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Economic growth, employment, and poverty reduction linkages: The case of Thailand

By

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Preface

The present paper examines the role of employment as serving and shaping the link between economic growth and poverty reduction in the case of Thailand. Using both macro and micro analyses of growth, employment and poverty data for Thailand between 1980 and 2002, the paper explores the issues and dynamics of the employment route in achieving poverty reduction. It empirically tests the validity of the argument that in order to reduce poverty on a sustainable basis, economic growth must result in productive employment and increases in the earnings of the poor. Moreover within the causal relationship between growth, employment and poverty in Thailand, the authors assess the change in income inequality in Thailand and its effect on the impact of growth on poverty reduction.

At the outset, the study documents the rise and fall of the Thai economy, broken down into three periods - prosperity (1980-1995), crisis (1996-1998), and recovery (1999-2002). The long spell of prosperity whereby poverty fell from 32.6 per cent in 1988 to 11.4 percent in 1996 was disrupted in 1996 by the Asian financial crisis, reversing many of these gains. Using data across regions, sectors and employment statuses, the study shows that the number of poor increased from 6.8 to 8.9 million between 1998 and 2000 with the disparity in poverty reduction worsening as poverty incidence in the rural Northeast increased sharply in the period 1996-2000.

Sections 2 to 4 examine growth, inequality and poverty dynamics, revealing the fact that poverty reduction in Thailand was achieved through a combination of high growth, productive employment, and lower inequality. The experience of Thailand between 1980 and 2002 demonstrates that flexibility in employment (e.g. wage and non-wage) and the labour market provided an effective coping mechanism whereby economic growth and poverty returned swiftly to pre-crisis levels by 2002. However the authors also argue that the speed of poverty reduction would have been faster if the government had offered greater social welfare and safety net benefits.

Using time series data from 1980 to 1996 for the whole economy and for individual sectors in Thailand, section 5 focuses on empirical linkages between output, growth, employment and poverty to test how employment-intensive the pattern of growth in Thailand has been. It is seen that throughout the 1980s and the 1990s, employment intensity of growth in manufacturing remained stable at a fairly high level; and in construction, employment intensity increased. Real wages registered healthy growth.

Further, the role of employment and the labour market in explaining poverty is analysed at the micro level (household income data from 1988-2002 Socio-economic Surveys (SES) and Labour Force Surveys) with a framework of demand and supply. On the demand side, low demand for labour, due to low average productivity of the workforce, affects the probability of being poor from low levels of real wages and earnings. This is explained by the type of economic activity and employment in which earning members of households are engaged. On the supply side, the ability of the poor to integrate into the process of economic growth and get access to jobs is a key factor in reducing poverty. This ability is reflected in (1) the characteristics of the labour force (such as level of education) and the labour force participation and (2) access to capital and productive assets. The paper examines the impact of these variables on the probability of a household being poor using a PROBIT model based on 2002 SES household data. The

probability of being poor appears to relate to farm income, place of residence, household size, and male household head. Results affirm that the probability of being poor is greater if it is a household headed by a Thai male engaging in farm activities in the Northeast to support a large number of dependents and if remittances are low.

Lastly, the paper concludes by reiterating the point that successful poverty reduction in Thailand is explained by economic growth as well as the manner in which income is distributed. It shows that growth, which generates productive employment together with income for the poor, is critical for success in poverty reduction. Thailand's experience thus provides an example of a virtuous circle of economic growth leading to poverty reduction via growth of employment with rising productivity, and reduced poverty creating the possibility of further increases in productivity and higher rates of economic growth. Growth of employment with rising productivity is seen to take place through a shift in the structure of employment towards occupations/sectors with higher levels of productivity, and improved productivity within sectors and occupations.

The present paper forms part of the outputs of a project on Employment Poverty Linkages and Policies for Pro-Poor Growth funded by the Swedish International Development Agency (SIDA). Other country level studies covered by the project include those on Bangladesh, Bolivia, Ethiopia, Mozambique, Pakistan and Vietnam.

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1. Introduction

It is beyond any doubt that Thailand has been one of the world's most successful countries in terms of economic growth for the past four decades. Thailand's GDP growth averaged about 6.8 per cent per annum since the launch of its First National Economic Development Plan in 1961. However, for the first time in many decades the growth rate plunged in 1996, a year before the onset of the economic crisis in 1997.¹ Despite a deep economic recession and a GDP growth rate of -10.8 per cent in 1998, Thailand recovered relatively quickly with a positive growth rate in 1999, returning to pre-crisis levels by 2002. Economic recession would have been prolonged if it were not for general resilience of the economy and broad coping mechanisms. The falling trend in poverty incidence, which was disrupted and reversed in 1997, returned yet again to normal levels in 2002. Rapid economic growth, which can explain the rapid decline in poverty incidence before the crisis, can also be used to explain Thailand's swift return to normality in its poverty situation.

As will be seen in the latter analytical part of this report, this rapid return to normality can be attributed to many factors. One of the most important factors is the flexibility in employment and the labour market. When the financial crisis brought about sudden tightening of the credit market and extremely high interest rates, many companies became insolvent and had to lay off large numbers of workers, many of who returned to their hometowns in rural areas to wait out these difficult times. When the financial situation improved and the firms started to get back to business, these workers returned to the cities and started to work again. The living costs in the countryside were minimal so that the impacts of job losses were also minimal. Workers who were not laid off completely, stayed in their jobs by accepting pay cuts and other reductions in fringe benefits. The outcomes are the same, that is, life for both the employers and workers eventually returned to normality after a relatively short period of hardship.

Employment and labour market flexibility is just one dimension of economic practices in Thailand that helped bring about relatively quick economic recovery. In hindsight, the market-oriented, outward looking, development policies of Thailand had much to do with the good growth results aforementioned. Regarding conventional development theories and trajectories, it seems as if Thailand is exemplary. To mention just a few: economic growth brings about rapid reduction in poverty; economic growth also brings about increased inequality in income distribution, the typical Kuznets case; poverty is reduced by the simplest of means—the increase in average income of the people across the board, including that of the poor; the industrialization of Thailand was helped in large part by the contribution from its agricultural sector; the structural transformation of the economy from agrarian-based to industrial-based follows the same pattern as observed in economies such as Japan, Korea, and Taiwan.

But while the development experience of Thailand can be considered conventional or orthodox, there are still inconsistencies in the way various sectors in the Thai economy have responded to changes in economic conditions. In this study, we will take a look at one important dimension of the Thai development experience, that of the relationship between economic growth, employment, and poverty reduction. In a nutshell, we can accept an argument that economic growth in Thailand has brought about increased

¹ Pranee Tinakorn (2002), p. 153.

employment, which raises the income of Thai people thereby lifting an increasingly large number of them over and above the poverty line. But even in a typical case like Thailand, there is much that lies inside this simple causal relationship, as our study will eventually reveal.

We will start by re-examining the two components of the above argument, that growth brings about poverty reduction, and such a reduction is the outcome of increased employment.

1.1 Effects of growth on poverty reduction

On this first component, it is almost universally accepted that economic growth is a necessary condition that brings about an increase in income, which, in turn, pushes people out of poverty. In a celebrated study, Dollar and Kraay (2002) argue that “Growth is Good for the Poor” because when they tried to find a statistical association between the growth of average income of the total population of the world’s developing countries and the average income of the poorest quintile of the same population, results had shown that there is a one-to-one relationship between the growth of income of the general population and the growth of income of the poor. In other words, as the income of the overall population grows, so too does the income of the poor.

While this general conclusion has many believers (for example, Bhalla (2003)), there are researchers who questioned the accuracy of such a conclusion, and had tried to qualify the effects of growth on poverty reduction.² It has been agreed that growth is a necessary but not sufficient condition for poverty reduction, and many have attempted to explain why this is so. Osmani (2003), for example, argues that there is no invariant relationship between the rate of growth and the rate of poverty reduction. In other words, faster growth is not always accompanied by a faster rate of poverty reduction, just as slower growth does not always entail slower rates of poverty reduction. To Osmani, there are three factors that affect the income of the poor. The first is the growth factor, which is the rate at which the production potential of the economy expands, which brings about an upward shift in the production possibility frontier. The second is the elasticity factor, which is the extent to which an upward shift of the production possibility frontier enhances the employment potential. And the third is the integrability factor, which defines the extent to which the poor are able to integrate into economic processes so that when growth occurs and the employment potential expands, they can take advantage of the greater scope for improving the quality and quantity of employment. In short, for any given rate of growth, what determines the rate of poverty reduction is the degree to which the employment potential responds to economic growth (elasticity) and the extent to which the poor are equipped to integrate into the expanding activities (integrability).

In yet another series of studies, Datt and Ravallion (1992), Kakwani (1993), Kakwani and Pernia (2002), and Francois Bourguignon (2002) have shown that growth alone is insufficient to have an all-encompassing and dominant effect on poverty reduction, but its effect on poverty reduction could be shared by the redistribution effect of income change. In other words, while growth may bring about reduction in poverty, such reduction may be either enhanced or offset by the distributive aspects of income change. The type of growth that has a beneficial effect on both poverty reduction and

² For a good summary on the critiques of Dollar and Kraay’s work, see Sumner (2003).

improved income distribution is ‘pro-poor’ growth, which is often defined as growth that improves the income position of the poor relatively more than that of the non-poor.

1.2 Poverty reduction through employment

On the second component, poverty reduction can occur through the poor engaging in some form of employment, self-employment as well as wage employment. But like the qualification on the impact of growth on poverty reduction mentioned earlier, it could be argued that high economic growth may fail to bring about a commensurate rate of poverty reduction if it is not accompanied by a rapid growth in productive remunerative employment. A. R. Khan (2001), for example, has documented several cases where the above situation could take place:

- When output elasticity of demand for labour is low, i.e., when economic growth may have low employment intensity due to inappropriate economic policies and institutions.
- When the employment impact of high growth is offset by the countervailing contraction of employment induced by economic reform under globalisation thereby resulting in a low observed output elasticity of employment.
- When economic growth could lead to a high rate of growth in employment of a kind for which the poor do not possess necessary skills.
- When there is a high concentration in the distribution of scarce productive resources such as land and physical capital.

In this study, we will look at the above relationships between economic growth and poverty, economic growth and employment, and the interplay between economic growth, employment, and poverty reduction using Thailand as a case study. Here, we will also introduce a new factor that we believe has an important effect on the impact of growth on poverty reduction. It is the change in income inequality that can affect different groups of people differently. To conclude, we suggest that a more effective poverty reduction policy is that which helps the poor relatively more than the non-poor. This pro-poor growth will not only reduce poverty faster but will also improve income inequality as the country develops.

2. Economic Growth and Poverty

Poverty generally tends to decline when economic growth is on the rise. Economic growth can help reduce poverty through an increase in household income, providing earnings to obtain the minimum basic needs. Various studies on poverty and economic growth Kakwani (1993); Kakwani and Pernia (2002); Osmani (2002), however, found that economic growth alone is insufficient for enhancing poverty reduction. The pattern and sources of growth, as well as the manner in which its benefits are distributed, are significant in achieving the goal of poverty reduction.

To validate the theoretical and empirical arguments, the discussion on the performance of the Thai economy with respect to the course and pattern of economic growth during 1980-2002 as well as the poverty incidence in the country is offered in this

chapter.³ Throughout that period, except for the crisis period, Thailand had achieved both high rates of economic growth and reduction in poverty. However, economic growth does not benefit all equally e.g. the poor as opposed to other groups in Thailand. Only in the periods of 1992-1994, 1994-1996 and 2000-2002 did high rates of economic growth generate an increase in real income share for the poorest 20 per cent of population. This can be linked with a larger reduction in poverty over these periods than in other periods.

2.1 Economic growth in Thailand

Thailand experienced a high economic growth rate for the last decade. Between 1980 and 1986, the average rate of real GDP growth was about 5.5 per cent per annum. The growth of the Thai economy accelerated significantly after 1986. Between 1988 and 1996, the average rate of real GDP growth was almost double, about 9.5 per cent per annum. The Asian crisis in 1997 led to a sharp recession in Thailand, resulting in average rates of real GDP growth of -5.9 per cent per annum between 1996 and 1998. The economy, however, rebounded with real GDP growth rates of 4.5 and 3.6 per cent per annum during 1998-2000 and 2000-2002, respectively (Table 2.1).

The Thai economy has gone through two structural changes since 1980. One is the shift from the agricultural to manufacturing sector. The share of the manufacturing sector in GDP increased significantly and the share of the agricultural sector continues to fall (Table 2.2). The agricultural sector accounts for less than 12 per cent of GDP in 2002, a decline from 20 per cent in 1980. The manufacturing sector, on the other hand, accounts for 36 per cent of GDP in 2002, a rise from 23 per cent in 1980. This structural shift alters the structural composition of employment. The shares of manufacturing, trade and service sectors in total employment increased significantly from 25 per cent in 1980 to approximately 47 per cent in 2002, while that of agriculture declined from 71 per cent in 1980 to 42 per cent in 2002.

The contribution of the agriculture sector to GDP has been declining because the agriculture sector has been growing at a slower rate than the manufacturing sector. Between 1988 and 1996, the agricultural sector grew at an average rate of 3.4 per cent per annum. In that period the fluctuation in growth rate for the agricultural sector was striking since crops, the main determinant of agricultural growth, were severely sensitive to weather conditions. At the same time, the non-agricultural sector, particularly manufacturing and construction sectors, grew substantially at the average rate of 12-13 per cent per annum. The fastest growing sector in that period however was the banking sector with an average annual growth rate of 17.5 per cent (Table 2.3). When the crisis broke out in 1997, agricultural sector growth was -1.2 per cent per annum. Still, it was small relative to the annual growth of -4.8 per cent for the manufacturing sector. The hardest hit were banking, construction, wholesale and retail trade. As the Thai economy recovered in the last four years, growth in all sectors has shown a sign of improvement. The fastest growing sectors are manufacturing as well as transportation and communication.

The second structural change is that the degree of export orientation has dramatically increased in the Thai economy with an average export growth rate exceeding

³ Poverty incidences during the period 1980-1987 are not discussed since there is no consistent data.

11 per cent (Table 2.4). In addition, the export structure has shifted away from agricultural and labour-intensive products to technology-intensive manufacturing goods (Table 2.5).

Higher labour productivity, measured by real output per worker, was prevalent in the period of economic growth. The crisis, on the other hand, caused a drop in labour productivity growth, total factor productivity (TFP) growth and employment growth, leading to a large contraction in GDP. As the Thai economy recovered, growth in labour productivity, capital and labour remained slow while TFP growth has shown an improvement (Table 2.6).

Per capita real GDP growth, is commonly used to measure the standard of living. For Thailand, the per capita real GDP grew at an average annual rate of 7.9 per cent from 1988 to 1996. The Asian crisis explains the decline in per capita real GDP which fell down to an average annual rate of -6.9 per cent. The economic recovery in 1998-2002 showed higher per capita real GDP - an average annual rate of 3.3 per cent.

In measuring welfare, one needs to take into account that different households have different basic needs. For instance, households with a disproportionate number of working male members normally require greater basic necessities. The poverty line in Thailand takes into account varying needs of people in different regions facing different regional prices. Here, the measurement of household welfare is based on Kakwani's (Kakwani 1997). The welfare is measured as the ratio of household per capita income to the household per capita poverty line⁴. This measure of welfare can be interpreted as the percentage of excess income that households get over and above their poverty line.

The average welfare of Thailand has been increasing rapidly during 1988-1996 (Table 2.7). Annual per capita welfare increased 8 per cent per year during that same period. Per capita welfare declined by 1 per cent per annum between 1996 and 1998 and by 0.8 per cent between 1998 and 2000. Per capita welfare increased by 4.8 per cent per annum between 2000 and 2002. To sum up, an increase in gross domestic product in Thailand is accompanied by an increase in the standard of living for Thai households.

Economic growth in Thailand has also benefited all regions of the economy (Table 2.8 – 2.9). During 1982-1990, high economic growth in Thailand was mainly concentrated in Bangkok and its vicinity. The manufacturing sector was a major contributor to high growth. Between 1990 and 1996, the economic growth rate in Bangkok was much lower. Instead, the region exhibiting highest growth was central. When the crisis broke out in 1997, the hardest hit was Bangkok and its vicinity. Between 1998-2000, the central region showed the fastest recovery.

For the production distribution among regions, it is not in equal fashion (Table 2.9). Bangkok and its vicinity always have the highest share of Gross Regional Product (accounts for 43 per cent in 2000). However, the share of Bangkok and its vicinity declined according to the absence of emerging new large-scale industry whereas the production contribution from the central areas had increased.

⁴ Suppose that X_i is the per capita income of the i th household and Z_i is the household-specific poverty line. The welfare of the i th household is then defined as $Y_i = X_i / Z_i$

2.2 Poverty incidence

Poverty incidence is measured using an income approach. A poor person is defined as an individual who has earned less than the cost of minimum basic needs (i.e. food and non-food requirements for survival). The official poverty line developed by Kakwani and Krongkaew (1998) is used as a threshold in order to determine who is poor. The poverty incidence measured by headcount ratio, poverty gap ratio, and the severity of poverty index is used as indicators of progress in reducing poverty in Thailand. The headcount ratio, a well-known poverty measure is a proportion of the poor who have incomes lower than the poverty line. The poverty gap ratio, expressed as a percentage of the poverty line, represents the amount of income required to raise all poor households up to the poverty line. The poverty gap indicates the depth of poverty and reflects how far the poor are below the poverty line. The severity of poverty index is calculated as an aggregate of the square of each household's poverty gap.

Thailand has made enormous progress in reducing poverty except for the crisis periods of 1996-1998 and 1998-2000 (Table 2.10). Dramatic reductions in poverty are evident across poverty measures. During the period of rapid growth between 1988 and 1996, poverty fell continuously from 32.6 per cent of the population in 1988 to 11.4 percent in 1996 with the number of poor declining from 17.9 million to 6.8 million. This means that on average, 11 per cent of the poor were lifted out of poverty every year. The poverty gap ratio and the severity of poverty index also indicate less severity of poverty. This came to a halt in 1997. As a result of the crisis, poverty incidence measured by the headcount ratio increased sharply from 11.4 per cent in 1996 to 13.0 per cent in 1998 and 14.2 per cent in 2000 with the number of poor increasing from 6.8 million to 8.9 million. Both the poverty gap ratio and the severity of poverty index indicate that the severity of poverty became more pronounced. When Thailand rebounded with an economic growth rate of 3.6 per cent in the period of 2000 and 2002, poverty returned to the level that is below that of the pre-crisis times. The incidence of poverty dropped from 14.2 per cent of the population in 2000 to 9.8 per cent in 2002. The poverty gap ratio and the severity of poverty index indicate a substantially lower degree of poverty severity. The significant decline is found for all areas and regions.

There is regional disparity in poverty reduction performance (Table 2.11). Bangkok and its vicinities have the lowest incidence of poverty measured by headcount ratios (less than 2 per cent in 2002) whereas the Northeast has the highest incidence of poverty (about 18 per cent in 2002). The gap has widened over the years. Table 2.12 shows that the rate of decline in poverty has been faster in the richer regions, Bangkok and its vicinities and Central areas, than in the poorer region of the Northeast. Between 1988 and 2002, the Northeast had the slowest rate of decline in poverty in the sense that its incidence of poverty in 1988 was about 37 per cent of that in 1988 whereas Bangkok's poverty incidence in 2002 was about 12 per cent of that in 2002. In the period of economic crisis, the disparity in poverty reduction also worsened as poverty incidence in the Northeast increased sharply in the period 1996-2000.

Table 2.11 also shows that there have been very sharp declines in poverty during 1992-1994, and 1994-1996 in the Northeast. Likewise, there have been sharp declines in the North during 1992-1994 and in the South during 1990-1992. A possible reason that supports such sharp declines is that the growth rate of per capita welfare (which is the per

capita income adjusted for household needs) in those periods is substantially higher than in the other periods (Table 2.13).

2.2.1 Poverty incidence by sectors

Between 1986 and 1996, high manufacturing growth led to a sharp reduction in poverty in the agricultural and manufacturing sector. The headcount ratio of the agricultural sector reduced substantially from 45.7 in 1988 to 19.2 in 1996 and those of the manufacturing sector reduced from 16.5 in 1988 to 6.8 in 1996 (Table 2.14).

When the crisis erupted, the headcount ratios of the agricultural sector increased from 19.2 in 1996 to 26.2 in 2000. Those of the manufacturing sector increased from 6.8 in 1996 to 8.2 in 1998. Strikingly, farm households were the hardest hit. As expected, poverty incidence in all sectors reduced upon the economic recovery in 2000-2002 with the biggest reduction in poverty occurring in the agricultural sector.

2.2.2 Poverty incidence by employment status

In terms of employment status, economic growth during 1994-1996 led to a substantial reduction in the headcount ratio of workers who were unemployed, from 21 per cent in 1994 to 8 per cent in 1996⁵. The percentage of poor among unpaid family workers also declined from 25 per cent in 1994 to 18 per cent in 1996⁶. In the crisis period (1996-1998), its effect on unemployment seems to be marginal as the percentage of unemployed poor increased by only 1 per cent. On the other hand, the crisis led to a continued increase in the percentage of the poor among employers from 12 per cent in 1996 to 18 per cent in 2000. The percentage of the poor among unpaid family workers increased from 17 per cent in 1998 to 25 per cent in 2000. When the economy rebounded in 2002, the proportion of the poor among employers together with those unpaid family workers reduced substantially by 9 per cent (Table 2.15).

The characteristics of the poor have not changed much in more than a decade from 1988 to 2002. Still, the poor are likely to live in rural areas, located in the North and Northeast, and engaged in farm activities in their small farm holdings (less than 5 Rais or 0.4 acres). In addition, their families are headed by males and by individuals with no more than primary schooling.

2.2.3 Income Inequality

While the overall reduction in poverty was successful, income inequality in the period of 1988-2002 did not fare well (Table 2.16). The Gini coefficient for Thailand rose sharply from 0.485 in 1988 to 0.536 in 1992 before it declined to 0.511 in 1998 and increased to 0.535 in 2000. The ratio of income received by the richest fifth of the population to that received by the poorest fifth increased from 11.9 in 1988 to 13.5 in

⁵ In the Socio-Economic Survey, the working status classified as “unemployed” is defined as an unemployed worker (who engaged in economic activity during the last 12 months) who is willing to work and is actively seeking a job.

⁶ In the Socio-Economic Survey, the working status classified as “unpaid family worker” is defined as those (who engaged in economic activity during the last 12 month) who voluntarily work in the household enterprise without being paid in monetary terms.

2002. Similarly, the ratio of income received by the richest tenth of the population to that received by the poorest tenth increased from 20.7 in 1988 to 24.7 in 2002.

2.3 Pro-poor economic growth in Thailand

Broadly speaking, pro-poor economic growth can be defined as one that enables the poor to significantly benefit from economic activity. Kakwani and Pernia (2000) argue that the change in poverty incidence depends on two factors, the average income and its distribution. The poverty elasticity with respect to economic growth (n) is defined as the proportional poverty changes, when there is a positive growth rate of 1 per cent. It is decomposed into: (1) the effect of growth on poverty change when the income distribution is held constant: the growth effect (n_g) and (2) the effect of income distribution on poverty change when the total income remains unchanged: the inequality effect (n_i). The sign of income inequality effects can be negative (or positive) when the change in inequality accompanying growth reduces (increases) poverty. The degree of the pro-poor index can be measured as the ratio of poverty elasticity to the growth effect ($=n/n_g$). However, it is the reciprocal of the ratio when there is a recession.

Economic growth will be pro-poor when the ratio is greater than one. It means that the poor benefit proportionally more than the non-poor. This is a result of redistribution in favour of the poor. For instance, during 1992-1994, with a 1 per cent increase in the economic growth, the headcount ratio would have reduced by 1.98 per cent given the inequality is held constant. The actual reduction in poverty was 2.29 per cent with the extra 0.31 per cent reduction in poverty coming from the income redistribution effect. This yields a pro-poor growth index of 1.15. This piece of evidence clearly shows that the economic growth is pro-poor. But the growth was not pro-poor during the period 1988-1990. A 1 per cent increase in economic growth during that period would have reduced the headcount ratio by 1.62 per cent when inequality is held constant. However, the actual reduction in poverty was only 0.99 per cent, yielding a pro-poor growth index of 0.61. That is, the percentage of the poor during 1998-1990 would have been reduced much faster if income distribution had improved (Table 2.17).

It is noted that during 1996-1998 and 1998-2000, there was a negative growth rate as a result of the economic crisis. During 1996-1998, a 1 per cent decline in per capita income would have increased the percentage of the poor by 4.74 per cent but the actual increase was 6.5 per cent, yielding a pro-poor growth index of 0.73. Thus, the economic crisis adversely affected the poor proportionally more than the non-poor.

As a whole, economic growth in Thailand reduced poverty faster than it would have been in the periods of 1992-1994, 1994-1996, and 2000-2002 due to the improvement in income distribution. In addition, economic growth during these periods raised the welfare share of the poorest ninth and tenth deciles of the population (Table 2.18). In conclusion, the success of poverty reduction in Thailand is dependent on economic growth as well as the manner in which income is distributed. Still, economic growth in Thailand has not always been strictly pro-poor although poverty has been reduced from 1988 to 2002. The speed of poverty reduction would have been faster if the government avoided policies that adversely affected income distribution.

2.4 Pro-poor economic growth through the labour market

It is interesting to explore how per capita household welfare derived from various sources of income is distributed among ten deciles of the Thai population. Based on the socio-economic surveys of Thailand, seven sources of household income are identified.

- (1) Wages and salaries (including tips and bonuses)
- (2) Entrepreneurial income (net profit from non-farming)
- (3) Farm income (net profit from farming)
- (4) Property income (e.g. land rent)
- (5) Interest and dividends
- (6) Current transfer received (e.g. assistance payments, pensions, scholarships and grants)
- (7) Income in-kind (including value of goods and services received as part of pay, home-produced and consumed)

The bottom ninth and tenth of the Thai population have major shares of household income from income in-kind, wages and salaries and farm income. The growth of per capita household welfare (which is the per capita household income adjusted for household needs) derived from wages and salaries, farm income, and income in-kind are shown in table 2.19, 2.10 and 2.11 respectively.

Table 2.19 shows that the growth of welfare derived from wage and salary was distributed to the bottom ninth and tenth deciles of the population during the periods of 1992-1994, 1994-1996, and 2000-2002. It can be said that economic growth in Thailand in those periods led to an increase in wage employment of the poor and, therefore, the household welfare derived from wages and salaries.

In addition, economic growth in Thailand in the periods of 1992-1994, 1994-1996, and 2000-2002 opened the window of opportunity through farming for the poor as the growth of welfare derived from farm income was distributed to the bottom ninth and tenth of the Thai population during those periods (Table 2.10). The growth of income in-kind was also distributed to the bottom ninth and tenth deciles of the population during the period 1988-90, 1994-1996, and 2000-2002 (Table 2.11). This shows that economic growth in Thailand during those periods increased the opportunity of the poor in terms of exchange of output of the poor from self-employment.

As a whole, the periods of economic growth (1992-1994, 1994-1996, and 2000-2002) were periods whereby wages and salaries of the bottom poorest groups increased dramatically, including farm income and income in-kind. This evidence supports the belief whereby growth that generates employment as well as income for the poor is critical for national success in poverty reduction.

Table 2.1 Average Economic Growth Rates (per cent) in Thailand

	1980	1986	1988	1990	1992	1994	1996	1998	2000
	-	-	-	-	-	-	-	-	-
	1986	1988	1990	1992	1994	1996	1998	2000	2002
Growth rate of Gross Domestic Product (GDP)	5.5	11.4	11.7	8.3	8.6	7.6	-5.9	4.5	3.6

Source: National Economic and Social Development Board (NESDB)

Table 2.2 Distribution of Production in Thailand (per cent of GDP)

	1980	1988	1990	1992	1994	1996	1998	2000	2002
Agriculture	20.2	16.2	13.6	13.0	11.3	10.5	11.6	11.5	11.3
Non-Agriculture	79.8	83.8	86.4	87.0	88.7	89.5	88.4	88.5	88.7
Mining and Quarrying	0.8	1.7	1.6	1.7	1.6	1.7	2.0	2.1	2.2
Manufacturing	23.1	25.8	27.8	29.5	30.4	31.6	32.3	35.2	35.8
Construction	4.6	4.8	6.0	6.1	6.4	6.3	3.3	2.5	2.5
Transportation and Communication	7.2	7.5	7.5	7.6	7.9	8.6	9.3	9.7	10.1
Wholesale and Retail									
Trade	17.9	17.1	17.4	16.6	16.6	16.0	15.0	14.6	13.5
Banking, Insurance and Real Estate	3.1	4.2	5.6	6.5	7.8	7.4	5.2	3.0	3.1
Services	12.6	13.3	11.9	10.9	10.1	10.0	11.5	11.7	11.7

Source: National Economic and Social Development Board (NESDB)

Table 2.3 Average sectoral growth rates (per cent) in Thailand

	1980-1986	1986-1988	1988-1990	1990-1992	1992-1994	1994-1996	1996-1998	1998-2000	2000-2002
Agriculture	3.6	5.3	2.5	6.0	1.3	3.8	-1.2	4.3	2.3
Non-Agriculture	5.9	12.7	13.4	8.7	9.7	8.0	-6.5	4.6	3.8
Mining and Quarrying	21.9	11.2	8.1	10.7	7.5	10.1	3.6	6.9	5.5
Manufacturing	5.8	17.0	15.9	11.5	10.4	9.6	-4.8	9.2	4.6
Construction	6.3	11.3	25.2	9.2	11.4	6.9	-31.9	-8.2	2.5
Transportation & Communication	6.1	12.6	12.2	8.5	11.1	11.9	-2.2	7.0	5.7
Wholesale and Retail	4.0	13.4	12.7	5.8	8.6	5.6	-8.8	3.1	-0.1
Trade									
Banking, Insurance & Real Estate	5.9	29.6	27.9	17.9	19.2	5.0	-21.0	-19.7	5.1
Services	7.9	6.9	5.7	3.5	4.6	7.2	0.9	5.4	3.6

Source: National Economic and Social Development Board (NESDB)

Table 2.4 Expenditures on Gross Domestic Product

Share	1988	1990	1992	1994	1996	1998	2000	2002p
Consumption	66.8	65.9	64.3	63.4	62.8	63.3	63.0	63.6
Private	56.7	57.1	55.8	55.2	54.4	53.8	53.8	54.5
Government	10.0	8.8	8.5	8.2	8.4	9.6	9.2	9.0
Gross Fixed Capital Formation	30.7	39.1	40.0	41.3	42.5	21.3	19.8	19.9

Share	1988	1990	1992	1994	1996	1998	2000	2002p
Private	25.6	33.2	32.0	32.6	32.1	12.1	12.5	13.7
Public	5.0	5.9	8.0	8.7	10.4	9.2	7.4	6.1
Domestic Demand	99.4	106.1	105.1	105.0	105.9	82.1	83.7	84.6
Exports of goods and services	33.0	36.5	40.7	44.6	42.0	55.3	64.7	64.6
Imports of goods and services	34.4	41.5	43.5	47.8	49.2	38.8	49.9	49.7
<hr/>								
Average growth per annum	86-88	88-90	90-92	92-94	94-96	96-98	98-00	00-02
Consumption	7.6	11.0	7.0	7.9	7.0	-5.5	4.4	4.2
Private	8.7	12.0	7.1	8.0	6.8	-6.4	4.7	4.4
Government Gross Fixed Capital Formation	2.2	4.8	6.3	6.7	8.6	0.5	2.6	2.6
Private	20.2	26.1	9.7	10.3	9.1	-32.4	1.1	3.9
Public	29.7	27.1	6.4	9.6	6.9	-41.4	6.7	9.0
Public	-8.3	21.1	26.6	13.5	17.4	-9.3	-6.4	-5.5
Domestic Demand	12.2	15.4	7.8	8.6	8.1	-17.0	5.6	4.3
Exports of goods and services	24.5	17.5	14.5	13.6	5.0	7.7	13.3	4.0
Imports of goods and services	36.6	22.6	11.0	13.8	9.7	-16.5	18.9	4.0

Source: National Economic and Social Development Board (NESDB)

Table 2.5 Export sector of Thailand

Share (per cent)	1994	1996	1998	2000	2002
Agriculture	11.4	11.8	9.3	7.1	7.6
Manufacturing	81.1	81.5	82.4	85.7	85.7
Labour intensive products	21.4	16.2	13.5	11.8	11.6
High-tech products	44.2	49.4	54.8	60.8	59.0
Resource based products	9.1	9.6	8.6	8.1	8.6
Samples & other unclassified goods	0.7	1.1	3.2	2.5	2.9
Re-exports	0.2	0.2	0.3	0.1	0.2
Total exports	100.0	100.0	100.0	100.0	100.0
<hr/>					
Average growth rate (per cent)	94-96	96-98	98-00	00-02	
Agriculture	13.7	-12.4	-1.1	2.1	
Manufacturing	12.2	-0.7	15.6	-1.0	
Labour intensive products	-2.4	-9.8	5.5	-1.7	
High-tech products	18.1	4.1	19.6	-2.3	
Resource based products	14.3	-6.2	9.7	1.9	
Samples & other unclassified goods	43.8	66.1	0.7	6.6	
Re-exports	11.0	33.2	-20.3	26.6	
Total exports	11.8	-1.2	13.3	-1.0	

Source: Bank of Thailand

Table 2.6 Labour Productivity growth
unit: per cent

	1990	1992	1994	1996	1998	2000
	1992	1994	1996	1998	2000	2002
Real Output per Worker						
growth	8.6	9.8	5.8	-4.7	2.6	1.0
economic growth	8.3	8.6	7.6	-5.9	4.5	3.6
Labour				-0.5	0.8	0.9
Land				0.0	0.0	0.0
Capital				2.4	0.7	0.9
TFP				-7.9	3.1	1.8

Source: National Economic and Social Development Board (NESDB)

Table 2.7 Standard of Living in Thailand
unit: per cent

	1988	1990	1992	1994	1996	1998	2000
	1990	1992	1994	1996	1998	2000	2002
growth in per capita real							
GDP	10.8	6.6	7.1	7.0	-6.9	4.0	2.7
growth in per capita welfare							
welfare	9.9	8.1	8.3	6.1	-1.0	-0.8	4.8

Source: National Economic and Social Development Board (NESDB), Socio-economic Surveys, NSO

Table 2.8 Growth rate of Gross Regional Product (Per cent) in Thailand

	1982-1983	1986-1988	1988-1990	1990-1992	1992-1994	1994-1996	1996-1998	1998-2000
Northeastern	7.8	5.5	10.0	6.2	7.0	8.5	-5.2	3.6
Northern	3.8	8.5	4.3	7.3	4.7	7.1	-4.6	2.2
Southern	4.8	8.1	10.6	6.4	7.9	7.3	-2.3	3.0
Bangkok	4.6	15.4	15.6	8.6	8.4	4.9	-9.3	4.1
Bangkok Vicinities	8.1	17.1	16.1	3.5	6.7	9.5	-9.5	5.3
Central	6.0	9.3	8.2	12.7	12.8	11.3	-1.7	6.7
Whole Kingdom	5.5	11.4	11.7	8.3	8.6	7.6	-5.9	4.5

Source: National Economic and Social Development Board (NESDB)

Table 2.9 Shares of Gross Regional Product (Per cent) in Thailand

	1982	1988	1990	1992	1994	1996	1998	2000
Northeastern	13.8	12.3	11.9	11.4	11.1	11.2	11.5	11.2
Northern	12.2	11.5	10.0	9.8	9.1	9.0	9.3	8.9
Southern	10.0	9.3	9.1	8.8	8.7	8.7	9.4	9.1
Bangkok	34.8	37.4	40.0	40.2	40.0	38.1	35.3	35.0
Bangkok Vicinities	8.0	9.1	9.8	8.9	8.6	8.9	8.3	8.4
Central	21.1	20.5	19.2	20.8	22.4	24.0	26.2	27.3
Whole Kingdom	13.8	12.3	11.9	11.4	11.1	11.2	11.5	11.2

Source: National Economic and Social Development Board (NESDB)

Table 2.10 Poverty incidences in Thailand

Poverty incidences	1988	1990	1992	1994	1996	1998	2000	2002
Headcount ratio	32.6	27.2	23.2	16.3	11.4	13.0	14.2	9.8
Poverty gap ratio	10.4	8.0	6.8	4.3	2.8	3.3	4.1	2.4
Severity of poverty index	4.6	3.3	2.8	1.7	1.1	1.2	1.6	0.9
Number of poor in million	17.9	15.3	13.5	9.7	6.8	7.9	8.9	6.2

Source: National Economic and Social Development Board (NESDB)

Table 2.11 Headcount ratios by regions

Region	1988	1990	1992	1994	1996	1998	2000	2002
Central	25.2	20.5	12.1	8.4	5.9	7	5.4	4.3
North	32	23.2	22.6	13.2	11.2	9.1	12.2	9.84
Northeast	48.4	43.1	39.9	28.6	19.4	24	28.1	17.68
South	32.5	27.6	19.7	17.3	11.5	14.6	11	8.71
Bangkok Vicinities	8.7	3	1.7	1.6	1	0.5	0.7	1.45
Bangkok	3.8	3.3	1.9	0.6	0.3	0.5	0.3	0.47
Whole Kingdom	32.6	27.2	23.2	16.3	11.4	13	14.2	9.79

Source: National Economic and Social Development Board (NESDB)

Table 2.12 Index of Headcount ratios by regions (1988=100)

Region	1988	1990	1992	1994	1996	1998	2000	2002
Central	100	81.3	48	33.3	23.4	27.8	21.4	17.2
North	100	72.5	70.6	41.3	35	28.4	38.1	30.8
Northeast	100	89	82.4	59.1	40.1	49.6	58.1	36.5
South	100	84.9	60.6	53.2	35.4	44.9	33.8	26.8
Bangkok Vicinities	100	34.5	19.5	18.4	11.5	5.7	8	16.7
Bangkok	100	86.8	50	15.8	7.9	13.2	7.9	12.4
Whole Kingdom	100	83.4	71.2	50	35	39.9	43.6	30

Source: National Economic and Social Development Board (NESDB) and own calculation

Table 2.13 Growth of per capita welfare (per cent)

Region	1988	1990	1992	1994	1996	1998	2000	2002
Central	11.8	6.0	14.5	2.4	-1.8	2.9	2.4	11.8
North	10.8	0.9	11.3	5.2	1.5	-3.9	4.3	10.8
Northeast	4.6	5.9	12.8	5.9	-4.2	-1.5	9.2	4.6
South	6.7	10.1	9.0	3.8	-1.1	1.0	3.4	6.7
Bangkok Vicinities	28.8	5.9	-0.5	19.0	-12.4	0.2	4.2	28.8
Bangkok	8.5	19.5	-0.5	6.1	1.9	-1.1	3.7	8.5
Whole Kingdom	9.9	8.1	8.3	6.1	-1.0	-0.8	4.8	9.9

Source: Socio-economic surveys and own calculation

Table 2.14 Headcount ratios by types of enterprises

Types of enterprises	1988	1990	1992	1994	1996	1998	2000	2002
Agricultural	45.7	38.6	35.1	25.9	19.2	22.5	26.2	17.6
Manufacturing	16.5	17.6	17.0	7.9	6.8	8.2	6.8	6.3
Construction	15.4	10.8	1.4	4.5	1.4	0.4	6.8	0.6
Trades	11.1	8.2	6.3	3.6	1.6	3.1	3.3	2.2
Services	14.9	11.6	7.3	5.5	3.5	4.3	2.9	2.4

Source: Socio-economic surveys and own calculation

Table 2.15 Headcount ratios by employment status

Working Status	1994	1996	1998	2000	2002
Employer	15.8	12.2	15.4	18.3	9.3
own account worker	16.4	10.8	10.4	11.4	9.8
Employee – private	8.1	4.6	6.0	5.4	4.8
employee-government	0.9	0.6	0.5	0.9	0.7
Unpaid family worker	25.3	17.5	20.7	25.0	16.3
Unemployed	20.7	8.4	9.5	n/a	6.7
Economically inactive	13.5	8.6	10.7	10.5	8.0
no occupation	11.6	9.1	14.4	8.4	7.1
Child under 15 and no income from working	21.9	15.2	16.8	19.1	13.2
Total	16.3	11.4	13.0	14.2	9.8

Source: Socio-economic Surveys and own calculation

Table 2.16 Gini Index

	1988	1990	1992	1994	1996	1998	2000	2002
Gini Index	0.485	0.524	0.536	0.527	0.515	0.511	0.525	0.510

Source: Socio-economic Surveys and own calculation

Table 2.17 Poverty elasticity and pro-poor growth index

Period	Poverty elasticity	Explained by Growth	Explained by Inequality	Pro-poor Index
1988-1990	-0.99	-1.62	0.63	0.61
1990-1992	-1.08	-1.88	0.81	0.57
1992-1994	-2.29	-1.98	-0.31	1.15
1994-1996	-3.12	-2.44	-0.69	1.28
1996-1998	6.5	2.37	4.13	0.36
1998-2000	5.39	1.96	3.43	0.36
2000-2002	-4.73	-2.39	-2.34	1.98

Source: Socio-economic Surveys and own calculation

Table 2.18 Growth in per capita welfare (per capita income adjusted for household needs) in Thailand (per cent)

Decile	88-90	90-92	92-94	94-96	96-98	98-00	00-02
1	-2.7	-4.7	1.6	1.3	-1.4	-3.3	5.3
2	-3.0	-3.8	0.8	1.9	-1.2	-1.5	3.6
3	-3.5	-3.2	2.2	1.2	-0.8	-1.2	3.4
4	-3.2	-2.7	2.5	0.9	-1.2	-0.7	2.6
5	-2.8	-2.2	2.8	0.4	-1.3	-0.4	1.9
6	-2.6	-2.0	2.4	0.7	-1.3	-0.3	1.6
7	-2.7	-1.7	2.3	0.6	-1.3	0.5	0.2
8	-2.7	0.0	1.4	0.3	-1.1	0.9	-0.6
9	-2.2	1.4	-1.9	0.7	0.3	1.3	-1.7
10	5.2	1.8	-1.5	-1.2	1.4	-0.3	-0.8

Source: Socio-economic Surveys and own calculation

Table 2.19 Annual welfare growth from wages and salaries

Decile	88-90	90-92	92-94	94-96	96-98	98-00	00-02
1	4	6	18	5	3	-11	27
2	3	8	22	11	-4	-5	21
3	6	7	29	7	-2	-6	21
4	15	9	24	11	-5	-4	19
5	22	5	27	8	-5	0	12
6	12	12	21	6	-4	5	0
7	12	10	18	6	-6	3	3
8	14	16	9	2	1	2	3
9	8	19	4	5	1	3	1
10	17	15	6	2	3	1	3
Total	14	15	10	4	0	1	4

Source: Socio-economic Surveys and own calculation

Table 2.20 Annual welfare growth farm income

Decile	88-90	90-92	92-94	94-96	96-98	98-00	00-02
1	8	7	12	9	-10	-7	18
2	19	1	1	12	-1	-5	8
3	9	7	-1	12	-7	-5	12
4	11	5	-3	8	-5	-3	6
5	4	2	1	5	-6	-3	2
6	13	1	-4	11	-10	-7	20
7	11	-4	-1	4	-4	-6	12
8	3	-5	-5	24	-7	-15	10
9	10	-12	9	9	-4	-19	40
10	17	-16	9	21	-5	1	4
Total	11	-5	1	13	-6	-7	11

Table 2.21 Annual welfare growth from income in-kind

Decile	88-90	90-92	92-94	94-96	96-98	98-00	00-02
1	7	1	3	6	-3	1	1
2	3	4	3	2	-1	1	-2
3	2	4	3	1	2	0	-3
4	-1	3	4	0	0	1	-3
5	-1	6	2	1	1	-1	-2
6	1	3	7	0	1	-2	1
7	-1	6	4	4	0	-1	-1
8	1	8	6	3	-1	-1	-2
9	5	5	6	3	1	-1	-4
10	4	19	1	1	-1	-1	-3
Total	2	8	4	2	0	-1	-2

Source: Socio-economic Surveys and own calculation

3. Economic Growth and Employment

The performance of the Thai economy is broken down into three periods between 1980 and 2002, i.e. prosperity, crisis, and recovery, for an examination into the possible relationship between economic growth and employment.

3.1 The Prosperity (1980 – 1996)

Over the last two decades from 1977 - 1996, economic growth and social development in Thailand were remarkable. This achievement was made possible by a development strategy that emphasized the role of the private (business) sector, i.e. market-oriented policies. Economic growth rates were high at an average of 7.6 per cent per annum in that period.

- (a) Per capita income climbed from 17,500 Thai Baht (or US\$700) in the late 1960s to 75,103 Thai Baht (or US\$2,960) in 1996.
- (b) The price level was stable with an average annual inflation rate of 4.7 per cent between 1980 and 1996.
- (c) The unemployment rate was consistently low and stable with an annual average rate of 3.7 per cent between early 1980s and 1996.
- (d) Social indicators showed significant improvement. The population growth rate had gone from 1.5 per cent in 1992 to 0.3 per cent in 1999. Life expectancy rose from 56 years in the late 1950s to 72 years in mid 1990s. Gross enrolment ratios increased significantly at most levels of education. Primary education nearly reached universal enrolment in 1997; while, the lower secondary education showed an impressive gain from 40 per cent in 1990 to 72 per cent in 1997, and the upper secondary and vocational education almost doubled to 47 per cent in 1997.

On the employment front, employment rose consistently from 22.91 million workers in 1983 to 31.17 million workers in 1996 with a few exceptions in the period of 1993 and 1994 when employment dropped (Tables 3.1 – 3.2). One possible explanation

to this employment variation is that no surplus land could be found in Thailand after the 1980s and over time Thailand's comparative advantage in agriculture slipped away. Evidently, this can be seen through sectoral employment (Tables 3.1 – 3.3). Farm employment fluctuated from 16.07 million workers in 1986 to 17.30 million in 1992 before taking a big plunge in 1994 and down to 13.79 million in 2002. This employment drop of 14.19 per cent for the time span of 17 years is striking. The commanding role assumed by the agricultural sector as the biggest employer in the country is fading.

Taking a greater role in generating jobs is the manufacturing sector. This shift in employment reflects an alternative path Thailand was pursuing, that is, the manufacturing export-led growth, which began in 1985 and continued until 1996. Manufacturing employment responded with a vigour to that growth path. Employment doubled from 2.3 million manufacturing workers in 1986 to 4.6 million in 1995. In a similar, yet more pronounced fashion, as the economic boom was rolling into Thailand it invited increasingly greater investments in the manufacturing sector and infrastructure. As the private investment index soared from 53.6 in 1988 to 100.0 in 1995, construction activities surged and it translated into the acceleration in its employment, i.e. it more than quadrupled from 0.81 million workers in 1986 to 2.65 million in 1996.

Across regions, employment fluctuation did exist from 1992 to 1994 for the North and South regions. On the other hand, the Northeast saw its employment drop. The opposite is true for Bangkok and its vicinities and the Central region as well. Two years later, employment rose uniformly in all regions with the Northeast being the national largest employer with 10.17 million workers in 1996 and the Central region came in at a relatively distant second with 7.24 million workers (Table 3.4). A closer look into full-time workers, i.e. those who have at least 35 working hours in a week reveals a moderate fluctuation over time for all regions. Out of the total workers employed, the biggest share of full-time workers from 1992 to 1996 could be found in Bangkok and its vicinities with the North and Central regions coming in second and third, respectively.

This strong and healthy economy — nationally and regionally — up until 1993 reflected Thailand's market-oriented policies that have led to Thailand's economic structure together with its labour market structure, and this has somewhat reflected Thailand's comparative advantage and has evolved over time in response to the shifts in that advantage. Additional factors partially responsible for this economic success include conservative macroeconomic policies, a stable exchange rate, private investments – domestic and foreign in manufacturing and infrastructure.

3.2 The Crisis (1997 – 1999)

At one point Thailand was one of the world's fastest growing economies and a model of developmental success, however this came to an abrupt halt in 1997. What triggered the demise of the Thai economy was the collapse of export growth in 1996. In addition to capital outflow, the drop had provoked a speculative attack on the Baht because this drastic fall in export growth was the right condition for the expectation of Baht devaluation. In the period between 1984 and 1996, the slowdown in exports was evident and widespread among Thailand's markets but was pronounced in exports to Japan, NAFTA and China (Table 3.5). It can be seen from Table 3.6 that the slowdown was to a large extent exclusive to manufactured exports from labour-intensive industries. The drama did not end here. The fragile economy was further fuelled by the implosion of

Thailand's financial system. A great number of financial institutions were near insolvent at the beginning of 1997. The loans were overwhelmingly non-performing, particularly those to the property sector. However, after the flotation of the Thai Baht in early July 1997, followed the deterioration in the value of the Baht, and the ensuing downfall of the Thai economy with the total size of the non-performing loans ballooning.

One can characterize the Thai crisis of 1997 as a financial crisis due to excessive private borrowing, particularly short-term overseas loans. As evident in June 1997, short-term debts relative to international, or foreign exchange reserves were alarmingly high at 145 per cent. The implication is that if all debts were due on one particular day in June 1997, even with the depletion of the international reserves the economy would have not been able to retire all outstanding debts. Hardship ensued.

In a related story, over 1997, while being onslaught with these problems at home, waves of shocks were passing through from abroad: one, a sudden unwillingness of foreign lenders to lend; two, the central bank's requirement of raising the capital base. Given this set of difficulties, many financial institutions were very reluctant to lend to their customers. The abrupt withdrawal of credit seriously damaged the economy, i.e. a severe deflation and a contraction ensued. Enterprises were hit hard not only by the removal of financial/credit support from the local financial institutions but the burden of servicing their foreign debts loomed larger out of the appreciation of the US dollar against Thai Baht, that is, the price of the dollar was getting higher.

Soon, the collapse of the Baht contaminated the whole of East Asia feeding back to the foreign exchange market for the Thai Baht. The collapse of the Indonesian rupee and the Korean won pushed the Baht into a big plunge spiralling down, more than halving its earlier value relative to this period. Therefore, panic prevailed. To restore as well as to stabilize the value of Thai Baht and to prevent it from heading down further, the Bank of Thailand put forth extremely tight monetary policies, including a high rate of interest. The outcome was an extremely tight credit market.

As the crisis had evolved from the financial sector to the real sector of the economy, the effects upon society were deep and strong. The labour market was not an exception. Repercussions were felt in the third quarter of 1997. Employment was the initial target; sectors badly affected were financial services and parts of the manufacturing and services that served the domestic market.

The path from crisis to employment began with the credit crunch (or tight credit market) which, in turn, led firms to curb their production levels. The production decision surely had implications on employment, as outputs are a function of labour, among a host of production inputs. Though, jobs and therefore employment were likely to be cut, its size was very dependent upon the flexibility in the labour market in terms of wages and employment.

- (a) If wages could be adjusted downward with ease, then fewer workers would be removed from the payroll.
- (b) If wages were sticky downward, then the adjustment would shift toward a big cut in employment. In other words, there would be a massive layoff.

The structure of employment and some of the changes are shown in Tables 3.1–3.3. Out of the total labour force in Thailand, every one out of two workers was likely to engage him/herself in agriculture or related activities. Its share, however, has dropped somewhat overtime. In 1990, about 60 thousand workers participated in agriculture and the remaining 40 thousand workers in manufacturing and services (Table 3.1). With a shift in the economic structure toward manufacturing, the decline in the agricultural labour force was inevitable. Its share dropped to 45% in 1999 and the other two sectors were the recipients of the remaining 55% of workers (Table 3.3).

Prior to the crisis, the Thai labour market was rather short of labour. Real wages were accelerating as a whole for all parts of Thailand from 1992 to 1997. National real wages soared 21.11 per cent from 5,012 THB (or US\$200.48) in 1992 to 6,070 THB (or US\$242.80) in 1997. Regionally speaking, the biggest rise in wages was in the North with 4,611 THB (or US\$184.44) in 1997 up from 3,794 THB (or US\$151.76) in 1992. Though Northeastern real wages in 1997 (4,682 THB or US\$187.28) were slightly ahead of their Northern counterparts, the Northeast gained the smallest increase in its real wage (17.96 per cent).⁷ To cope with this problem, firms sought foreign migrant workers to fill in the vacancies. A few years later, the picture was completely different. In a short span of time, the second half of 1997, what was labour shortage became labour surplus as the number of terminated firms soared at an alarming rate from 77 in 1996 to 5,864 firms in 1998. Real wages declined and so did employment (Table 3.7)

It is well known that the unemployment measure is often vague and arbitrarily defined in developing economies. Thailand is no exception. To carry out any analysis on employment and unemployment data in Thailand, a word of caution must be made. The National Statistical Office⁸ liberally defines “being employed” as an individual who has worked at least one hour during the survey week or has not worked at all but still has his/her own farm or business and is seasonally inactive. Alternatively speaking, any individual who has worked less than one hour per week is “being unemployed” under the National Statistical Office’s count. One can see that these definitions surely underestimate the unemployment figure. Anyhow, it is evident from Table 3.4 that unemployment, defined as an individual who actively seeks work as well as merely willing to work, excluding the seasonally unemployed, rose substantially in all three rounds between 1996 and 1999. Round 1 in February saw the jobless rate in 1999 at 5.2 per cent, a big jump from 2.0 per cent in 1996; Round 3 in August saw it tripling from 1.1 per cent in 1996 to 3.4 per cent in 1998.

Commerce employment performed well with a slight rise in employment between 1997-2000 and the opposite was true for manufacturing and construction employment with the latter being severely affected. To be precise, construction employment nose-dived from a record high of 2.65 million workers in 1996 to 1.55 million in 2000 for a drop of 41.56 per cent in a span of 5 years. The drop was extremely severe between 1998 and 1999 when employment plummeted 23.6 per cent. One would speculate that those jobless workers resorted to alternative farm jobs. Contrary to that speculative view, agricultural employment declined (Table 3.3). An expectation that farming would be an alternative source of employment is not valid here. As a whole, of those 1.33 million

⁷ See Table 5.2 for details.

⁸ The NSO is responsible for the national labour force surveys, conducting three rounds of surveys on an annual basis; the first round being in February (the dry season), the second in May, and third in August (the rainy and harvest season).

Thais who lost their jobs, more or less, due to the crisis in February 1998, 6 out of 10 (or 64.23 per cent) formerly worked in the non-agricultural sector and the remaining (or 35.77 per cent) were farm workers prior to their termination (Table 3.8). The two biggest loss in jobs were construction and manufacturing with the shares of laid off workers at 25.45 per cent and 19.19 per cent, respectively. Put it differently, close to half of job losers in Thailand would have stayed with their construction and manufacturing jobs if the economy was strong and healthy.

Regional employment did not fare well either. In 1998, it plummeted in all regions nationwide. The biggest drop can be found in the Northeast where 585,000 workers lost their jobs in 1998. The job losses in all other regions in that same year were mild by comparison, particularly in the South with 10,000 workers who were jobless (Table 3). Unemployment rises were constant across regions as well. The Northeast took a sizable lead in its unemployment rate of 5.7 per cent in 1998 over all other regions. The South came out with the smallest loss from its lowest unemployment rate of 2.25 per cent in 1998 (Table 3.4).

The repercussions from the crisis upon the Thai labour market did not end there. Various measures to combat the hardship were introduced by firms to those 16.68 million workers who stayed on in February 1998, ranging from wage freezes to wage and/or fringe benefit cuts. Thai labour market flexibility is observed here as more than half (or 61.8 per cent) of Thai workers were willing to have their wages frozen.

What differentiates the Thai labour market from others is the dominating role of its informal sector. Employment in that sector has outnumbered that of the formal sector by 2.5 to 1. A case in point: in 1999, while 8.19 million Thais (or 26.7 per cent) found their employment in the formal sector, a bigger group of 22.47 million (or 73.3 per cent) earned their incomes in the informal sector (Table 3.9).⁹ On average, the informal sector is characterized by a large number of small-scale activities that adopt simple and labour-intensive technology. As a result, labour productivity and income tend to be low and lower than those in the formal sector. To a large extent, the informal sector is legal but it is unregistered, unorganised, and unregulated. The implication is that those who engage in informal-sector activities are outside national and local labour regulations. As the greater share of the Thai labour force is involved in the informal sector and its employment growth is expected to continue, the jobs and careers for these workers are at stake since they are exposed to risks and uncertainties arising from their jobs without any legal protection. Thailand is no exception.

From 1992 to 2001, the informal-sector real wage was far below that of the formal sector. Despite stronger performance in terms of growth - an annual average of 5.5 per cent between 1992 and 1997, the informal sector saw its real wage plummet after the crisis and has lost its growth momentum ever since (Table 3.10). Clearly, workers in the informal sector were exposed to fluctuations in national output and activities. Employment contracts and systematic wage arrangements between firms and workers do not exist as far as the informal sector in Thailand is concerned. Hours of work and wages vary from day to day. Employment and income security for these workers are, unquestionably, illusive. A spell of poverty is not a remote possibility as uncertainty becomes a norm here.

⁹ This sectoral employment differential held true through 2002.

“Conventional” informal activities found in Thailand take the forms of operating own small businesses on the sidewalk and in an alley, working for family businesses without pay, and being home based to deliver contract work.¹⁰ At the time of the turmoil in 1997 and the immediate year after, those own account and unpaid family workers were severely affected, particularly those with little schooling. A quarter of all job losers due to the crisis (or 286,300 workers) came from the “conventional” informal sector with 22.52 per cent (or 244,200 workers) unpaid family workers and 3.88 per cent (or 42,100 workers) own account workers.

Given that employment in the informal sector, for the likes of street vendors, shop attendants, and home contract workers, has been striking in Thailand, the workers in this sector may not be working as consistent or as much as their formal counterparts. These informal workers are perceived as “underemployed,” that is, those who work less than 20 hours a week. Underemployment is an equivalence of and can be counted as “hidden” unemployment. Its change has been dramatic, reflecting the manifestation of the employment problem in times of the crisis.¹¹ In August 1997 (after the floatation of the Thai Baht one month earlier), the unemployment rate (open and hidden) elevated to 9.1 per cent, a sizable change from 5.3 per cent in the same month of 1996; in the next 6 months to February 1998 the rate accelerated to 10.12 per cent.

Together with the rise in unemployment, the average hours worked and real wage rates have shown a similar decline. The average hours worked indeed fell 6 per cent from 51.4 hours per week in February 1996 to 48.3 hours in February 1998 (Table 3.4). The gains in real wages in the earlier period of 1989 to 1995 for an estimated annual growth of 6 to 6.5 per cent have reversed into demise. In the span of one year from February 1997 to February 1998, real wage growth, for the first time in recent decades, recorded a negative growth of 4.6 per cent. An average Thai worker found his/her compensation eroded from the monthly earning of 5,503 Baht (or US\$122.29) to 5,249 Baht (or US\$166.64).¹²

3.3 The Recovery (2000 – 2002)

After the Thai economy bottomed out in the third quarter of 1998 and contracted by as much as -10.5 per cent in the same year, a gradual rise in national output has been observed. Its year-on-year growth in real GDP (or GDP at 1988 prices) surged to 4.45 per cent and 4.65 per cent in 1999 and 2000, respectively. The growth performance subsided to an estimated 1.94 in 2001 but strongly rebounded to an estimated 5.22 per cent a year later. Fiscal spending, private consumption, and exports were the key drivers behind the growth. Given that the production utilization and actual output were well below their full capacity,¹³ reflecting a subdued economy in a span of 2 years from 1997-1998, stimulative and counter-cyclical fiscal spending was the optimal choice in reinvigorating growth in Thailand. This timely response from the government was due to the fact that public debt was remarkably low at the start of the crisis.

¹⁰ Note that those are not formal written contracts. They are, rather, informal cum verbal agreements on output, price, and delivery date.

¹¹ Other possible forms of underemployment include early retirement and cuts in real wages and benefits.

¹² US\$1.00 = 45 Thai Baht (THB)

¹³ Manufacturing capacity utilization plummeted from 77.4 in 1995 to 52.8 in 1999.

Private consumption has begun showing some sign of recovery after bottoming out by the third quarter of 1998, resulting in a drop in the composite private consumption index (1995 =100) from 101.4 in 1997 to 95.4 in 1998 for a drop of 6.3 per cent (Table 3.11). A number of indicators including electricity consumption, sales of department stores, sales of automobiles and motorcycles, imports of consumer goods, and revenue collected from the value added tax show a rise in private consumption. In 1999, total private consumption (96.9) recorded a small increase (1.6 per cent) from 1998. This revival in private consumption was made possible by the positive income effects associated with the fall in the unemployment rate as well as rising real wages in the manufacturing sector. Table 3.12 suggests that new jobs are being created predominantly in the manufacturing and construction sectors at growth rates of 10.6 and 11.6 percentage points, respectively. Between 1999 and 2000, as many as 500,000 were recruited thereby reducing the unemployment rate from 4.19% in 1999 to 3.59 per cent in 2000.

A similar response can be found in the hours of work. Full-time workers, that is, those who work at least 35 hours on a weekly basis, almost doubled in a space of one year from 15.99 million in 1999 to 26.86 million workers in 2000. As the growth momentum was restored between 2000 and 2002, more and more Thais worked longer hours. Thailand witnessed a total of 27.44 million full-time workers at the end of 2002, an average annual increase of 1.08 per cent between 2000 and 2002.

Though consistently being the biggest employer in Thailand, the share of employment in agriculture is falling gradually. Labour is being absorbed into manufacturing, commerce, and construction both in absolute and relative terms. The rise in employment between 2000 and 2002 was pronounced in the commerce sector and its share has escalated at a rate that could overtake its manufacturing counterparts in the near future (Tables 3.3 and 3.12).

Real wages rebounded from 5,561 THB (or US\$123.58) in 2000 to 5,844 THB (or US\$146.10)¹⁴ in 2002 from an average annual increase of 2.54 per cent – positively correlated to Thailand's economic growth that grew at an annual average rate of 3.94 per cent. A closer look into the sectoral wages confirms the fading role of agriculture as the biggest employment generator. Real farm wages never surpassed the national average wage. In fact, farm wages dropped further from 50 per cent in 1992 to 42 per cent in 2002. Real wages in all sectors outside agriculture grew impressively, especially services whose wage was well above the national average and growing from 144 per cent in 1992 to 155 per cent in 2002.¹⁵

¹⁴ US\$1.00 = 40 Thai Baht (THB)

¹⁵ See Table 5.3 for details.

Table 3.1
Labour force status: Thailand, 1986-1990

	(unit: thousands)				
	1986	1987	1988	1989	1990
Labour force	27,525	28,732	29,614	30,283	30,809
Employed persons					
<i>Total</i>	25,220	26,174	27,727	28,061	28,812
<i>Agriculture</i>	16,070	15,659	17,379	17,020	17,129
<i>Manufacturing</i>	2,300	2,739	2,611	3,104	3,322
<i>Construction</i>	678	817	809	947	2,649
<i>Commerce</i>	2,707	3,086	3,031	3,063	2,935
Employed persons (%)					
<i>Agriculture</i>	63.72	59.83	62.67	60.65	59.45
<i>Manufacturing</i>	9.12	10.46	9.42	11.06	11.53
<i>Construction</i>	2.69	3.12	2.92	3.37	9.19
<i>Commerce</i>	10.73	11.79	10.93	10.92	10.19
Unemployed persons	1,445	1,795	1,277	1,178	1,061
Unemployment rate (%)	5.25	6.25	4.31	3.89	3.44

Source: Labour Force Survey 1986-2002, National Statistical Office and Thailand Development Indicators, 1990-1999, National Economic and Social Development Board.

Table 3.2
Labour force status: Thailand, 1991-1996

	(unit: thousands)					
	1991	1992	1993	1994	1995	1996
Labour force	30,809	32,813	32,240	30,955	32,175	32,325
Employed persons						
<i>Total</i>	29,322	30,795	30,679	29,303	30,815	31,166
<i>Agriculture</i>	16,384	17,305	16,270	14,841	14,389	14,137
<i>Manufacturing</i>	3,658	3,933	4,179	4,079	4,609	4,651
<i>Construction</i>	1,412	1,617	1,615	1,880	2,248	2,649
<i>Commerce</i>	3,263	3,263	3,504	3,330	3,909	4,094
Employed persons (%)						
<i>Agriculture</i>	55.88	56.19	53.03	50.65	46.69	45.36
<i>Manufacturing</i>	12.48	12.77	13.62	13.92	14.96	14.92
<i>Construction</i>	4.82	5.25	5.26	6.42	7.30	8.50
<i>Commerce</i>	11.13	10.60	11.42	11.36	12.69	13.14
Unemployed persons	973	913	844	834	550	498
Unemployment rate (%)	3.12	2.87	2.64	2.65	1.72	1.55

Source: Labour Force Survey 1986-2002, National Statistical Office and Thailand Development Indicators, 1990-1999, National Economic and Social Development Board.

Table 3.3
Labour force status: Thailand, 1997-2002 (unit: thousands)

	1997	1998	1999	2000	2001	2002
Labour force	32,780	32,596	32,911	33,328	34,065	34,292
Employed persons						
<i>Total</i>	31,714	30,775	31,055	31,566	32,418	33,133
<i>Agriculture</i>	14,315	14,056	14,058	13,937	13,655	13,792
<i>Manufacturing</i>	4,644	4,556	4,626	4,656	5,166	5,257
<i>Construction</i>	2,502	1,661	1,423	1,548	1,585	1,701
<i>Commerce</i>	4,207	4,257	4,437	4,384	4,585	4,989
Employed persons (%)						
<i>Agriculture</i>	45.14	45.67	45.27	44.15	42.12	41.63
<i>Manufacturing</i>	14.64	14.80	14.90	14.75	15.94	15.87
<i>Construction</i>	7.89	5.40	4.58	4.90	4.89	5.13
<i>Commerce</i>	13.26	13.83	14.29	13.89	14.14	15.06
Unemployed persons	495	1,423	1,383	1,194	1,096	766
Unemployment rate (%)	1.53	4.37	4.19	3.59	3.23	2.24

Source: Labour Force Survey 1986-2002, National Statistical Office and Thailand Development Indicators, 1990-1999, National Economic and Social Development Board.

Table 3.4
Labour force status: Thailand, 1992-1998 (unit: thousands)

	1992	1993	1994	1995	1996	1997	1998
Employed persons							
<i>Northeast</i>	10,665	10,260	10,029	10,116	10,169	10,342	9,757
<i>North</i>	5,992	6,214	6,085	6,004	6,006	6,052	5,827
<i>South</i>	3,725	3,845	3,756	3,913	3,973	4,042	4,032
<i>Central</i>	6,933	6,978	6,954	7,136	7,244	7,313	7,243
<i>Bangkok and vicinities</i>	3,283	3,383	3,340	3,646	3,772	3,964	3,916
Full-Time workers							
<i>Northeast</i>	9,833	9,464	9,304	9,434	9,383	9,634	8,864
<i>North</i>	5,741	5,739	5,491	5,645	5,632	5,506	5,334
<i>South</i>	3,198	3,303	3,091	3,236	3,239	3,041	3,022
<i>Central</i>	6,583	6,408	6,510	6,637	6,778	6,590	6,476
<i>Bangkok and vicinities</i>	3,171	3,016	3,230	3,534	3,695	3,434	3,327
Full-Time workers (%)							
<i>Northeast</i>	92.20	92.24	92.77	93.26	92.27	93.16	90.84
<i>North</i>	95.81	92.36	90.23	94.01	93.77	90.97	91.54
<i>South</i>	85.86	85.91	82.30	82.71	81.53	75.24	74.95
<i>Central</i>	94.94	91.83	93.62	93.00	93.56	90.11	89.42
<i>Bangkok and vicinities</i>	96.59	89.15	96.719	96.95	97.95	86.62	84.96
Unemployment rate (%)							
<i>Northeast</i>	3.75	3.60	3.90	2.55	2.15	2.10	5.70
<i>North</i>	3.75	3.00	2.80	1.80	1.70	1.40	3.65
<i>South</i>	1.70	1.00	1.40	1.25	1.05	1.25	2.25
<i>Central</i>	1.75	1.55	1.80	1.25	0.95	1.20	3.00
<i>Bangkok and vicinities</i>	1.95	1.60	1.60	0.80	1.25	1.20	3.80

Source: Labour Force Survey 1986-2002, National Statistical Office

Table 3.5
Thailand: Exports by Destination, 1994-1996

Destination Share (%)	1994	1995	1996
ASEAN	18.2	19.9	19.3
Chinese Economies	9.5	10.5	8.7
Japan	17.1	16.8	16.7
European Union	14.9	14.5	15.8
NAFTA	22.6	19.1	18.5
Rest of the World	17.7	19.2	21.0

Table 3.6
Thailand: Exports growth rates by commodity, 1994-1996

Commodity	1994	1995	1996
Computer and parts	44.9	38.7	31.3
Garments	12.4	1.3	-21.9
Rubber	43.3	46.5	1.4
Integrated circuits	27.5	28.4	3.4
Gems & Jewellery	8.3	11.5	8.4
Rice	18.9	24.1	8.4
Sugar	41.2	67.2	11.7
Frozen shrimps	29.9	2.3	-17.8
Television & parts	26.2	12.7	14.1
Shoes & parts	40.5	37.0	-40.9
Canned seafood	24.7	4.1	-0.3
Air conditioner & parts	62.1	49.6	33.6
Plastic products	-29.1	102.2	51.4
Tapioca products	-13.6	-2.8	16.7
Textiles	4.5	22.1	-4.4
growth rate (%)	20.7	25.2	-3.3
share in total exports (%)	53.8	54.4	52.9

Table 3.7
Thai labour market: Employment, wages, and hours of work, 1996-1999

	February				August				
	1996	1997	1998	1999	1996	1997	1998		
Labour force participation (%)	70.1	69.2	68.5	68.9		71.7	71.9	70.8	
Real wages, average (Baht/month)		5,220	5,503	5,249	5,292		5,688	5,950	5,720
Hours of work, average (per week)	51.4	51.2	48.3	49.7		51.4	50.2	51.0	
Unemployment rate (%)	2.0	2.2	4.6	5.2		1.1	0.9	3.4	
Underemployment rate (%)	5.92	5.49	10.12	7.57		5.3	9.1	6.6	

Source: Labour Force Survey, National Statistical Office.

Table 3.8
Thai labour market: Former employment by sector

(unit: thousands)

	Former Employment	
	1997	1998
Total	567.9	1,325.5
Agriculture	279.8	474.1
Manufacturing	82.0	254.3
Construction	95.3	337.3
Commerce	49.6	129.4

Source: Labour Force Survey, February 1997-1998, National Statistical Office.

Table 3.9
Thai labour market: formal and informal employment

(unit: per cent)

	1999	2000	2001	2002
Employment rate	93.7	94.2	94.8	96.4
Share of employment				
formal sector	26.7	28.1	27.5	27.9
Informal sector	73.3	71.9	72.5	72.1

Source: Labour Force Survey, National Statistical Office.

Table 3.10
Thai labour market: formal and informal real wages

Sector	Real wages (THB/month)						Growth rate (%)		
	1992	1996	1997	1998	1999	2001	1992-1997	1997-1998	1999-2001
Formal	6,300	6,939	7,256	6,815	6,671	7,106	2.96	-6.1	1.5
Informal	2,798	3,567	3,652	3,197	3,195	3,051	5.50	-12.5	-1.5
Average	5,012	5,802	6,070	5,860	5,568	5,766	4.00	6.4	0.5

Source: Labour Force Survey, National Statistical Office.

Table 3.11
Thailand's selected economic indicators, 1995 – 2002

	1995	1996	1997	1998	1999	2000	2001	2002
Private consumption index (seasonally adjusted)	100.0	102.4	101.4	95.4	96.9	100.2	102.8	106.7
Manufacturing production index	100.0	107.8	107.2	96.5	108.6	112.1	113.6	123.2
Private investment index	100.0	90.2	63.4	27.1	33.8	41.5	41.6	51.4

Source: Bank of Thailand

Table 3.12
Thai labour market: Changes in employment and wages by sector (February round)

	Employment		Real wages at 1994 prices ⁽¹⁾	
	1999	2000	1999	2000
Total	2.1	1.9	-2.1	-0.2
Agriculture	7.8	-3.9	-7.2	-4.1
Manufacturing	-1.3	10.6	-1.6	4.2
Construction	-23.6	11.6	-0.1	-1.6
Commerce	1.6	5.4	-11.9	1.9

Notes: ⁽¹⁾ Average real wages per worker per month in a particular sector.

Source: Thailand Economic Monitor (June 2000), World Bank.

4. Linkages between Economic Growth, Employment and Poverty

Osmani (2002) attempts to explore the two channels that link economic growth and poverty together: the social provisioning channel and the personal income channel. For the former channel, economic growth enhances the poor to improve their capabilities, and these greater resources help them escape poverty. For the latter channel, economic growth translates into a higher income for the poor. Employment is the vital link between economic growth and poverty. In other words, the quantity and quality of employment of the poor determines how economic growth transforms into a higher income for the poor. When economic growth generates employment for the poor, it will raise labour demand, which help the poor who are unemployed or underemployed find jobs and earn incomes enough to meet their basic needs. And if labour productivity of the poor and marginal return for the poor increase from economic growth, the implication is an increase in their income.

The employment elasticities out of growth – aggregate as well as sectoral over a span of two and a half decades are analysed in this chapter in order to examine how employment intensive the pattern of growth in Thailand has been. Moreover, empirical linkages between output, employment and poverty are offered in this chapter.

4.1 Estimation of Employment Elasticities

The linkage between economic growth, employment and poverty can be explained by the employment intensity of growth. With sizable time series data from 1980 to 1996, the employment elasticity of output is estimated for the whole economy and for individual sectors in Thailand. With sizable time series data from 1980 to 1996, the elasticity is then estimated for the whole economy and for individual sectors in Thailand. In order to examine changes in employment elasticity over time, the regression model used in the analysis is shown below.

$$\text{Log (EMPLOY)} = a_0 + a_1 \text{log(GDP)} + a_2 \text{DUMMY 90*log(GDP)}$$

where EMPLOY = employment

GDP	=	Gross Domestic Product at 1988 price
DUMMY90	=	a dummy equals 0 for all years from 1980-1990 and 1 for all other years

It can be seen from the table 4.1 that employment elasticity with respect to real value added is estimated at 0.38 for the period 1980-1990 and 0.37 for the period 1990-1996. The elasticity for the latter period has declined little. It is expected to fall gradually as Thailand becomes more developed and relatively less labour abundant. The responsiveness in term of jobs to economic growth, as expected, is not uniform. Across sectors, the elasticity in construction has been very high (0.77) and has actually increased substantially during the 1990s. This supports the view that the growth in the construction sector can be an important source of employment and thus income for the poor. The employment elasticity in manufacturing has remained high at a stable level of 0.54. Employment elasticities in trade and services has remained stable at a moderate level of 0.47. The employment elasticity for the agricultural sector is the lowest in Thailand and it has declined from a level of 0.42 during the period 1980-1990 to a level of 0.39 during 1990-1996. The reason might be due to the labour shortage in the agriculture sector as Thailand's labour force, especially the 15-24 years old, is moving away from agriculture.

Even though employment elasticities in aggregate and in the agriculture sector are not very high, activities of the poor go beyond farms, encompassing an array of activities, namely construction, manufacturing, construction trade, and services. It could be argued that economic growth has been quite employment intensive in Thailand and has contributed to poverty reduction through the employment route.

4.2 Economic growth, employment and poverty: A nexus

An important question is whether the incidence of poverty can be explained by differences in employment and labour market structures. It is useful to begin with the characteristics of the poor based on the nature of employment. Of all the poor in Thailand in 2002, 34.0 per cent are under 15 years old and have virtually no labour earnings, 22.6 per cent are unpaid family workers, 15.1 per cent are economically inactive (e.g., housewives), 9.0 per cent are private employees, and 13 per cent are own-account workers (Table 4.2). As far as Thailand is concerned, a poor Thai is more likely to be working poor who engage themselves in wage employment or being self-employed. While employment is not powerful enough to reduce poverty for close to half of the poor who are under 15 years of age as well as those who are not labour participants, these young poor are dependent on their household heads who have jobs to provide them those basic needs. Obviously, employment for household heads can be a vehicle for poverty reduction in Thailand.

The linkages between incidence of poverty, economic growth and employment are empirically tested in this section. Similar to earlier studies Khan (2001) and Osmani (2003), there are five explanatory variables for poverty reduction. One, GDP growth that expands an economy allows more employment. Two and three are the growth elements that generate an increase in employment and an increase in per capita income, which enables households to escape poverty. Four is the extent to which poor individuals are

able to respond to employment. And, five is the income distribution that increases the total income share of the poor.

$$\text{Log (POV)} = a + b_1 \log(\text{GDP}) + b_2 \log(\text{ELAS}) + b_3 \log(\text{MEAN INCOME}) \\ + b_4 \log(\text{DEPEND}) + b_5 \log(\text{GINI})^{16}$$

where

POV	=	headcount ratios
GDP	=	Growth Domestic product
ELAS	=	Employment elasticity in real output
MEAN INCOME	=	per capita household income
DEPEND	=	Dependency ratio
GINI	=	GINI coefficient

Since time series data on aggregate level is limited, sectoral data spanning from 1988 to 1996 is used instead. With 25 overall samples,¹⁷ the data is disaggregated into five sectors: agriculture, manufacturing, construction, trade, and services.

The double logarithmic regression model is used to allow the interpretation of the coefficient as the poverty elasticity with respect to the explanatory variables. Poverty incidence measured by the headcount ratio is used as dependent variable. The explanatory variables are the sectoral Gross Domestic Product, the employment elasticity of sectoral output, the per capita household income, the dependency ratio (i.e. a proxy for the ability of the poor individuals to respond to the rise in employment), and the Gini coefficient, a measure for income inequality.

$$\begin{aligned} \text{Log (POV)} &= 3.39 - 0.05 \log(\text{GDP}) - 0.14 \log(\text{ELAS}) - 1.87 \log(\text{MEAN}) \\ &\quad \text{INCOME) } \quad \quad \quad (-0.37) \quad \quad \quad (-1.64)^{**} \quad \quad \quad (-9.59) \\ &\quad * \quad \quad \quad + 0.08 \log(\text{DEPEND}) + 3.42 \log(\text{GINI}) \\ &\quad \quad \quad (0.22) \quad \quad \quad (4.30)^* \\ \text{Adjusted R-squared} &= 0.87, \text{ Durbin-Watson Stat} = 2.5 \end{aligned}$$

Note: *t* statistics in parentheses

* significant at 95 per cent level

** significant at 90 per cent level

¹⁶ Estimation using this model can yield a problem of multicollinearity when GDP and mean income are highly correlated. This problem is less severe when GDP growth is not associated with a growth in household income. For example, when the rise in GDP is from the export of high technology products, whilst a major part of the population are still labourers, mean income of the population in this sector will not necessarily rise. In this case, growth merely occurs for a minor part of society, while the income of the major part of the population is still unlikely to be affected

¹⁷ The 1997-2002 is excluded from the regression since there is a structural break of the economy as a result of the crisis.

The regression results can explain the relationship reasonably well with a high adjusted R-squared of 0.87. As expected, both the logarithmic of dependency ratio and of GDP, or GDP growth rate, are not statistically significant.¹⁸ This supports the view that even though economic growth is necessary, it is not sufficient to combat poverty. At the opposite end, poverty is statistically related to mean household income. To be precise, a 1 per cent increase in per capita household income will lead to a 1.87 per cent reduction in poverty. In a similar fashion, employment elasticity of output and the Gini coefficient are statistically significant, that is, a 1 per cent increase in employment elasticity of output will lead to a 0.14 per cent reduction in poverty, while a 1 per cent increase in the Gini coefficient will lead to an increase in poverty by 3.4 per cent. The empirical results confirm that growth, which generates employment and income for the poor, is extremely important in achieving the goal of poverty reduction.

Table 4.1
Estimation of real output elasticity of employment

Major Industry	Elasticity of employment 1980-1990 (coefficient a1)	Elasticity of employment 1990-1996 (coefficients a1 and a2)
Aggregate	0.388421	0.37717
Agriculture	0.421236	0.39246
Manufacturing	0.54942	0.55925
Construction	0.773041	0.83275
Trade	0.47416	0.47860
Services	0.46720	0.46124

Source: Own estimation

Table 4.2
Share of the poor by employment status

Share of the poor (per cent)	1996	1998	2000	2002
Employer	0.0	10.5	11.5	5.6
Own account worker	0.0	7.3	7.5	12.5
Private employee	6.7	7.7	6.4	9.0
Unpaid family worker	25.7	24.5	25.7	22.6
Government employee	0.2	0.2	0.3	0.3
Unemployed	0.4	0.8	n/a	0.8
Economically inactive	12.6	15.3	13.6	15.1
No occupation	0.4	0.2	0.9	0.2
Children under 15 years old and no income from working	35.4	33.6	34.1	34.0

Source: Socio-economic Surveys and own calculation

¹⁸ There is less severe multicollinearity in this equation since the correlation between sectoral GDP and sectoral mean income during 1988-1996 is -0.06 and dropping mean income does not increase the t-score for sectoral GDP.

5. Income Inequality and the Labour Market

Economic development has transformed the structure of the Thai economy from agricultural to manufacturing. This has brought along a shift in the structural composition of employment from an agrarian sector to a manufacturing sector. Kuznets (1955) argues that, in the first stage of this development, income inequality arises from an elastic supply of labour. In a later stage, as workers transfer from the unproductive to productive sector, farm and manufacturing labour productivity as well as returns converge and income inequality eventually declines. From a different viewpoint, the evidence shows that the rapid economic growth in Thailand was associated with rising inequality. The income inequality measured by the Gini index rose from 0.485 in 1988 to 0.525 in 2000.

This chapter examines factors relating to employment and labour markets in explaining the high and rising income inequality in Thailand. This analysis is based on the 1988-2002 Socio-economic Surveys (SES) and the Labour Force Surveys (LFS) conducted by the National Statistic Office.

5.1 Income inequality in Thailand from 1988 to 2002

The growth process in Thailand for the last ten years was not accompanied by a monotonic decline in the income inequality. The Gini coefficient rose sharply from 0.485 in 1988 to 0.536 in 1992. It then declined to 0.511 in 1998 before increasing again in 2000 to 0.525. The ratio of income received by the richest fifth of the population to that received by the poorest fifth increased from 11.9 in 1988 to 13.5 in 2002. Again, the ratio of income received by the richest tenth of the population to that received by the poorest tenth increased from 20.7 in 1988 to 24.7 in 2002.

An analysis on the structure of income sources is important to the identification of causes of income inequality. Household incomes, rather than individual incomes, are the focal point since the rural poor in Thailand are dependent on non-pecuniary household incomes. The SES sources of income are employed here as LFS individual labour earnings count just pecuniary wages and leave out the earnings of self-employed and unpaid family labour.

Recall that Kakwani (1997) constructed the economic welfare of the household by dividing the per capita household income from each source by a per capita household poverty line. A significant change in the share of total household income is found between 1988 and 2002. The share of total household income from wages and salaries rose from 34 per cent in 1988 to 42 per cent in 2002; that of entrepreneurial income increased from 15 per cent in 1988 to 19 per cent in 2002; that of farm income declined from 16 per cent in 1988 to 11 per cent in 2002; and that of income in-kind declined from 25 per cent in 1988 to 17 per cent in 2002 as well. These changes indicate a growing participation in the formal labour market. The ratio of employment in the formal sector to that in the informal sector went up substantially from the 41 per cent in 1988 to 62 per cent in 2002. As wages and salaries have commanded a major share in the sources of income, they contribute to a higher degree in explaining income inequality.¹⁹

¹⁹ Other sources of income such as entrepreneurial, farm, and transfer income also contributed to a rise in income inequality. In particular, the distribution of entrepreneurial incomes became less equal. Surprisingly transfer income which should have been distributed more proportionally to the poorest was not found. It is interesting to explore the explanation in future research.

To investigate whether wage inequality is on a rise, the household per capita wage welfare (which is the per capita wage adjusted for household needs) is divided into 10 deciles. The ratio of wage income received by the richest tenth of the population to that received by the poorest tenth increased from 39 in 1988 to 56 in 1996 before declining to 43 in 1998. As a result of the crisis, household wages of the poorest deciles declined sharply in that period (1998-2000) causing an increase in the ratio to 56 in 2000. The wage incomes were distributed more equally in 2002 as the ratio declined to 39 from the fact that the poorest tenth of the population benefited from the wage growth. However, the share of the wage income received by the poorest tenth of the population has not gone up substantially. It shows that the overall effect of wage income does not extend to the poor as job opportunities in the high wage sector is limited. Workers from households with the poorest ninth and tenth per cent of population, especially unskilled workers, have little education and/or skills that deter them from securing jobs in the high wage sector.

5.2 Determinants of income inequality

Real wage differentials are an important source of income inequality in Thailand. The inequality in real wage can be explained by (1) level of schooling (2) regions of employment (3) sectoral employment and (4) formal/informal sector²⁰.

As expected, higher levels of schooling are associated with higher levels of real wage. There is a rising trend in the real wage differentials among education levels since 1998, a year after the crisis (Table 5.1). During 1998-2001, the real earnings of employees with primary and secondary education continued to drop, while those with vocational and college education continued to rise. One factor that explains the sharp increase in wage inequality is that most of the labour force in Thailand (approximately 74 per cent of the Thai labour force in 1997) has primary education or less. With the relatively abundant supply of labour, the wage could be paid for less.

Regional differences in real labour wage do exist. In 2002, average real wage in Bangkok was 1.6 times the national average – up from 1.4 times in 1992. For other regions (except Central areas), the average wage compared with the national average, increased from 133.3 per cent in 2000 to 136.3 per cent 2002. The main factor behind regional wage differences are labour productivity, measured by gross regional product per worker. Greater labour productivity is found in a higher portion of Bangkok Metropolitan and its vicinity. The Northern and Northeastern regions where most of the population is poor, have lower labour productivity than the rest of the country. In addition, the average rural wage compared to the national average, reduced from 71 per cent in 1992 to 68.84 per cent in 2002, while the urban wage increased from 131.1 per cent in 1992 to 136.2 per cent in 2002 (Table 5.2).

In addition, part of the increase in income inequality can be explained by wage differentials in the agriculture sector and manufacturing sector. The structure of employment has changed at a slower pace than the change in the structure of GDP. In 1980, the agricultural sector accounted for 71 per cent of total employment and 20 per

²⁰ In many developing countries, say, African countries, gender equity in labour market is a dominant factor in explaining differences in wage earnings. However, in Thailand, gender equity is unlikely an issue. Average male wage is 1.1 times the country's average wage whereas average female wage is 0.9 times the country's average wage.

cent of real GDP. The real output per worker in this sector was 11,577 Baht per worker per year (measured at 1988 price). For the same year, the manufacturing sector accounted for 8 per cent of total employment and 23 per cent of real GDP. The real output per worker in manufacturing was 117,967 Baht per worker per year (measured at 1988 prices). In 2000, the manufacturing sector accounted for 16 per cent of total employment but only for 36 per cent of real GDP. The real output per worker in this sector was 211,098 Baht per worker per year (measured at 1988 prices). This indicates a vast gap in productivity between agricultural and manufacturing sectors, which explains real wages differentials, and hence income inequality between those engaged in agriculture and industry.

There are clear indications of real wage differences reflecting differentials in labour productivity (Table 5.3-5.4). The relative low labour productivity is a contributing factor to the relatively low farm income. In 2002, average real wage in the agricultural sector was 0.47 times the national average, reflecting the fact that it has lower productivity than the national average. It is noted that sectoral productivity measured by real output per worker does not take into the account the quality of workforce, which is a major determinant of labour productivity. For example, farm workers tend to be old (45-60 years of age) with low levels of education and fewer working hours (Wasantiwong (2002)). This difference explains lower farm wages than wages in other sectors. The positive trend between labour productivity and real wage is also found in the agriculture and manufacturing sector over time.²¹

Lastly income inequality can be explained by real wage differentials between formal and informal sector. The real wage in the informal sector tends to decline. These workers who represent two-thirds of the entire labour force earned 2,913 Thai Baht (or US\$64.73) per month in 2002. Relative to workers in the formal sector whose real wage rate continued upward from 6,671 Thai Baht (or US\$148.24) on average in 1999 to 7,222 Baht (or US\$160.49) on average in 2002. This widens the wage gap between formal and informal sectors, not only in terms of income but also the related social welfare and benefits from the government, which hardly extends its coverage to workers in the informal sector. Another finding is that the economic crisis caused real wages in the formal and informal sectors to fall by 6 per cent and 13 per cent, respectively from 1997 to 1998. It reveals that labour in the informal sector was severely affected by the crisis (Table 5.5).

In conclusion, real wage disparity in Thailand can be explained by differentials in labour productivity. Workers with low levels of education, working in Northeast/agricultural sector/ informal sector are likely to have low productivity. The policy recommendation is to improve access of the poorer households to the higher wage jobs by having vocational programs. Moreover, the majority of the workers in Thailand are self-employed working in small farms/ enterprises. They do not access the formal labour protection program such as unemployment insurance/ minimum wages. It is therefore recommended that policy measures be set to extend coverage to these people. This will promote equity across income groups and regions.

²¹ The positive trend is not found in the agriculture sector during 1997-1999.

Table 5.1
Real wage differentials by level of schooling

Education Level	Real Wage (Baht/person/month)						Average wage to national average (per cent)					
	1992	1996	1997	1998	1999	2001	1992	1996	1997	1998	1999	2001
All levels	5,012	5,802	6,070	5,680	5,568	5,766	100	100	100	100	100	100
Primary school or less	3,187	3,899	3,944	3,516	3,443	3,376	63.6	67.2	65	61.9	61.8	58.6
Secondary school	5,410	5,782	5,686	5,119	4,877	4,754	107.9	99.7	93.7	90.1	87.6	82.4
Vocational school	7,430	8,108	8,536	7,088	7,401	7,794	148.2	139.7	140.6	124.8	132.9	135.2
University	11,433	12,684	13,147	11,731	11,164	11,833	228.1	218.6	216.6	206.5	200.5	205.2

Source: own calculation based on nominal wage data, the Labour Force Survey (Round 3), National Statistical Office and Consumer Price Index (CPI) from Ministry of Commerce.

Table 5.2
Real wage differentials by region/area

Region/area	Real Wage (Baht/person/month)							Average wage to national average (per cent)						
	1992	1997	1998	1999	2000	2001	2002	1992	1997	1998	1999	2000	2001	2002
Whole Kingdom	5,012	6,070	5,680	5,569	5,561	5,748	5,844	100	100	100	100	100	100	100
Northeastern	3,969	4,682	4,215	4,348	4,190	4,291	4,209	79.2	77.1	74.2	78.1	75.3	74.7	72
North	3,794	4,611	4,287	3,994	3,960	4,356	4,341	75.7	76	75.5	71.7	71.2	75.8	74.3
South	4,227	5,488	4,909	4,800	4,853	4,364	4,097	84.3	90.4	86.4	86.2	87.3	75.9	70.1
Central	4,013	4,928	4,472	4,387	4,610	4,735	5,872	80.1	81.2	78.7	78.8	82.9	82.4	101
Bangkok and Vicinities	7,173	8,530	8,127	8,117	8,066	8,494	9,406	143	141	143	146	145	148	161
Urban Area	6,571	7,786	7,435	7,413	7,411	7,701	7,957	131	128	131	133	133	134	136
Rural Area	3,597	4,476	4,010	3,918	3,938	4,052	4,023	71.8	73.7	70.6	70.4	70.8	70.5	68.8

Source: own calculation based on nominal wage data, the Labour Force Survey (Round 3), National Statistical Office and Consumer Price Index (CPI) from Ministry of Commerce.

Table 5.3
Real wage differentials by sectors

Sector	Real Wage (Baht/person/month)					Average wage to national average (per cent)				
	1992	1997	1998	1999	2000	1992	1997	1998	1999	2000
National	5,012	6,070	5,680	5,569	5,561	100.00	100.00	100.00	100.00	100.00
Agriculture	2,256	3,042	2,514	2,517	2,610	45.01	50.12	44.26	45.20	46.93
Manufacturing	4,471	5,660	5,093	5,109	5,109	89.21	93.25	89.67	91.74	91.87
Construction	4,043	4,509	4,207	4,031	4,187	80.67	74.28	74.07	72.38	75.29
Trade	5,569	7,596	7,038	6,865	6,960	111.11	125.14	123.91	123.27	125.16
Services	6,437	7,164	6,770	6,620	6,773	128.43	118.02	119.19	118.87	121.79

Table 5.4
Labour Productivity differentials by sectors

Sector	Labour Productivity (Million Baht/person)					Average labour productivity to national average (per cent)				
	1992	1997	1998	1999	2000	1992	1997	1998	1999	2000
National	0.07	0.10	0.09	0.09	0.10	100.00	100.00	100.00	100.00	100.00
Agriculture	0.02	0.02	0.02	0.02	0.02	23.10	23.35	25.87	25.00	25.92
Manufacturing	0.17	0.22	0.19	0.22	0.21	230.73	222.05	213.39	232.07	220.88
Construction	0.15	0.13	0.19	0.24	0.23	206.93	131.06	213.53	256.28	244.25
Trade	0.11	0.10	0.09	0.09	0.09	146.13	107.59	97.87	95.20	93.21
Services	0.07	0.07	0.07	0.07	0.07	97.81	75.02	75.57	74.95	76.13

Table 5.5 Real wage differentials by formal/informal sector

	Real Wage (Baht/person/month)						Average wage to national average (per cent)					
	1996	1997	1998	1999	2001	2002	1996	1997	1998	1999	2001	2002
Average	5,802	6,070	5,680	5,568	5,766	5,844	100	100	100	100	100	100
Formal Sector	6,939	7,256	6,815	6,671	7,106	7,222	120	120	120	120	123	124
Informal Sector	3,567	3,652	3,197	3,195	3,051	2,913	61	60	56	57	53	50

Source: own calculation based on nominal wage data, the Labour Force Survey (Round 3), National Statistical Office and Consumer Price Index (CPI) from Ministry of Commerce.

6. The Role of Employment and Labour Market in Poverty Reduction: A Micro Analysis

The role of employment and the labour market in explaining poverty can be analysed at a micro level (household) with a framework of demand and supply. On the demand side, low demand for labour, due to low average productivity of the workforce, affects the probability of being poor from low levels of real wages and earnings. This can be explained by the type of economic activities and employment in which earning members of households are engaged. On the supply side, limited ability of the poor to integrate into the process of economic growth and get access to the creation of jobs is a key role of employment in reducing poverty. This ability will be reflected in (1) the characteristics of the labour force (such as level of education) and the labour force participation and (2) access to capital and productive assets. This section will examine the impact of these variables on the probability of a household being poor using a PROBIT model.

6.1 Labour force characteristics of poor households

In the context of labour demand and supply, labour and employment related characteristics that affect poverty could be divided into: (1) employment characteristics (i.e. types of economic activities and modes of employment), (2) worker characteristics (i.e. level of education and participation) and (3) asset characteristics (i.e. land assets and remittance receipts).

The SES data of 2002 show that in both urban and rural areas, a higher percentage of poor households are found in the agricultural sector with a reversal of this situation for manufacturing, construction, trade and services. Another finding is that for transportation activity, a higher percentage of poor are found in urban areas, whereas a lower percentage of poor are found in rural areas (Table 6.1).

**Table 6.1
Distribution of labour by sectors**

Sectors	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Agriculture	7.7	49.5	55.6	80.6
Manufacturing	4.4	2.4	3.1	2.2
Construction	1	0.3	0.7	0
Trade	18.3	7.2	9.3	1.9
Transportation	4.6	5.5	2	0.4
Service	13.2	6.3	4.1	0.9

**Table 6.2
Percentage Distribution of the Poor and Non-Poor by mode of employment**

Mode of Employment	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Looking for work	1	0.6	0.3	0.4
Employer	9.4	17.8	21.4	20.8
Own-Account Worker	23.6	33.9	33	46.3
Unpaid family worker	1.7	1.9	2.3	3.2

Employee-gov	10.8	1.3	6.1	1.1
State enterprise employee	2	0	0.8	0
Employee-private	31.4	24.1	18.9	13.6
Co-op member	0	0	0	0.1
Economic Inactive	19.7	19.8	16.8	14.2
No occupation	0.4	0.5	0.2	0.3

Source: own calculation from the 2002 Socio-Economic Survey (SES)

For modes of employment, household heads of the poor families are more likely to be either jobless, unpaid family workers, or own-account workers (Table 6.2). Extent of household heads, who are economically inactive such as housewives and job seekers, shows a different picture between rural and urban areas. In urban areas, economically inactive poor outnumber the non-poor whereas the reverse is true in rural areas. In the rural areas, the percentage of the one who is looking for work is higher among the poor than the non-poor. The reverse is true for the urban areas.

Educational attainment of the household heads does not differ significantly between the poor and non-poor families (Table 6.3). The percentage of household heads with no more than primary education is only marginally different from non-poor heads. As expected, those poor with college education are of much smaller percentage relative to the non-poor.

The dependency ratio, measured as the proportion of non-earners to household size, is a burden, which limits participation in the workforce. Table 6.4 shows that poor households also have higher dependency ratios. For asset characteristics, a higher percentage of households that posses land or receive assistance or pensions are non-poor.

Table 6.3 Distribution of household heads by level of education

Level of Education	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Primary school or less	64	67.1	68.8	70
Secondary school	21.2	21.5	19.4	18.7
Vocational school	7.1	6.6	6.6	6.9
University	7.6	4.8	5.2	4.2

Source: own calculation from the 2002 Socio-Economic Survey (SES)

Table 6.4 Average dependency ratios of households

	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Dependency Ratio	0.31	0.44	0.39	0.45

Source: own calculation from the 2002 Socio-Economic Survey (SES)

**Table 6.5
Distribution of household by land holdings**

Level of Education	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Land owners	69.96	30.04	81.25	18.75

Source: own calculation from the 2002 Socio-Economic Survey (SES)

Table 6.6
Distribution of households by remittances

Level of Education	Urban		Rural	
	Non-Poor	Poor	Non-Poor	Poor
Receive transfer payments	93.81	6.19	88.32	11.68

Source: own calculation from the 2002 Socio-Economic Survey (SES)

6.2 Probability of a household being poor

A probability (PROBIT) model is constructed to explain poverty using 2002 SES household data. Here, it is argued that variables below explain the probability of being poor.

- (1) **employment characteristics** (types of economic activities and modes of employment). It is hypothesized that a farm household is more likely to be poor since its productivity and, therefore, earnings are low. Moreover, different types of working status such as own account workers, unpaid family workers and private employee are tested to see the influences on the probability of being poor.
- (2) **worker characteristics** (level of education and participation). It is argued that a household head with no more than primary and high dependency burden is more likely to be poor.
- (3) **asset characteristics** (land holdings and transfer payments). This section tests whether a household that owns farm decreases the probability of being poor. Households in rural parts of Thailand rely on remittance receipts. It is hypothesized that a household that receives assistance or pension has less likelihood of being poor.
- (4) **place of residence** Households in the Northeast always have low earnings and welfare. This increases the probability of being poor.
- (5) **demographic characteristics** (household size, age of household head, and sex of household head). A look into the demographic characteristics of the poor and non-poor households reveals that the former, on average, have a bigger household and the head of household is male. It will be tested empirically whether household size and gender of household head can explain the probability of being poor.
- (6) **income** (wage and salary, farm and non-farm profits, and income in-kind). The evidence in Thailand shows that the disparity of per capita welfare between the poor and the non-poor is significant. As income gets higher, the likelihood of being poor becomes smaller. This section also tests whether different sources of income i.e. wage and salaries, farm income, and income in-kind, will affect the probability of being poor differently.

The probit model being tested for the likelihood of being poor is shown below.

$$\begin{aligned}
 \text{Prob (POOR)} = & a_0 + a_1 \text{Dagri} + a_2 \text{Down acc} + a_3 \text{Dunpaid} \\
 & + a_4 \text{Dprivate employee} + a_5 \text{Dprimary} + a_6 \text{DEPEND} \\
 & + a_7 \text{Dland} + a_8 \text{Dassist} + a_9 \text{Dnortheast} + a_{10} \text{SIZE} \\
 & + a_{11} \text{Dfemale} + a_{12} \text{WAGE}, + a_{13} \text{NON-FARM} + a_{14} \text{FARM} \\
 & + a_{15} \text{INKIND}
 \end{aligned}$$

where:

Prob (Poor)	=	Probability of being poor (=1 if the household per capita income is less than the household poverty line and = 0 otherwise)
Dagri	=	a dummy (= 1 if agriculture and = otherwise)
Down acc	=	a dummy (= 1 if household head is an own-account worker and = 0 otherwise)
Dunpaid	=	a dummy (= 1 if the household head is an unpaid family worker and = 0 otherwise)
Dprivate employee	=	a dummy (= 1 if the household head is a private employee and = 0 otherwise)
Dprimary	=	a dummy (= 1 if the household head gets no more than primary education and = 0 otherwise)
DEPEND	=	dependency ratio (the proportion of non-wage earners to household size)
Dland	=	a dummy (= 1 if the household owns farm and = 0 otherwise)
Dassist	=	a dummy (= 1 if the household has transfer payment and = 0 otherwise)
Dnortheast	=	a dummy (= 1 equals 1 if the household is in northeast and = 0 otherwise)
SIZE	=	household size
Dfemale	=	a dummy (= 1 if female household head and = 0 otherwise)
WAGE	=	wage and salary (the ratio of per capita household wage and salary to per capita household poverty line)
NON-FARM	=	non-farm income (the ratio of per capita household non-farm income to per capita household poverty line)
FARM	=	farm income (the ratio of per capita household farm income to per capita household poverty line)
INKIND	=	transfer payment (the ratio of per capita household income in-kind to per capita household poverty line)

Empirical results as seen in Table 6.7 reveal that farm households are more likely to be poor. This, perhaps, is due to low farm productivity and earnings. Household heads that are either own account workers or private employees are more likely to be poor due to low earnings. Place of residence strongly affects poverty. In fact, households in the Northeast have a higher probability of being poor. The probability increases monotonically with household size and male household head. Female household heads are less likely to be poor. This is probably due to the fact that female labour possess general skills that are transferable across jobs and sectors so they gain easy access to labour-intensive jobs in services and handicraft sectors.

The empirical results show that different sources of income will affect the probability of being poor, differently. For example a 1% increase in farm income will decrease the probability of being poor by 0.023%. A 1% increase in wage and salaries will decrease the probability of being poor by 0.021%. A 1% increase in in-kind income will decrease the probability of being poor by 0.016%. Among various sources of income welfare, the results show that the farm income has contributed most to the chance of being poor.

In conclusion, the higher probability of being poor in Thailand is found among agriculturists, in families with a larger number of dependent children and elderly people or with remittance received or with low income welfare, such as in the Northeast. Moreover, household heads whose working status is own-account and private employees are more likely to be poor.

Table 6.7
PROBIT results on the likelihood of being poor

Explanatory variables	Coefficient	Marginal Effect	Z-statistics	Significance
Constant	2.697	1.076	24.476	0.000
Whether Agriculture	0.815	0.325	12.999	0.000
Whether own account worker	0.296	0.118	5.761	0.000
Whether unpaid family worker	0.192	0.077	1.341	0.180
Whether (private) employee	0.922	0.368	12.382	0.000
Whether primary school education or less	0.002	0.001	0.049	0.961
Dependency ratio	0.328	0.131	4.106	0.000
Whether owns land	-0.075	-0.03	-1.055	0.292
Whether remittance received	-2.703	-1.078	-35.130	0.000
Whether northeast	0.126	0.05	2.858	0.004
Household size	0.140	0.056	9.855	0.000
Whether female head	-0.202	-0.08	-4.176	0.000
Wage and salaries welfare	-0.053	-0.021	-39.374	0.000
Non-farm income welfare	-0.043	-0.017	-30.758	0.000
Farm income welfare	-0.057	-0.023	-33.774	0.000
In-kind income welfare	-0.040	-0.016	-33.537	0.000

McFadden R-squared = 0.721

Log likelihood = -2432

Total observation = 34785

Non poor observation = 32395

Poor observation = 2390

7. Conclusions and Policy Implications

On the premise that economic growth creates employment and earnings, which, in turn, takes more and more people out of poverty, this study empirically tests its validity in the case of the Thai economy.

7.1 Effect of growth on poverty reduction

Conceptually, the macro linkage between growth, employment, and poverty rests on the growth in labour productivity. Thailand witnessed over two decades of high economic growth rates from 1977 to 1996 for an average of 7.6 per cent per annum. Per capita income climbed from US\$700 in the late 1960s to US\$2,960 in 1996. The unemployment rate was consistently low and stable with an annual average of 3.7 per cent. On that path, came structural changes. One is the shift from agriculture to manufacturing as the former's share in GDP became smaller and the latter's bigger over

time. Two, the Thai economy is oriented to the world market with an annual average rate of export growth well over 11 percentage points. The export structure has shifted too, from traditional farming as well as labour-intensive goods to technology-intensive manufacturing outputs. Labour productivity grows as the Thai economy expands, so does employment. From 1985 to 1996, with an exception in the period of 1993 to 1994, employment rose consistently from 24.23 million to 31.17 million workers. One possible explanation to this employment variation is that no surplus land could be found in Thailand after 1980s and over time Thailand's comparative advantage in agriculture has slipped away, so has farm employment. The manufacturing sector has gradually taken a greater role in generating jobs reflecting the manufacturing export-led growth, which began in 1985 and continued until 1996. Manufacturing employment doubled from 2.3 million workers in 1986 to 4.6 million in 1995. As private investment soared between 1988 and 1995, construction activities surged and, undoubtedly, accelerated its employment, that is, it more than quadrupled from 0.81 million workers in 1986 to 2.65 million in 1996.

Real wages fare better as well. Thai labourers saw their real wage soar 21.11 per cent from 5,012 THB (or US\$200.48) in 1992 to 6,070 THB (or US\$242.80) in 1997. Across regions, the Northeast gained the smallest increase in real wage (17.96 per cent) while the opposite can be said of the North (21.53 per cent). Sectorally speaking, farm labourers earned a lower real wage over time and lagged further behind their manufacturing counterparts. This wage disparity widened from 2,215 THB (or US\$88.60) in 1992 to 2,618 THB (or US\$104.72) in 1997.

A dramatic reduction in poverty is evident across poverty measures. In the period of rapid growth between 1988 and 1996, poverty fell from 32.6 per cent of the population in 1988 to 11.4 per cent in 1996, lifting people out of poverty by nearly 11 per cent per year. The proportion of the unemployed poor was substantially reduced from 21 per cent in 1994 to 8 per cent in 1996. The unpaid poor workers also declined from 25 per cent in 1994 to 18 per cent in 1996. While the overall reduction in poverty was remarkable, the income inequality in the span of 1988-2002 did not fare well. The Gini coefficient rose sharply from 0.485 in 1988 to 0.536 in 1992. The ratio of income received by the richest fifth of the population to that received by the poorest fifth increased from 11.9 in 1988 to 13.5 in 2002. Similarly, the ratio of income received by the richest tenth of the population to that received by the poorest tenth increased from 20.7 in 1988 to 24.7 in 2002.

7.2 Economic growth, employment, and poverty reduction: A nexus

The collapse of export growth in 1996 coupled with mismanagement in the financial sector and exchange market of Thailand were some of the important factors that triggered the onset of financial crisis and economic crisis in 1997. Prior to the crisis, the Thai labour market was rather short of labour. Real wages were accelerating as a whole for all parts of Thailand from 1992 to 1997, leading to firms seeking foreign migrant workers to fill in the vacancies. The crisis had changed labour shortage to labour surplus as the number of collapsed firms rose from 77 in 1996 to 5,864 firms in 1998. Real wages declined and so did employment.

The sector that suffered most in terms of job losses was the construction sector. The number of workers in this sector fell from 2.65 million workers in 1996 to 1.55

million in 2000 for a drop of 41.56 per cent in a span of 5 years. The drop was extremely severe between 1998 and 1999 when employment plummeted 23.6 per cent. The fall in employment was less in other manufacturing sectors. Various measures to combat the hardship were introduced by firms to those 16.68 million workers who stayed on in February 1998, ranging from wage freeze to wage and/or fringe benefit cut. Thai labour market flexibility was observed here as more than half (or 61.8 per cent) of Thai workers were willing to have their wages frozen. Of those 0.56 million workers who voluntarily took a cut, all but one favoured the wage cut. The rate of underemployment also increased during the crisis.

What differentiates the Thai labour market from others is the dominating role of its informal sector. Employment in that sector has outnumbered that of the formal sector by 2.5 to 1. "Conventional" informal activities in Thailand takes the form of operating own small businesses on the sidewalks and in alleys, working for family businesses without pay, and being home based to deliver contract work. Despite stronger growth performance for an annual average of 5.5 per cent between 1992 and 1997, the informal sector saw its real wage plummet after the crisis and lost its growth momentum ever since. Given that typical Thai workers in the informal sector are poorly educated, their work is very likely to be terminated. At the time of the 1997 economic turmoil and the immediate year after, those own-account and unpaid family workers were severely affected, particularly those with little schooling. This period of job loss and low income initially would put a great number of the Thai labour force into poverty.

Of all the poor in Thailand in 2002, 34 per cent were under 15 years old and had virtually no labour earnings. Though employment is not powerful enough to reduce poverty for those young poor, they are dependent on their household heads that have jobs to provide them basic needs. Obviously, employment for household heads can be a vehicle for poverty reduction in Thailand. Linkages between output, employment, and poverty using 1988-1996 sectoral data is empirically tested here. The regression results support the view that economic growth is needed for poverty reduction. However, additional policies must be introduced for poverty to be effectively reduced. At the opposite end, poverty is statistically related to mean household income. To be precise, a 1 per cent increase in per capita household income will lead to a 1.87 per cent reduction in poverty. In a similar fashion, employment elasticity of output and the Gini coefficient are statistically significant, that is, a 1 per cent increase in employment elasticity of output will lead to a 0.14 per cent reduction in poverty, while a 1 per cent increase in the Gini coefficient will lead to an increase in poverty by 3.4 per cent.

While poverty reduction requires economic growth as a necessary condition, the employment intensity of growth is another important condition. The employment elasticity of output is estimated here with time series data from 1980 to 1996 for the whole economy and for individual sectors in Thailand. For the economy as a whole, employment elasticity declined only marginally between 1980-90 and 1990-96. For manufacturing, it has remained stable at a reasonably high level (0.55 – 0.56), while in construction, employment elasticity actually increased substantially (from 0.77 to 0.83). Employment elasticities for other sectors, namely, trade and services, have remained stable from 1980 through 1996. While the poor in Thailand are likely to live in the North and Northeast relying on farm activities, their activities go beyond farms encompassing an array of activities, namely, manufacturing, trade, and services. This could be a

plausible explanation as to why employment elasticity for the agricultural sector is the lowest.

Across ten deciles of the Thai population, the bottom ninth and tenth have disproportionate shares of their household incomes from income in-kind, wage and salary, and farm income. The periods of economic growth (1992-1996 and 2000-2002) boosted labour demand substantially in the sectors where the poor are a dominant group. As a result, wages and salaries of the bottom poorest groups increased dramatically, so did farm income and income in-kind. These positive events were genuinely strong enough to reduce poverty in Thailand.

7.3 Income inequality and labour market

The growth process in Thailand for the last ten years was not accompanied by a monotonic decline in income inequality. The Gini coefficient rose sharply from 0.485 in 1988 to 0.536 in 1992. It then declined to 0.511 in 1998 before increasing again in 2000 to 0.525. The ratio of income received by the richest fifth of the population to that received by the poorest fifth increased from 11.9 in 1988 to 13.5 in 2002. Again, the ratio of income received by the richest tenth of the population to that received by the poorest tenth increased from 20.7 in 1988 to 24.7 in 2002.

Inequality in Thailand varies substantially across areas, regions, and economic sectors. The Gini coefficients show a lower degree of income inequality in the rural than urban areas. Surprisingly, income inequality in Bangkok and its vicinity is smallest and the highest income inequality can be found in the South. The regional disparity might be a result of the regional disparities in economic growth and labour productivity. Sectorally speaking, as expected, income inequality in the agricultural sector is low and high-income inequality can be found mainly in the manufacturing and construction sectors.

The identification of determinants of income inequality through 1988-2002 Socio-economic Surveys (SES) conducted by the National Statistical Office (NSO) reveals that labour market outcomes can explain income inequality in Thailand. The economic crisis led to a reduction in real wage rates across education groups. After the crisis, wage differentials by level of schooling become more pronounced as the real earnings of workers with primary and secondary education dropped further, while those with vocational and higher education continued on a rise.

Regional differences in real labour wage do exist. In 2002, the average real wage in Bangkok was 1.6 times the national average – up from 1.4 times in 1992. For other regions (except Central), the average wage compared to the national average increased from 133.3 per cent in 2000 to 136.3 per cent in 2002. The main factor behind regional wage difference is labour productivity, measured by gross regional product per worker. Greater labour productivity is found in a good portion of Bangkok Metropolitan and its vicinity. The Northern and Northeastern regions, where the poor dominate all other groups, have lower labour productivity than the rest of the country. In addition, the average rural wage compared to the national average, reduced from 71 per cent in 1992 to 68.84 per cent in 2002, while the urban wage increased from 131.1 per cent in 1992 to 136.2 per cent in 2002.

Sectorally speaking, the farm wage is lower than the manufacturing wage. It is due to the fact that Thai farm workers are old with little education and few hours worked. The opposite is true for their manufacturing counterparts. In addition, the ratio of average labour wage in agriculture to the national average declined from 45 per cent in 1992 to 37 per cent in 2002.

The real wage in the informal sector tends to decline. These workers who represent two-thirds of the entire labour force earned 2,913 Thai Baht (or US\$64.73) per month in 2002 relative to 7,222 Baht (or US\$160.49) for workers in the formal sector. This widens the wage gap between formal and informal sectors, not only in terms of income but also the related social welfare and benefits from the government, which hardly extends its coverage to workers in the informal sector.

7.4 The role of employment and labour market in poverty reduction: A micro analysis

The SES data show that poor households regardless of their place of residence are commonly found in the agricultural sector; the opposite is true for manufacturing, construction, trade and services. A related finding is that the urban poor are more likely to engage in the transportation sector. As far as jobs are concerned, household heads of the poor families are more likely to be either jobless, unpaid family workers, or own-account workers. Their schooling does not differ significantly relative to non-poor household heads.

Given that the dependency ratio, measured by the proportion of non-wage earners to household size, can limit the participation of household heads in the labour market, it is discovered that for the case of Thailand, poor households have a higher dependency ratio. This burden gets aggravated as relatively few poor households possess land or receive transfer payments.

Through 2002 Socio-economic Survey household data, it can be seen that the probability of being poor appears to relate to farm income, place of residence, household size, and male household head. Empirically speaking, the probability of being poor is greater if it is a household headed by a Thai male engaging in farm activities in the Northeast to support a large number of dependents and if remittances are low.

7.5 Policy implications

Though rigidities in wages and hours worked are not observed in Thailand, this labour market flexibility might not give many gains to workers as one would expect. These fluctuations in wages and hours worked could prove to be detrimental to those workers' welfare. Their income security is eroding. If their fringe benefits have been curtailed in addition to their wages, then their lives would be deprived of some protection against unforeseen hardship they might have experienced in the near or distant future.

The social safety net system in Thailand today is measly and it operates on a case-by-case basis. The likelihood is greater for retirees, people with disabilities, HIV/AIDS victims, and natural disaster victims to obtain some social protection. Whereas, workers who either lose their jobs or have their wages and/or hours worked cut are being left out by the system. A master plan on social safety net for all socio-economic groups –

workers, retirees, and the disabled, among others – in Thailand is called for. In the meantime, the existing social safety net system needs to be strengthened at least in terms of standardization of its system. These changes require state intervention to rectify such market imperfection.

The success of poverty reduction in Thailand is dependent on economic growth as well as the manner in which income is distributed. Her economic growth has not always been strictly pro-poor although poverty reduction did occur from 1988 to 2002. The speed of poverty reduction would have been faster if the government avoided urban biased and sectoral policies that adversely affect income distribution. Put it differently, growth that generates employment together with income for the poor is critical for national success in poverty reduction. And, if labour productivity of the poor and marginal return for the poor becomes higher from economic growth, the implication is an increase in their income and the alleviation of poverty as well as income inequality.

Looking beyond Millennium Development Goals (MDG) in which Thailand has made striking progress ranging from poverty, hunger, gender, HIV/AIDS, and malaria, it is income distribution that deserves equal, if not more, attention from all concerned. MDGs should seriously address equitable (or more equitable) income distribution and introduce it as one of its goals for Thailand and the rest of the world to pursue and achieve.

It is empirically clear that income inequality in Thailand can be explained by differences in labour earnings. Relative to national average earnings, those with primary education in the Northeast region of Thailand who get involved in informal farm activities are, unquestionably, poor. In addition, the probability of being poor increases monotonically with household size and male household head.

A higher income, may it be labour earnings – farm and non-farm incomes – or income in-kind will surely reduce the probability of being poor. Policy measures are implicated here. The poor households should have better access to higher-paying jobs made possible by getting them through vocational education. Supportive programs include the improvement in labour market information with respect to its richness, flow, as well as exchange, and recruitment channels. Given that a large number of Thai workers are self-employed in the form of either small farms or enterprises, they are excluded from formal labour protection programs for the likes of unemployment insurance, medical insurance, and minimum wage law. It is an unfinished business that the government must take an active role in managing the informal sector to ensure them of decent working conditions as well as the protection against any hardship that might arise from their jobs. Policy measures must be introduced to extend its coverage to include these workers. It surely will promote equity across income groups and regions.

Across sectors, the responsiveness of jobs to economic growth, i.e. the employment elasticity of growth though different in magnitude, is uniformly positive. The implication is that the Thai labour force is sensitive to economic fluctuation. Job security and stable flow of income can be thrown out of balance easily upon the economy going through a business cycle. When the economy becomes weak and unemployment is rampant, workers will find themselves without jobs. Thailand saw it first hand when the country was hit with massive unemployment in the aftermath of the 1997 crisis. A period of being jobless could pose a serious threat to family income and poverty. The ensued

social hardship prompted Thai policymakers to formulate a sustainable unemployment insurance scheme.

The planned unemployment benefit under the social security program will help ease the anxiety of workers and their families as well as help cushion the trauma of losing a job. An estimated 7.8 million employees are currently covered by the social security system. In order to become eligible, insured workers are required to contribute an additional 1 per cent of their salaries starting on July 1, 2004 to the Social Security Fund administered by the Social Security Office, the Ministry of Labour and Social Welfare. Employers are also required to match their employees' contribution to the fund, while the government contributes less than half.²² Under the unemployment scheme, a retrenched worker for a period of at least 60 days will be entitled to unemployment benefit equivalent to 50 per cent of his or her last month's salary for up to 180 days. If the decision to leave is voluntary, the unemployment benefit will come down to an equivalent of 30 per cent of his or her last month's salary for up to 90 days. The financial support given to the jobless workers is conditional on their willingness to do skills training, a factor that is complemented by a placement service provided by the Ministry of Labour and Social Welfare. It is reported that in its first month, a mere 9,000 Thai workers made their claims for unemployment benefit from the Social Security Fund, which now stands at 2.2 billion Thai Baht (or US\$55 million).²³ The fund can comfortably accommodate as many as 440,000 jobless workers annually.

A concern is raised on the possibility of moral hazard arising from the unemployment insurance scheme. An argument is that this subsistence allowance is substantial by Thai workers' standards. It might induce a reckless behaviour in the workplace. The drop in labour performance, responsibility, and ethics could jeopardize not only firms but also the whole nation. It is too early to tell whether or not moral hazard will emerge in the Thai labour market.

²² The rates are based on the assumption of 5 per cent annual economic growth rate and 3 per cent annual inflation rate.

²³ The Social Security Office, the Ministry of Labour and Social Welfare, August 2004.

References

- Bautista, R. M. (1999): “Economic Growth and Poverty Reduction in Indochina: Lessons from East Asia”. International Food Policy Research Institute, Washington D.C.
- Bhalla, S. (2003): *Imagine There's No Country: Poverty, Inequality, and Growth in the Era of Globalization*. Institute of International Economics, Washington D.C.
- Datt, G. and Ravallion, M. (1992): “Growth and Redistribution Components of Changes in Poverty Measures: A Decomposition with Application to Brazil and India in the 1980s.” *Journal of Development Economics*, 38 (2): 275-295.
- Deininger, K. and Squire, L. (1998): “New Ways of Looking at Old Issues: Inequality and Growth.” *Journal of Development Economics*, 57 (2): 259-287.
- Dollar, D. and Kraay, A. (2002): “Growth is Good for the Poor.” *Journal of Economic Growth*, 7: 195-225.
- Francois, B. (2002): “The growth elasticity of poverty reduction: Explaining heterogeneity across countries and time periods.” DELTA Working Papers 2002-03, Paris.
- Islam, R. (2004): “The Nexus of Economic Growth, Employment and Poverty Reduction: An Empirical Analysis.” Issues in Employment and Poverty Discussion Paper 14. Recovery and Reconstruction Department, ILO, Geneva.
- Kakwani, N. (1993): “Poverty and Economic Growth with Application to Cote d'Ivoire.” *Review of Income and Wealth*, 39: 121-139.
- _____ (1997): “Economic Growth and Income Inequality in Thailand.” Development Evaluation Division, National Economic and Social Development Board, Bangkok.
- Kakwani, N. and Krongkaew, M. (1998): “Poverty in Thailand: Defining, Measuring, and Analyzing.” Working Paper No. 4, Asian Development Bank and Development Evaluation Division, National Economic and Social Development Board.
- Kakwani, N. and Pernia, E. (2000): “What is Pro-poor Growth?” *Asian Development Review*, 18 (1).
- Khan, A. R. (2001): “Employment Policies for Poverty Reduction.” Issues in Employment and Poverty Discussion Paper 1. Recovery and Reconstruction Department, ILO, Geneva.
- Kittiprapat, S. (1999) “Adjustment of Thai Labour Market to the Economic Crisis” (in Thai). Paper presented at the annual meeting of the Economic Society of Thailand, Bangkok.

Krongkaew, M. and Kakwani, N. (2003): “The Growth-Equity Trade-Off in Modern Economic Development: The Case of Thailand.” *Journal of Asian Economics*, 14: 735-757.

Kuznets, S. (1955): “Economic growth and Income Inequality.” *American Economic Review*, 45: 1-28.

National Statistical Office (1998): *The Impact of the Economic Crisis on Employment, Unemployment, and Labour Migration*. National Statistical Office, Bangkok.

Osmani, S. R. (2002): “Exploring the Employment Nexus: Topics in Employment and Poverty.” The Task Force on the Joint ILO-UNDP Program on Employment and Poverty, UNDP, New York.

Tinakorn, P. (2002): “Disparities in Income Distribution During Four Decades of National Development, 1961-2001.” *Thammasat Journal of Economics*, 20 (2-3): 141-208.

Rahman, R. I. and Nabiul Islam, K. M. (2003): “Employment Poverty Linkages: Bangladesh.” Issues in Employment and Poverty Discussion Paper 10. Recovery and Reconstruction Department, ILO, Geneva.

Siamwalla, A. (1998): *Responding to the Thai Economic Crisis*. UNDP Office, Bangkok.

Sumner, A. (2003): “From Lewis to Dollar and Kraay and Beyond: A Review and Stocktake of Fifty Years of Poverty, Inequality and Economic Growth.” Paper prepared for Development Studies Association (DSA), Devon.

Thonguthai, P. (2003): “Social Protection for Workers in the Informal and Agricultural Sectors.” (in Thai). Paper presented at the 26th annual symposium, Faculty of Economics, Thammat University, Bangkok.

Warr, P. G. (1998): “Thailand: What Went Wrong?” (Draft). Paper presented at Conference on Thailand’s Dynamic Economic Recovery and Competitiveness, Bangkok.

Wasantiwong, M. (2002): “Current Situation of the Thai Labour Market” (in Thai). Seminar Proceeding from ‘Trends in Thai Economy in 2002’, Bangkok.

World Bank (2000): *Thailand Economic Monitor*. World Bank Office, Bangkok www.bot.or.th (Bank of Thailand’s website).

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