequality Measures by Region, 1988-92^{1/}



^{1/} Measured as Gini Coefficient; ratio of income shares of top decile to lowest decile (UD/LD); and, ratio of income shares of top quintile to lowest quintile (UQ/LQ).
Source: SES, 1988-92.

1.27 What has accounted for higher inequality. To guide policy, it is useful to explore further the sources of higher inequality.¹² These sources are identified by decomposing aggregate inequality in each of the two years (1988 and 1992) as well as the *change in aggregate inequality* over the period, 1988-92. At a specific date, differences in per capita income *among* households that shared a particular attribute (e.g., that resided in the same region) but varied in other respects (“within-group” inequality) are typically the largest source of aggregate inequality. This is confirmed for both 1988 and 1992, with over 70% of aggregate inequality accounted for by such “within-group” inequality, irrespective of how households are classified (Annex Table 1.8).

1.28 For policy, one key issue is whether *changes in aggregate inequality* have arisen more due to growing differences within various groups of households (e.g., those that live in the same region) or because of widening differentials *between* various types of households (e.g., those located in different regions). The analysis here confirms that wider income differentials *between* households of various types (“between-group” inequality) did contribute significantly to the increase in overall income inequality (Table 1.4). This result is strongest for locational factors both rural/urban and by region. It held also for households classified according to educational attainment of the head, although changes in these population shares were also important in this case. Hence, inter-group differences became more prominent during 1988-92 as sources of higher inequality confirming, for instance, that the pattern of real per capita income growth shown in Figure 1.1 has sharpened income inequality.

Table 1.4: Relative Contributions to Inequality Increase by Household Attributes, 1988-92, (% of total)

Household Attributes	Within-group Inequality	Between-group Inequality	Change in Population Shares
Location (Rural/Urban)	37.3	62.1	0.6
Region of Residence	41.4	59.9	-1.3
Education	45.4	38.9	15.6

Source: Annex Table 1.9, and Kakwani, background paper.

1.29 Another important issue for policy is the extent to which various income sources, such as wages and salaries and entrepreneurial income, have contributed to higher inequality. The results confirm that wages and salaries and entrepreneurial income

¹² The analytical method used here is to decompose an appropriate index of inequality in two ways. *First*, households are divided into mutually-exclusive groups according to such attributes as location (rural-urban), and education of the head. The Theil index (see Annex Tables 1.8 and 1.9) is used in measuring inequality for this decomposition since the Gini coefficient is not decomposable in this manner for such classifications. *Second*, a measure of inequality based on the Gini (see Annex Tables 1.10 and 1.11) is used in decomposing the total income of households into various income sources (such as wages and salaries, entrepreneurial income, and farm income). In this decomposition, households are not partitioned and, therefore, the Gini coefficient can be used.

contributed most to the increase in overall inequality, while farm incomes had strongly equalizing effects (Table 1.5). However, before branding outcomes in the labor market as the main culprit and looking to policies to change these, a closer look at the contribution of each income source is revealing. The links in their relationship to inequality are not as straightforward as first appears. As Table 1.5 summarizes, the contribution of wages and salaries to income inequality has come primarily from an increase in its share of total incomes (from about 34% to over 40%), which reflects rising participation in the formal

**Table 1.5: Relative Contributions to Inequality Increase by Income Source, 1988-92
(% of total)^{1/}**

Income Source	"Pure" Inequality	Correlation	Change in Income Share	Total
Wages and Salaries	-1.9	30.2	61.0	89.4
Entrepreneurial Income	1.6	15.4	28.6	45.6
Farm Income	1.3	-17.5	-17.5	-33.7

^{1/} Selected income sources. Rows may not add up due to rounding. See Annex Table 1.11 for complete decompositions.

Source: Annex Table 1.11, and Kakwani, background paper.

labor market. This shift from informal to formal employment has occurred more among higher-income households, as indicated by the increase in correlation between wages and total income. However, the increase due to these factors was tempered by the *more equal* distribution of wages and salaries (or decrease in "pure" inequality). In contrast, entrepreneurial incomes were more inequalizing because their share in (and correlation with) total incomes rose *and* these earnings were distributed *more unequally*. The next chapter analyses further the distribution of labor incomes and its implications for labor market policies.

C. THE RELATIONSHIP BETWEEN EQUITY AND GROWTH

1.30 Is there a growth-equity trade-off? Apart from slowing the pace of poverty reduction in this manner, these distributional trends raise two other issues. The *first* concerns how these trends compare with the experience of other developing countries, particularly those in East Asia. The question of whether there is a systematic relationship between income inequality and growth has dominated development economics since the postulation by Kuznets in 1955 of an inverted U-relationship between per capita income and inequality. In this view, as incomes in developing countries grow, inequality first rises and then falls. Therefore, in the initial stages of economic growth, there was seen to be a trade-off between equity and growth, and governments would need to intervene

actively through mechanisms such as asset redistribution and progressive taxation to ensure that growth was not skewed against the poor.

1.31 The consensus that such a stable cross-country relationship existed, and the growth-equity trade-offs it implied, began to shift in the late-1970s with research that questioned its empirical basis. As a result, it is now widely accepted that the commonly-accepted version of the Kuznets' hypothesis is too simplistic.¹³ One reason is that initial conditions (such as the pattern of distribution of assets, including land) vary dramatically across countries, especially between those in East Asia and Latin America. Moreover, the simple specification of the hypothesis, which singles out per capita income growth leaves out many other factors (such as access to primary education) that appear to be far more significant in determining the level of (and trends in) income inequality than the pace of economic growth. Hence, the current view is that there is no systematic relationship between growth and inequality in the sense that more rapid growth would *necessarily* be associated with worsening distributional outcomes.

1.32 The cross-country experience. This empirical pattern appears to be confirmed by the experience of East Asia in the last quarter century. In general, the countries that commonly constitute the so-called "East Asian miracle" experienced rapid per capita GDP growth while ensuring that distributional equity did not worsen significantly and, in most cases, improved over the period.¹⁴ In Korea, for instance, per capita GDP growth during the 1970s and 1980s averaged about 8% annually. While inequality rose slightly in the 1970s, its level remained modest (compared to most of Latin America), and the Gini coefficient fell sharply during the 1980s. Moreover, this experience of East Asia contrasted sharply with that of some middle-income Latin American countries (such as Brazil) that experienced economic stagnation *and* greater inequity in income distribution. Not only have the trends in East Asia been towards lower inequality, the levels of income inequality (as measured, for instance, by the Gini) have generally been lower than in countries at comparable income levels in Latin America (Figure 1.3).

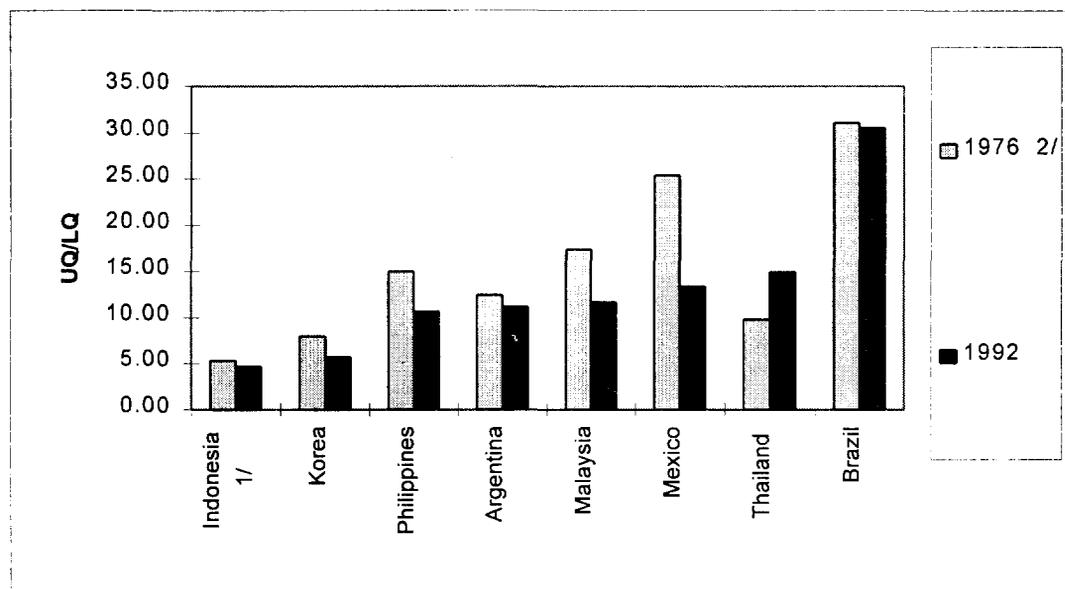
1.33 Thailand's income distribution trends, however, diverge from the East Asian pattern. The sustained increase in income inequality, since the mid-1970s has meant that its level is now comparable or higher than many middle-income Latin American countries. And within East Asia, the level of inequality in Thailand is now the highest, even higher than in Malaysia or the Philippines. The consistent rise in inequality for at least the last two decades (and possibly longer) is also atypical of the East Asian pattern. While Korea too saw an increase in the 1970s, it was not sustained nor did inequality ever approach the levels seen in Thailand today.

¹³ For a review of the rationale for this revisionist view, see Bruno, Ravallion, and Squire, 1995.

¹⁴ This statement needs to be qualified in two ways. Even some of the countries in which inequality declined between the 1960s and the 1990s saw shorter periods during which inequality rose. And, as noted below, Thailand remains the exception in that inequality has risen consistently over the last three decades. While comparisons of inequality trends before and after 1975 are fraught with uncertainty, most studies have reported that household income inequality (as measured by the Gini) rose between 1962 and 1975. The continued rise since 1975 is better documented (see World Bank, 1993 for details of these).

1.34 The impact of inequality on economic growth. It is this pattern of rising inequality in Thailand that makes the *second* aspect of the growth-equity issue relevant. Recent work on the links between income growth and inequality has concentrated more on the implications of greater inequality for the continuation of economic growth. An influential argument, which is still being fleshed out and tested, is that societies with lower income inequality are more likely to grow faster for two reasons. They are more

Figure 1.3: Comparison of Inequality -- Selected Countries, 1976 and 1992



^{1/} Data for Indonesia refer to 1976 and 1993, and to per capita expenditures.

^{2/} 1975 data used for Thailand and Mexico; 1971 data used for Philippines.

Source: World Bank, Social Indicators of Development, 1996; Deininger and Squire, "Inequality and Growth", 1995 (draft).

likely to make the investments necessary for sustained growth (as in primary and secondary education). And, in political economy terms, these societies are more likely to be able to strike the bargains needed to manage the often-difficult trade-offs associated with sustained rapid economic progress. Both aspects of this argument are pertinent to Thailand today. Among the key development issues that faces the Thai economy is its need to upgrade the education status of its future labor force, especially by increasing the rate of secondary school participation. As is discussed in detail in the next Chapter, low (albeit recently rising) secondary school enrollment rates result more from low demand rather than supply constraints. It would be more difficult to increase demand for secondary education among the poor, (e.g., because of binding credit constraints) in a situation in which income inequality continues to rise. And this could well hurt Thailand's medium-term economic prospects.

1.35 The political economy argument is just as relevant. Thai society has always been built on a social contract that has emphasized equity. As long as that contract was

perceived to be honored as in the last three decades, it was possible to achieve a remarkable consensus concerning the adoption of growth-oriented policies. This set of policies has served Thailand well, underpinning its sustained economic success. But this social contract and the resulting consensus may now be in danger of fraying as a result of rising and highly visible signs of inequality both within Bangkok and the secondary cities and between these urban areas and the countryside. Widespread dissension could impede the prospects for economic growth if it becomes more difficult to implement the politically-charged decisions needed to restructure the Thai economy towards higher value-added production as its comparative advantage continues to shift from products based primarily on cheap labor.¹⁵ It is, therefore, of interest to probe a bit deeper into what factors underlie the recent increases in inequality. The next chapter examines the role of the labor market in determining these outcomes.

¹⁵ Although it is difficult to provide empirical evidence, this hypothesis is supported by the recent mass rallies in Bangkok and elsewhere that were intended to draw attention to the deteriorating economic situation of farmers and rural workers especially in the Northeast. The coincidence of these rallies with a period of continued rapid growth is especially striking.

2. LABOR MARKETS, INCOME DISTRIBUTION AND POVERTY

2.1 This Chapter examines two aspects of the functioning of labor markets that are relevant in the context of the poverty and income distribution trends discussed before. One is the extent to which the labor market has contributed to the growing inequality in household incomes. The second issue taken up here concerns the incidence and conditions of child labor in the context of the recent rapid growth of the economy.

A. LABOR MARKETS AND INEQUALITY

2.2 Understanding the role of the labor market in the recent trends towards greater income inequality is of particular relevance given Thailand's very successful development strategy (from a growth perspective) that has combined outward orientation and labor-intensive production. It is often contended that, while this approach may have succeeded dramatically in accelerating economic growth, its distributional impact has been less sanguine, and that Thailand exemplifies an economy that has grown rapidly but where workers, especially those without skills, have gained little from growth. Despite the wealth of analysis that shows that labor markets in Thailand are flexible and well-integrated across regions and sectors, the concern has persisted that labor earnings might have become significantly more unequal.¹ Given the deserved credit that Thailand has received for its success in fostering economic growth, the empirical verification of this link is of interest to policymakers not only in Thailand but also in other developing countries that are considering the pros and cons of adopting a similar development strategy.

2.3 The analysis in this section uses data from various rounds and years of the Labor Force Survey (LFS) conducted by the NSO.² Most of the analysis pertains to 1988-92 (to make it directly comparable to the household income and expenditure data analyzed in Chapter 1) although, where a longer view is useful, additional data from 1985 and 1994 are also examined. The analysis proceeds in three steps. *First*, changes in the distribution of individual labor earnings and levels of real wages are examined. This helps address the question of whether or not individual labor incomes have become more or less unequal. *Second*, changes in the share of labor incomes in household incomes and

¹ Much of this work on Thai labor markets uses Labor Force Survey (LFS) data from the early- and mid-1980s, or uses simulations. Hence, it misses the effects of the transformation of the economy during the recent high-growth period. See, for instance, World Bank, 1983, and the papers by Sussangkarn in Warr (ed.), 1994, in Horton et. al. (ed.), 1994, and Tan (1991).

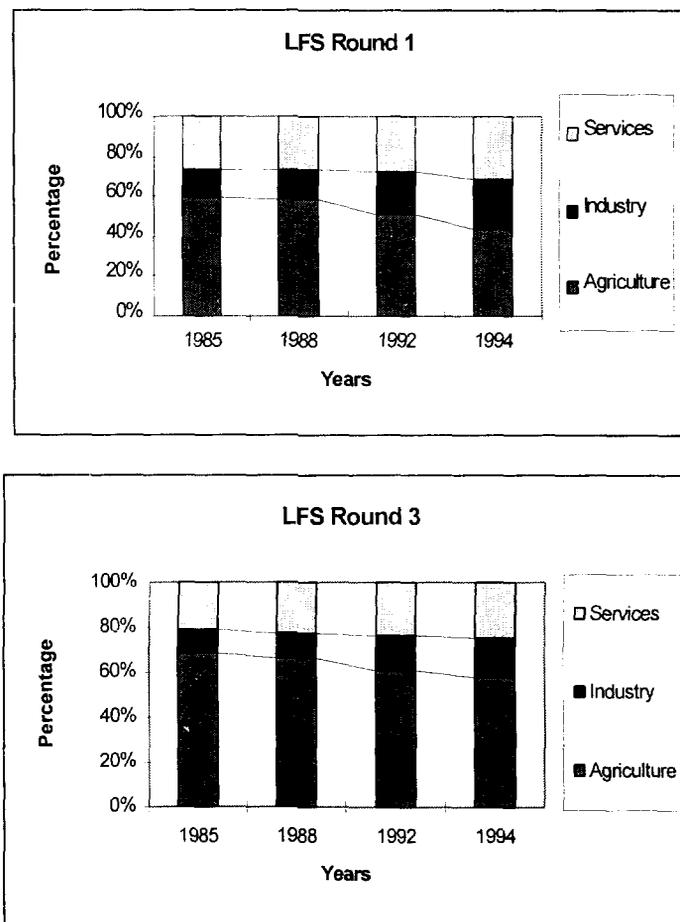
² Since 1984, the Labor Force Surveys are conducted three times a year: Round 1 in February (the dry season); Round 2 in May; and, Round 3 in August (close to the peak season).

the dispersion of household labor earnings are evaluated. This extension of the analysis to the household level is important, in part, because it allows for the inclusion of labor income from self-employment and family labor. *Finally*, the key factors that underlie the changes in the distribution of individual labor earnings are identified with a view to drawing out policy implications.

Have Individual Labor Earnings Become More Unequal?

2.4 Changing labor market structure. Before examining the changes in the distribution of individual labor earnings itself, it is instructive to look at how the structure of the Thai labor market has been transformed since the mid-1980s. In 1994, the employed labor force was about 30 million, varying with the season. Of those employed, between 44% and 58% were engaged in agriculture, with between 18% and 24% employed in industry. As Figure 2.1 shows, there has been a continuing shift of labor out of agriculture and into industry as per capita incomes have risen.

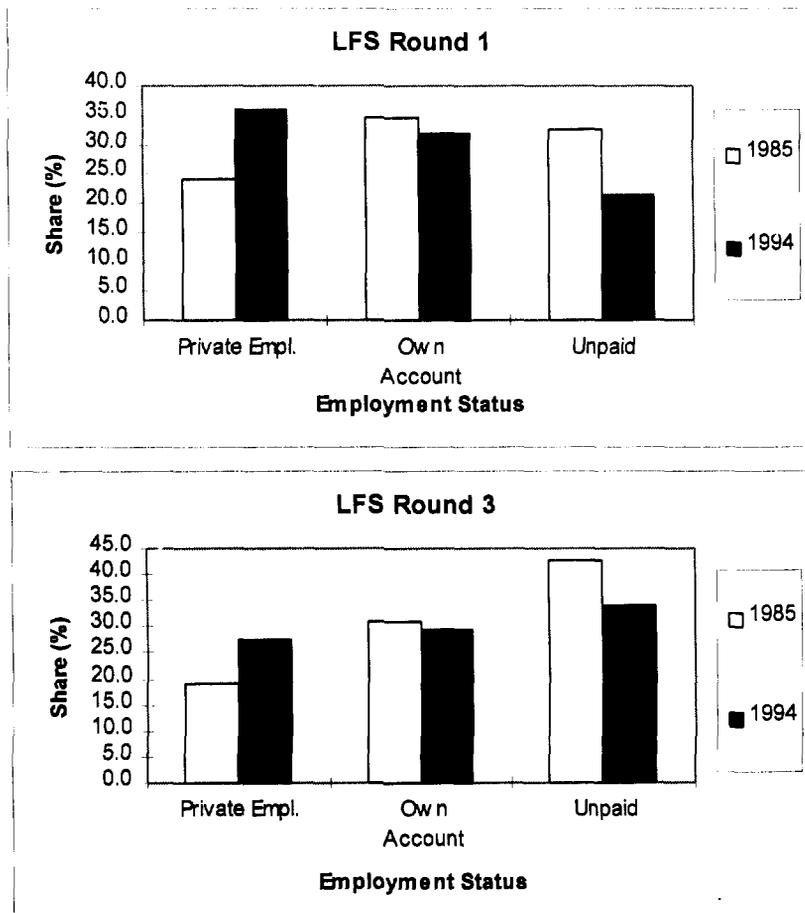
Figure 2.1: Employment Shares by Sector (various LFS rounds)



Source: Labor Force Survey; NSO, various years

2.5 A second related shift is also evident from Figure 2.2, which shows that irrespective of season, a far larger share of employment is now in the wage sector. Significant changes have occurred during 1985-94 in the employment shares for two groups--private employees and unpaid workers. The change in their shares (in either Round) is almost exactly offsetting, with reductions of almost 10 percentage points in the labor force share of unpaid workers, and corresponding gains among private employees. These changes are obviously related to the rising employment shares of manufacturing and construction, and mean that the rewards to labor are becoming increasingly monetized. These two trends--the falling share of agricultural employment and the increasing monetization of labor incomes--hint strongly at rising returns to workers as growth has proceeded.

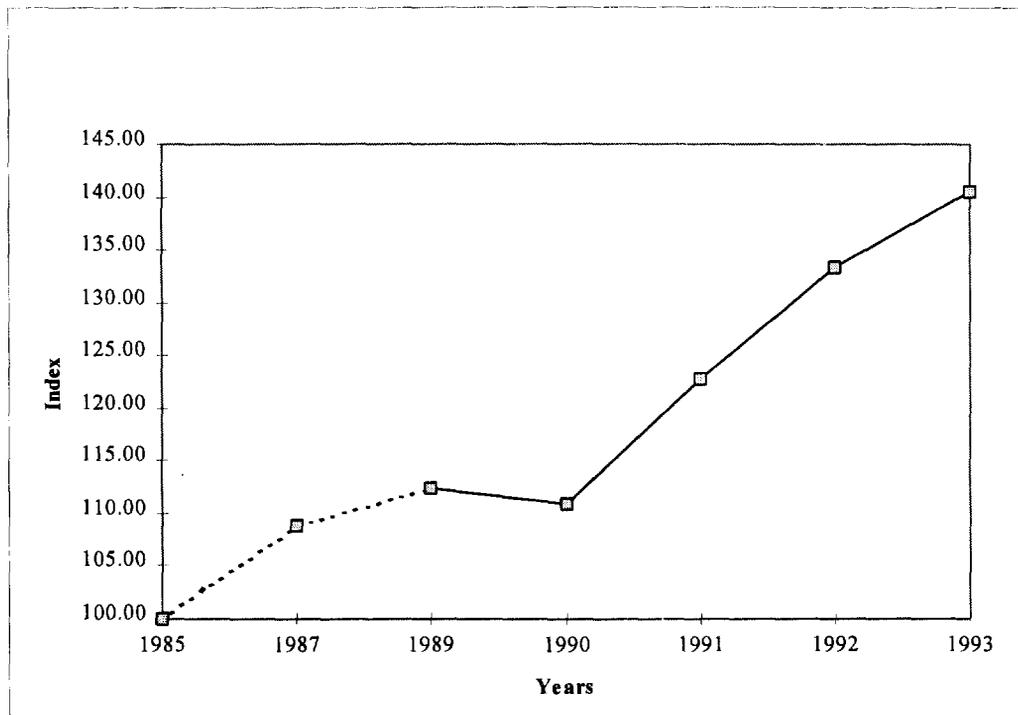
Figure 2.2: Labor Force Shares by Employment Status



Source: Labor Force Survey; NSO.

2.6 Rising real wages. The increase in real wages since the late-1980s supports this conclusion that workers have benefited. Since there is no single reliable source for wage data, the trends for this period are established from four different sources of wage data.³ Figure 2.3 shows the trends in the most comprehensive of these wage data, which covers all daily and monthly employees. Average real wages rose rapidly at an annual rate of almost 6% during 1985-93, and over 8% during 1990-93. Disaggregated data show that these real wage gains extended also to workers with daily and piece wage contracts. Moreover, workers in all Regions saw increases in their real wages during 1987-93, with the most rapid increases being in the North, Bangkok and the Northeast. Finally, these wage gains occurred during 1989-93 in almost all sub-sectors, with the most rapid increases occurring in construction.

Figure 2.3: Index of Real Average Monthly Labor Earnings (1985=100)



Note: Data on nominal wages for 1986 and 1988 are not available.

Source: MoLW

2.7 Falling earnings inequality. However, even strongly rising average real wages do not necessarily translate into favorable distributional outcomes whereby workers at the bottom of the wage distribution are better off. The inequality of individual earnings also needs to be evaluated. Using three different measures of earnings inequality, the finding is that between the late 1980s and the early- to mid-1990s, the dispersion of individual labor earnings fell.⁴ From the LFS data, the dispersion of earnings of all paid workers

³ See the background paper by Tzannatos and Dar for details of these data and the real wage trends noted here.

⁴ Summaries of these estimates are shown in Annex Table 2.2, with the details reported in the background paper.

(measured by the SD of the log of earnings) fell at an annual rate of over 6% during 1988-92. A similar proportionate decrease occurred in the variation of earnings of private employees (measured by the CV of earnings) during 1990-94. And, the variation in the distribution of non-agricultural earnings across sub-sectors also fell by about 12% between 1989 and 1993. By all these measures, therefore, *the distribution of individual labor earnings has become less unequal since the late-1980s*.

Determinants of Inequality in Individual Labor Earnings

2.8 While it is heartening that the dispersion of individual labor earnings has fallen by almost a quarter during the recent high-growth period, it is necessary for policy analysis to identify the underlying factors that have contributed to lower inequality. To do this, the effects of the various factors that determine individual labor earnings, such as education and industry, are first delineated by estimating earning functions from the LFS data for 1988 and 1992. Changes in inequality are then explained according to the distribution of these characteristics in the labor force (and their changes during the period).⁵

2.9 The estimated earnings functions show that the strongest effect on wages in both years comes from education, and this positive effect rises with the level of education (Annex Table 2.4). Moreover, these educational premia increase between 1988-92, suggesting that the less educated are increasingly being penalized in the labor market. Apart from education, the wage premia associated with employment in manufacturing and construction fell during 1988-92, while these widened in other non-agricultural subsectors, most notably in services. While Bangkok (and its vicinity) obviously commanded the highest wages, wages in non-municipal areas in the Northeast and North were farthest below those in Bangkok. Finally, women earned, on average, about 23% less than men in 1988, and this wage gap fell only slightly.⁶

2.10 Among the determinants of inequality in individual earnings in 1988 and 1992, differences in educational attainment between workers were the most important (Table 2.1). In 1988, a third of earnings inequality was due to the differential endowment of education, and by 1992, almost 45% was attributable to this factor. However, in both years, basic education (primary and junior secondary) was *equalizing* in its effects on wages while university education, in particular, was strongly *inequalizing* (Annex Table 2.5). The other important factors that contributed to wage inequality were differences between workers in the public and private sector, and by region. In contrast, differences

⁵ Earnings functions allow the effects of each of the variables that determine labor earnings -- such as, the worker's education level and experience, the industry in which s/he works, and the location of work -- to be identified separately. The variation in earnings that is explained collectively by these factors can then be decomposed according to how these characteristics are distributed across workers. The technical details of this analysis (and those that follow) of the individual and household labor earnings determinants as well as a description of the data that are used are contained in the background paper by Tzannatos and Dar.

⁶ However, there has been an improvement in the relative earnings of women over the longer term (since 1980). See Tzannatos, 1995.

across establishments in various subsectors and of varying sizes were relatively unimportant in explaining wage inequality.⁷

Table 2.1: Selected Determinants of Inequality in Individual Wage Earnings, 1988-92 (% of total inequality)

Differences in	1988	1992	Change (1988-1992)
Educational Attainment	33.7	44.6	10.9
Industry	7.2	6.2	-1.0
Public/Private Sector	25.1	23.3	-1.8
Region	13.6	9.7	-3.9
Firm size	2.7	0.9	-1.8

Source: Tzannatos and Dar (background paper); Annex Table 2.5

2.11 Between 1988 and 1992, all the main determinants of earnings *except education* contributed to the observed decline in inequality. Again, the key *inequalizing* factor during 1988-92 was university education. The effects of basic education, the expansion of the presumably more-competitive sectors such as manufacturing and construction, employment in relatively-poor regions, such as the North and the Northeast, and in rural areas, and the closer alignment of public- and private-sector wages, were all strongly *equalizing*. In this sense, the functioning of the labor market contributed substantially to a reduction in individual earnings inequality.

Have Household Labor Incomes Become More Unequal?

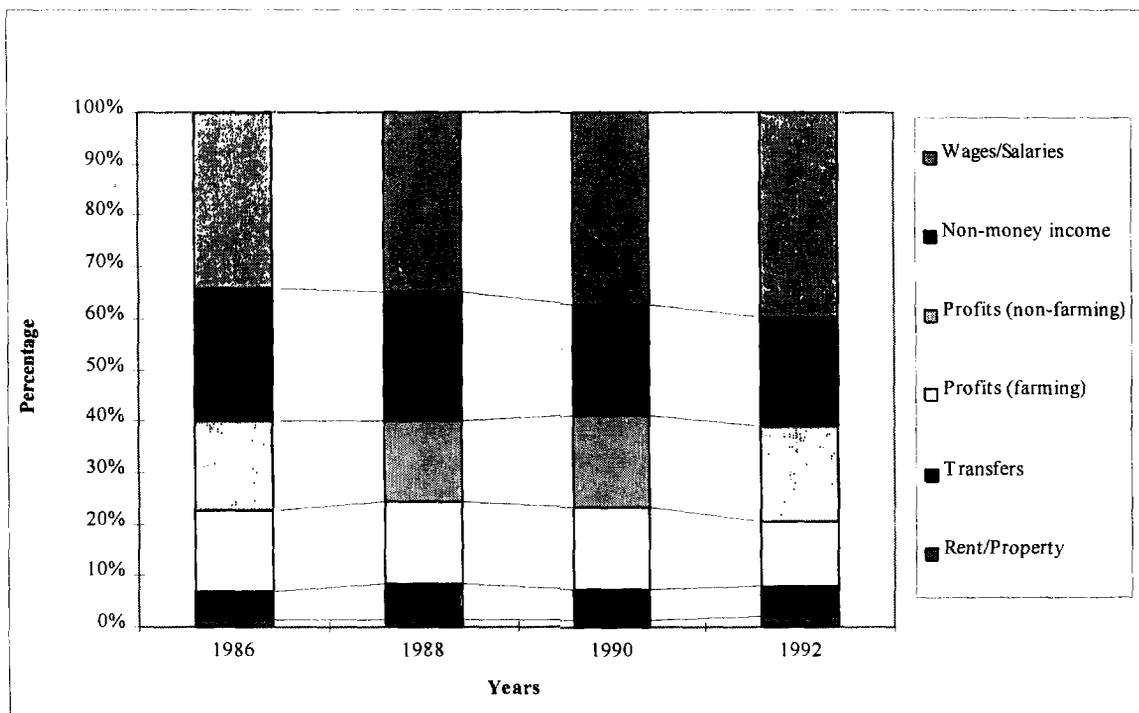
2.12 The limitations of the preceding analysis, which focused on earnings of employees are two-fold. *First*, individual labor earnings, as computed, exclude returns to self-employed and family labor because they include only those who earn monetary wages. This omission is particularly serious in Thailand, where unpaid on-farm labor is still an important occupational category (despite its recent rapid decrease), especially for the rural poor. *Second*, it is possible that the distribution of household earnings could change differently from that for individual earnings. For instance, if the way workers are distributed among households or changes in employment occurred such that the already better-off households took greater advantage of the increasing employment opportunities

⁷ The analysis also shows that seasonality has become less characteristic of the labor market over time. For instance, a comparison of the educational composition of the labor force in February and August shows that for Round 3 (LFS) in 1985, the percentage of the labor force with lower primary education was about 10 percentage points higher than that in Round 1. By 1992, however, there was virtually no difference between the figures for the two rounds. Also, the dissimilarity in the incidence of seasonal employment across workers of different educational levels was reduced by more than half between these two years (Annex Table 2.6).

(for women, for example), the distribution of *household* labor earnings could have increased despite a decrease in *individual* labor earnings.⁸

2.13 Rising labor income shares. Before examining how inequality in household labor earnings has changed, it is useful to see how its share in total household income has shifted. If its share is large (and rising), changes in inequality in this component would have a more significant effect on trends in overall inequality. During 1986-92, the share of total household income from wages and salaries rose from 34% to about 40% at the expense mostly of income from farming, and this shift accounts also for the rising share of money income (Figure 2.4). This increase in labor income share is reassuring from the point of view of workers as it shows that households that rely primarily or entirely on their labor (who are more likely to be the poor) have shared in growth.

Figure 2.4: Household Income Shares--Selected Sources, 1986-92



2.14 Falling participation rates. A further sign that the recent growth has brought broad-based benefits to workers is provided by the labor force participation rates trends (Annex Table 2.3). These rates have not risen since the late-1980s and actually fell in the 1990s. Hence, the rising share of labor incomes in household incomes does not reflect more people within the household working but rather that those who work are being paid

⁸ For instance, this pattern that has been observed in some OECD countries because even as gender wage differentials decreased, the increase in women's employment came disproportionately from households in which the husbands already enjoyed high earnings. Hence, the initial increase in labor force participation by women in some countries was associated with greater inequality in household labor incomes.

more for their labor. This conclusion is also supported by SES data that show that during 1986-92, the share of households with over three labor income earners fell.

2.15 Lower inequality in household labor earnings. These trends that point to an equalizing effect of growth on household labor incomes are confirmed by an analysis of changes in the dispersion of these incomes (which are derived from the LFS) during 1988-92. Two measures of inequality are used here--the Gini coefficient and the Mean Logarithmic Deviation (MLD), which is preferred to the Gini in analyzing the determinants of household earnings inequality change since it is decomposable. During 1988-92, both these measures of the inequality of household labor incomes declined significantly--by about 14%.⁹

2.16 These declines at the household level roughly match the proportional decrease in individual labor earnings inequality noted before. In this sense, the reduction in the inequality of individual labor earnings of wage employees is mirrored in a decrease in the inequality of household labor earnings of wage and non-wage workers. This consistency with which inequality in labor earnings has diminished provides strong support to the conclusion that the recent increases in household income inequality have *not* come from labor market outcomes.

B. POLICY IMPLICATIONS

2.17 In summary, this analysis suggests that growth has had significant positive effects on both labor earnings and employment. Real labor earnings have risen, on average, and their distribution both across individual workers and households has become less unequal. However, as Chapter 1 noted, declining inequality in labor earnings was *not* associated with greater equality in total household income. In part, due to their growing importance in household incomes, wages and salaries contributed strongly to rising income inequality. Another factor was that better-off households were more successful than poorer households in taking advantage of improved labor market outcomes

2.18 Overall, these results support the notion that the process of economic growth in Thailand has favored labor. But, it is also apparent that opportunities to increase labor earnings were *not* distributed equitably across groups of workers. While this analysis has not identified explicitly why those from better-off households have improved their positions relatively more, the answers are likely to stem from more severe constraints in educational attainment, information and access to credit that affect those who are poorer. These issues should be the subject of further research.

2.19 However, three policy messages are clear from the findings of this section. *First*, direct wage or employment regulation of labor markets in Thailand aimed at achieving redistributive goals is likely to be ineffective and could even have adverse effects by slowing the growth of formal-sector employment. Inequality in the labor market does *not*

⁹ For details of these measures and their computation, see the background paper by Tzannatos and Dar.

arise from industrial or regional differences (Table 2.1). Hence, for instance, attempts to specify higher minimum wages in particular industries or regions will have only a small effect on labor earnings inequality, but would likely reduce efficiency.

2.20 *Second*, policies should be directed at reducing the main supply-side constraint on the labor market, which remains the lack of adequate education for almost half the population who leave school without completing junior secondary school. Education is both a key determinant of labor earnings and is increasingly inequalizing (beyond primary schooling). Thus, the most substantial contribution that government policy could make in enhancing equity would be to improve the access to secondary education of those at the bottom of the distributional ladder. The current policy stance of rapidly expanding access to secondary education is justified because it would promote equity as well as foster growth by upgrading labor quality.

2.21 *Finally*, though Thai labor markets have remained competitive, they are also still relatively simple. As the economy becomes more complex, more sophisticated systems of wage determination, social insurance and collective bargaining will be required. For instance, the share of employment in larger firms is likely to increase, more advanced technologies would be adopted in the manufacturing sector requiring more investment in training and greater emphasis on employment security; and, there will be a shift away from households as the main source of old-age insurance. Such issues are better dealt with through tripartite consultation (among labor, employers and the government) concerning the design of such mechanisms as wage determination systems that are related to profitability and productivity, and social insurance schemes that serve both short- and long-run goals. Besides these, it will also be necessary for the government to enact and enforce adequate standards in such areas as work place health and safety, and to protect child labor.

C. CHILD LABOR, EDUCATIONAL ENROLLMENT, AND POVERTY

2.22 One aspect of the labor market that is connected intimately to poverty and growth is the use of child labor. It is well documented that the cross-country incidence of child labor as well as the exploitativeness of the conditions under which children work are inversely related to per capita incomes and poverty levels.¹⁰ In light of the recent rapid growth and the sharp decrease in poverty incidence, it is instructive to examine recent trends in child labor and the conditions under which these children are employed. The other aspect that is analyzed in this section are the links between child labor, school enrollments (particularly in junior secondary school) and wages paid to children.

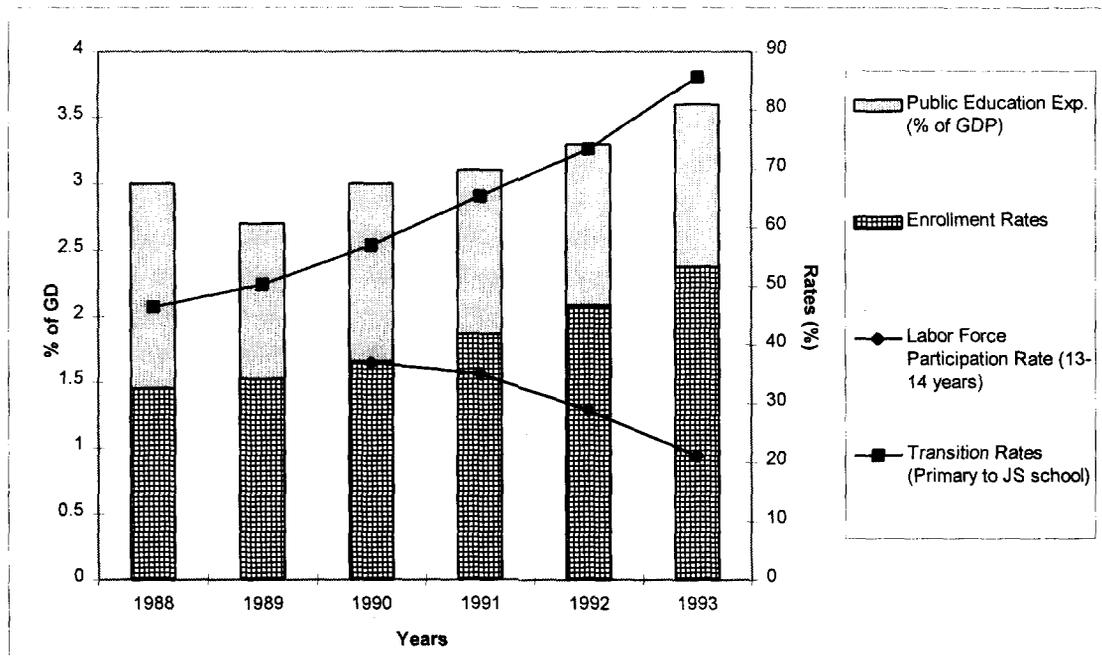
Trends in Child Labor and School Enrollments

2.23 Although it is difficult to precisely define and measure work performed by children, data drawn from the Labor Force Survey (LFS) show that the incidence of child

¹⁰ See, for example, UNICEF (1986).

labor has been falling in Thailand since the acceleration of growth in the late-1980s. For children aged 13 and 14, there was a sharp decline between 1990-93 both in the number of those working--by over 40%--and in the labor force participation rate--from 37% to just over 20%. (Figure 2.5).¹¹ As expected, this decline in child labor is reflected in complementary increases in the transition rate (the share of children who complete the previous level of education that moves on to the next level) from primary (Pratom 6) to junior secondary education (Pratom 7) as well as increases in the overall enrollment rate in junior secondary education.

Figure 2.5: Child Labor Force Participation and Junior Secondary Enrollment and Transition Rates



Source: Labor Force Surveys; Vichai (1994); Educational Statistics in Brief 1995.

2.24 Why has the incidence of child labor fallen? These trends are attributable to a combination of factors. Obviously, rising household incomes (and falling poverty) due to rapid economic growth have reduced the pressure for children to work and increased the demand for education, and hence raised secondary school enrollment rates. The success of Thailand's past family planning efforts and the resulting decline in fertility have also helped by facilitating the decline in primary school enrollments. During 1989-1995, primary school enrollment fell by almost 10%, allowing the conversion of many classrooms from use in primary to junior secondary schools and facilitating the almost 70% increase in junior secondary enrollment that has occurred. Finally, the

¹¹ In 1989 the cutoff point for including workers in the labor force was increased from 11 to 13 years. The Reports of the Labor Force Surveys prior to that date provided information on labor force participation of children in the age group 11 to 14 years.

Government's commitment to raising the level of education attainment, and specifically its goal of achieving universal junior secondary enrollment by 2000 has been mirrored in the significant increases in the budgetary allocations to education.

2.25 However, despite these significant improvements in terms of incidence, child labor remains widespread. About 1.6 million children below the age of 15, of whom 1.2 million are between 12 and 14 years, still remain out of school, and many of them work, even though they may not be captured by official statistics. Moreover, the conditions under which many of these working children are employed are such that society bears costs both due to the reduction in their lifetime productivity (due to lack of schooling) and on account of their stunted physical and mental development.

2.26 Conditions of employment for children. Evidence on the conditions under which child labor is employed has been assembled from special surveys (Annex Tables 2.7 to 2.10). It appears that children (defined here as those between 11-15 years) work long hours, and the trend is towards working even longer. The length of the workweek varies little between occupations and sexes, although girls seem to work significantly longer than boys in the service sector. Between 1985-95, there has been a lengthening of the workweek. The percentage of children working more than eight hours a day has increased from 85% in 1985 to 92% in 1995, and those working all seven days of the week has also risen from 8% to 30%. Moreover, almost a third of the surveyed children have a daily break that lasts less than an hour. Children's work seems not only to be long but is often risky. About a third of those surveyed in another study are engaged in activities that are at least somewhat risky, with about 3% working under conditions of severe risk. More than two-thirds of children work in conditions where they are exposed to dust, noise, and chemicals. Although these figures cannot be compared directly with similar data for adults, they illustrate the significant longer-term damage that these working children might be subjected to as a result of their work. Finally, although most children who work outside agriculture do so in the most visible part of the labor market (in manufacturing, trade, and hotels and restaurants), they often suffer considerable mistreatment and violation of labor standards and rights. Even according to official statistics (that are likely to be understated), about half of those employed in inspected establishments were mistreated.¹²

2.27 Economic growth and the government's commitment to increasing public spending on education have thus had salutary effects in reducing the labor force participation rates of children, and by 1993 the share of children among workers had fallen to almost half its 1990 level. However, those children who still work appear to be subjected to difficult working conditions (and there is some evidence that these conditions have worsened). These conditions of child employment suggest a strong case for government intervention. One plausible hypothesis is that rapid growth may

¹² The records of a non-governmental organization (NGO) active in assisting working tell a similar story with the most common problems being hard work under sub-standard condition; violation of basic rights; and, fraud concerning compensation and work arrangements. This organization--the Foundation for Children's Development-- assisted almost 900 children working in 273 enterprises during 1982-93.

somewhat perversely be the reason for deteriorating conditions of child employment. With sharply lower poverty incidence (compared to 1988) even in the North East and North, it is likely that the children who work now are from households that are part of the hard-core poor. These families, being desperately poor, face conditions that force their children to accept even the harshest conditions of employment, unlike those from families that were previously close to the poverty line (and have now moved out of poverty) whose children previously worked but chose only less arduous forms of employment.

2.28 Why do children stay out of school? To address the issue of whether and how public policy should be designed to keep children in school (and thereby out of work), the factors that keep children out of school (and therefore, likely to work) are identified by combining the results of an econometric analysis of the data from the LFS during 1985-92 and summary data from the Children and Youth Survey for 1992 (also conducted by the NSO). This analysis leads to two main conclusions that accord with intuition. *First*, child work and schooling decisions are significantly related to the education of the head of household (Table 2.2). This link, obviously, reflects both the transfer of human capital from parents to children (i.e., more educated parents are willing to keep their children in school longer) and the positive relationship between parental education and household incomes (and thus, more able to send their children to school rather than work).

**Table 2.2: Predicted Probabilities of Child's Labor Force Participation and Junior Secondary School Enrollment (%)
(by head of household education)**

	LF participation		School enrollment	
	Boys	Girls	Boys	Girls
No/less than lower primary	24.2	24.4	65.3	60.2
Lower primary	21.5	22.1	67.9	65.7
Elementary	9.7	11.9	85.3	81.1
Lower secondary	4.4	8.0	89.8	85.3
Upper secondary	3.9	15.5	90.8	75.9
University/Teacher training	1.3	13.5	95.7	83.9

Source: Calculated from Annex Table 2.14

2.29 And, *second*, the main reason that children do not attend school (between 12-14 years, which is the relevant age group for the transition from primary to junior secondary school) is the direct cost of education to the household rather than the need for additional income from child labor. As Annex Table 2.11 illustrates, lack of finance is the main cause for not attending school in this age group, with only a fifth of children being out of school because they need to work. Moreover, distance to school (which would indicate

inadequate supply) is not cited as an important reason for non-attendance. For older children (between 15-19 years), the importance of the need to work increases, although lack of financial support remains the most important reason for non-attendance. This conclusion is also supported by data concerning the time allocation of children who leave school (Annex Table 2.12). At younger ages (between 9-11 years), most out-of-school children are engaged mainly in housework alone or in combination with unpaid work (between 12-14 years). These activities could be easily combined with schooling, and do not suggest that the primary motivation is the need for additional incomes from paid work.

2.30 These results suggest that the ability of households to finance education is a significant constraint to increasing education enrollment at the junior secondary level. In this sense, child labor in Thailand is mainly (although by no means entirely) a phenomenon of poor households being unable to finance education (especially at the post-primary level) rather than reflecting the pressing need for additional income.

D. ANALYSIS OF POLICIES TO REDUCE CHILD LABOR

2.31 Despite the reduction in the incidence of child labor due to Thailand's success in achieving broad-based development, almost 400,000 children remain out of primary school and another 1.2 million do not attend junior secondary school. Most of these children already work, many under harsh conditions, and many will not be able to invest in further education, thereby reducing their productivity and that of society. Obviously, the policies that have facilitated the economic boom of the past decade should continue. In addition, it may also be necessary to redesign public education policies somewhat to tighten their focus on rural areas, where families rely almost exclusively on public schools for the education of their children compared to urban areas. For example, in Bangkok almost half the enrollment at all education levels is in private schools compared to 1% and 6% respectively of enrollment in primary and junior secondary education in other regions. Hence, facilities for junior secondary education (in terms of provision of schools, teachers, and materials) should be expanded more in areas outside Bangkok and the other urban and suburban locations to which the (growing) private educational sector is increasingly catering. Despite the evidence already cited that supply constraints are generally not binding, increased public support for education in poorer areas, especially at the junior secondary level, could help reduce what constraints might remain for the poor.¹³

2.32 Beyond this, more targeted policies would be needed to reach households situated in poorer areas or which constitute the hard-core rural and urban poor. This section considers three complementary sets of policies: (i) direct subsidies for secondary school

¹³ As demonstrated by its policies in recent years, the Government is aware of the need to increase transition rates to junior secondary school and improve access to these facilities in rural areas. However, measures to achieve these goals must be part of a comprehensive program of educational reform that explicitly addresses the relative roles of the public and private sectors as well as the provision of targeted subsidies.

attendance to enhance the human capital of those children who would otherwise have dropped out and started working; (ii) better enforcement of child labor legislation with regard to conditions and types of employment to help children who would still be employed; and, (iii) a range of *ad hoc* project interventions at the community level focused on particular activities where child workers face persistent problems.

2.33 Subsidies for secondary school attendance. The Government is already considering the possibility of subsidizing attendance of junior secondary school so as to increase transition rates and, eventually, secondary school completion rates.¹⁴ Whether such a policy would be desirable (in efficiency terms from a societal standpoint) requires an evaluation of whether households, especially poor ones, would systematically invest less in junior secondary education than is appropriate from society's perspective.

2.34 The benefits and costs of completing secondary school, from a purely private perspective, are summarized in Table 2.3. The value (to the household) of a child completing junior secondary school is the increase in wages that would result. The costs of investing in further education consist of the expenditures associated with schooling as well as the forgone income of the child due to school attendance. These results also show how the private benefits from more education fall with higher discount rates which, as noted below, is one reason that poorer households might be expected to derive fewer benefits from additional education.

Table 2.3: Private Benefits and Costs--Completion of Junior Secondary Education (Baht)

Child Wages (as % of agricultural wages)	Private Costs	Private Benefits			Net Private Gain (Loss)		
		Discount Rates			Discount Rates		
		10%	15%	20%	10%	15%	20%
30	23,700	32,000	18,700	12,000	8,300	(5,000)	(11,700)
40	30,300	32,000	18,700	12,000	1,700	(11,600)	(18,300)
50	36,900	32,000	18,700	12,000	(4,900)	(18,200)	(24,900)

Source: Tzannatos, background paper.

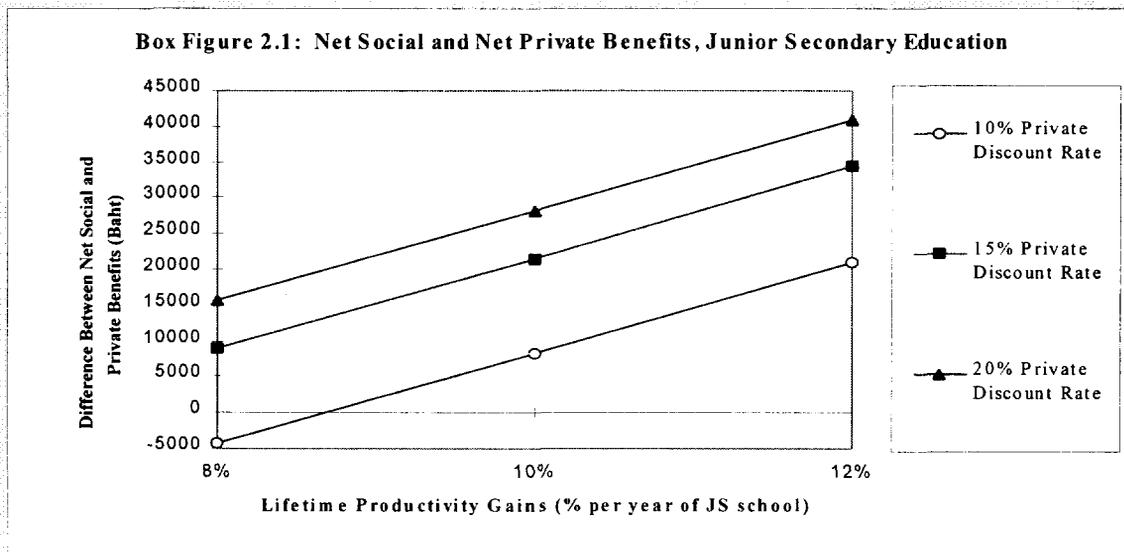
2.35 However, these private net benefits of investing in junior secondary education could be much lower than those to society, especially for poorer families. One reason for this divergence in returns is that individuals and their families capture only the part of the social benefits from education that takes the form of higher wages. The added benefit to society from additional education is larger than these higher wages. Employers increase their profits due to higher labor productivity, and society gains as workers become more skilled and trainable, and as health and nutrition outcomes improve for families, especially as girls are more educated. A second reason why private net benefits could be lower applies especially to poor households. Given their precarious existence, these

¹⁴ In 1995, the Government also introduced a Baht 10 billion program to provide subsidized loans to poor families to assist in financing their children's secondary education.

families are likely to have higher rates of time preference (discount) than society or even their more affluent counterparts, of the order of 15% or more depending on seasonal conditions and emergencies. Hence, from a private perspective, especially for poor families, it may be a rational decision to forgo secondary education for their children. The effects of these factors on the divergence between social and private returns from completing junior secondary education are illustrated in Box 2.1.

Box 2.1: Social and Private Benefits of Completing Junior Secondary Education

The two factors that would lead households, especially poor ones, to invest less in junior secondary (JS) education are illustrated here. Box Figure 2.1 shows the divergence between the social and private net benefits from the completion of the three years of JS schooling under a range of assumptions. These estimates are based on a social discount rate of 10%, and a wage increase of 20% from the completion of the additional three years of JS school.¹⁵ The horizontal axis of the Figure shows the (assumed) lifetime productivity gain from the completion of JS school and represents the social value of the additional education. The private discount rate is varied from 10% (where it is identical to the social rate) to 20%. Hence, the divergence between the social and private returns to completing JS school increases as: (i) the private discount rate of households rises above 10%; and, (ii) the gap between the productivity gain and the wage increase (due to the completion of junior secondary education) expands.



Source: Tzannatos, background paper.

¹⁵ The details of this analysis are contained in Annex 2.1. The wage increase of 20% from the completion of JS education is based on the earnings functions estimates in Tzannatos and Dar, background paper). The social discount rate of 10% is the conservative assumption used in project analysis by the World Bank. A lower discount rate would increase the divergence between social and private returns estimated here.

2.36 The possibility that households underinvest in secondary education means that measures to expand enrollments in junior secondary schools would help foster economic growth. They would also benefit the relatively worse off in society. The less educated are already faring worse than the more educated in the rapidly-changing Thai economy and account for a disproportionate (and rising) share of the poor (Table 1.3). Also, while the share in the labor force of those with less than secondary education declined from 87% to 81% during 1985-92, their share among the unemployed rose (from 71% to 84%) as did their unemployment rate (from 3.2% to 4.6%). These workers now have the highest unemployment rate and are the only group that have seen an increase since the late-1980s (Annex Table 2.13).

2.37 On both efficiency and equity grounds, therefore, providing such a subsidy for junior secondary school enrollment and completion appears to be justified. However, it is by no means a panacea from the perspective of reducing child labor. One possible objection would be that the recent and relatively rapid (recorded) decline in child labor and the increase in secondary school enrollments (Figure 2.5) is likely to continue as growth proceeds, thereby rendering the subsidy largely irrelevant and a waste of public resources. This view would be reinforced by the relatively small response of education attendance to subsidies (a subsidy of 10% of the child's wage would increase enrollment only by about 20,000) and the high incremental cost per child (about two to four times the current level). However, given the high social returns to the policy, its effectiveness can be enhanced, if it is designed carefully. In particular, the subsidy should be designed so that potential recipients are screened in some way to establish that they are poor. The data clearly show that it is children aged 11-16 from households headed by less educated, and typically poorer parents, who are more likely to be out of school and in the labor force. The scheme should, therefore, be aimed only to the very poor in areas where school enrollment is already quite high while being provided more liberally to schools in areas where attendance is low and child work prevalent. Given the regional nature of the Thai economy, targeting in this manner over geographical areas, rather than screening households, may be easier to implement because it does not require detailed information about household incomes.¹⁶

2.38 Child labor legislation. Experience has shown that attempts to reduce child labor, for example, by banning it altogether, are usually ineffective. Such bans typically lead to situations in which child labor is driven underground, as a result of which child workers lose even the little protection they already had.¹⁷ A more effective way to proceed is to enact regulations that focus on improving conditions of employment and restricting child labor in certain areas, and to shift the efforts to enforcing these regulations vigorously. In this manner, the engagement of children in activities that are detrimental to child's

¹⁶ There are several other design issues that arise, which need attention, but are not discussed here. These include how the grant should be structured so as not to discourage attendance, the amount of the subsidy, whether or not it should be age related, and to whom the subsidy should be paid. For a brief discussion of these, see the background paper by Tzannatos.

¹⁷ See Rodgers and Standing, 1981.

physical and mental development can be reduced. An example of an activity whose prohibition for child employment should be enforced without exceptions is prostitution. Work conditions that require long hours without breaks, physical effort or exposure to excessive levels of dust and chemicals should also be restricted.¹⁸

2.39 The Thai Government has adopted this approach to dealing with the problem. In 1992, it declared its intention to end abusive child labor, and the draft Eighth Plan identifies child labor and children in prostitution as the two most critical issues. It also aims to increase the minimum working age from 13 to 15 and to extend compulsory education to nine years by the year 2000. Two additional programs aiming to reduce child labor migration from the rural areas and to provide protection to children in the workplace were approved in November 1994, and Baht 300 million has been provided to these programs over a five-year period. This approach will need to be combined with more effective implementation of the existing statutes regarding the work conditions of child labor, if success is to be achieved in combating the undesirable aspects of child labor. Also, some of the gaps in the legislation would also need to be addressed. For instance, the current safety legislation does not differentiate between child and adult workers; there are no provisions at present that require breaks during working hours for children although they are obviously more at a disadvantage from working long uninterrupted hours.¹⁹ Finally, existing legislation covers only child workers whose status is that of employees, who constitute a minority of child workers. Since conditions of employment are so important, these laws should progressively be extended to other groups of child workers such as the self-employed, and those engaged in sub-contracted work, farming and fishing.

2.40 Targeted interventions. Public policy interventions aimed at improving the conditions of child labor and reducing its incidence can also be effective if they are undertaken at the community level and targeted at specific types of work or abuses. Two programs currently undertaken by ILO in the context of the International Program on the Elimination of Child Labor (IPEC) illustrate the potential role for such interventions.²⁰ The first is a mobile training and sensitization program for children working/living in the construction sector, which aims to introduce children in Bangkok to skill development and provides vocational training opportunities as an alternative to working in the

¹⁸ ILO Forced Labor Convention 1930 (No. 29), the Abolition of Forced Labor Convention 1957 (No. 105), and Minimum Age Convention 1973 (No. 138) provide a framework for child labor. Other conventions (especially those relating to freedom of association, protection of the right to organize and collective bargaining) are also relevant. See Bequele (1995).

¹⁹ Though employment of children aged 13 to 15 years requires official permission, this is waived in the case of work involving carrying weights less than 10 kilograms and for light work in most commercial and service activities. Child work is not permitted (till the age of 18 years) in metal melting and molding operations, and work with excessive heat, cold, noise, light, vibration, chemicals, inflammable substances except in gas stations and similar, toxic materials and so on. Child work is prohibited in slaughter houses, casino and adult entertainment, prostitution houses, massage parlors, places serving alcohol and the similar establishment (Banpasirichot, 1995).

²⁰ ILO (1995).

construction sector. Children are provided with scholarships so that they can quit work in the sector. So far this project, which cooperates with employers and government agencies, has assisted 250 children at a cost of \$22,000. A second project, being implemented in collaboration with NGOs, tries to provide alternatives to young girls in Northern Thailand who face the risk of being forced into prostitution. The project provides access to basic education, and a vocational training program, and following completion of the program, job-placement assistance is offered.

2.41 Although these two programs have not been formally evaluated yet, they offer examples of the dividends from efforts that involve communities in partnership with NGOs and government agencies. Partnership with employers is especially important since lack of their active involvement often limits the effectiveness of public policies related to child labor. The Employers Confederation of Thailand (ECOT) is increasingly involved in IPEC initiatives. Finally, the involvement of trade unions would also be beneficial to improving working conditions, especially in reducing the long hours that children often work.²¹ The welfare of child workers can also be affected by supplementary activities such as opportunities for non-formal education and the availability of health care services including greater cooperation with medical institutions in reporting suspected cases of child workers' abuse and torture. Public information campaigns can help strengthen the responsibility of employers and communities on child labor issues as can awareness campaigns aimed at teachers. Finally, the development of regional and national statistics on child labor that would supplement the indicators available from the Labor Force Surveys can help in monitoring the situation of child labor and in introducing timely interventions. The collection of these statistics should be collected by an agency other than the Ministry of Labor and Social Welfare (MoLW), which has the formal responsibility of labor inspections, so as not to distort information.

²¹ There are such proposals for the case of child workers in the leather industry in Samutprakarn. However, the support of trade unions cannot always be assumed; the objectives of decent wages, employment protection and regulation of working conditions makes unions natural enemies of child labor. Increased awareness on this issue among union members is often required. To this end, ILO in association with the Institute of Labor Studies and Management at Chulalongkorn University is developing a training package to sensitize trade union leaders who are affiliated with the Labor Congress of Thailand and the Thai Trade Union Congress.

3. AN EVALUATION OF TARGETED ANTI-POVERTY PROGRAMS

A. BACKGROUND

3.1 A major concern for the Government is the extent to which its anti-poverty programs are contributing to the reduction in the incidence and severity of poverty. This Chapter surveys the major targeted programs currently in place and evaluates their effectiveness and efficiency in reaching the poor. There are at least two sets of reasons why such an evaluation is essential and has been long overdue. *First*, Thailand's recent economic success and the government's comfortable fiscal position have led observers concerned about the welfare of the poor to call for an expansion of the scope and size of targeted anti-poverty programs. However, there is also a perception among many in the government that expenditures on these programs has risen sharply in recent years. Along with the proliferation of programs, managed by various Ministries and agencies, this leads to questions as to whether there is sufficient coordination between these various official actors in efforts to improve the lot of the poor.

3.2 The *second* reason to focus on the effectiveness of these programs is the distributional shift away from the poorest. Despite the dramatic reduction in poverty during 1988-92 in the Kingdom as well as in every region, it is notable that the share of income accruing to the poorest decile of the population has fallen consistently during this period. While their real incomes have grown on average, they gained less from the recent rapid growth than those richer. To lift these relatively disadvantaged people (in the poorest decile) above the poverty line, there is a strong case to supplement the workings of the market with the enhanced provision of public assistance to this group through targeted anti-poverty programs or safety nets.¹ However, if an expansion of targeted programs is to be effective, it needs to be preceded by an evaluation of those already in place.

3.3 Ideally, such an evaluation would proceed by surveying all the targeted anti-poverty programs, and then focusing on those that are most significant in terms of the public expenditures they involve and the number of beneficiaries. This approach has not been used here because of the practical difficulties involved in compiling the data for all programs that claim to have some anti-poverty focus. This problem is compounded by the ambiguity of the definition of the target groups for most such government programs

¹ For a description and taxonomy of safety-net programs, see, World Bank, Social Assistance and Poverty-Targeted Programs, A Best Practice Paper, draft, 1996. As it also notes, however, safety-net programs should be viewed as complementary to growth-oriented policies rather than as substitutes. Hence, a reorientation in targeted programs in Thailand should take place in the context of continued emphasis on sound economic management.

in Thailand. Over time, a large number of programs aimed at least partially at improving the welfare of the poor or other socially-disadvantaged groups have been instituted. Some aim generally at goals such as rural development that could also help reduce poverty. Others are more narrowly aimed, and identify the poor as the main intended beneficiaries. Hence, there is some arbitrariness in identifying targeted poverty programs, and depending on the definition that is chosen, the list could run into the hundreds of programs. So, the approach adopted here is pragmatic in that the description and evaluation are restricted to the major government programs from which the poor would be expected to benefit substantially. The programs considered here have been identified mostly from discussions with government officials and others knowledgeable about anti-poverty programs, and comprise some whose purpose is entirely to assist the poor and others with broader developmental goals. However, they are not an exhaustive set of targeted programs.²

3.4 Private and public transfers. Before turning to the role and effectiveness of public programs to assist the poor, it is useful to provide a context by examining the relative role of these in comparison to private transfers. Typically, the information needed for such an analysis is available from household surveys. Unfortunately, the SES data used in the analysis elsewhere in this study do not provide the disaggregated information necessary. Specifically, although the SES does collect household-level information about income received in the form of transfers, it does not separate these transfer receipts cleanly into those from the government and those from private sources (including the extended family). Hence, analyses are not possible, for instance, of how public transfers (such as public assistance, pensions, and scholarships) influence household income inequality or of whether private transfers flow disproportionately to poorer households or poorer regions. The only conclusion that can be drawn from the partial information that is available from the SES is that even a lower-bound estimate of private transfers shows that they accounted in 1992 for about 8% of total household expenditures, with their share being much higher in the two regions in which poverty was greatest (the Northeast and North)--about 10% of expenditures--and lowest in and around Bangkok--about 7% of expenditures (Annex Table 3.1).

B. AN OVERVIEW OF ANTI-POVERTY PROGRAMS

3.5 Before evaluating specific programs, it is worth distinguishing among various kinds of programs. One distinction already noted is that between targeted programs (aimed primarily at assisting the poor) and non-targeted programs (with broader developmental goals). Among each of these types of programs, it is also worth distinguishing between *pure transfer* programs and those that are *employment generation* programs. Further, pure transfer programs can operate either through *cash* or *in-kind* transfers. In Thailand today, there are examples of targeted programs of all three types.

² For a more comprehensive review of poverty alleviation programs and their history in Thailand, see the background paper by Krongkaew *et. al.*. For details of the evaluations of the targeted programs analyzed here, see the background paper by Subbarao and Rudra.

3.6 The major programs that provide **cash transfers** to the poor include the provision of: direct cash assistance to needy families in poverty; a monthly per diem of Baht 200 to the elderly without other means of support; and, village community funds of Baht 12,500 administered by village welfare committees, to be used in assisting poor residents. All these cash transfer programs are administered by the Department of Public Welfare (DPW) of the Ministry of Labor and Social Welfare (MoLW).

3.7 The main **in-kind** transfer targeted to the poor is the low-income card (LIC) program administered by the Ministry of Public Health (MoPH). It aims to provide free medical services to the poor. About 20% of the population received low-income cards and this proportion has remained roughly constant since the program began in 1984. Means-tests for low-income cards are done by village headmen every three years. A second in-kind transfer program targeted at the poor is the school lunch program, which provides a meal each school day to children from poor families at the pre-school and primary levels. The program is administered by the Ministry of Education (MoE).

3.8 **Income-generation programs** targeted to the poor are intended to provide them with temporary incomes. The most significant such program currently being implemented is the Poverty Alleviation Project (PAP), which was initiated by the Community Development Department (CDD) of the Ministry of Interior (MOI) in 1993. It provides interest-free loans to poor households as seed money for investments in income-generating activities. An amount of Baht 280,000 is given to each village. From this fund, households with incomes less than Baht 5,000 per person per year can borrow without interest. By 1995, an amount of Baht 2.8 billion had been advanced to support income-generating activities in about 10,000 villages.

3.9 Apart from these major targeted programs, there are **developmental programs**, part of whose rationale is their beneficial impact on the poor. Early examples of such programs in Thailand were a public works program--the Rural Job Creation Program (RJCP)--that was administered by the Office of the Prime Minister (OPM) from 1980 to 1992, and the development program for the Northeast -- the Green Esarn Program (GEP) -- which was in place during 1988-92. These programs have now been replaced with another program of infrastructure development -- the Tambon Development Program (TDP) administered by the Office of the Prime Minister (OPM), which is now the government's main rural development program.³ It includes a public works component aimed at providing rural infrastructure and employment generation. Another development program intended also to benefit the poor is the land reform program under which public lands have been redistributed and the security of tenure improved. Finally, an example of a non-targeted program of cash transfers is the assistance provided to women and children, also by DPW.

³ For detailed descriptions of these programs and qualitative evaluations of the GEP and land reform programs, see the background paper by Krongkaew *et. al.*. The GEP is not included here because although it covered the poorest region--the Northeast, its poverty orientation was more diffuse than the RJCP.

3.10 The expenditures on each of these major programs in fiscal years 1990 and 1995 and their budgeted 1996 levels are summarized in Table 3.1, and also separated according to whether these relate to programs aimed solely at the poor or at broader developmental goals. The main conclusion that emerges from this Table is the modest level of public spending on these programs, even if these are defined broadly enough to include public works programs that aim broadly at rural development beyond helping only the poor. Their share in government expenditures has fallen during 1990-95, and accounts for only about 1.6% of the total (although budgeted to rise to 2% in 1996).

**Table 3.1: Public Spending on Major Targeted Poverty Programs
(million baht; current prices; fiscal years)**

Program	1990	1995	1996 (budget)
Cash Transfers			
Assistance to needy families	41.2	81.3	90.9
Subsistence to the elderly	71.0	441.0	534.5
In-kind Transfers			
Health subsidies for the underprivileged	1509.0	3191.0	4187.0 ^{2/}
School lunch programs	..	1835.2	2130.0
Housing programs	460.7	2411.9	3002.1
Income-generation programs			
Targeted			
Poverty Alleviation Program	..	926.6	1345.1
Non-targeted ^{1/}			
Rural Job Creation Program	3260.0
Tambon Development Program	..	1901.1	5000.0
Total Expenditure			
Targeted programs			
As a share of government expenditure (%)	0.8	1.3	1.4
Targeted and non-targeted (income generation) programs			
As a share of government expenditure (%)	2.0	1.6	2.0

^{1/} These programs are broad-based rural development programs which are expected to benefit the poor (and the non-poor) in the long run.

^{2/} For Low-income card only.

Sources: DPW (MoLW) Annual Reports (1994, 1995 draft); Progress report on Tambon Development Program, MoI; MoPH; BoB

And of these, if attention is restricted only to targeted programs, their share of government expenditures doubled, but only to 1.4%. These low shares of public spending are similar to those in other middle-income East Asian countries, and reflect their traditional reliance on the community and the extended family as the main sources of assistance. However, these low levels of spending make it even more critical that the limited money allocated to helping the poor be spent well. It is to an evaluation of whether this is so that the remainder of this Chapter is devoted.

C. TARGETING EFFICIENCY AND EFFECTIVENESS OF PUBLIC ASSISTANCE PROGRAMS

3.11 The key criteria by which targeted poverty programs are to be evaluated are their *targeting efficiency* and their *effectiveness*. Targeting efficiency refers to the extent to which a particular program reaches the poor groups whose welfare it is intended to enhance, i.e., the target group. Other things equal, a program would be more efficient in its targeting if it benefited (included) a larger proportion of its target poor population and did not benefit (excluded) the non-poor population for whom it is not intended.⁴ The effectiveness of an anti-poverty program measures the extent to which the program raises the welfare (or as a proxy, the income or expenditure) of the poor households it is intended for. While both criteria are simple conceptually, their precise measurement is fraught with difficulty since they require disaggregated and detailed data on beneficiaries and their characteristics as well as of the impacts of the programs on household welfare. In the section that follows, an evaluation of the major anti-poverty programs is provided along these lines based on the limited primary and secondary data that are available concerning these programs and their beneficiaries.

Cash transfers

3.12 Only the three cash transfer programs directed at the poor, and implemented by DPW are considered here.⁵ Transfers under each of these programs are means tested, i.e., the target poor are identified, by village welfare committees, 45,000 of which have been set up all over the country by the DPW. While no studies (or the necessary data concerning program beneficiaries) are available to judge how well the means testing works in practice, discussions as well as limited field visits indicate that, in general, the *transfers to the elderly poor and the needy families* are generally being made to the target group *within villages*.⁶ Across regions and provinces, however, the targeting seems less efficient in including the poor. An indication of this is provided by comparing the relative share of regions in terms of their shares of the total transfer with their shares of the poor (Annex Table 3.2). In 1995, the Northeast accounted for 42% of the total transfer, compared with its share of almost 60% of the poor (from 1992 estimates). Conversely, the Central region, which had less than 10% of the poor (in 1992) received almost a quarter of the total transfer. These figures indicate that the cash transfer programs are *not* well-targeted geographically.

⁴ For a more detailed discussion of these and other criteria and their applicability for various kinds of targeted anti-poverty programs, see World Bank, 1996, *op. cit.*. It is difficult to simultaneously both raise inclusion and reduce exclusion without increasing administrative costs. If greater priority is accorded to raising the welfare of the poor, therefore, it is more important to reduce errors due to exclusion.

⁵ The reason that the other two cash transfer programs -- to women, and children -- operated by DPW are not evaluated here is that they are not even intended primarily as anti-poverty programs. To evaluate them by these criteria, therefore, would be inappropriate.

⁶ A similar approach of community identification of the poor, which has been successful, has been used in the Antyodaya Program in India.

3.13 Despite the lack of targeting of cash transfers at a regional and provincial level, they could be efficient at the village level in terms of excluding the non-poor. However, the problem arises from the limited volume of assistance provided to individual villages. For instance, consider the subsistence allowance to the elderly poor in the North East. Only 6.8% of those above 60 years (who would be eligible for the allowance if they were poor) actually received it, compared to a poverty rate of about 22% for the Northeast. Hence, it is very unlikely that *most* of the needy elderly are being covered. At the provincial level, welfare officials are instructed to identify no more than 3 to 5 elderly persons per village for assistance. Many of the poorest may not be reached, suggesting the possibility of large exclusion errors due to the need for stringent rationing of the scarce resources, particularly in poorer provinces and districts with larger numbers of elderly poor. A similar issue arises for the cash assistance to needy families, through which Baht 14.5 million was provided to about 21,000 families in 1994. According to the directives of the DPW, poor families may be given Baht 2,000 but no more than thrice a year. However, given the total amount available, the volume of assistance likely only flows to a few families even if there is no leakage to the non-poor, and as with the elderly, rationing and exclusion are likely to result.

3.14 Finally, the small amount of the resources transferred also limits the effectiveness of both schemes in reducing poverty. The allowance for the elderly, for instance, amounted to about 43% of the (adjusted) rural poverty-line income in 1995. And, the assistance actually received by poor families averaged less than Baht 700 (or a little over a quarter of the rural household poverty line in 1995). Hence, for these two programs, at least, the small amount of assistance being provided makes little difference to the severity of poverty in the country, while involving high administrative costs (per unit of resources transferred).⁷

3.15 The efficiency and effectiveness of the third transfer program -- the *revolving village fund* -- are less clear. In part, this reflects the limited experience with the program since it only began in 1995. The program is designed so as to give considerable discretion to the village welfare committees not only as to who receives the transfers but also as to what the transfers are to be used for, and the extent of reimbursement by beneficiaries. The intention of the fund is that it would be used to help poor households in the village in cases of emergencies such as due to crop failure or death of the household head. However, there is evidence that in relatively-prosperous villages, the fund's resources are being augmented with private charities and transfers, and that the fund's resources are used for not merely as emergency cash relief, but more generally as seed-money for income-generating programs. By contrast, in the poorer villages, it would be more difficult to augment the resources of the fund, the demands on the fund are larger, and reimbursements lower. The fund is, thus, most likely to be ineffective in reducing poverty in the relatively-poorer villages where the need is greatest. Moreover,

⁷ An important issue in evaluating cash transfer programs usually concerns the disincentives they might result in, for instance, to work. However, the cash transfers here are so small that any such incentive costs due to adverse effects on labor supply, for instance, are unlikely.

its use in this manner converts a program that was intended to be a transfer scheme for emergencies into an income-generation program. While this is not a problem *per se*, the lack of clarity concerning the objectives of this program makes it more difficult to evaluate its cost effectiveness in reducing poverty.

In-kind transfers

3.16 The main programs are those that provide free/subsidized health care to the poor and the provision of school lunches to children from poor families. A policy for subsidizing the health care of low income families has taken various forms since 1975.⁸ There are currently several programs (funded from general tax revenues) under which MoPH provides free or subsidized health care to the following: holders of the Low Income Card (who are intended to be the poor and get free care); those who do not have such a card but claim inability to pay (where their eligibility and extent of the subsidy are determined by social workers); military veterans, monks, and village leaders as well as children and the elderly; and, as a fringe employment benefit for civil servants.

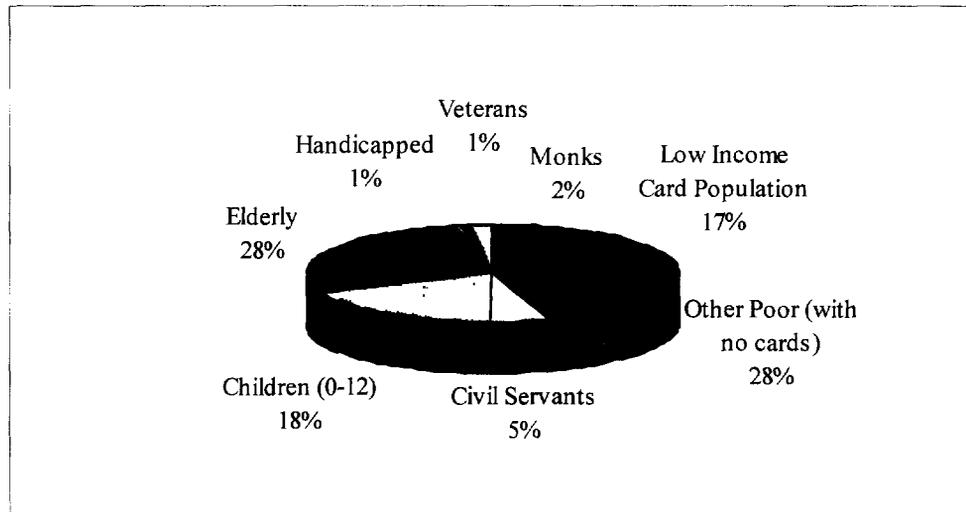
3.17 Issuance of *low income cards (LIC)* for medical care, which began in 1981, is based on village headmen checking eligibility according to incomes.⁹ Currently, to be eligible for the card, individuals must have monthly incomes less than Baht 2000 and households an income less than Baht 2800. While it is difficult to identify accurately the amounts spent exclusively (or even targeted at) the poor, an estimate of the spending on various groups (for 1995) is shown in Figure 3.1.

3.18 Two points about these estimates raise questions as to the efficiency with which the poor are targeted by the programs of free health care. *First*, the amount spent in 1995 on the elderly and children (below the age of 12) is far greater than that on the LIC program. While providing free/subsidized medical care to the old and the very young may be justified on other grounds, there is no attempt to ensure that these subsidies flow to the poor. The *second* notable aspect is that the spending on those not covered under any program (and who declare an inability to pay) was almost twice as large as that spent on the LIC program. Given the incentives that arise under such a system where individuals cannot be denied health care at a public facilities and then claim inability to pay, it is reasonable to believe that a significant proportion of those receiving such care are the non-poor pleading inability to pay. On both counts, these findings mean that a substantial share of public expenditures on health care aimed at benefiting needy groups in the population actually flows to the non-poor.

⁸ For a brief history of these schemes and their evolution since 1975, see the background paper by Manopimoke.

⁹ This program was renamed the Social Medical Welfare Card in 1994. For details of this program and its coverage since 1981, see the background paper by Manopimoke.

Figure 3.1: Publicly-Funded Health-Care Programs, 1995¹



^{1/} Total expenditure on these health care programs was Baht 7.1 billion in 1995.

Source: Health Insurance Division, Ministry of Public Health; Manopimoke, background paper

3.19 These concerns about the targeting efficiency of the LIC program are magnified by questions about the efficacy of the income tests used in determining eligibility. The income thresholds themselves are overly generous relative to the official poverty line, being about 4.5 times higher for individuals and about 1.3 times higher for households. So, even if the income test is applied accurately, a considerable number of non-poor would be eligible. This conclusion is supported by evaluations of the programs (conducted with the cooperation of the Rural Health Division of MoPH) confirm that a significant proportion of those who received cards are not eligible even by the generous income tests.¹⁰ For instance, in a survey of over 14,000 household in 36 provinces conducted in 1988, about 21% of those who received the cards had incomes above the threshold levels for eligibility. Besides including non-eligibles, these evaluations also point to significant proportions of eligible households being left out. The 1988 evaluation also found that only 28% of those households that met the income test actually received the card.

3.20 Several questions also arise as to the effectiveness of these programs in assisting the poor (Table 3.2). *First*, the monetary value of the medical care transferred to recipients through the LIC program (measured by per capita expenditures and subsidies) is very low in absolute terms (respectively Baht 317 and Baht 164 per recipient in 1995). It is also lower than the corresponding amounts for civil servants (Baht 1500 and Baht 916 per recipient). The difference in the per capita subsidy figure is especially striking. In part, the low subsidy provided under the LIC program reflects a *second* factor--the high administrative costs for the LIC program. In 1995, these were estimated to be over

¹⁰ For summaries of these evaluations, see the background paper by Manopimoke.

48% of the total expenditures on the program, compared to about 40% for the civil servants' scheme. *Finally*, a recent study of the LIC program suggest that over 10% of low-income card holders actually used the cards, and the average number of visits (per holder of the card) was less than 3 per year. In Khon Kaen province in the North East, for instance, which is relatively poor, only about 23% of low-income card holders actually utilized the card.¹¹ The precise reasons for low usage of the card are not clear. The possible reasons (which deserve to be investigated further) are the low value of the transfer itself, the high costs to the poor of obtaining the card, the possibility that the benefit would be available even without the card, and the perception of low-quality care at public hospitals.

Table 3.2: Expenditure and Subsidies--Selected Healthcare Programs, 1994

Category	Free medical care for the poor, elderly, children aged 0-12, and handicapped	Civil servants medical benefit scheme
Per capita expenditure (baht)	317	1500
Per capita subsidy (baht)	164	916
Per capita administrative cost (baht)	153	584
Administrative cost as percent of total expenditure (%)	48.3	40.0

Source: Computed from Nitayarumphong (1995).

3.21 The *school lunch program (SLP)* was enacted in 1992 to provide free school lunches to needy students in all primary schools that provide compulsory education. The funding for the program has risen almost ten-fold during fiscal years 1993-96 to about Baht 2.1 billion in fiscal 1996. Since the budgetary resources available to the SLP are limited, the scheme has tried to cover as many students as possible by keeping the cost of meals low. When the program was set up in 1992, it was determined that for each school day during the academic year, eligible students would be provided a lunch that cost Baht 5.¹² The screening of eligible children for the SLP begins with each primary school identifying those who need the free meal, for which lists are then submitted to the MOE District Office. However, since budgetary constraints meant that the free lunch cannot be granted to all eligible children, a combination of criteria (involving family income and

¹¹ See Anuwat Supachutikul, 1995, for the data on the Kingdom. The information on utilization in Khon Kaen was provided by Provincial Health Department officials.

¹² This amount was determined in 1992 based on the price of an egg, a plate of rice and vegetables, which were viewed as the cheapest way of providing sufficient nutrition for primary-age school children. Even before the SLP, the MOE had attempted to implement such a scheme in 1988, but it was not allocated in separate budget nor implemented nationwide. In 1993, the SLP was extended to cover pre-primary school age children as well.

location, and whether the child is underweight) is ultimately used by the MOE in selecting recipients based on the requests received from the provinces.

3.22 However, the goals of the SLP have changed over the course of the program and are still not completely clear. When initially implemented, its goal was to ameliorate the conditions of underweight school-age children. However, since the number of poor students (by most estimates) is far higher than the number of primary-age underweight children, the aim of the program shifted towards providing free lunch to poor students irrespective of whether they were underweight. This confusion of objectives is relevant to evaluating the program because it means that it is unclear as to which target group should be considered. In part, this helps explain the huge unmet demand that exists for the program. In fiscal 1995, the SLP provided free lunches to a little over 2.1 million children at the primary and pre-primary levels. However, this number was less than half the number of students (over 4.5 million) for whom requests were received from local administrative levels.

3.23 Despite the multiple objectives of the program, the approach taken here is to consider the program, as it was conceived, as being targeted towards assisting children from poor households. The question could then be posed as to whether children from the poorest households actually receive the free lunches that are provided. It is difficult to answer this precisely given the lack of the absence of detailed provincial data concerning the beneficiaries of the SLP. However, the multiplicity of objectives already noted does *not* lead to confidence that the poor are being accurately targeted. Further, the process by which local administrators and school officials assemble their requests for assistance is highly discretionary. Students' eligibility for the SLP is determined entirely on their teachers' opinion as to whether their families are considered to be "impoverished", without any attempt to define this more precisely in terms of incomes, assets or expenditures. Finally, it is doubtful that the poor are being accurately targeted because no attempt is made at the central MOE level to attune program funding levels to the large differences in poverty rates across provinces and regions.¹³ In fact, if MOE has the goal (reasonable from a political perspective) of being impartial and seeks to make equitable budget allocations across provinces, this imperative may actually push in the opposite direction. Relatively better-off provinces with low poverty rates (such as those around Bangkok and in the Central region) would receive allocations for the SLP that are far greater than those dictated purely from their needs in terms of poverty incidence at the expense of the allocations of needier provinces in other regions.

3.24 In judging the effectiveness of the SLP in reducing poverty, a key question is the value of the transfer that is made through the free lunch, and its adequacy in nutritional terms. Although the price of each meal is estimated at about Baht 5, this would overestimate the value of the ingredients since it includes the cost of administering the

¹³ An effort is made by MOE to accommodate all requests received from "hardship areas" that are periodically designated by the Ministry of Finance in consultation with other Ministries. However, since this designation is used primarily to adjust civil servants' salaries, it takes account of a variety of economic, social and political conditions that are not necessarily correlated to the level and severity of poverty.

program (including preparing and serving the meal). The question then is whether such a meal, whose ingredients cost less than Baht 5, could provide significant nutrition and therefore provide value to poor students. In addressing this, a menu of food consumption has been developed using the Recommended Daily Allowance (RDA) for school-age children, and costed using regional consumer prices for 1995.¹⁴ On this basis, it is estimated that, on average, the ingredients of a meal that meet the RDA nutritional guidelines would cost (in 1995 prices) about Baht 7.5. Therefore, it is doubtful as to whether the current program (especially once the administrative cost component is factored into the total cost of providing the meal) is able to assure adequate nutritional standards even for the poor students it does reach.

Income-generation programs

3.25 The two main interventions currently in place that are targeted directly or indirectly at improving the welfare of the poor through the generation of employment are the Poverty Alleviation Program (PAP) and the Tambon Development Program (TDP).

3.26 The *Poverty Alleviation Program* provides interest-free loans to assist the poor in investing in income-generating activities. All households with annual incomes less than Baht 5000 are eligible for these loans within the almost 700 villages in which the program, which began in 1993, now operates. The minimum loan amount is Baht 5000 per household. To apply for assistance, eligible households in program villages must submit project proposals that are reviewed by the village welfare committee to confirm project viability, and these are then funded. In 1995, nearly 1 billion Baht was outstanding under this scheme.

3.27 Since comprehensive data on the scheme are not available (although an evaluation is planned for 1996), the assessment here is based on information collected by the CDD. These data cover the gross incomes (over time) of assisted households assisted by the scheme in program villages, and of non-participating households in the non-program villages. A serious omission (from an evaluation standpoint) in these data (and all other available information about this program) concern the characteristics of beneficiaries from the scheme. Hence, it is not possible to draw any inferences about the targeting efficiency of the program in terms of whether it is reaching the poor within the villages in which it is in place and what proportion of these loans are being received by the non-poor. While the current threshold household income (Baht 5000) is low enough that it would capture only the hard-core poor (being about a sixth of the rural household poverty line in 1995), no information is available, for instance, about the proportion of the poor

¹⁴ See the background paper by Poshyananda for details. The RDA information is from the Nutrition Department, Ministry of Public Health, and the consumer price data are from the Department of Statistics, Ministry of Commerce. Since current administrative costs are not available separately, a conservative estimate of 20% of total costs is assumed.

households in the program villages that is being covered.¹⁵ Collecting such information should be a priority in order to be able to evaluate the program more fully.

3.28 Despite its limited coverage, these data are helpful in that they track each household's income before the program and for two successive years after its inception in program villages. Hence, income changes among households who received PAP loans can be compared to those who did not receive such assistance. Since both program and non-program villages are located in the *same* province, both sets of villages could be assumed to be roughly similar in terms of agroclimatic factors and average incomes (in the absence of any intervention). The observed differences between the two sets of households following the program would, therefore, largely be attributable to program participation. Changes in *net* household incomes (after taking account of estimated loan repayment) for participants are compared to the corresponding income changes for non-participants, and the results of this comparison are shown (for the entire three-year period, two years of which are after receipt of the loan by assisted households) in Table 3.3.¹⁶

Table 3.3: Poverty Alleviation Program: Comparison of Program Participants and Non-Participants, 1993-95

Real Growth Rate		Negative	0%-10%	11%-30%	31%-100%	Greater than 100%	Total
Total	Program	34.6	3.4	4.9	10.5	46.6	100.0
	Non-Program	44.6	3.5	3.5	5.2	43.2	100.0
of which:							
Center	Program	11.4	4.0	5.3	9.1	70.2	100.0
	Non-Program	37.3	4.3	3.3	8.7	46.4	100.0
Northeast	Program	24.8	4.2	4.4	16.1	50.4	100.0
	Non-Program	42.8	2.4	2.2	3.2	49.4	100.0
North	Program	53.5	4.4	7.4	9.8	24.9	100.0
	Non-Program	64.0	6.0	5.4	6.0	18.6	100.0
South	Program	38.9	0.6	1.7	6.4	52.4	100.0
	Non-Program	26.8	1.4	3.1	4.9	63.8	100.0

Source: Community Development Department, Ministry of Interior.

3.29 There are three key findings. *First*, on average, the program had a positive impact in that the proportion of households that suffered income losses was substantially lower among participants than among households not assisted by the scheme. As Annex Tables 3.3 and 3.4 indicate, this result held for year to year (i.e., 1993-94 and 1994-95)

¹⁵ Information was also not collected about loan repayments, and should be included in future to be able to judge the scheme's sustainability. This omission is not too serious for the purposes of this evaluation since it appears, from an interim performance report published by the MOI, that the repayment record in 1994 and 1995 (for loans advanced in 1993) was very low (varying between 0.02% to 3.1% of loans in different villages). In the evaluation that follows, the need for principal repayment is taken into account by assuming that the initial loan amount is repaid in equal installments over five years. Therefore, the gross income of an assisted households is reduced by 20% to provide for this loan repayment in each of the two years following program participation.

¹⁶ The two years for which the program has operated is part of a five-year cycle, over which it is intended to be evaluated.

comparisons as well. Despite this good news, however, the *second* conclusion is that a large proportion (almost a third) of participant households also suffered declines in income over the entire period (and higher proportions in each two-year period) despite receiving the loan. In this sense, the program had limited success in reducing poverty among assisted households.

3.30 *Finally*, these data show that doubts remain as to the sustainability of income growth among households assisted by the program. While the program has not been in place for very long, a test of whether it leads to sustainable income generation opportunities is to examine whether most assisted households enjoyed income growth in *both* years following program participation. As with income growth over the period, assisted households did better on this criterion than non-participants in that more of them enjoyed income growth during both years after receiving loans. However, while 40% of those assisted enjoyed positive net income growth in *both* years, only a slightly lower proportion (31%) suffered income losses growth in *both* years, while the rest saw income growth in only one of the two years (Annex Table 3.5). In general, the failure rate was lower and the success rate higher for participants in the Northeast than in other regions for both the years following the program. Also, the proportion of assisted households that saw sustained income gains was somewhat higher, and the proportion that suffered sustained losses was lower, in the Northeast than in other regions. While this superior performance of participants in the Northeast is, in part, because their initial incomes are lower, it suggests that there may be more potential for income generation activities for the poor in the Northeast than elsewhere.

3.31 The main public works program at present is the *Tambon Development Program (TDP)*. It was preceded during 1980-92 by the *Rural Job Creation Program (RJCP)*. The main goal of that program was rural employment generation during the slack agricultural season through the construction of infrastructural assets such as water supply and irrigation facilities and roads. In its first decade, the RJCP emphasized labor-intensive infrastructure projects. From 1990, however, there was a shift towards more capital-intensive projects and techniques so that fewer jobs were created (although the employment was longer lasting). Enhancing the durability and quality of the infrastructure assets created and the progressive scarcity of viable labor-intensive projects seem to have been the main reasons for this shift.¹⁷

3.32 In 1992, the RJCP was replaced by the TDP, which aimed to give each Tambon (the administrative unit at the sub-district level) a sum up to Baht 5 million to be used for

¹⁷ Such an increase in capital intensity of projects is typical of public works programs in developing countries. For example, the Maharashtra Employment Guarantee Scheme in India began as a labor-intensive public works program, but over time it became more difficult to identify labor-intensive projects. For cross-country experience with public works programs, see World Bank, 1996. *op.cit.*. For a detailed qualitative review of the RJCP, see the background paper by Krongkaew *et.al.*

construction activities aimed at rural development.¹⁸ The number of projects and the expenditures under TDP as well as their breakdown by region and project types is shown in Annex Table 3.6. Although each activity funded by the TDP employed unskilled labor to some degree, the one that most closely resembled that funded under the RJCP--construction of public utilities--has declined during 1992-95 in terms of its share of total program spending, from 74% of the total to about 22%.

3.33 In evaluating the targeting efficiency and cost-effectiveness of a public works programs such as the TDP in reducing poverty, the key variables to be examined are: the extent to which the program creates unskilled employment (since this is most likely to benefit poor households disproportionately); the level of the wage paid by the program in relation to the average unskilled wage; and, the average cost per job that is created through the program. Ideally, such an analysis of the impact of the TDP on the poor would proceed by analyzing these variables for all of the over 8000 projects implemented. However, since such comprehensive data are not available, disaggregated data on these variables were collected for this study from 257 projects across the Kingdom.¹⁹ The main characteristics of these projects are summarized in Annex Table 3.7. Of these projects, 104 (or about 40%) used unskilled labor in construction, and given the focus of this evaluation on the poverty impact of these projects, the analysis that follows is restricted to these projects.

3.34 Details of these 104 TDP projects that employed unskilled labor are shown in Table 3.4 and Annex Table 3.8. *First*, these projects created just over 30,000 person days of unskilled employment (or about 300 days per project). The largest amount of unskilled job creation in this sample was in the North, which also had the most sample projects although the Central Region, with the same number of projects generated far fewer unskilled jobs.

3.35 *Second*, the wage paid to unskilled workers under TDP (the program wage) was equivalent or higher than the (regionally-differentiated) minimum wage in all regions. While there might be an equity argument for setting the program wage at this level, the extent to which the employment created under the program is cost effective depends on the relation between the program wage and the prevailing unskilled wage in particular areas. This comparison is also shown in Table 3.4. Since the average unskilled wage rate is much lower than the minimum wage in the North, Northeast and the BMR (which also has a higher minimum wage), the program wage in these regions is significantly higher than the minimum wage. To this extent, the self-targeting of the program was reduced

¹⁸ Despite its broader aims, the TDP is evaluated here in terms of its poverty impact because it resembles public works programs in other countries in its hybrid nature, combining transfers and work requirements with the creation of rural infrastructure. See, World Bank 1996, *op.cit.*

¹⁹ We are grateful to Khun Nitayaporn of MOI for her assistance in collecting and providing these data, and to Professor Medhi for his help in assembling it. These projects do not represent a random sample having been selected to cover all regions and project types. See background paper by Subbarao and Rudra for details.

and the attraction of program jobs to the non-poor was greater than if the program wage had been lower than the average unskilled wage.²⁰

Table 3.4: Tambon Development Program: Cost, Wage Levels, and Labor Intensity^{1/}

	No. of projects	Person days of unskilled employment created (persons)	Unskilled wage bill as ratio of total cost (percent)	Cost per person day of employment created (unskilled) (baht)	Comparison of unskilled wage with minimum wage (percent)	Comparison of unskilled wage with average wage (percent)
North	28	10,420	16.4%	676	0.0%	46.1%
Northeast	18	5,698	12.3%	893	-0.1%	31.6%
Central	28	7,967	11.9%	799	-0.3%	-6.9%
Bangkok Metropolitan Region	5	879	9.8%	1,425	8.4%	17.2%
South	25	6,158	11.5%	991	2.8%	-3.2%
Total (Whole Kingdom)^{2/}	104	31,122	13.0%	831	-	-

1/ Of the total sample of 257 projects, only the projects (104; 40%) with an unskilled labor component have been chosen for this analysis.

2/ Comparisons not computed due to lack of wage data.

Source: Technical Services and Planning Division, Ministry of Interior.

3.36 *Finally*, while the data show considerable variation in the cost per day of employment created across regions, with lower costs (as would be expected) in the North and Northeast than in the BMR, and across project types, where the construction of public facilities and irrigation infrastructure generally show lower costs. What is striking, however, is not these variations but the high costs per job created in *all* regions. Even in the North, where the average cost was lowest, it was over Baht 675 (or \$27) per job created. While this cost is obviously difficult to compare across countries that differ in per capita consumption levels and wage rates, a recent survey of public works programs found the typical range even in middle-income countries such as Botswana, Chile, and Costa Rica to be between \$1-\$4.²¹

D. CONCLUSIONS AND RECOMMENDATIONS FOR REORIENTATION OF INTERVENTIONS

3.37 The principal conclusion of this evaluation of targeted anti-poverty programs in Thailand is that, despite impressions to the contrary, the level of government spending on these programs is small, and what money is being spent appears to be having little impact on the lives of the poor. Therefore, the effectiveness of these programs in reducing the

²⁰ A program is self-targeting if it is available to all participants but is structured in such a way as to discourage the non-poor from taking part while appealing to the target poor. In this way, the administrative costs of targeting are reduced.

²¹ See World Bank, 1996, *op. cit.*

incidence and severity of poverty is limited. The widespread perception within Thailand that a lot of public spending is being devoted to poverty alleviation efforts is **not** borne out by the reality. Rather, this impression probably reflects the number and variety of publicly-funded programs that are aimed directly or, in most cases, tangentially at helping the poor. For instance, even the seven programs evaluated in this Chapter involve five different Ministries and agencies in their administration.

3.38 This proliferation of publicly-funded programs is symptomatic of several problems these face in reaching the poor. *First*, with so many government agencies involved in administering these programs, coordination between them is essential but difficult to achieve if the programs are to reach the poor. As the review here indicates, each agency tends to make its own decisions concerning who the target poor are and what delivery mechanism should be used. *Second*, many of the programs have multiple goals, in addition to that of poverty reduction. Most commonly, this is the overarching goal of rural development driven mostly by a desire to stem rural-urban migration so as to reduce the pressure on Bangkok and the secondary cities. These multiple objectives mean that the impact on poverty reduction often receives less attention. It also becomes difficult to evaluate programs *ex post*. Therefore, programs typically are not discontinued, while new ones are added--hence, the proliferation of programs. *Finally*, and related to the previous point, there have been few systematic attempts by the Government to evaluate the success of various schemes in reducing poverty, and to use these evaluations in drawing lessons to guide the design of future interventions.

3.39 The findings of this Chapter argue that the reorientation of targeted poverty programs must begin by sharpening their focus on poverty reduction. Therefore, it is necessary to identify the main interventions by which the government aims to reach the poor and to define clear poverty-oriented goals for these. The most important implication of this recommendation concerns the manner in which resources are allocated for programs between provinces and districts. This allocation should be driven most prominently by the level and severity of poverty in various locations. The discussion in Chapter 1, based on the 1992 SES data, indicates that sufficient information already exists for such allocations. This information could be refined by consulting more with NGOs that have been in rural development and poverty alleviation activities (such as the Population and Community Development Association) and have accumulated valuable grass-roots experience.

3.40 Targeting of resources according to poverty incidence would imply a significant shift from current practice for several programs. At present, budgets are allocated across provinces, for such programs as those that provide **cash transfers and the in-kind transfer through the SLP**, roughly in proportion to their population. But provinces, even within the Northeast and North, vary greatly in terms of poverty incidence, as proxied for instance by the variations in their per capita incomes. The richest province in the Northeast (Khon Kaen) had a per capita income in 1994 that was more than twice as

large as the poorest province (Si Sa Ket). Improved targeting of the poor would be achieved by taking account of these inter-provincial differences.²²

3.41 To enable better targeting to the poor, other programs would also require changes in their design. An example is the **revolving village fund** program. Apart from clarifying whether the purpose of the transfers through this scheme is emergency relief for the poor or to provide seed money for income-generating projects, the allocation of funds across villages should take account of differences in poverty (and its intensity). Such a change would recognize that poorer villages have few private resources with which to augment public funding. In this sense, the current allocation rule (of a fixed amount to each program village regardless of poverty incidence) works against program effectiveness in the poorest villages where the needs are greatest .

3.42 To improve the effectiveness of the **low-income card for medical services**, the priorities are to find ways of denying the benefits that the card as well as other programs of subsidized medical care confer to the non-poor, and to enhance the value to the poor of the benefits from the card. This would argue, first, for improved means testing (based on ability to pay) to determine who is eligible for free or subsidized medical care. Free medical care should not be viewed as an entitlement available to all who claim inability to pay. The costs associated with acquiring and using a low-income card, which appear large enough now to keep the usage of the card quite low among the poor, also need to be reduced. In part, this would argue that card-holders (as much as others who pay for health care) should be allowed to choose from whom they receive their care rather than being forced to go through the existing referral system.

3.43 The design of the **school lunch program (SLP)** also needs to be changed. Most importantly, it needs to be targeted only to poor children. Modifying the budget allocation rule, as suggested above, would ensure that the resources available to various provinces and districts are commensurate with the needs but will not be sufficient to benefit poor children. For this goal, the program design should be altered so that while non-poor children are also served a meal at school, their parents share the cost of the meal. Similar programs in the US, for instance, have adopted such schemes. Moreover, the analysis here indicates that the current cost of a meal -- Baht 5 -- is insufficient to provide a nutritious meal. Therefore, this amount needs to be raised, which should be feasible without increasing the budgetary impact of the scheme provided cost recovery can be increased by charging for meals of non-poor children.

3.44 Program design changes in the **two main income-generating programs** would also improve the efficiency with which they target the poor. Whether the design of the **TDP** can be changed to improve the prospects that the poor self-target themselves into program participation depends critically on whether the program wage rate can be kept below the average unskilled wage in various regions (which are themselves, in most

²² However, finer targeting would increase administrative costs. The value of the income transfer to the poor will determine the level of administrative cost worth incurring, apart from how well the targeting mechanism screens the poor. See, World Bank, 1996.

cases, below the minimum wage). While this may be politically sensitive, it should be recognized that this only recognizes what is already implicit in the average wage that private employers pay (which is less than the minimum wage). One solution may be to contract out the jobs to the private sector (contractors) who then could pay the market wage. The analysis here also suggests strongly that the TDP is not cost effective in that the jobs it creates are far more costly than in the rest of the economy. This may be a reflection of the capital-intensity of the jobs created as well as the inefficiency of the program. Using private contractors more may be a way of reducing inefficiency although it would require closer monitoring of project selection to ensure continued labor absorption.

3.45 Program changes are also needed for the **PAP**. While the analysis here suggests that such credit-based livelihood program may have some potential, especially in the Northeast, experience with such programs in other countries indicates that they are not applicable to every poor household. Lack of access to production credit is not a binding constraint on raising incomes in every household since some lack entrepreneurial abilities or other complementary inputs necessary for success in production activities. At present, the aim seems to be to simply distribute interest-free loans in the hope that it would solve the problems of the poor. Cross-country experience suggests that more is required -- pre-testing the market, offering program-specific training, and providing marketing outlets for the produced output. None of these activities is currently part of the program. Not surprisingly, some beneficiaries who have managed to provide the above inputs themselves succeeded, while others made losses. These are also promising areas for collaboration with NGOs, many of which already operate successful income-generation programs on a smaller scale.

3.46 Finally, a general set of recommendations concerns the need to establish a framework for systematic and periodic evaluations of these programs. In this way, ineffective and inefficient programs can be discontinued while more promising initiatives could be expanded and funded more generously. Over time, decisions based on these evaluations would allow for a reduction in the proliferation of anti-poverty programs, thereby ensuring that scarce public resources are used more cost effectively. Specifically, this framework should *first*, and at a minimum, require all agencies that administer poverty-targeted programs to ensure that information concerning beneficiary characteristics is collected systematically over time. This would allow periodic evaluations of whether the poor are being reached by various schemes, and the extent to which program benefits are leaking to the non-poor. *Second*, income-generation programs such as the PAP that are based on the provision of credit should be required to collect data (which they do not at present) concerning loan repayments. This would allow an assessment of changes in net household incomes. *Third*, comprehensive data should be collected and maintained on rural-works type programs such as the TDP. Such a data base would provide a much clearer picture of the impact of such programs on the rural poor. *Finally*, relatively minor changes in the questionnaires and data collection for the biennial SES would provide valuable information on the role of public transfers in reducing poverty and their distributional impacts as well as allowing a comparison of

their significance with private transfers for various income classes. At present, the questions posed in the SES combine private and public transfers in a way that they cannot be separated. Changing the way in which these are posed would be straightforward, while yielding substantial gains from an analytical and policy standpoint.

BIBLIOGRAPHY

Banpasirichot, C., "The Situation of Child Labour in Thailand: An Overview", A Report to the ILO/IPEC Study, A Comprehensive Report on the Situation of Child Labour in Thailand, 1995

Bequele, A., "Child Labour and Minimum Social Standards: The Challenge for Asia", Asia Papers No. 1, IPEC, 1995

Bruno, M., M. Ravallion, and, L. Squire, "Equity and Growth in Developing Countries: Old and New Perspectives on the Policy Issues," paper prepared for the IMF Conference on Income Distribution and Sustainable Growth, 1995

Deininger, K., and L. Squire, "Measuring Income Inequality: A New Data-Base," Policy Research Department, World Bank, draft, 1995

Horton, S., R. Kanbur, and D. Mazumdar, "Openness and Inequality," paper presented at the International Economic Association World Congress, 1995

International Labour Organisation (ILO), International Programme on the Elimination of Child Labour (IPEC): Implementation Report on IPEC Experience, 1992-95, 1995

Krongkaew, M., "Thailand: Poverty Assessment Update," unpublished, 1995

Kuznets, S., "Economic Growth and Inequality", American Economic Review, Vol. 45, pp.1-28, 1955

Meesook, O., Income, Consumption and Poverty in Thailand, 1962/63 to 1975/76, Staff Working Paper No. 364, World Bank, 1979

Nitayarumphong, S., "Thailand at the Cross-roads: Challenges for Health Care Reform", paper presented at the International Workshop on Health Care Reform: At the Frontier of Research and Policy Decisions, 1995

Rodgers, J., and G. Standing, Child Work, Poverty and Underdevelopment, International Labour Organisation, 1981

Ravallion, M., Poverty Comparisons, World Bank, 1993

Siamwalla, A., "Land-Abundant Agricultural Growth and Some of Its Consequences: The Case of Thailand", paper prepared for IFPRI Conference (Sept. 1990), Agriculture on the Road to Industrialization, 1991

Supochutikul, A., "Situation Analysis on Health Insurance and Future Development", Thailand Health Research Institute, mimeo., 1995

Sussangkarn, C., "Labour Markets", in P. Warr (ed.), The Thai Economy in Transition, 1994

_____, "Thailand", in S. Horton et. al. (ed.), Labor Markets in an Era of Adjustment, 1994

Tan, J-P., "Thailand's Education Sector at a Crossroads", in Decision and Change in Thailand -- Three Studies in Support of the Seventh Plan, World Bank, 1991

Tzannatos, Z., "Employment Segregation: Can We Measure It and What Does the Measure Mean?", *British Journal of Industrial Relations*. Vol. 28, pp. 105-111, 1990

_____, "Growth, Adjustment and the Labor Market: Effects on Women Workers," Poverty and Social Policy Department, World Bank, draft, 1995

UNICEF, Exploitation of Working Children and Street Children, Report to the UNICEF Executive Board Session E/ICEF/86/CRP.3, 1986

Vichai, T., "Secondary Education in Thailand," Education and Social Policy Department, World Bank, unpublished, 1994

World Bank, Growth and Employment in Rural Thailand, Report No. 3906-TH, 1983

_____, Thailand: Building on the Recent Success: Country Economic Memorandum, Report No. 7445-TH, 1989

_____, Thailand: Poverty Assessment, Report No. 11928-TH, 1993

_____, Best Practice Paper on Social Assistance and Poverty-Targeted Programs, Poverty and Social Policy Department, draft, 1996

_____, Social Indicators of Development, 1996

Background Papers Prepared for this Report

Kakwani, N., "Economic Growth and Income Inequality in Thailand: 1988-92"

Krongkaew, Medhi. et. al., "Selected Poverty Alleviation Programs in Thailand"

Manopimoke, Supachit., "The Free Medical Care Program for the Low Income in Thailand"

Poshyananda, Tanaporn., "The School Lunch Program"

Subbarao, K. and K. Rudra, "Protecting the Disadvantaged in a High-Growth Economy: Effectiveness of Poverty Targeted Programs in Thailand"

Tzannatos, Z., "Child Labor and School Enrollments in Thailand in the 1990s"

Tzannatos, Z., and A. Dar, "How Do Labor Incomes Change in a Fast-Growing Economy: Nine Answers for Thailand in the Last Decade"

Annex 2.1

Estimates of Private and Social Costs and Benefits of Completing Junior Secondary Education and the Fiscal Impact of a Subsidy for School Attendance

I. Benefit-Cost Analysis (for three-year junior secondary education; Baht per child)

A. Costs:

Opportunity cost (to family/society) of foregone production:
(for 11 months of work for 3 years)

assuming: child wage is	30% of agricultural wage:	19800
	40% of agricultural wage:	26400
	50% of agricultural wage:	33000

Direct public cost of education¹ 17183

Direct private costs @ Baht 1300 x 3 years) 3900

Total public and private costs (without school attendance subsidy):

assuming: child wage is	30% of agricultural wage:	40883
	40% of agricultural wage:	47483
	50% of agricultural wage:	54083

B. Benefits (of completion of three-year junior secondary education):

(a) Private benefits:

(assuming 6% wage increase per year of JS school relative to primary school education, and 11 months of work/year)²

Lifetime impact on earnings

assuming 10% discount rate:	32000
15% discount rate:	18700
20% discount rate:	12000

(b) Social benefits:

(for various rates of productivity increase per year of JS school relative to primary school education and 40 productive years, and 10% social discount rate)³

Lifetime impact on productivity

assuming 8% productivity increase:	44888
10% productivity increase:	57331
12% productivity increase:	70234

II. Fiscal Impact of School Attendance Subsidy:

Subsidy:	10% of child wage
Elasticity of secondary school enrollment to subsidy ⁴ :	10%
Enrollment in junior secondary schools in 1993:	2 million
Increase in enrollment due to 10% subsidy:	20000

Annual total fiscal cost of subsidy (Baht):
(for 9-month school year)

assuming child wage is	30% of agricultural wage:	108 million
	40% of agricultural wage:	144 million
	50% of agricultural wage:	180 million

Ratio of total cost of subsidy to 1994 budget on junior secondary education (%):

assuming child wage is	30% of agricultural wage:	0.9
	40% of agricultural wage:	1.3
	50% of agricultural wage:	1.6

¹ Based on relative enrollments in junior secondary (JS) and upper secondary school and total secondary education expenditures in 1993, and assuming unit (per student) cost of upper secondary education is twice that for junior secondary education.

² Wage impact of JS completion based on earnings functions estimated in background paper by Tzannatos and Dar.

³ This estimate assumes a 10% productivity increase for each additional year of schooling beyond primary school.

⁴ This estimate is based on the econometric analysis in the background paper by Tzannatos.

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ANNEX FIGURES

- 1.1 Thailand -- Poverty Incidence and Severity (at various poverty lines)

Annex Table 1.1: Economic Developments: 1981-1995

	1981-86	1987-90	1991-94	1994	1995
Real Growth					
GDP	5.5%	11.6%	8.3%	8.8%	8.7%
Agriculture	4.1%	3.2%	3.5%	4.2%	3.3%
Industry	5.1%	15.8%	9.1%	11.2%	11.3%
Services	6.3%	12.0%	9.0%	8.1%	7.8%
Economic Structure (% of GDP in current prices)					
Agriculture	18.7%	15.2%	11.4%	10.5%	10.9%
Industry	30.7%	34.5%	36.5%	37.0%	37.6%
Services	50.6%	50.3%	52.1%	52.5%	51.5%
Employment Structure (% of total employment) 2/					
Agriculture	69.4%	64.0%	59.3%	57.7%	..
Industry	10.0%	13.7%	16.4%	17.7%	..
Services	20.6%	22.4%	24.3%	24.6%	..
Manufactured exports (real growth) 1/	16.1%	30.2%	18.8%	18.8%	20.9%
Manufactured exports/ Merchandise exports	36.4%	54.4%	77.9%	80.9%	81.5%
Exports of goods and nonfactor services (as a % of GDP)	23.4%	33.7%	36.8%	38.4%	41.5%
Current account balance (as a % of GDP)	-4.4%	-3.9%	-6.1%	-5.7%	-8.1%
Inflation (average; in percent)	7.6%	4.4%	4.5%	5.0%	5.8%
Savings and Investment (at current prices)					
Gross national savings/GDP	20.2%	26.6%	34.0%	34.5%	34.4%
Gross domestic investment/GDP	24.3%	29.6%	41.1%	41.2%	43.1%
Public capital expenditures/GDP	8.4%	5.4%	7.9%	8.4%	8.6%
Private fixed investment (real growth)	4.6%	27.3%	7.9%	11.5%	12.8%

Source: Bank of Thailand; World Bank staff estimates.

Notes:

1/ Calculations based on MUV growth rate.

2/ 1990 data used for 1987-90; period averages used for other computations.

**Annex Table 1.2: Regional and Provincial GPP
(1994 levels and 1989-93 annualised growth rates)**

	GPP (1000 Baht) 1994	PER CAPITA (Baht) 1994	GPP (Growth Rate) 1989-93
WHOLE KINGDOM	3,600,906,499	61,335	9.2%
NORTHEAST	405,959,573	20,235	5.4%
SI SA KET	20,240,351	14,960	3.8%
YASOTHON	8,864,317	15,943	4.9%
BURI RAM	23,800,224	16,620	4.2%
SURIN	22,021,582	17,191	6.2%
NAKHON PHANOM	11,550,327	17,580	6.5%
KALASIN	16,003,744	18,002	4.8%
SAKON NAKHON	17,925,338	18,015	5.0%
MAHA SARAKHAM	16,696,343	18,050	5.2%
ROIET	21,465,914	18,115	5.5%
UBON RATCHATHANI	30,673,666	18,876	5.3%
NONGBUA LAMPHU 1/	8,883,216	19,186	..
NONG KHAI	16,348,317	19,370	3.9%
UDON THANI	27,476,637	19,584	3.8%
MUKDAHAN	5,585,083	20,018	5.6%
CHAIYAPHUM	21,189,392	20,142	2.2%
LOEI	13,116,203	23,256	1.5%
NAKHON RATCHASIMA	63,934,846	25,523	7.4%
AMNAT CHEORN 1/	8,902,369	25,879	..
KHON KAEN	51,281,704	29,989	9.2%
NORTH	343,477,716	31,064	6.1%
PHRAE	11,080,416	21,985	4.1%
NAN	9,578,238	22,019	3.8%
PHICHIT	13,015,351	22,675	3.1%
PHETCHABUN	20,783,241	22,839	2.0%
PHAYAO	11,754,183	23,698	8.2%
CHIANGRAI	27,700,979	25,206	6.6%
SUKHOTHAI	14,744,037	25,247	3.0%
MAE HONG SON	4,340,992	25,686	3.7%
UTTARADIT	13,229,012	28,948	1.5%
PHITSANULOK	23,004,656	29,046	4.6%
UTHAI THANI	9,189,527	30,031	4.0%
KAM PHAENG PHET	20,225,802	30,098	2.0%
NAKHON SAWAN	34,118,369	31,359	5.1%
TAK	11,675,685	33,359	4.4%
LAMPANG	27,849,403	36,500	7.1%
CHIANG MAI	65,084,842	45,514	8.4%
LAMPHUN	26,102,983	60,988	37.8%

**Annex Table 1.2: Regional and Provincial GPP
(1994 levels and 1989-93 annualised growth rates)**

	GPP (1000 Baht) 1994	PER CAPITA (Baht) 1994	GPP (Growth Rate) 1989-93
SOUTH	308,084,613	39,789	6.5%
PHATTHALUNG	11,481,478	23,528	3.5%
NAKHON SI THAMMARAT	42,822,841	27,645	6.9%
NARATHIWAT	19,661,722	32,180	4.9%
PATTANI	18,490,170	32,213	8.3%
TRANG	21,122,790	36,169	6.7%
YALA	14,847,686	38,868	6.5%
SATUN	9,277,529	39,312	5.1%
SURAT THANI	35,571,805	42,858	6.8%
CHUMPHON	17,900,852	43,135	7.3%
KRABI	14,408,983	46,782	3.8%
SONGKHLA	58,720,905	48,171	8.5%
PHANGNGA	12,057,336	51,971	2.6%
RANONG	11,619,951	89,384	8.5%
PHUKET	20,100,565	108,652	5.6%
CENTRAL	687,490,408	69,598	9.9%
SA KEAW 1/	9,156,904	23,359	..
SINGBURI	6,362,167	26,958	4.0%
LOP BURI	20,303,203	27,326	4.1%
ANG THONG	7,324,345	27,330	2.8%
CHAI NAT	10,599,785	28,961	0.1%
SAMUT SONGKHRAM	7,029,646	35,325	4.4%
SUPHAN BURI	29,570,490	35,584	5.6%
NAKHON NAYOK	9,017,356	37,572	5.8%
PRACHINBURI	18,846,711	40,794	6.5%
CHANTHABURI	18,008,727	42,473	8.4%
PHETCHABURI	19,428,230	46,368	6.4%
PHRA NAKHON SRI AYUTHA	33,714,722	46,891	30.7%
KANCHANABURI	32,558,273	48,740	-0.5%
PHACHUAP KHIRI KHAN	22,232,173	51,944	9.0%
RATCHABURI	41,624,285	54,269	12.0%
TRAT	10,515,646	56,233	6.6%
SARABURI	40,376,755	77,055	11.3%
CHACHOENGSAO	45,637,899	77,484	10.2%
RAYONG	67,544,329	137,846	14.2%
CHON BURI	193,464,336	208,925	12.7%
BANGKOK AND VICINITY	1,855,894,189	186,167	11.1%
NONTHABURI	45,531,395	66,958	1.7%
NAKHON PATHOM	60,166,652	80,978	20.4%
SAMUT PRAKAN	155,705,669	173,006	6.5%
BANGKOK METROPOLIS	1,380,342,666	203,650	10.4%
PATHUM THANI	120,322,088	245,555	22.2%
SAMUT SAKHON	93,825,719	248,216	39.6%

Notes:

1/ Province created in 1994.

Source: NESDB

Annex Table 1.3: Average Real Household Income Per Capita by Region, 1988-92

Region	1988	1990	1992
Whole Kingdom	1051	1281	1539
Municipal Areas	2129	2675	3545
Sanitary Districts	1192	1352	1814
Villages	755	896	978
North	932	1125	1169
Municipal Areas	2014	2480	2898
Sanitary Districts	977	1286	1628
Villages	811	957	927
Northeast	665	720	873
Municipal Areas	1485	1671	2486
Sanitary Districts	1114	1124	1316
Villages	585	634	751
Central	1057	1313	1521
Municipal Areas	1681	2031	2726
Sanitary Districts	1253	1423	1903
Villages	930	1187	1265
South	952	1090	1327
Municipal Areas	1930	1861	2734
Sanitary Districts	1230	1200	1623
Villages	763	950	1066
Bangkok	2409	2918	4060
Bangkok Vicinity	1741	2933	3311
Municipal Areas	1837	3628	3902
Sanitary Districts	1695	2139	3454
Villages	1687	2428	2488

Source: Krongkaew, 1995.

**Annex Table 1.4: Headcount Index, Poverty Gap, and Foster-Greer-Thorbecke Index by Regions
1988-92**

Region	HCR			PGap			FGT		
	1988	1990	1992	1988	1990	1992	1988	1990	1992
Whole Kingdom	22.23	17.97	13.13	6.54	4.81	3.48	2.74	1.94	1.38
Municipal Areas	6.42	5.30	2.37	1.80	1.57	0.79	0.78	0.72	0.39
Sanitary Districts	28.63	25.19	16.76	8.56	8.32	5.08	3.71	3.77	2.28
Villages	25.51	20.47	15.49	7.52	5.23	3.99	3.12	2.03	1.52
North	20.66	16.61	13.60	5.75	4.25	3.73	2.27	1.65	1.52
Municipal Areas	10.98	10.29	3.43	2.89	2.29	1.07	1.14	0.88	0.41
Sanitary Districts	36.71	23.97	17.28	11.33	7.28	4.94	4.76	3.17	2.12
Villages	19.52	16.29	14.18	5.30	4.05	3.85	2.06	1.53	1.56
Northeast	34.51	28.27	22.31	10.55	7.48	5.59	4.49	2.97	2.08
Municipal Areas	16.88	17.19	9.59	4.93	6.32	2.53	2.15	3.22	1.02
Sanitary Districts	38.39	35.33	31.45	12.31	12.08	9.71	5.53	5.48	4.25
Villages	35.10	28.25	22.20	10.89	7.15	5.40	4.53	2.74	1.96
Central	15.96	12.92	6.04	4.55	3.82	1.52	1.83	1.69	0.62
Municipal Areas	7.27	6.48	0.99	1.90	1.63	0.41	0.84	0.77	0.23
Sanitary Districts	21.26	22.13	8.83	5.65	7.76	2.58	2.41	3.67	1.24
Villages	16.16	12.08	6.21	4.70	3.38	1.47	1.94	1.43	0.55
South	21.47	17.55	11.82	6.16	4.57	3.72	2.53	1.81	1.60
Municipal Areas	10.57	9.59	5.54	2.61	2.27	2.01	0.91	0.87	0.96
Sanitary Districts	23.49	28.51	14.66	7.04	8.93	4.70	2.94	3.94	2.35
Villages	23.14	17.96	12.64	6.69	4.59	3.93	2.77	1.79	1.65
Bangkok	2.92	2.04	1.12	0.84	0.69	0.49	0.40	0.34	0.31
Bangkok Vicinity	6.50	2.81	1.25	1.56	0.81	0.47	0.67	0.32	0.24
Municipal Areas	8.37	3.04	0.07	2.84	0.96	0.04	1.33	0.39	-
Sanitary Districts	9.62	4.36	1.76	1.84	0.85	0.77	0.83	0.28	0.40
Villages	3.40	1.65	1.69	0.36	0.55	0.89	0.05	0.24	0.47

Source: Krongkaew, 1995.

Annex Table 1.5: Percentage Distribution of the Poor and Non-Poor by various characteristics 1988-92

Household Characteristics:	Poor		Non-Poor	
	1988	1992	1988	1992
Region				
North	18.4	19.8	20.2	19.0
Northeast	53.2	58.3	28.9	30.7
Central	13.3	8.5	20.0	19.9
South	12.5	12.0	13.1	13.6
Bangkok	1.3	0.8	12.8	10.8
Bangkok Vicinity	1.2	0.5	5.1	6.0
Community Type				
Municipal Areas	5.4	3.4	22.5	21.3
Sanitary District	11.8	11.8	8.4	8.9
Villages	82.8	84.8	69.1	69.9
Sex of Household Head				
Male	84.3	83.9	82.7	83.1
Female	15.7	16.5	17.3	16.9
Occupation of Head				
Professional and Technicians	0.1	0.2	4.1	4.3
Executives	0.0	0.0	1.2	1.2
Clerical Workers	0.2	0.0	2.3	2.5
Sales Workers	2.4	1.4	8.6	8.4
Service Workers	0.5	0.6	4.9	4.2
Agriculturists	73.3	76.7	48.8	46.0
Laborers	6.5	4.4	15.1	16.0
Inactive	16.9	16.7	15.0	17.3
Socioeconomic Class				
Farm Operators	52.5	57.5	32.6	30.4
- less than 2 rais	0.7	0.4	0.3	0.2
- 2-4 rais	6.7	3.1	1.6	1.3
- 5-9 rais	12.4	14.9	5.1	4.1
- 10-19 rais	19.4	20.1	9.7	10.1
- 20-39 rais	11.3	15.2	10.3	10.0
- 40 or more rais	2.0	3.8	5.6	4.7
Renters	8.0	6.4	5.5	4.0
- less than 5 rais	1.0	0.5	0.4	0.3
- 5-19 rais	4.6	3.9	2.0	1.9
- 20 or more rais	2.4	2.0	3.1	1.8
Other Farm Operators	1.2	0.3	1.1	0.8
Entrepreneurs	6.9	5.2	16.0	15.8
Professionals	0.2	0.2	6.8	6.6
Laborers	18.7	16.4	8.3	9.0
Other employees	7.4	7.0	22.1	25.8
Economically Inactive	5.1	7.0	7.8	7.6
- Receiving Pensions	4.6	6.1	6.9	6.6
- Receiving Property	0.5	0.9	0.9	1.0

**Annex Table 1.5: Percentage Distribution of the Poor and Non-Poor by various characteristics
1988-92**

Household Characteristics:	Poor		Non-Poor	
	1988	1992	1988	1992
Age of Household Head				
Under 20	0.1	0.3	0.5	0.4
20-29	9.7	7.2	10.9	8.6
30-39	28.7	24.9	24.9	24.1
40-49	25.6	24.0	24.2	24.2
50-59	16.9	18.5	21.4	21.0
60 and over	18.9	25.1	18.2	21.8
Education of Household Head				
No formal education	14.5	16.3	9.6	9.5
Primary	82.7	81.9	74.6	72.8
Secondary	1.9	1.7	7.2	8.3
Vocational	0.8	0.1	5.0	4.7
University	0.0	0.0	3.6	4.7

Source: Krongkaew, 1995.

**Annex Table 1.6: Family Size and Dependency Ratio of the Poor and Non-Poor by Region
1988-92**

Region	Average Household Size		Dependency Ratio	
	1988	1992	1988	1992
<u>Poor</u>				
Whole Kingdom	5.64	5.53	47.40	46.72
of which:				
North	4.80	5.21	44.02	47.39
Northeast	5.86	5.64	45.10	43.92
Central	5.30	5.27	50.12	48.22
South	6.15	5.75	57.90	57.90
Bangkok	5.83	4.43	56.36	48.93
Bangkok Vicinity	7.15	4.95	51.55	48.45
<u>Non-Poor</u>				
Whole Kingdom	4.56	4.55	41.85	41.35
of which:				
North	4.12	4.22	36.80	39.03
Northeast	4.87	4.72	37.85	37.80
Central	4.59	4.53	42.81	41.56
South	4.65	4.72	45.67	46.20
Bangkok	4.37	4.59	50.28	45.57
Bangkok Vicinity	4.79	4.39	49.82	47.56

Source: Krongkaew, 1995.

**Annex Table 1.7: Decomposition of Poverty Incidence by Community Type, 1988-92
(in percent)**

Period	Growth component ^{1/}	Redistribution component ^{1/}	Residual ^{2/}	Total change in poverty
Rural				
Head Count Index				
1988-1990	-15.86	2.50	9.19	-4.17
1990-1992	-16.66	0.31	15.45	-0.90
1988-1992	-30.73	2.94	22.77	-5.03
Poverty Gap Index				
1988-1990	-21.78	2.42	12.42	-6.94
1990-1992	-22.95	2.07	21.28	0.40
1988-1992	-40.84	4.30	29.97	-6.57
Foster-Greer-Thorbecke				
1988-1990	-26.68	2.34	15.03	-9.30
1990-1992	-28.10	5.86	26.01	3.76
1988-1992	-48.60	7.53	35.18	-5.89
Urban				
Head Count Index				
1988-1990	-15.66	5.11	13.75	3.19
1990-1992	-36.26	9.41	8.42	-18.43
1988-1992	-50.36	14.82	19.71	-15.83
Poverty Gap Index				
1988-1990	-23.49	10.11	20.53	7.15
1990-1992	-51.13	17.82	9.10	-24.21
1988-1992	-70.54	29.34	22.42	-18.78
Foster-Greer-Thorbecke				
1988-1990	-30.85	15.86	26.73	11.73
1990-1992	-62.91	26.44	6.29	-30.19
1988-1992	-82.84	45.82	15.03	-21.99

Source: Staff estimates based on SES data using POVCAL. Estimates here are based on data grouped into deciles rather than raw data, and two methods were used to estimate the Lorenz curves (Generalized Quadratic and Beta forms) depending on the goodness of fit.

Notes:

- 1/ **Growth Component:** In percentage points, the change in the poverty measure holding the distribution (the Lorenz curve) constant at time t and adjusting for mean income over t to t+1.
- Redistribution Component:** The change in the poverty measure adjusting for redistribution and holding mean income constant as of time t.
- 2/ The mean and distribution parameters are not additively separable, and cannot be unambiguously attributed to the growth or distribution components.

**Annex Table 1.8: Decomposition of Aggregate Inequality by Household Attributes
1988 and 1992 ^{1/}**

Household Attribute	1988 (%)			1992 (%)		
	Aggregate Inequality	Within-group Inequality	Between-group Inequality	Aggregate Inequality	Within-group Inequality	Between-group Inequality
Rural/Urban	36.5	30.2	6.3	47.8	34.4	13.3
Region	36.5	31.5	5.0	47.8	36.2	11.6
Education	36.5	28.8	7.7	47.8	33.8	14.0

^{1/} Measured by the Theil index (%). See Kakwani, background paper for details.

**Annex Table 1.9: Decomposition of Inequality Change by Household Attributes
1988 - 1992 ^{1/}**

Household Attribute	Change in Within-group Inequality (%)		Change in Between-group Inequality (%)		Change in Aggregate Inequality (%)
	"Pure" Inequality	Population Shares	Population Shares	Mean Incomes	
Rural/Urban	4.21	0.02	0.05	6.99	11.27
Region	4.66	-0.05	-0.10	6.75	11.27
Education	5.12	-0.13	1.89	4.38	11.27

^{1/} Measured by the Theil index (%). See Kakwani, background paper for details.

**Annex Table 1.10: Decomposition of Aggregate Inequality by Income Source
1988 and 1992** ^{1/}

Income Component	Factor Income Shares (%)		Factor Inequalities (%)		Factor Correlation (%)	
	1988	1992	1988	1992	1988	1992
Wages and Salaries	34.49	40.71	77.85	77.46	0.76	0.82
Entrepreneurial Income	15.90	18.60	90.09	90.86	0.70	0.76
Farm Income	15.71	11.64	78.49	80.15	0.39	0.29
Roomers and Boarders	0.36	0.38	99.72	99.70	0.83	0.86
Land Rent	0.33	0.12	99.19	99.51	0.57	0.33
Other Rent	0.12	0.25	99.92	99.96	0.80	0.95
Interest and Dividends	0.48	1.16	98.70	98.82	0.71	0.83
Assistance and remittance	6.07	4.98	92.87	92.16	0.60	0.52
Pensions and annuities	1.16	0.99	99.48	99.45	0.85	0.83
Scholarships and Grants	0.00	0.01	100.00	100.00	0.17	0.68
Terminal Pay, etc.	0.04	0.02	99.96	100.00	0.79	0.70
Money Income	74.66	78.86	55.71	59.50	0.97	0.98
Inkind Income	25.34	21.14	41.45	46.90	0.57	0.65
Total Income	100.00	100.00	46.34	52.58	1.00	1.00

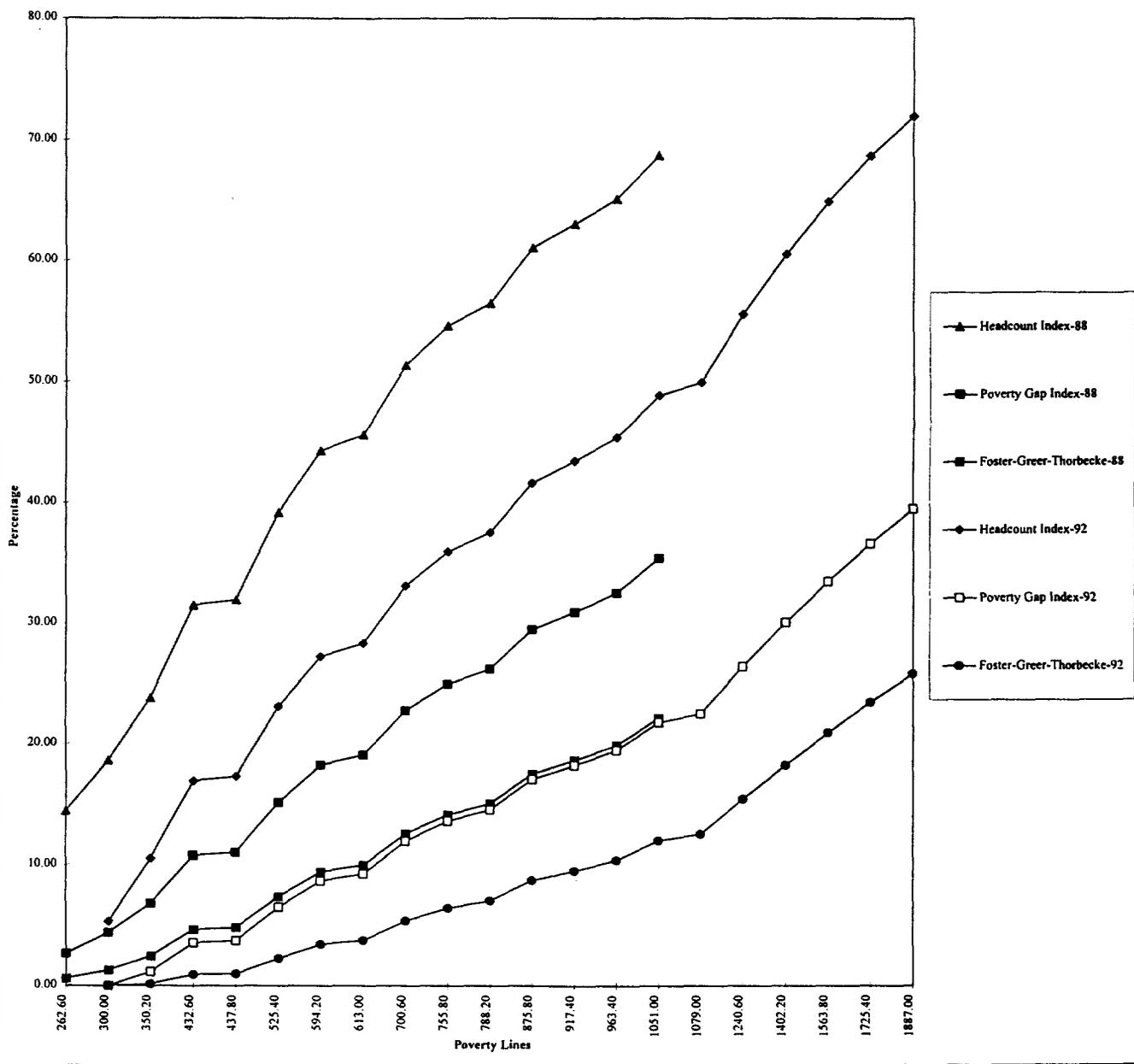
^{1/} Factor income share refers to the share of each component in total income; factor inequality is measured by the Gini coefficient of each income component; and, factor correlation is a correlation measure between each income component and total income. Aggregate inequality measured by Gini coefficient (%). See Kakwani, background paper for details.

**Annex Table 1.11: Decomposition of Inequality Change by Income Component
1988 - 92 ^{1/}**

Income Component	Changes in:			Aggregate Inequality (%)
	Factor Income Shares (%)	Factor Inequalities (%)	Factor Correlation (%)	
Wages and Salaries	3.80	-0.12	1.88	5.57
Entrepreneurial Income	1.78	0.10	0.96	2.83
Farm Income	-1.09	0.08	-1.09	-2.11
Roomers and Boarders	0.02	0.00	0.01	0.03
Land Rent	-0.09	0.00	-0.05	-0.15
Other Rent	0.12	0.00	0.03	0.14
Interest and Dividends	0.52	0.00	0.09	0.61
Assistance and remittance	-0.57	-0.02	-0.42	-1.01
Pensions and annuities	-0.14	0.00	-0.03	-0.17
Scholarships and Grants	0.00	0.00	0.00	0.01
Terminal Pay, etc.	-0.01	0.00	0.00	-0.01
Money Income	4.33	0.04	1.38	5.75
Inkind Income	-1.13	0.77	0.84	0.48
Total Income	3.20	0.80	2.22	6.23

^{1/} Factor income share refers to the share of each component in total income; factor inequality is measured by the Gini coefficient of each income component; and, factor correlation is a correlation measure between each income component and total income. Aggregate inequality measured by Gini coefficient (%). See Kakwani, background paper for details.

Annex Figure 1.1: Thailand: Poverty Incidence and Severity (at various poverty lines), 1988-92



Source: Staff estimates based on SES data using POVCAL. Estimates here are based on data grouped into deciles rather than raw data, and two methods were used to estimate the Lorenz curves (Generalized Quadratic and Beta forms) depending on the goodness of fit.

**Annex Table 2.1: Average Monthly Labor Earnings, 1985-94
(Baht)**

	Type of Payment			
	All	Daily	Monthly	Piece
1985	2796.0	2011.0	3479.0	..
1987	3175.0
1989	3580.0	2114.0	4992.0	..
1990	3753.0	2302.0	5426.0	2724.0
1991	4395.0	2621.0	6243.0	2780.0
1992	4964.0	2839.0	7182.0	3286.0
1993	5406.0	3088.0	7732.0	3818.0
1994	*	3257.0	*	3858.0

* Figures for monthly employees in 1994 excluded civil servants
and are not comparable to the previous years.

Sources: MoLW yearbooks.

Annex Table 2.2: Measures of Earning Dispersion, 1980-93

Years	CV of Private Earnings	SD of Log Earnings of all Employees	CV of Wages by Industry
	1	2	3
1980	580		
1988		19.7	
1989			42
1990	150		
1992		15.1	
1993			37
1994	120		

Sources: 1. TDRI; 2. LFS; 3. MoLW.

Annex Table 2.3: Labor Force Participation Rates

Years	Male	Female
1987	83.3	68.2
1988	82.7	68.3
1989	83.5	69.0
1990	*	*
1991	82.9	66.6
1992	83.3	67.3
1993	82.1	66.0
1994	79.8	62.3
1995	78.4	61.2

Notes:

* 1990 was a census year; thus no LFS was undertaken.

Source: LFS, Round 1

**Annex Table 2.4: Standardized Wage Differentials (%) -- Selected Comparisons
1988-92**

	1988	1992
<u>By Education (relative to no education)</u>		
Lower Elementary	13.6	23.4
Elementary	26.8	41.3
Lower Secondary	41.7	57.6
Upper Secondary	47.5	66.1
Upper Vocational	25.4	50.1
University (Academic)	105.6	124.2
University (Technical)	70.0	98.2
<u>By Subsector (relative to agriculture)</u>		
Manufacturing	20.9	17.6
Construction	31.1	15.2
Utilities	8.9	15.4
Commerce	31.7	27.7
Services	11.0	15.0
<u>By Region (relative to BMR)</u>		
North-Municipal	-23.6	-28.1
North-Villages	-45.0	-42.3
Northeast-Municipal	-25.1	-30.0
Northeast-Villages	-45.8	-42.6
South-Municipal	-12.7	-23.1
South-Villages	*	-28.5
Central-Municipal	-14.5	-15.3
Central-Villages	-20.6	-27.5
<u>By Establishment Size (relative to < 6 employees)</u>		
21-50 employees	21.7	29.8
51-100 employees	26.9	34.5
More than 100 employees	38.4	45.2
<u>By Sex (relative to Male)</u>		
Female	-23.2	-21.6

Note:

* Not significantly different from zero.

Source: Tzannatos and Dar (background paper).

**Annex Table 2.5: Wage Inequality Accounted by Worker Characteristics
(as a % of each group's contribution to inequality)**

	1988	1992
Education		
Less Than P4	0.12%	-0.81%
Lower Elementary	-10.70%	-15.82%
Elementary	-14.18%	-20.55%
Lower Secondary	8.05%	5.41%
Upper Secondary	17.77%	16.89%
Upper Voc.	6.58%	3.11%
University	57.82%	79.63%
Univ. Tech. Voc.	-5.14%	-4.50%
Teacher Trg.	39.66%	36.64%
	100.00%	100.00%
Industry		
Mining	-0.03%	0.08%
Manufacturing	-0.55%	-12.41%
Construction	-0.93%	-14.42%
Utilities	3.17%	5.60%
Trade	33.78%	31.24%
Transportation	23.77%	27.78%
Services	40.80%	62.13%
	100.00%	100.00%
Regions		
North 1	-3.68%	-7.70%
North 2	1.83%	7.98%
North 3	39.46%	27.02%
NE1	-1.92%	-6.25%
NE2	0.37%	8.66%
NE3	61.86%	48.95%
South1	-1.63%	-2.21%
South2	-0.33%	0.73%
South3	-0.37%	5.14%
Central1	-2.42%	-5.43%
Central2	-0.92%	1.20%
Central3	7.75%	21.91%
	100.00%	100.00%

Note: Tzannatos and Dar (background paper)

Annex Table 2.6: Distribution of Employment by Education Level and Season

	1985		1992	
	February	August	February	August
None	8.9	7.4	4.7	4.7
Less than Pratom 4	5.9	4.4	2.9	2.9
Lower Elementary	55.3	59.4	50.1	49.9
Upper Elementary	16.1	16.7	23.2	24.4
Lower Secondary	6.1	4.9	7.2	6.7
Upper Secondary	1.5	1.4	2.7	2.7
Upper Vocational	2.8	1.9	2.8	2.5
University Academi	0.9	1.3	2.5	2.5
University Technic	0.6	0.6	1.6	1.6
Teacher Training	1.8	1.9	2.3	2.0
Total	100.0	100.0	100.0	100.0
Dissimilarity index	5.2%		2.5%	

Note: The dissimilarity index is based on the difference in the employment distributions as reported in rounds 1 and 3 of the LFS within each year and is calculated as follows (Duncan and Duncan, 1955):

$$D = \frac{1}{2} \sum_{i=1}^N |f_i - a_i|$$

where D is the index, i (= 1,2,...,N) is the number of educational groups, f_i and a_i are the ratios of workers to the labor force in February and August, and the summation refers to the absolute differences between these two ratios within each education group. The value of the index varies between 0, when the ratios of various education groups are equal in February and August (no seasonality), and 1 when there is complete dissimilarity (workers who work in February don not work in August). Though the index is often expressed as a precentage, as is in the above table, it does not have a direct interpretation. (Tzannatos, 1990)

Annex Table 2.7: Average Hours Worked by Children (per week; by occupation)

	Boys		Girls	
	Average Hours	Frequency	Average Hours	Frequency
Professional	49.5	8	44.0	26
Administrator	56.0	1	na	0
Clerk	57.2	11	48.7	15
Commerce	47.1	594	51.1	961
Farmer	48.8	4376	47.6	3932
Mining	44.5	2	na	0
Transport	57.7	99	50.5	11
Other	52.5	1215	50.2	1166
Services	53.9	117	65.6	1023
Total	49.6	6426	51.1	7134

Source: LFS

**Annex Table 2.8: Conditions of Child Work
(% of children working)**

	1986	1995
	1/	
Daily hours (>8)	84.9	91.5
Weekly days (6)	86.2	58.2
Weekly days (7)	8.0	30.3
Night work, (10pm-6am)	8.6	11.6 2/
Break (> 1 hour)	70.1	
Monthly income (Baht)	400	

Notes:

1/ In 1986, the average daily child wage in Bagkok was 22 Baht compared to a minimum wage of 70 Baht.

2/ 1991 data.

Source: Youth Bureau, Foundation for Children's Development and Department of Health (quoted from Banpasiric, 1995)

Annex Table 2.9: Working Conditions of Child Labor

Working Conditions	Percent of Children Affected
Light work/no risk	68.0
Work with machines/tools with low risk	29.0
Heavy tasks/lifting with high risk	3.0
All	100.0

Source: ILO

Annex Table 2.10: Child Labor Inspection - 1993

Regions	Inspected (1)	Mistreated (2)	Ratio (2)/(1)
Northeast	3,078	2,900	94.2%
North	1,731	1,516	87.6%
Bangkok	5,221	3,516	67.3%
Central	5,109	2,539	49.7%
South	4,675	1,264	27.0%
Bangkok Vicinity	9,738	2,005	20.6%
Total	29,552	13,740	46.5%

Source: MoLW, Yearbook of Labor Statistics 1993.

Annex Table 2.11: Reasons for Non-Attendance of School

Reason	Ages 12-14	Reason	Ages 15-19
Medical	1.2%	Medical	1.5%
No financial support	63.3%	No financial support	40.4%
Distance	3.4%	Distance	1.8%
Had to earn livelihood	19.7%	Had to earn livelihood	26.5%
No interest	9.5%	No interest	15.2%
Could not be admitted	0.7%	Could not be admitted	7.5%
Misconduct	0.2%	Misconduct	1.3%
Others	1.9%	Others	5.7%
Unknown	0.0%	Unknown	0.0%
Total	100.0%	Total	100.0%

Source: Report on Children and Youth Survey (NSO, 1992).

**Annex Table 2.12: Time Allocation since Leaving School
(as % of children out of school with known activity)**

	Ages 9-11	Ages 12-14	Ages 15-19
Boys			
Work (paid)	0.0%	35.8%	47.6%
Unpaid work	5.4%	53.6%	47.0%
Housework	94.6%	9.7%	3.7%
Training/study	0.0%	0.6%	0.5%
Looking for work	0.0%	0.3%	1.3%
Total	100.0%	100.0%	100.0%
Girls			
Work (paid)	0.0%	40.5%	45.5%
Unpaid work	22.2%	37.0%	43.5%
Housework	77.8%	21.2%	10.2%
Training/study	0.0%	0.6%	0.2%
Looking for work	0.0%	0.7%	0.6%
Total	100.0%	100.0%	100.0%

Source: Report on Children and Youth Survey (NSO, 1992).

Annex Table 2.13: Unemployment Shares and Rates (by education level)

Education level	Shares				Unemployment Rates	
	Unemployment		Employment		1985	1992
	1985	1992	1985	1992		
Less/Pre-primary	71%	84%	87%	81%	3.2	4.6
Sec general	14%	10%	7%	10%	7.3	4.5
Sec vocational	5%	3%	2%	3%	9.2	4.1
Higher education	7%	3%	2%	4%	11.0	4.1
Teacher Training	3%	1%	2%	2%	5.2	2.7
Total	100%	100%	100%	100%	3.8	4.5

Source: Vichai (1994)

Annex Table 2.14: Labor Force Participation and Wages

	Boys 13-16		Girls 13-16	
	Coefficient	Std. Error	Coefficient	Std. Error
log wage	0.522	0.176	0.101	0.162
number of persons	0.035	0.009	0.038	0.009
number of siblings	0.041	0.014	0.026	0.013
no of older siblings	0.025	0.030	0.067	0.027
edh2	-0.061	0.082	0.064	0.074
edh3	-0.237	0.058	-0.115	0.052
edh4	-0.638	0.078	-0.557	0.073
edh5	-1.190	0.080	-0.849	0.080
edh6	-1.436	0.171	-0.485	0.113
edh8	-1.407	0.153	-0.598	0.105
edh9	-1.833	0.220	-0.116	0.107
edh10	-1.922	0.333	-0.285	0.157
edh11	-1.723	0.155	-1.073	0.126
edh12	0.416	0.512	-0.539	0.205
edh13	-0.814	0.237	-0.025	0.120
rg2yr85	0.295	0.111	0.087	0.090
rg3yr85	-0.812	0.166	0.278	0.064
rg4yr85	-0.191	0.129	0.227	0.101
rg5yr85	-0.966	0.199	0.129	0.082
rg1yr88	0.007	0.111	0.031	0.113
rg2yr88	0.668	0.087	-0.147	0.102
rg3yr88	-0.644	0.158	0.150	0.081
rg4yr88	-0.088	0.099	0.089	0.104
rg5yr88	-0.900	0.137	0.024	0.103
rg1yr91	-0.171	0.120	-0.354	0.089
rg2yr91	0.404	0.111	0.054	0.082
rg3yr91	-0.720	0.187	-0.155	0.100
rg4yr91	-0.361	0.172	-0.070	0.116
rg5yr91	-0.780	0.205	0.132	0.098
rg1yr92	-0.400	0.131	0.706	0.235
rg2yr92	0.284	0.119	1.312	0.245
rg3yr92	-0.740	0.146	1.651	0.245
rg4yr92	-0.451	0.156	1.789	0.258
rg5yr92	-0.933	0.203	-0.068	0.007
age 13	0.274	0.226	0.057	0.007
age 14	0.705	0.226	-0.228	0.087
age 15	0.965	0.232	-0.458	0.102
age 16	1.173	0.235	-0.372	0.090
agehead	-0.063	0.009	-0.578	0.127
agehead2	0.051	0.008	0.087	0.073
rnd1reg2	-0.390	0.048	0.140	0.097
rnd1reg3	0.245	0.085	-0.448	0.131
rnd1reg4	-0.095	0.062	-0.366	0.108
rnd1reg5	-0.134	0.107	-0.710	0.152
rnd3reg1	0.232	0.074
Number of Observations	15,165		15,603	
Log Likelihood	-7463.55		-8409.13	

Conversion factors for marginal effects: 0.29 for boys and 0.33 for girls.

Source: Tzannatos (background paper).

Annex Table 2.15: School Participation and Wages

	Boys		Girls	
	Coefficient	Std. Error	Coefficient	Std. Error
log wage	-0.824	0.156	-0.759	0.154
number of persons	-0.026	0.009	-0.038	0.009
number of siblings	-0.082	0.013	-0.057	0.013
no of older sibs	0.027	0.028	0.024	0.026
edh2	0.099	0.077	0.077	0.072
edh3	0.270	0.055	0.332	0.051
edh4	0.685	0.073	0.727	0.069
edh5	1.234	0.072	0.904	0.074
edh6	1.500	0.145	0.518	0.106
edh8	1.367	0.124	0.718	0.100
edh9	1.602	0.150	0.264	0.103
edh10	1.547	0.203	0.220	0.151
edh11	1.680	0.123	1.241	0.118
edh12	-0.311	0.517	0.613	0.180
edh13	0.969	0.213	-0.260	0.113
rg2yr85	-0.224	0.106	-0.135	0.090
rg3yr85	0.755	0.150	-0.211	0.064
rg4yr85	0.468	0.121	-0.239	0.095
rg5yr85	1.289	0.176	0.023	0.077
rg1yr88	0.182	0.105	-0.291	0.107
rg2yr88	-0.565	0.084	0.367	0.101
rg3yr88	0.763	0.143	0.239	0.079
rg4yr88	0.295	0.094	-0.040	0.097
rg5yr88	1.038	0.122	0.223	0.097
rg1yr91	0.290	0.112	0.424	0.088
rg2yr91	-0.282	0.107	0.372	0.080
rg3yr91	0.873	0.170	0.195	0.092
rg4yr91	0.711	0.157	0.535	0.110
rg5yr91	1.128	0.182	-0.037	0.093
rg1yr92	0.589	0.121	-1.324	0.231
rg2yr92	-0.136	0.110	-1.800	0.240
rg3yr92	0.809	0.131	-2.128	0.240
rg4yr92	0.817	0.142	-2.176	0.252
rg5yr92	1.308	0.181	0.093	0.007
age 13	-0.579	0.218	-0.080	0.007
age 14	-0.937	0.219	-0.268	0.087
age 15	-1.111	0.224	0.416	0.098
age 16	-1.315	0.227	0.400	0.088
agehead	0.067	0.008	1.012	0.123
agehead2	-0.054	0.008	0.149	0.071
mdlreg2	0.239	0.048	-0.405	0.097
mdlreg3	-0.146	0.077	0.464	0.125
mdlreg4	-0.021	0.058	0.434	0.105
mdlreg5	0.032	0.092	1.142	0.146
mdlreg1	-0.146	0.071
Number of Observations	15,165		15,603	
Log Likelihood	-8248.71		-9047.17	

Conversion factors for marginal effects: 0.37 for boys and 0.39 for girls.

Source: Tzannatos (background paper).

**Annex Table 3.1: Private Transfers (Cash + In-kind) as a Percent of Household Expenditures
1992, (deciles ranked by *per capita* expenditure)**

Deciles	Thailand	North	Northeast	Bangkok
1	9.8	9.2	12.6	5.1
2	10.2	10.6	10.1	7.4
3	10.3	9.8	12.5	4.5
4	8.6	9.7	11.0	5.9
5	7.8	9.0	10.9	8.4
6	6.8	9.6	12.3	7.9
7	8.3	8.2	10.3	8.9
8	8.4	11.2	9.3	8.0
9	9.2	8.9	12.8	8.1
10	7.9	10.2	8.5	6.1
Total	8.4	9.7	10.3	7.1

Source: Socio-Economic Survey, 1992; National Statistical Office.

Annex Table 3.2: Subsistence allowance to the elderly, 1993-95

Region	October 1993 - September 1994			October 1994 - September 1995		
	No. of recipients	Amount (mill. baht)	Region's share (%)	No. of recipients	Amount (mill. baht)	Region's share (%)
Central	26,896	64.6	24.3	42,305	101.5	23.0
North	27,533	66.1	24.8	41,270	99.1	22.4
Northeast	41,359	99.3	37.3	77,192	185.3	42.0
South	15,062	36.2	13.6	23,113	55.3	12.6
Total	110,850	266.2	100.0	183,880	441.3	100.0

Source: MoLW, Department of Public Welfare.

**Annex Table 3.3: Income Growth Rates among Participants and Control Groups by Region
1993-94**

Real Growth Rate		Negative	0%-10%	11%-30%	31%-100%	Greater than 100%	Total
Total	Program	52.5%	5.9%	7.4%	12.0%	22.1%	100.0%
	Non-Program	72.7%	3.6%	3.4%	3.8%	16.5%	100.0%
of which:							
Center	Program	44.0%	6.0%	7.0%	9.5%	33.5%	100.0%
	Non-Program	76.1%	4.3%	5.1%	4.0%	10.5%	100.0%
Northeast	Program	36.1%	6.5%	8.5%	21.6%	27.3%	100.0%
	Non-Program	73.6%	1.6%	2.1%	3.0%	19.7%	100.0%
North	Program	63.0%	8.7%	9.1%	9.2%	10.0%	100.0%
	Non-Program	73.8%	6.0%	4.5%	4.3%	11.4%	100.0%
South	Program	63.4%	1.3%	4.0%	7.5%	23.7%	100.0%
	Non-Program	67.8%	3.1%	2.8%	4.2%	22.1%	100.0%

Source: Data provided by the Ministry of Interior, Community Development Department.

**Annex Table 3.4: Income Growth Rates among Participants and Control Groups by Region
1994-95**

Real Growth Rate		Negative	0%-10%	11%-30%	31%-100%	Greater than 100%	Total
Total	Program	39.5%	7.3%	16.8%	14.3%	22.1%	100.0%
	Non-Program	47.6%	4.9%	10.9%	6.1%	30.6%	100.0%
of which:							
Center	Program	18.1%	5.6%	23.3%	18.6%	34.4%	100.0%
	Non-Program	42.4%	6.5%	7.2%	5.1%	38.8%	100.0%
Northeast	Program	30.1%	8.0%	23.5%	23.2%	15.2%	100.0%
	Non-Program	44.4%	4.9%	6.3%	8.5%	35.9%	100.0%
North	Program	57.2%	10.2%	10.4%	7.1%	15.1%	100.0%
	Non-Program	69.4%	6.7%	8.5%	5.8%	9.6%	100.0%
South	Program	43.5%	3.9%	12.9%	10.8%	28.9%	100.0%
	Non-Program	27.2%	1.4%	23.0%	3.8%	44.6%	100.0%

Source: Data provided by the Ministry of Interior; Community Development Department.

**Annex Table 3.5: Sustainability of Incomes of Participants and Control Group
1993-95**

		Gain in 1994		Loss in 1994	
		Gain in 1995	Loss in 1995	Gain in 1995	Loss in 1995
Total PHH: <u>2217</u>					
Total CHH: <u>1888</u>					
Total	Program	39.1%	8.4%	21.4%	31.1%
	Non-Program	20.3%	7.0%	32.2%	40.6%
of which:					
Central	Program	46.7%	9.3%	35.1%	8.8%
	Non-Program	17.4%	6.5%	40.2%	35.9%
Northeast	Program	54.2%	9.7%	15.9%	20.2%
	Non-Program	19.9%	6.5%	35.7%	37.9%
North	Program	27.9%	9.1%	14.8%	48.2%
	Non-Program	16.5%	9.8%	14.1%	59.7%
South	Program	31.4%	5.2%	25.0%	38.3%
	Non-Program	27.7%	4.5%	45.1%	22.8%

Notes:

Total PHH stands for Total Households in the Program Villages with Households with Average Income of less than 5000 baht per annum.

Total CHH stands for Total Households in the Control Group Villages with Households with Average Income of less than 5000 baht per annum.

Source: Data provided by the Ministry of Interior; Community Development Department.

**Annex Table 3.6: Summary of Approved Projects and Outlay for the Tambon Development Project
September 1995**

Region	Total Approved Projects		Drinking Water		Irrigation Development		Career Development for Youths		Public Utilities	
	No. of Projects	Amount (mill. baht)	No. of Projects	Amount (mill. baht)	No. of Projects	Amount (mill. baht)	No. of Projects	Amount (mill. baht)	No. of Projects	Amount (mill. baht)
Central	2,081	416.6	655	131.2	741	145.3	94	20.8	591	119.3
North	1,884	441.4	365	76.1	874	214.4	67	12.3	578	138.6
Northeast	3,109	791.8	778	175.9	2,052	547.4	95	20.8	184	47.7
South	1,151	259.2	310	66.1	350	79.8	71	16.3	420	96.9
Total	8,225	1909.0	2,108	449.3	4,017	986.9	327	70.3	1,773	402.7

Source: Progress Report on Tambon Development Program, Ministry of Community Development.

Annex Table 3.7: Tambon Development Program: Summary of Selected Projects

Category	Share	Actual
Total No. of Public Works Project	100%	257
of which (% by region):		
North	25%	64
Northeast	19%	50
Central	28%	72
BMR	6%	16
South	21%	55
of which (% by type):		
Water for Household Use	29%	75
Water for Irrigation	27%	70
Occupational Promotion	18%	46
Public Facilities	26%	66
of which (% by unskilled job creation):		
Projects which have created Uns	40%	104
Projects which have not created	60%	153
Wages: 1/	Average	Minimum
North	75	110
Northeast	83	110
South	117	110
BMR	125	135
Central	118	110

Source: Technical Services and Planning Division, Ministry of Interior.

1/ Average wages taken from Labor Survey.

Annex Table 3.8: Public Works in Thailand: Costs and Labor Intensity 1/

	No. of projects	Person days of unskilled employment created (persons)	Total cost of project (baht)	Unskilled wage bill as ratio of total cost (percent)	Input and materials as ratio of total cost (percent)	Cost per person day of employment created (unskilled) (baht)	Comparison of unskilled wage with minimum wage (percent)	Comparison of unskilled wage with average wage (percent)
North	28	10,420	7,048,803	16.4%	69.4%	676	0.0%	46.1%
of which:								
(1) Water for Household Use		1,380	1,136,995	13.4%	83.5%	824	0.0%	46.1%
(2) Water for Irrigation		3,707	1,316,238	31.7%	61.3%	355	0.8%	47.3%
(3) Occupational Promotion		1,641	1,987,972	9.1%	59.6%	1,211	-0.3%	45.8%
(4) Public Facilities		3,692	2,607,598	15.5%	74.8%	706	-0.4%	45.6%
Northeast	18	5,698	5,086,792	12.3%	81.6%	893	-0.1%	31.6%
of which:								
(1) Water for Household Use		1,535	1,770,610	9.6%	82.3%	1,153	0.3%	32.1%
(3) Occupational Promotion		1,908	1,037,116	20.2%	74.2%	544	0.0%	31.7%
(4) Public Facilities		2,235	1,978,789	12.4%	82.2%	885	-0.5%	31.1%
Central	28	7,967	6,369,343	11.9%	72.3%	799	-0.3%	-6.9%
of which:								
(1) Water for Household Use		3,103	2,078,682	8.5%	80.8%	670	-0.3%	-6.9%
(2) Water for Irrigation		1,554	1,183,989	14.1%	78.4%	762	-1.8%	-8.3%
(3) Occupational Promotion		2,057	2,210,407	12.6%	65.3%	1,075	0.8%	-5.9%
(4) Public Facilities		1,253	896,265	15.2%	62.0%	715	-0.6%	-7.2%
Bangkok Metropolitan Regio	5	879	1,252,574	9.8%	71.0%	1,425	8.4%	17.2%
of which:								
(1) Water for Household Use		240	402,018	8.1%	90.9%	1,675	0.0%	8.1%
(4) Public Facilities		639	850,556	10.6%	61.6%	1,331	14.1%	23.3%
South	25	6,158	6,105,396	11.5%	80.4%	991	2.8%	-3.2%
of which:								
(1) Water for Household Use		2,056	2,215,325	10.5%	80.6%	1,077	2.4%	-3.6%
(2) Water for Irrigation		122	543,963	2.5%	97.3%	4,459	0.0%	-5.9%
(3) Occupational Promotion		2,220	2,299,274	11.2%	78.8%	1,036	4.2%	-1.9%
(4) Public Facilities		1,760	1,046,834	18.9%	74.5%	595	1.8%	-4.2%
Total (Whole Kingdom) ^{2/}	104	31,122	25,862,908	13.0%	75.2%	831	-	-

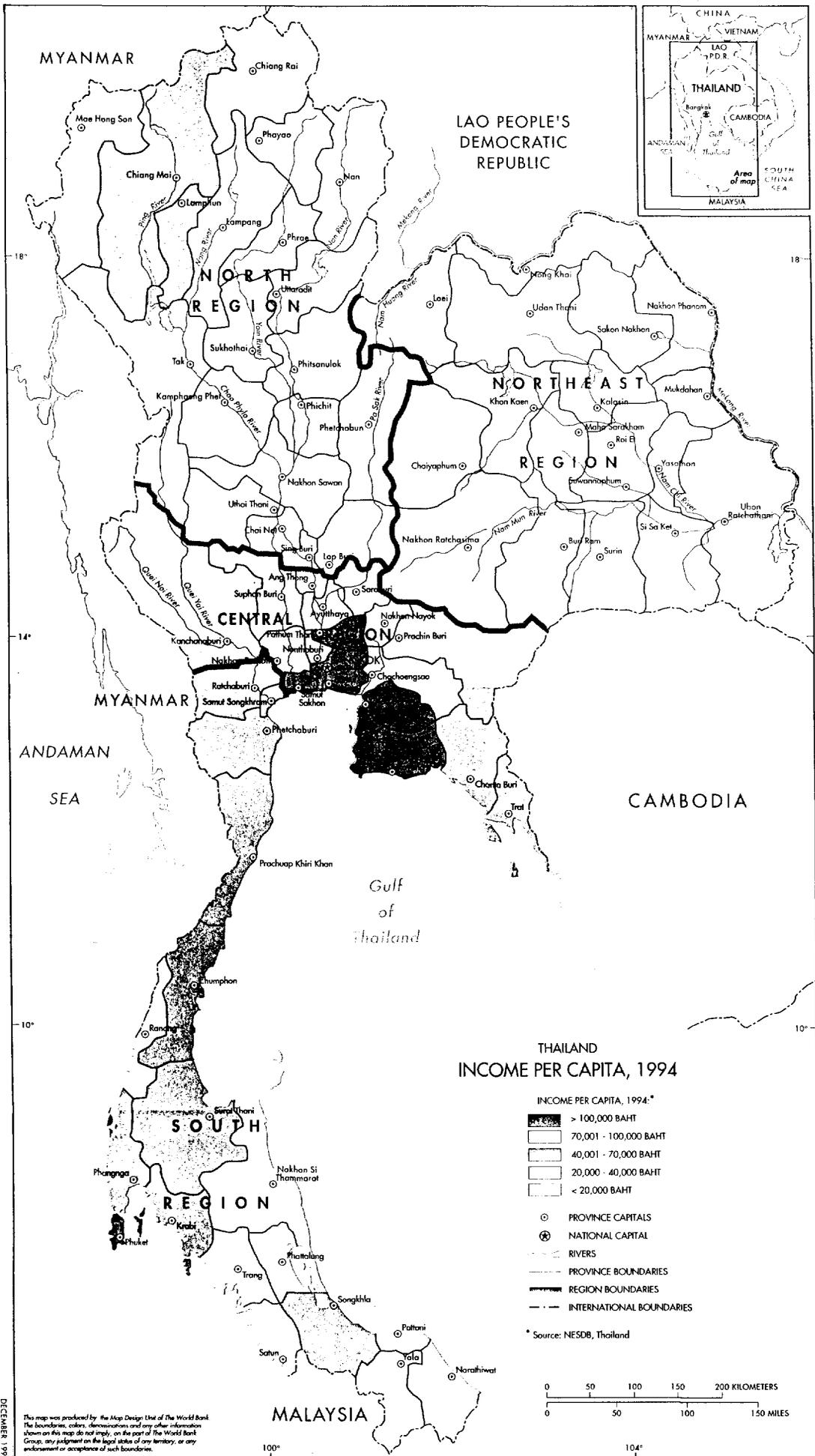
Notes:

1/ Of the total sample of 257 projects, only the projects (104; 40%) which have an unskilled labor component have been chosen for this analysis.

2/ Comparisons not computed due to lack of reliable wage data.

Source: Data provided by the Ministry of Interior, Technical Services and Planning Division.

MAP SECTION



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