

## CHAPTER 3

### FRAMEWORK OF THE STUDY

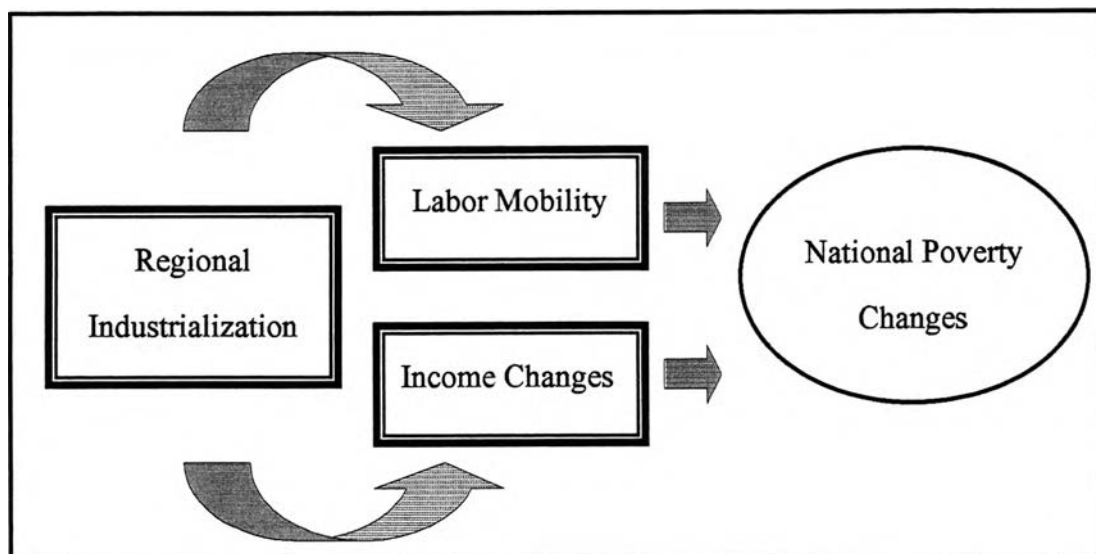


#### 3.1 Conceptual Framework

Many previous studies on poverty in Thailand believed that the regional industrialization could contribute to poverty reduction, through an increasing in employment opportunities and income. However, these studies did not expect that all changes in the national poverty level could be influenced by the regional industrialization. There were many other factors contributing to the changes in the national poverty level.

This study aims to specifically identify the impacts of the regional industrialization on the changes in national poverty level by assuming that one significant channel through which policy influences poverty changes is through its effect on the changes in labor income and labor mobility across region and sectors of production. The conceptual basis for relating poverty to the regional industrialization is summarized in figure 3.1. The income changes and the labor mobility are similarly an outcome of regional industrialization and poverty is a subsequent outcome. Thus, this study will focus on the income changes and the labor mobility as the component of the link between poverty and regional industrialization.

**Figure 3.1** Conceptual Framework: Regional Industrialization, Labor Mobility, and Poverty Changes.



### 3.2 Theoretical Framework

To find out the impact of regional industrialization on poverty, requires some theories and ideas to explain the link between poverty and regional industrialization.

The theoretical framework in this study is divided into 4 parts. Firstly, industrialization and labor mobility. Secondly, the poverty measurement. Thirdly, poverty index. Finally, poverty lines.

#### 3.2.1 Industrialization and labor mobility

While the industrial expansion has been more and more located in the Bangkok Metropolitan Area and in big cities-leading the industries in urban areas are expanding. Consequently, labor influx from rural areas enters in the urban areas or from agricultural sector to non-agricultural sector. Working in other industries or service industries is interested of the labor. This is because

they can be offered better jobs with higher income. This can improve their standard of living and with purchasing power.

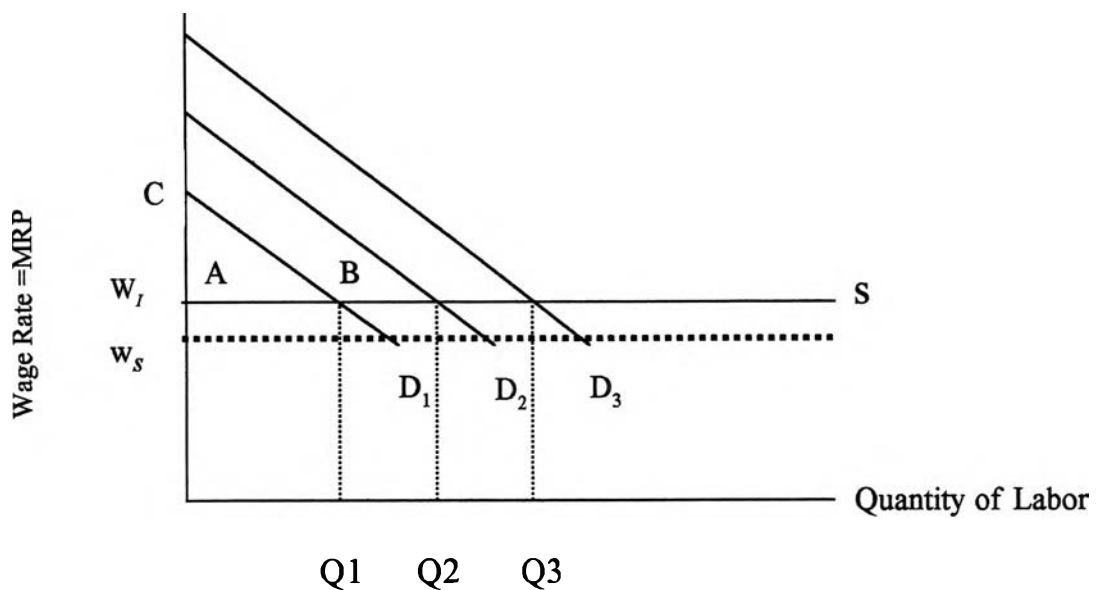
Due to the differences in demographic pattern, natural resource, infrastructure, economic conditions, and industrial development policies in each region of Thailand, labor transfer from the agriculture to the non-agricultural sector will be different significantly in each region.

The mechanics of Lewis's model which are depicted in figure 3.2 will be used to explain the relationships among regional industrialization, labor mobility, and poverty changes in Thailand. *Lewis's dual model* (1954) is an initial model to explain how the economic development in developing country provided with a traditional agricultural sector and an industrial capitalist sector to grow. In Lewis's model, the economic growth occurs because an increase in the size of the industrial sector, which accumulates capital, relates to the agricultural sector, which amasses no capital at all. The source of capital in the industrial sector is benefited from low wages paid to labor come from the traditional agriculture.

Figure 3.2 shows that employers in the industrial sector face a perfectly elastic supply of labor curve because there is a surplus of labor in the rural agricultural sector and the industrial wage ( $W_1$ ) exceeds the subsistence wage rate ( $W_s$ ). If labor demand is  $D_1$  in the industrial sector, capitalists will employ  $Q_1$  workers and earn profit income shown by area ABC. Reinvestment of this income will shift the labor demand curve rightward, say to  $D_2$ . Thus employment in the industrial sector will increase, as will total wages, capitalist income, and national output. The process will continue until the surplus labor in the subsistence sector is fully absorbed in the industrial sector.

Implicating of Lewis model into the Thai economy: Lewis's model helps to explain how a developing nation that had previously less saving and small investment percentage of its national income improve itself into an economy voluntarily saving and investing large percentages of its national income. It is not true for Thailand because the rapid economic growth and capital accumulation in the industrial sector in Thailand has resulted from Foreign Direct Investment (FDI). Therefore the reinvestment of profits and interest is a less portion in the expansion of capital stock.

**Figure 3.2** Industrial Expansion in Lewis Model



**Source:** Based on W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," *Manchester School* 22 (May 1954): 146

### 3.2.2 Poverty measurement

There are two different approaches to identify a poverty measurement. The first approach seeks an absolute standard of deprivation, while the second relies on relative standards of adequacy.<sup>1</sup>

#### a) The absolute approach

The poverty measurement in this study based on the absolute approach. The absolute approach to define poverty beings starts by establishing a certain minimum level of goods and services. Families and individuals who do not have the resources to purchase this minimum bundle of goods and services are then considered poor. In most severe conception of the absolute approach, this bundle of economic goods and services consists of the minimum caloric intake essential to human existence. After establishing what should be included in the minimum level of consumption, then the income necessary to purchase the goods and services can establish using the prevailing market prices.

#### b) The relative approach

The relative approach is a measure of inequality. This approach states that a person is poor when his or her income is significantly less than

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<sup>1</sup>For more discussion of poverty definition, measurement, and extent, see Mwangi S. Kimenyi, *Economics of Poverty, Discrimination, and Public Policy*, 1995.

the average income of the population. Relative poverty incidence based on a comparison between per capita incomes in one group and those of another group. The relative approach may be described relative definitions of poverty consider not only the ability to consume a certain minimum, but also compare the welfare of those with the lowest amount of resources with others in the society.

### 3.2.3 Poverty index

This study uses Head-Count Ratio index (HCR) to measure the poverty incidence. Head-Count Ratio was used in most of previous studies on poverty in Thailand because it simply shows the proportion of people who are considered to be the poor according to the poverty lines. This Head-Count Ratio is sometimes referred to as the "incidence of poverty". Based on Sen (1976), the incidence of poverty is called the Head-Count Ratio (H).

Let  $Z$  is the poverty line. The Head-Count Ratio is the ratio of the number of people with income  $y_i < z$  to the total population size ( $n$ ). Thus;

$$H = \frac{q}{n}$$

Where  $q$  is the number of people with income less than the poverty line. This ratio is completely insensitive to the distribution of income among the poor. A transfer of income from the poorest group of people to those who are better off will either keep  $H$  unchanged or decrease it. It is also unable to take account of the extent of the shortfall of income, which should not show the same extent of poverty.

The measurement of absolute poverty incidence requires comparing per capita household income with an absolute standard of income, held constant in terms of its real purchasing power-known as a poverty line. The poverty line has to be determined in order to classify population into “poor” and “non-poor”. The poverty lines were used in many previous studies on poverty in Thailand are based on a nutritional concept such as Krongkaew's poverty lines, the Asian Development Bank's poverty lines, and Kakwani's poverty lines. These lines are calculated from minimum food requirement and necessary non-food expenditure. However, they are different in their value and measurement.

One of absolute poverty lines used for calculating the poverty incidence in various years was Oey Astra Meesook's urban and rural poverty lines. Meesook's poverty line was defined in terms of household total income. The poverty line has been fixed separately with respect to urban area and rural area. The level has been set at 1,981 baht per person per year in rural area and 2,961 baht per person per year in urban area in 1975/76. Many previous studies on poverty in Thailand are based on Meesook's poverty lines including Sarntisart (2003). According to the study, there were 6,951 baht per person per year for urban poverty line and 4,650 baht per person per year for rural poverty line in 1990. Adjusted by consumer price indices<sup>2</sup>, the urban poverty lines were 6,228, 9,300, and 10,816 baht per person per year in 1988, 1996, and 2000 respectively. The adjusted rural poverty lines were 4,166, 6,222, and 7,235 baht per person per year in 1988, 1996, and 2000 respectively.

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<sup>2</sup> Consumer Price Indices (CPI) at 1990 constant price were 89.6, 133.8, and 155.6 in 1988, 1996, and 2000, respectively. (Sarntisart, 2003)