Macroeconomic Policy for Emerging markets
Lessons from Thailand

Routledge: 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge: 711 Third Avenue, New York, NY 10017

Chapter 12
The macroeconomic perspective of poverty and income distribution

1. Introduction

Social upheaval and political turmoil are rooted in countries with injustice and income inequality. A macroeconomic policy which provides inclusive growth would be more likely to sustain growth in the long run. Uninterrupted growth over many decades is a prerequisite to a high standard of living. As discussed in earlier chapters, political unrest stalled Thailand's stable growth path, notwithstanding several major external shocks. High output growth generates employment; thereby reducing poverty.

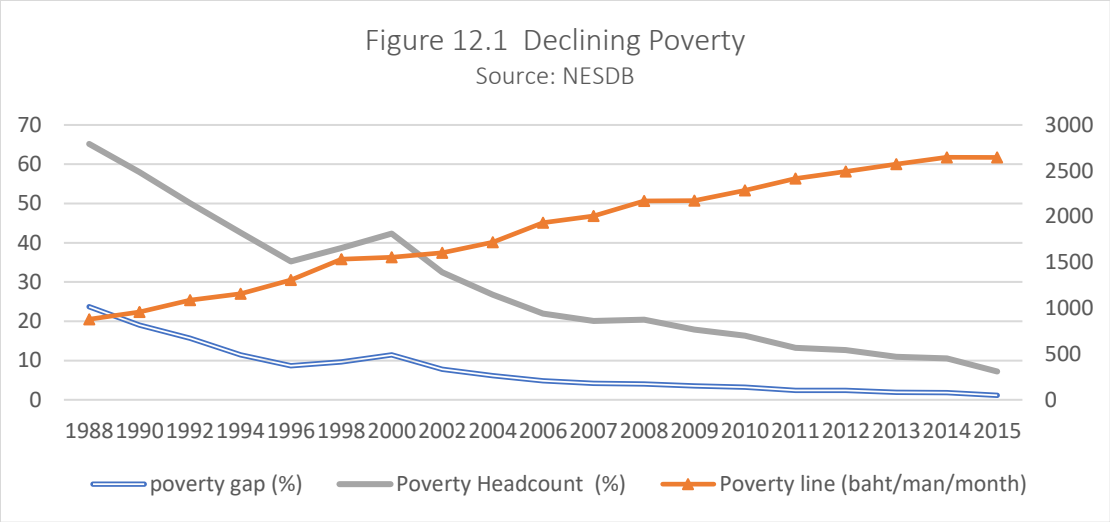
Similarly, high crop prices can reduce poverty and improve income disparity between rural and urban areas. Thus, the exchange rate policy that affects commodity prices has a far-reaching effect on poverty and income inequality. High growth of wage rates in the urban area brings about labor migration. With plenty of job opportunity, urban areas generate employment and attract labors from rural areas. Urbanization, therefore, has an impact on poverty reduction.

There has been a disputable fact on the issue of the trade-off between growth and income inequality. Evidence in some high-income countries shows that their development paths did not undergo deteriorating income inequality. We will examine the existence of such trade-off and explain why there is a declining trend in poverty and income equality. We will explore how fiscal policy can exert influence on poverty and income distribution.

2. Economic growth benefits the poor

Warr (2007) states that the long-term economic performance of Thailand has been remarkable, as reflected in life expectancy, infant and maternal mortality, and literary. Although poverty has declined dramatically, economic inequality has increased. Ten years have passed since the dire remark by Warr, Thailand has come a long way since then. In this chapter, we explain the tendency for poverty eradication and inequality improvement in Thailand over the last two decades, despite a slowdown in economic growth. Kurita and Kurosaki (2011) observe that inequality in Thailand and the Philippines reduced the growth rate of per capita consumption. Differences in income inequality in both countries explain how the two countries have a different outcome in output growth and poverty reduction since the late 1980s. Thailand escapes the poverty trap, partly because of the declining fertility rate in the last five decades[i]. The downward trend continues so much that the country will be facing an aging problem shortly. According to Day (2015), the declining fertility rate in developing countries coincides with rising per capita income. As a result, the fraction of skilled workers increases with economic growth. The rising opportunity cost of having children and the high cost of childrearing inputs make the fertility rate continue declining further.

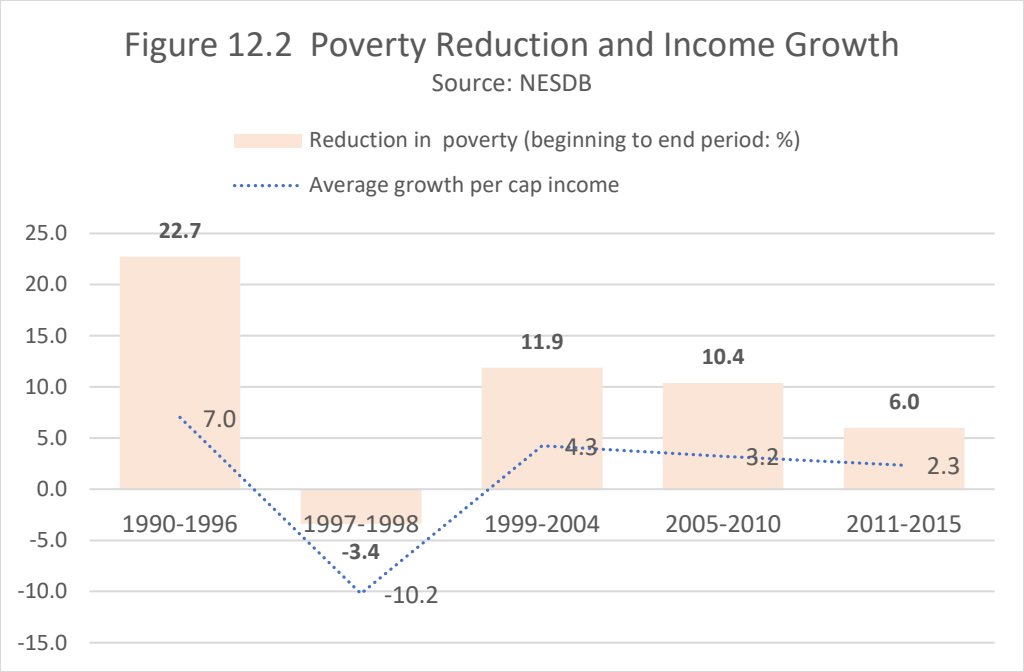
Strong economic growth generates high employment. The poor, who are mostly unskilled, earn higher income share from jobs creation during economic booms. If growth continues without disruptions, poverty level declines. Thailand's level of poverty was cut by half from 70 % in the early 1980s to 35% in 1996. The panacea for poverty is the ability to maintain stable and steady economic expansion. In 1997, when the Thai economic succumbed to the Asian Financial Crisis, the poverty headcount had reverted to 43 % in 2000 (Figure 12.1) before gradually declined to 7.2 % in 2015, thanks to economic recovery.



The poverty gap (percent of the difference between the poverty line and consumption expenditures of the poor) also replicates the movement of the poverty headcount. It can be said that Thailand's economic development succeeded in reducing poverty; The poverty gap dropped dramatically from 24 % in 1988 to just 1.1 % in 2015 (Figure 12.1).

An essential contributor to this poverty eradication is the ability to maintain price stability. The poverty line climbed up from 879 baht in 1988 to 2,644 baht in 2015. As a food exporting country, Thailand does not have a problem with famine and food security. The ability to keep food price low help alleviate the plight of the poor, who live below the poverty line. Macroeconomic stabilization policy, therefore, has an indirect impact on poverty reduction by maintaining high employment and price stability.

There is a relationship between output growth and changes in the unemployment rate (Okun, 1962). In the case of the US, a one-percent reduction in the unemployment rate corresponds to two percentage point of growth that is faster than the potential output growth. Since high growth raises the demand for labor, it must also provide jobs for the poor and reduce poverty level. Consequently, there must be a positive relationship between the speed of poverty reduction and GDP growth.



The period of high economic growth, between 1990 and 1996, was also the period of the fastest speed of poverty reduction. Thailand's per capita income grew by 7 percent, while poverty declined by 22.7 % (Figure 12.2). Then came the Asian Financial Crisis, during 1997-1998, when per capita income contracted by 10.2 % and the poverty rate increased by 3.4 %. Recession depressed the demand for labor and the poor bore the brunt of the economic crisis. As the Thai economy slowly rebounded and buoyed by the export boom during 1999-2004, per capita income rose 4.3. The progress on poverty reduction resumed as the unemployment rate declined, resulting in an 11.9 % decline in poverty level between 1999 and 2004.

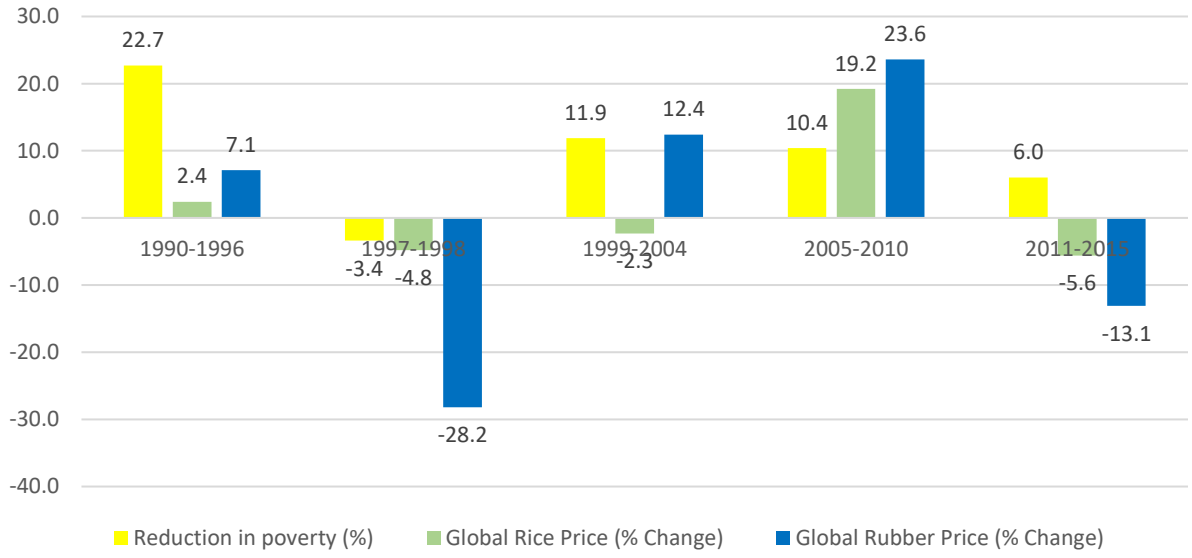
After that episode, the Thai economy suffered from a slowdown in GDP growth, due to the Global Financial Crisis, during 2008-2009, exports declined but rebounded sharply. Income per capita continued growing but at a low level of 3.2 percent. Consequently, poverty level dropped by 10.4 percent from 2005 to 2010. Nevertheless, the downward trend of poverty reduction has begun when the economy enters a new growth episode—slowing down than the potential growth path. By 2015, the poverty rate was reduced by 6% from the level in 2011, because the continued slowdown of the GDP growth of the Thai economy, thanks to China's slowdown, could not provide sufficient strength to reduce poverty as it did in the past. Per capita income grew easily by 2.3 %, the lowest period of a positive growth, which corresponds to the period of the slowest poverty reduction.

It is now evident that external factors indirectly impact poverty level. Through commodity booms and busts, changing export demand for Thailand's agricultural commodities can, therefore, affect farmers' income in rural areas. Thailand's primary agricultural export commodities are rice, rubber, and tapioca. Figure 12.3 illustrates the correlates of poverty reduction and changes in global prices of rice and rubber.

Between the periods 1990-1996 and 2005-2010, both global prices of rice and rubber were favorable to Thai farmers. The speed of poverty reduction was strong. On the contrary, commodity slumps during the period 1997-1998 and the period 2011-2015 resulted in decelerated poverty reduction. Most of the time, prices of rice and rubber moved in tandem. However, between 1999-2004, they moved in the opposite direction.; Rubber price went up by 12.4 % and the rice price went down by 2.3%. Poverty continued to decline by 11.9 %, thanks to high export prices of maize and tapioca during the same corresponding periods. Indeed, poverty reduction depends partly on the strength of commodity prices.

Figure 12.3 Global Commodity Prices and Poverty Reduction

Source: NESDB

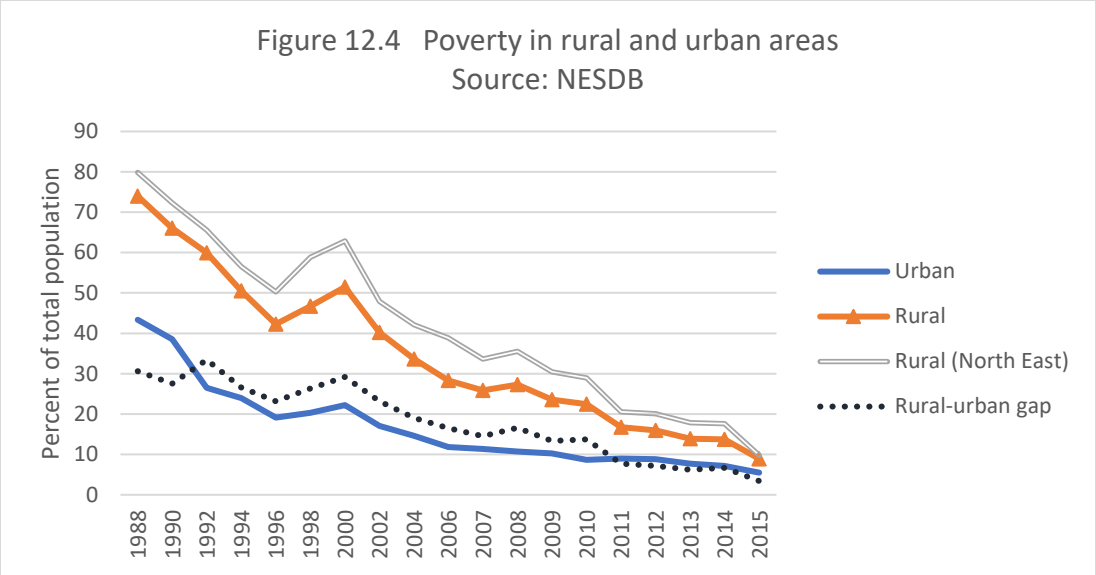


The percentage changes of global export prices of rice and rubber are shown in Figure 12.3 were based on the values in the US dollar. The baht-dollar exchange rate movements can thwart or propel commodity booms and busts. As such an exchange rate policy indirectly influence the welfare of the poor. A change in the level of exchange rate exerts an impact on every commodity the poor consume, both in rural and urban areas. Since Thailand are net importers of crude oil, exchange rate depreciation also affects farm input prices including transportation costs. Not just price stability is required for poverty reduction; an appropriate exchange rate management is needed because of the exchange rate policy has a far-reaching effect on poverty eradication.

3. Rural vs. Urban Income Disparity

The gap between rural and urban poverty can be seen as a spatial inequality. Unlike farmers in the central plain, The Northeastern farmers do not have abundant water resources. Farmers in the Northeastern provinces cannot grow rice twice a year. Hence their income is lower than other farmers in the country. Figure 12.4 illustrates that, despite the co-movements of the poverty incidence, the poor in the rural Northeast experienced extreme poor living conditions more than the poor in other parts of the country.

The declining trend of urban and rural poverty mirrors the rising per capita income discussed earlier in Figure 12.2. The disparity between the rural and urban poor can be measured by the gap between urban and rural poverty rate.



Since rural poverty declined faster than an urban area, the gap between poverty in the urban and rural area has narrowed Figure 12.4. Poverty rate declines slower in urban than rural areas. Access to credit markets and labor mobility are contributing factors to reducing the poverty gap between the two sectors. The wide gap of 30 percentage points in 1988 was reduced to just 3.4 % in 2015. The implication is that there is no evidence of urban bias in the case of Thailand.

Furthermore, the evidence suggests that urbanization in Thailand is sustainable, for the disparity between rural and urban areas has diminished over time. However, there are existing large gaps on the regional level. The northeastern region is still the poorest in the country. Farming in the northeast has changed gradually. Farmers do not have to rely solely on growing paddy and glutinous rice. Other crops have emerged, including cassava, sugarcane, maize, and rubber. Crop diversification may reduce the risk of heavy reliance on the monocropping pattern. Figure 12.5 shows the correlation coefficients of fragrance paddy rice and other crop prices in the Northeast. The strong correlation of these farm prices indicates that crop diversification does not help farmers to stabilize their income. Northeastern farmers are still vulnerable to abnormal weather conditions and price fluctuations. There is a limit to risk diversification because the unpredictable weather conditions can destroy different output in the same areas; crop prices can move up and down together. Diversification can reduce risk only when there is no price correlation, or there is a negative correlation between commodity prices.

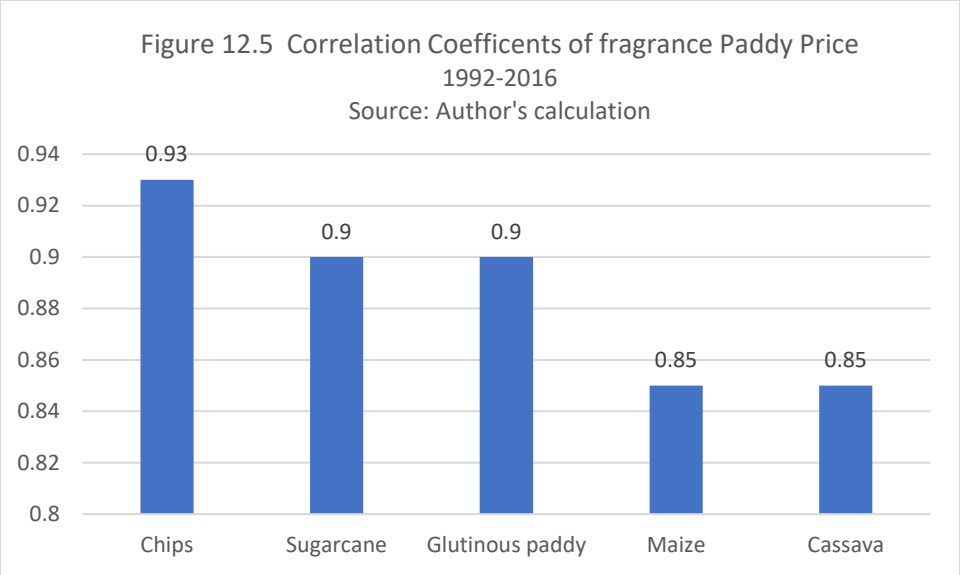


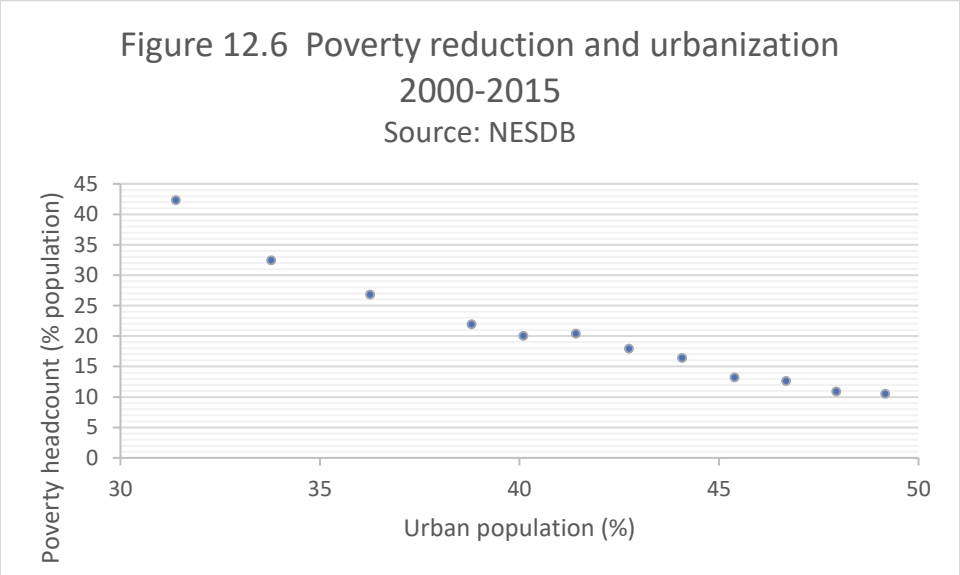
Figure 12.5 Correlation Coefficents of fragrance Paddy Price 1992-2016
Source: Author's calculation

Income of the urban poor would be more stable than the rural poor. Services and industrial sectors are in urban areas. There is a strong correlation between output growth rate in manufacturing and service sectors, but agricultural growth correlations with services and manufacturing growth are insignificant. The lack of linkages between agriculture production and other sectors explain the low correlation. Growth in the manufacturing sector and stimulate activity in the service sector—not the agricultural sector. A specific policy targeted to the plight of the poor is needed to raise income in rural areas, because the trickle-down effect of the growth in manufacturing and service to the agricultural sector is low.

There is a robust negative relationship between urbanization and poverty (Figure 12.6). The faster farmers move from rural to urban areas, the faster the rate of poverty reduction. The most effective way to maintain income level for the poor is to transfer agricultural labor to service or manufacturing sectors in urban areas. There is a caveat here. The fast rate of urbanization can have an undesirable effect because the country would have less time to establish urban infrastructure, including laws and regulations, to pave the way for high-quality urbanization, which includes the exploitation of economies of scale of expanding cities. Traffic congestion within the inner cities, long commuting hours, and pollution would be a force counteracting the expansion of the city.

Despite the pull factor of higher wages in cities, traffic congestion and low quality of urban life would hinder the transfer of labor from rural areas. The push factors from rural to urban labor are farm mechanization and improved farm productivity. Public infrastructure investment in the agricultural sector can strengthen the push-factor and speed up the transfer of rural labor. However, there are some problems remain; how to equip agricultural labor with new technology or provide

training for them to suit the employment requirement in the modern sector, which is possible for the young in rural areas, but not for the limited skilled elderly, who cannot be retooled to fit in the service and industrial sectors. The average age of Thai farmers are above 50 years and they would be probably happy remaining in the rural areas.



Thailand has a larger labor force in the agricultural sector when compared to other countries at the same level of income. Thailand's idiosyncrasy of labor employment structure affects poverty and income distribution. The process of poverty eradication can hit a snag if urbanization rate decelerates. Urbanization and poverty reduction have a two-way relationship.

On the one hand, urbanization attracts people from rural areas by the lure of high wage and high employment. The overall poverty can be reduced by rising high wage in both rural and urban areas. The dual economy described by Lewis' model has become a blur, due to labor migration and agricultural labor productivity improvement, which tend to equalize the wage rate between the two sectors. On the other hand, when poverty has been reduced substantially, and income inequality has been narrowed down, there will be less incentive to move into urban areas; thereby slowing down the urbanization rate, which is happening in high-income countries, where the rate of urbanization has plateaued after achieving a certain per capita income level.

Gerschenkron (1962) espouses the idea that economic backwardness is due to the lack of financial institution development. The more economic backwardness of the country, the more it needs the intervention of the public to establish development financial institutions. If the poor are excluded

from formal credit markets, financial exclusion can exacerbate poverty problem. In particular, if banking activities concentrate in a particular region of the country, the poor would be alienated and having difficulty in obtaining credit to finance their consumption and investment. They would be remaining in poverty trap because they rely on the exorbitant high rate of interest in the informal money markets. With a higher degree of urbanization, an increasing number of bank branches provides financial access to the poor. For Thailand, distribution of bank branches does not appear in the primal city. Bank branches are geographically distributed according to the intensity of economic activities. The pattern of regional distribution of bank branches in 2006 was not different from the pattern in 1996. About 33% of all bank branches were located in Bangkok, 30% in the central region, and roughly about 12% the northeast, the north, and the south. Hence, the hypothesis of urban financial bias and financial concentration in urban areas does not fit to explain the rural-urban disparity. In Thailand, the financial factor does not impede the poverty reduction process. It can be concluded that financial institution development that began earnestly in the 1970s helped rather than hindered the poverty eradication.

4. Kuznets Hypothesis Revisited

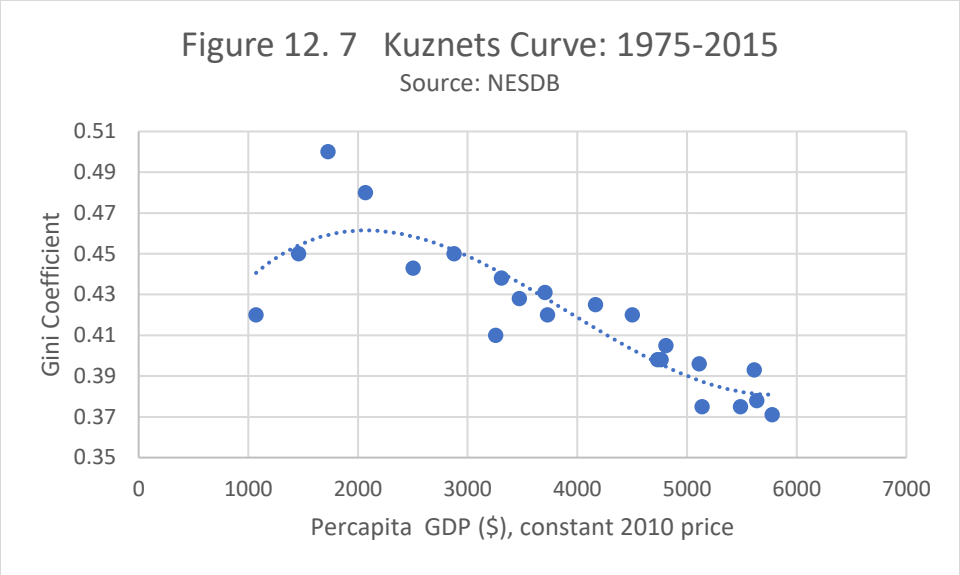
The relationship between income level and income inequality was examined by Kuznets (1955). As an economy develops from predominantly rural agriculture to the industrialized urban economy, income inequality rises to a threshold level before it starts to decline. The Kuznets Curve hypothesis can be illustrated by the non-linear relationship between the Gini coefficient and income per capita throughout economic development. However, the relationship between economic growth and income distribution is more complicated than the inverted U-shaped curve can capture that. The causation is bi-directional, with a feedback effect from inequality to growth.

In a study of 109 developing countries observed between 1981 and 2008, Amini and Bianco (2016) find the evidence that poverty is negatively related to growth, and positively related to income inequality. They also find that human capital regarding education and health facilitates the effect of GDP growth on poverty reduction. This finding is consistent with the Kuznets Curve hypothesis regarding the worsening income distribution at the early stage of economic development. The validity of Kuznets Curve theory has been questioned by Fields (2001), whose empirical work is based on large panels of countries or time series data. The inverted U-shaped curve relationship between income inequality and per capita income seems to disappear. More recently, Picketty (2014) argues that the return to capital is rising faster than the economic growth rate. The resulted concentration of wealth implies that the relation is a U-shaped rather than the inverted U-shape curve observed by Kuznets. Tridico (2010) examines the relationship between inequality within

50 emerging and transitioning economies from 1995 to 2006. He finds that growth did not reduce property while income inequality intensified.

Nevertheless, countries with high public spending on education and health did not experience worsening income inequality. Perara et al. (2013) observe that economic growth leads to poverty reduction. Furthermore, poverty can be further reduced in countries with stable governments and obeying law and order Improvements in corruption, democratic accountability, and bureaucratic quality reduced poverty but raise income inequality. Recent research on the nexus between growth, poverty, and income inequality points out to the importance of quality institutions. Whether a growing economy experiences poverty reduction and improvement in income inequality depends on the quality of institutions. Institution changes can take the form of market liberalization and trade reform, which are the handmaiden of economic growth. Lin and Fu (2016) examine how trade affects income inequality in small developing countries. They attribute the rising income inequality to trade under autocracies. For a democratic society, trade can reduce income inequality through active activity in manufacturing products via production fragmentation and network trade. Increasingly, the role of institutions, including the ruling regime and quality of the government, has been emphasized as a factor influencing how a country's inequality evolves along its development path.

Increasing degree of trade openness since the early 1980s has made Thailand more vulnerable to external shocks. A change in the terms of trade of agricultural products and manufacturing exports can alter income shares between people in rural and urban areas. The trickledown effect of economic development can be captured by the inverted-U shaped curve of the relationship between income inequality and the level of per capita income. When Thailand economy adopted infrastructure-led growth development policy in the 1960s, per capita income started to rise rapidly. Many critiques of Thailand's economic development argue that income disparity was widening. In some countries, stylized facts of economic development do not match with the prediction of Kuznets. Fiscal measures such as progressive income tax and high level of public expenditure on education enable some countries to enjoy the benefits of economic development without experiencing higher income inequality.



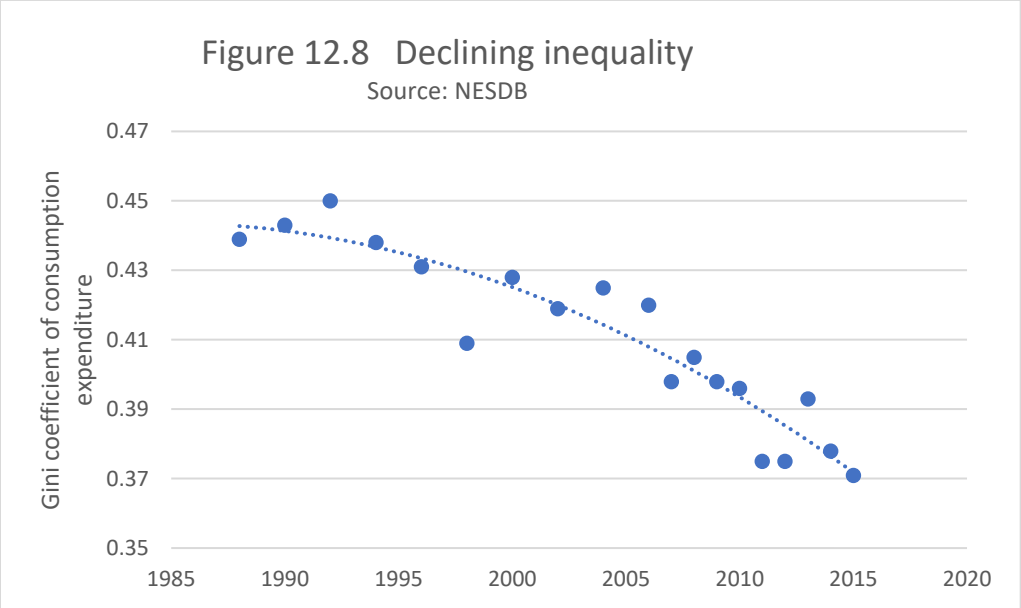
An analysis of the relationship between per capita income and the Gini coefficient reveals that Thailand has already passed the threshold income level, where the trend of declining income inequality would continue if per capita income keeps on rising (Figure 12.7). Due to limited data available on the Gini coefficient in the 1960s, we can infer that inequality must have been rising in the1960s up to the late 1980s.

Nevertheless, there is a measurement problem associated with using the income to calculate Gini coefficients. Because income comprises of saving and consumption, the income Gini coefficient also reflects inequality in saving. The rich tend to save more than the poor. Therefore we should calculate inequality based on consumption expenditures, which can be measured with more accuracy than income.

The Gini coefficient measured from consumption expenditures suggests that there is a case to support the Kuznets hypothesis. As the Thai economy expanded rapidly during the first three decades of economic development, income inequality was on the rising trend before it has exhibited a downward trend since the early 1990s. Figure 12.8 suggests that Thailand experienced Kuznets inverted U-shaped curve[ii].

From 2014 to 2017, reduction of income inequality and poverty decelerated as the economic growth rate declined sharply, compared to the period before political upheaval and regime changes. There have been changes in the quality of governing institutions. According to Worldwide Governance Indicators, Thailand's institution quality deteriorated sharply from 2005 to 2015, due to the lack of political stability, voice and accountability, rising violence, terrorism, and rampant corruption. If the quality of institutions matters for growth, it would also indirectly impact poverty

and income distribution. The downward trend of poverty and inequality continues, notwithstanding deteriorating quality of institutions. We cannot discern that the autocratic regime is consistent with improving the living standard and reducing inequality. Without the effectiveness and commitment of the pro-poor policy would prolong and complicate solutions for inequality. There can be other contributing factors to lift the poor and reduce income inequality after the regime changes.

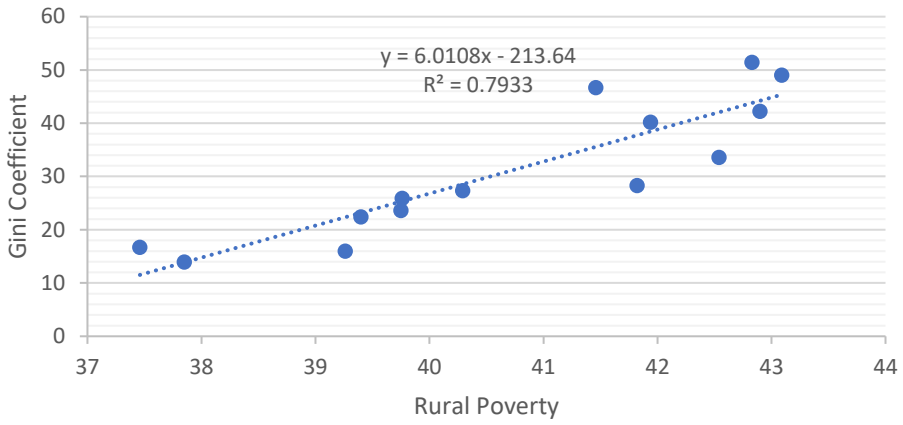


Whatever the political regime can be, if the aim is to reduce poverty and income inequality, the policy focus must be on reducing rural poverty. There is a significant positive relationship between the Gini coefficient and the level of poverty in rural areas (Figure 12.9). It is hardly surprising since poverty concentrates in rural areas, where the majority of poor are in the bottom 10 percent of social strata. The policy implication from the positive relationship between rural poverty and the Gini coefficient is quite clear; if we succeed in reducing rural poverty, our objective of the more equitable income distribution can be achieved.

The primary source of rural income is from agriculture. Fluctuations in farm output and commodity prices result in a high proportion of transitory income in total income. With the low proportion of permanent income in total income, rural households tend to save less. When experiencing shocks from unfavorable weather conditions, rural farmers are in debt and trapped in poverty cycles. When rural poverty declines, the income share of poorest would increase. Stable commodity prices and stable growth of agricultural output would allow farmers to get out of poverty as permanent income

from farms will be rising. Public policy which aims to stabilize output and income in rural areas will have a favorable impact on income distribution.

Figure 12.9 Gini coefficient and rural poverty
Source: NESDB



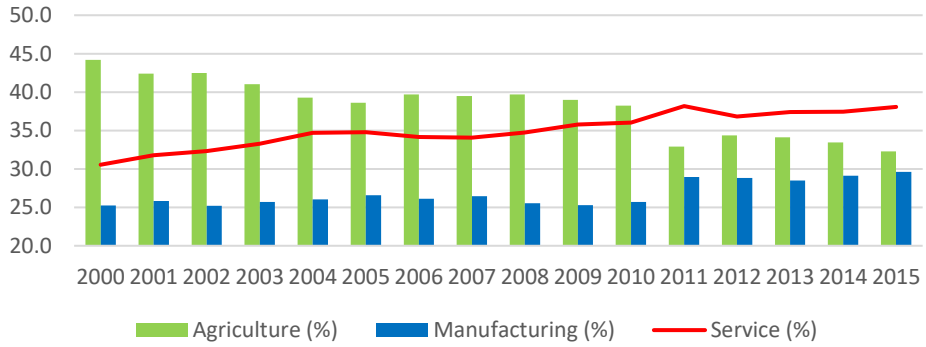
The long-term impact of agrarian structure on income inequality has been scrutinized by Oyvat (2016). Land inequality increases income Gini coefficients in both urban and rural sectors. The existence of land inequality has a significant impact on the level of urbanization and overall income inequalities. Oyavat argues that progressive land reform and subsidies to small farmers can reduce inequality and poverty in the long run. It seems that the land reform program in Thailand has not been successful. There is substantial inequality of landholding in Thailand, which is a stumbling block that would slow down income inequality in Thailand. About 27% of the population holds 15 rai (2.4 hectares), while there is 4 % hold more than 100 rai (16-hectare) piece of land. The existence of numerous small farms inhibits efficient farm mechanization as it does not permit exploitation of economies of scale of heavy farm machinery. As a result, farm labor productivity remains low. Only 10 % of the Thai own about 70% of the nation's total land. Farmlands were allocated to farmers by the Agricultural Land Reform Office to solve the problem. The problem is that allocated land can be sold to wealthy landowners and speculators. This scheme has intensified asset inequality in the country. In 2014, the National Committee on Land Policy was established with a mandate to allocate land of four million rai (640,000 hectares) to the poor in the form of cooperatives, instead of granting individual rights of ownership. The progress has been slow, and there are no effective fiscal measures to cope with land speculation. Income inequality is directly caused by asset inequality, which has remained a perennial problem underlying the structure of Thailand's

inequality. In effect, there is a lower bound level of the Gini coefficient (Figure 12.8). The country needs a long-term solution for asset inequality, and the solution might lie in the area of fiscal policy.

5. Fiscal policy and income inequality

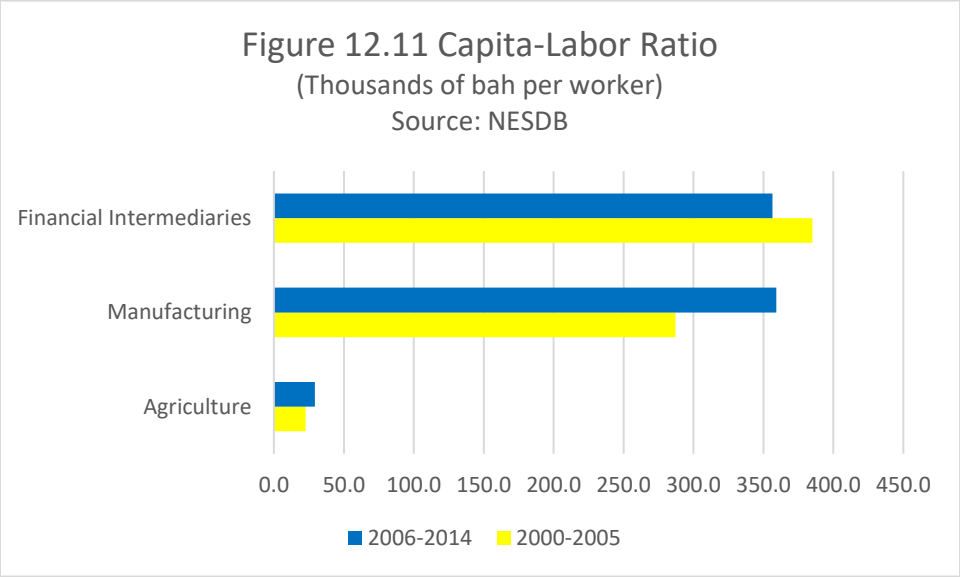
The structure of Thailand's sectoral employment is different from other countries with the same level of per capita income. The share of agricultural labor in total employment has been considerably higher than in other countries at the same level of economic development. This idiosyncrasy is due to the lack of farm productivity improvement, which can release agricultural workers to other sectors. On the demand side, the manufacturing sector's share of employment had been sluggish from 2000 to 2010 (Figure 12.10). Employment generated by other sectors has been stagnant since 2012. The agricultural labor transformation process is painfully slow because farm labor productivity increased gradually over the years. The limited ability to transfer labor out of agriculture affects the speed of poverty eradication and income inequality reduction.

Figure 12.10 Sectoral Employment Share
(% total labor employed)
Source: NESDB



The growth in manufacturing output did not lead to a substantial transfer of labor from farmland to factories in urban areas. One of the reasons is the low level of human capital formation in the agricultural sector. Despite the high percentage of budget allocated to education, the outcome from the human capital investment is disappointing[iii]. Moreover, the high capital-labor ratio in manufacturing sector precludes the sector from sufficient absorbing labor from the agricultural

sector. The capital-labor ratios in the manufacture and financial sectors are higher than agriculture (Figure 12.11). As a result, output expansion in this capital-intensive sector does not generate substantial employment. Industry-led growth does not generate employment fast enough to pull agricultural labor. FDI that kept on flowing into the manufacturing sector is the main culprit for causing substantial differences in the capital-labor ratio between the two sectors. While investment in agriculture has been ignored, foreign investors are attracted to only the financial and manufacturing sectors. Thanks to the Asian financial crisis which made asset prices of the banking sector became cheap, significant FDI inflows enhanced commercial banks' capital funds. Moreover, the Board of Investment provides tax incentives to foreign investors in such a way that FDI concentrates in specific industries, ignoring low profitable agricultural investment.



The low capital-labor ratio in the agricultural sector explains the productivity gap between the manufacturing and financial sectors. Because the real wage rate depends on the value of marginal productivity, the demand for farm labor cannot increase as much as other sectors if there is no improvement in agricultural technology and favorable farm prices. In turn, the higher productivity in the manufacturing and financial sectors lead to wage pressure in the farming sector. Farm input prices also rise during commodity booms, making it difficult for farmers to make a profit and retain sufficient investible funds for improving farm productivity. As long as labor productivity gaps remain wide, rising national wage rates would exacerbate the plight of the farmers, because net farm income will be squeezed by rising agricultural wage rate (Figure 12.12). Small-scale farmers

would remain in debt, and it would be impossible for them to have ability or incentives to improve human can make physical capital investment.

Figure 12. 12 Widening Wage Gap
Source: NESDB

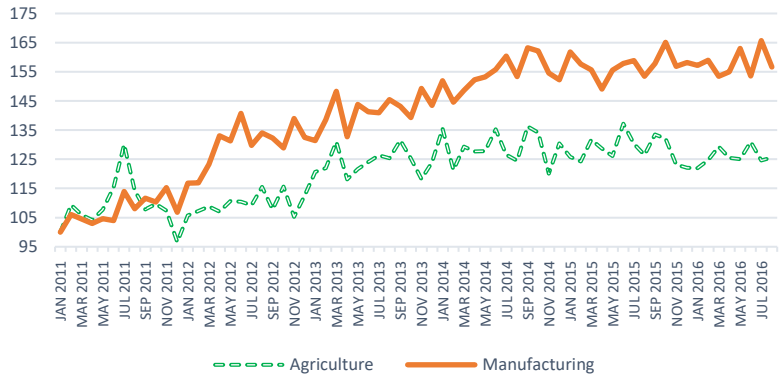
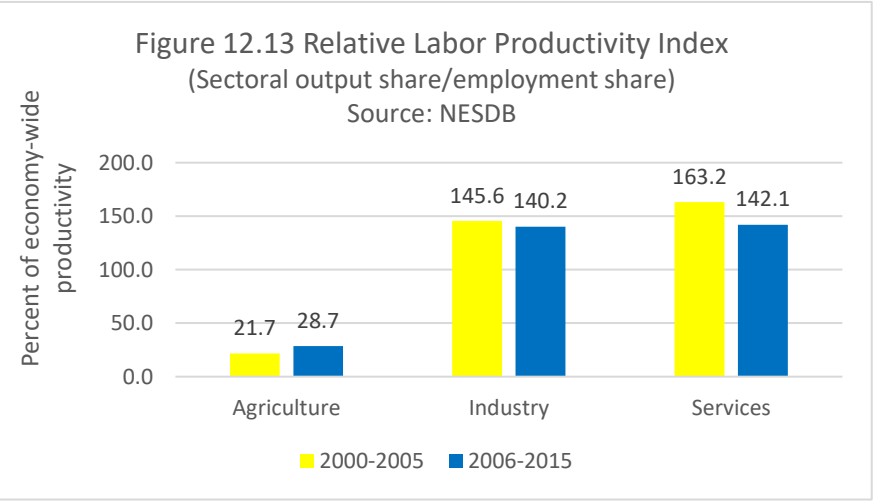


Figure 12.13 Relative Labor Productivity Index
(Sectoral output share/employment share)
Source: NESDB



The relative labor productivity index (Figure 12.14) reveals that between 2000 and 2005, agricultural labor was well below the overall labor productivity—only 21.7 % of the national level. Moreover, there was only a slight improvement between the period 2006-20015. During the same corresponding period, the average labor productivity in the service sector was about 63 and 42 % higher than the economy-wide level. The relative average productivity of labor in manufacturing was also roughly 45% and 40 % higher than the national productivity average. However, it also trended downward after 2014. The low level of private investment, including FDI, is the main

culprit for the decline. Consequently, there was less pressure on manufacturing wage rate. However, as shown in Figure 12.12, the wage rate in the agriculture sector was stagnant, reflecting low improvement in the productivity of agricultural labor. It is also difficult to relocate a large number of farm workers to other sectors. However, this difficulty can be addressed by fiscal policy. Public investment in irrigation, transportation, and farming technology can enhance productivity in the agricultural sector; thereby raising the marginal productivity of farm labor. That particular form of public investment can lower poverty in rural areas and at the same time improve income inequality. Furthermore, higher productivity can release farm labor to the service sector and speed up the process of urbanization.

6. Other dimensions of inequality

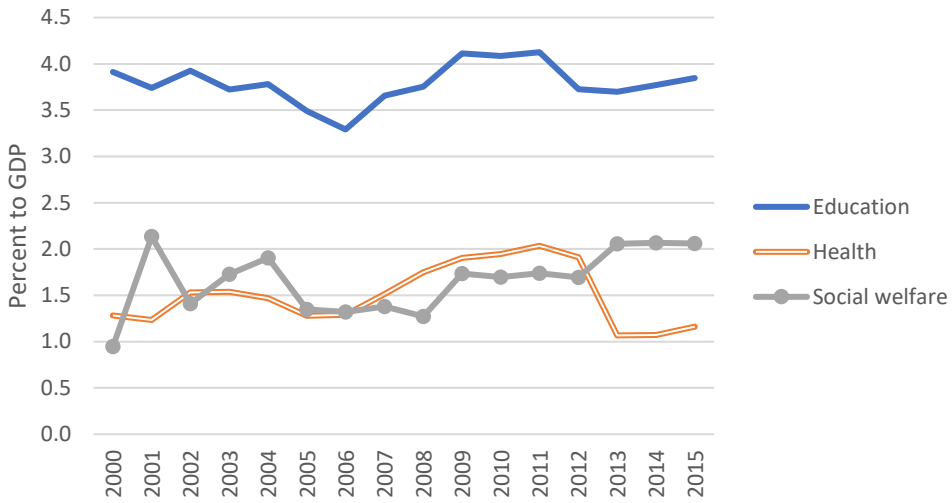
Empirical evidence provided by Pickett and Wilkinson (2015) strongly suggests that large income differences have damaging health consequences, causing violence and other social problems. As such, reducing income inequality will improve overall health and wellbeing. It is argued in this chapter that the causation runs both ways. Low stock of health capital results in poverty and income inequality. On the other hand, increasing inequality brings about poor health.

If educated and healthy labor force contributes to high labor productivity, public spending to raise human and health capital is crucial for the sustainable long-term growth of the economy. However, the multiplier effect of such public spending will be small in the short run. Only in the long run will the country benefit from such long-term investment. Because of myopic behavior, governments might not see the long-term beneficial impacts of maintaining expenditure for health and human capital investment. Public spending on education and health should not be affected by political and military business cycles. Public spending on schools and hospitals should not be used to stabilize the economy; it should meet a minimum requirement of a certain percentage of GDP to assure that long-term growth of the economy would not be adversely affected by the fiscal austerity during the economic downturn.

Gaiha et al. (2012) employ data from Asian countries during the period 1991-2007 and found that poverty reduction is more substantial if the fiscal stimulus is directed to social spending in health and education. Unfortunately, Thailand's budget allocated to education and health seem to be procyclical. The education budget declined from 3.9 % of GDP in 2000 to 3.7 % during the mild recession in 2001(Figure 12.4). From the high level of 3.7 % in 2002, it continuously declined, reaching 3.3 % in 2006. The declining trend reversed as the economy gradually recovered, plateauing around 4.1 % between 2009 and 2011. When the economy was on the way to economic

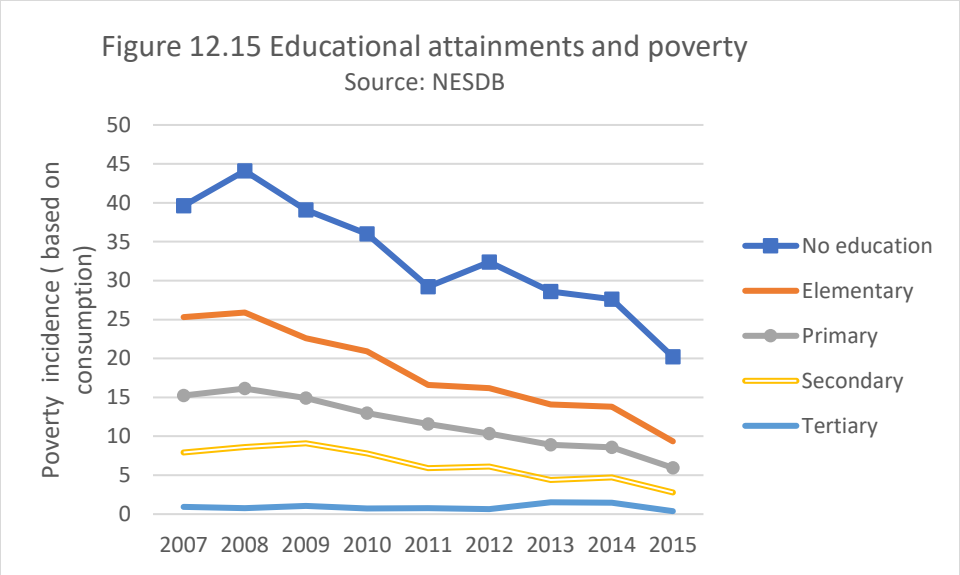
trough, education spending was reduced to around 3.7 % of GDP. The similar procyclical pattern can be observed for budget allocated to strengthen health capital. Social welfare spending should be counter-cyclical to offer a cushion for the poor in time of crisis and disaster. It can also serve as a built-in fiscal stabilizer during the economic downturn.

Figure 12.14 Public Spending on Human and Health Capital
Source: NESDB



It is imperative that the budget on education and health be maintained at a specific minimum requirement to ensure long-term growth of human and health capital. Furthermore, it is imperative to realize that cutting health and education budget have long-term consequences on poverty and income distribution. Health and education spending is similar to merit goods which the government sometimes fails to understand their significance.

In the classic work of Mincer (1958), there are substantial returns to schooling in the form of higher wages. Evidence illustrated in Figure 12.15 supports Mincer hypothesis. For people without education attainment, their level of poverty incidence is the highest level among all education attainment classes. The higher the level of education, or the longer they invested time in schooling, the lower their percentage of living below poverty lines. The level of poverty incidence declines as the level of education goes up. Note that over time, from 2008 to 2015, there was a declining trend of poverty in particular for the less educated, reflecting the gradual economic recovery after experiencing the brief recession in 2009.

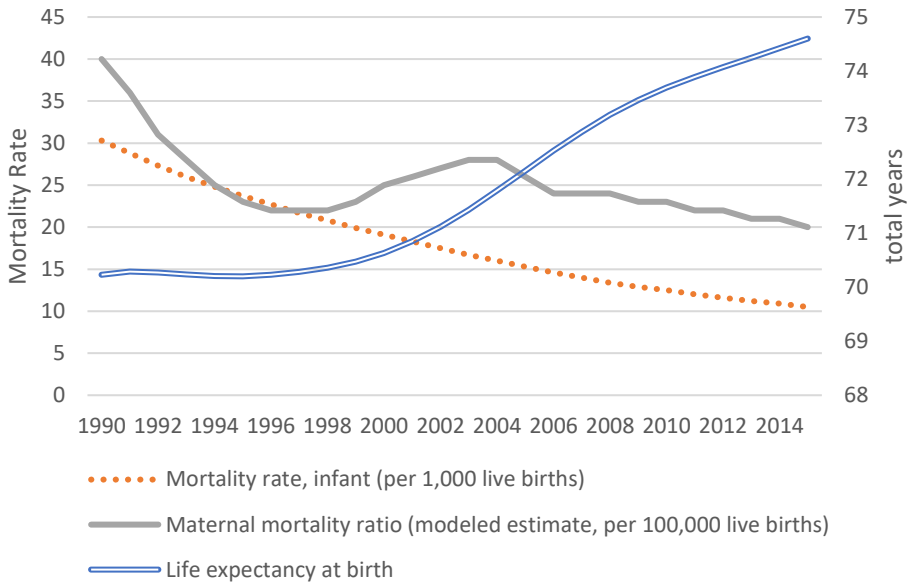


To elucidate the point that poverty and education are related, we examine the level of poverty in the three southernmost provinces: Pattani, Yala, and Narathiwas. These provinces are ones of the lowest income provinces in the country. When compared to other southern provinces, whose poverty rate has been steadily declining, the three provinces' poverty fluctuated substantially between 2000 and 2015. The fluctuations of the poverty rate reflect output volatility. Other less poor southern provinces earn a steady income from the tourism industry, but these three southern provinces suffer from perennial problems of terrorist activities, threatening a favorable environment for trade and investment. Falling rubber prices and high unemployment gave rise to poverty, underground activities, and violence. In turn, economic and social instability gives rise to the low quality of schooling and shorter time spans children spent in school. The number of years spent in school in these three provinces south was on average eight years--three years lower than the level in Bangkok.

Poverty and income distribution is a multi-facet problem, encompassing factor endowment, social and political issues. Nevertheless, one of the essential factor contributing to income inequality is the shortage of human capital, which must be addressed by an appropriate education policy, which fits into the local culture and social values. There are other non-monetary aspects of poverty, which are about quality of life. The maternal mortality ratio declined from 36 (out of 100,000 born) in 1990 to 20 in 2015 (Figure 12.16). Admittedly, the rate is still high, but substantial progress has been made. Notice that the massive reduction was made during the economic boom in the early 1990s, reaching its trough at 22 around the 1997/1998. When the

economy suffered from the financial crisis, the ratio had risen again and peaked at 28 around 2003/2004 before it gradually declined. Thailand did not experience the sharp decline in mortality ratio as it achieved during the boom. It is hard to dispute that GDP growth is good for the poor, but business cycles do have real impacts on the wellbeing of the poor.

Figure 12. 16 Mortality and Life expectancy
Source: World Development Indicators



Other non-monetary measures of wellbeing of the poor are the prevalence of underweight children. In the first five years of life, malnutrition can lead to reduced cognitive and non-cognitive abilities. The malnourishment of children adversely affects the ability to learn and negatively related to health capital. In the long run, poor health conditions in workers preclude productivity improvement and long-run economic growth.

Life expectancy at birth rose from 70 years in 1990 to 74.6 years in 2015. Casstello-Climent and Domenech (2008) argue that the life expectancy mechanism explains a large part of the relationship between inequality and human capital accumulation. When individuals invest in education, they take into account their life expectancy, which depends on the human capital of their parents. The fundamental inequality of education creates a poverty trap in which children raised in low-income families have a low life expectancy and work as unskilled labor.

The prevalence of underweight Thai children under five years of age had declined slowly but steadily to 15.4 % in 1995. By 2006, the percentage of underweight children declined sharply by half to just 7 %, thanks to the public budget allocated to health services. Nevertheless, the was a slight rebound to 9.2 % in 2012. Growth slowdown and the health care and social welfare budget were reallocated to other priorities. Growth is good for the poor, but an inclusive and sustainable growth requires a good government that prioritizes the plight of the poor.

7. Concluding remarks

The macroeconomic policy must preserve and maintain macroeconomic stability while taking into consideration the impact on the poor. Exchange rate policy adjustments to correct disequilibrium in the balance of payments must be accompanied by fiscal policy to mitigate adverse consequences on the poor, who would suffer from price changes induced by exchange rate depreciation. On the other hand, fiscal policy which stimulates or deflates the economy must take into account unintended impacts of public expenditures and tax burdens on the poor.

The macroeconomic policy must take in to account the long-term impact on growth by designing economic stabilization policy with the strategy of pro-poor policies. Fiscal policy focusses on education and health can stimulate long-term growth and reduce poverty. These are specific sets of pro- poor macroeconomic policy, encompassing the well- coordinated fiscal, monetary, international trade, and exchange rate policies. In the case of fiscal sustainability, the government must maintain a minimum 25 percent of total budget allocated to capital expenditures to maintain long-term growth trajectory. Similarly, there must be a lower bound for public spending on health and social welfare. Because investment in human and health capital should not be procyclical, the minimum requirement should be based on the minimum percentage of GDP. The historical pattern of spending in this category (Figure 12.14) suggests that public spending on education should not go below 4% of GDP, while the minimum public spending on social welfare and health should not be less than 2 % of GDP for each category. This public spending rule can prevent myopic behavior of the government which mainly focuses on current spending. It is a dangerous economic consequence when self-interest and short-termism undermine long-term growth.

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[i] [i] In 1967, the fertility rate was 6 births per woman. By 2015, it declined to 1.5.

[ii] Jitsuchon (2014) observes that Thailand has passed Kuznets' turning point since the mid-1990s.

[iii] The 2013 national average of PISA scores of Thai students in reading, mathematics, and science are equivalent to one proficiency level--much lower than the OECD average.