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## Rural-urban migration in Thailand

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UNIVERSITY OF NEBRASKA AT OMAHA

RURAL-URBAN MIGRATION IN THAILAND

A THESIS SUBMITTED TO

DR. BUN SONG LEE

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IN CANDIDACY FOR THE DEGREE OF

MASTER OF ARTS

DEPARTMENT OF ECONOMICS

BY

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OMAHA, NEBRASKA

AUGUST 1986

UMI Number: EP73312

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## PREFACE

In common with other developing countries, Thailand experiences an accelerating and unfavorable redistribution of its population, resulting from the rapid population growth in combination with unevenly spread modernization in the country.

The purpose of this study is to assess long-term trends in migratory behavior in Thailand. This study is divided into two sections. The first section focuses on the national geography, patterns of migration, rural/urban distribution, urbanization, and characteristics of migrants in Thailand. The first section includes the discussions of several economists whose works are relevant to this study. Also included at the beginning of the first section are the reviews of several articles which are important to the development of this field. For the first part, the data are collected from the study of Sidney Goldstein (1977, 1985); The 1970 and 1980 Population and Housing Census: Subject Report Number 2; Economic and Social Commission for Asia and the Pacific (ESCAP), Country Report: Thailand; and Institute of Population Studies (Asean population Programme): Migration in Relation to Rural Development: Self-help Land Settlement in Thailand. The second section attempts to assess long-term trends in migration behavior by applying a multiple regression analysis to the data collected from The 1970 and 1980 Population and Housing Census. Double-log relationships were fitted.

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## SECTION ONE

## I. INTRODUCTION: ARTICLE REVIEWS.

According to Lee and Farber (1984), the studies concerning the net social and economic effects of rural-urban migration in less developed countries (LDCs) are broadly grouped into two schools. The first one is the so-called "anti-rural-urban-migration-in-LDCs group." Headed by Todaro (1981) and Friedman and Douglas (1978), this group argues that the rural-urban migration in LDCs is different from that experienced by developed countries, so that the urban industrial model that recapitulates the Western experience of the preceding two centuries is not applicable to LDCs. As a result of increasingly rising urban unemployment caused by increased rural-urban migration, again induced by the too rapid pace of urbanization in LDCs, rural-urban migration appears disastrous for the society. That analysis was then forced to accept the fact that the solutions to the urban employment problem have to be sought in the rural areas. Strictly speaking their solution is to reduce rural-urban migration by using the rural development projects.

The second school is "the pro- or neutral-rural-urban-migration-in-LDCs." The famous economists in this school are Preston (1979), Simmons (1979), and Mera (1978a and 1978b). They suggested that the pace of current

urbanization in LDCs is not very rapid when compared with previous urbanization experiences of the currently developed countries; the unemployment of the urban areas was quite exaggerated because rural-urban migrants to a certain degree have been successful in obtaining urban employment and the level of rural-urban migration decreases as the economy grows. Therefore, this argument suggests, in contrast to the former one, that rural-urban migration is not totally disastrous. This leads to the conclusion that the solution to the urban unemployment problem could be found in the urban areas, for instance accommodating or redirecting the rural-urban migrants to other cities. Several famous articles about rural-urban migration have also been summarized and reviewed by Lee and Farber (1984). Only the main ideas of those works are presented in this study. Furthermore, the opinion of Stark (1982) is added to the list to sum up the results of previous studies.

TODARO (1981) does not view migration as a beneficial process necessary for solving the problem of the growing urban labor demand. The continual excess of the rates of rural-urban migration over the rates of urban job creation and over the capacity of urban social services to absorb this labor accounts for the unemployment problem and the population concentration problem in the big cities.

In Todaro's model of rural-urban migration, if a policy

is designed only to solve urban unemployment the situation could be aggravated. The creation of more jobs in urban areas without improving rural incomes and employment opportunities will only lead to higher levels of urban unemployment. This is because of the assumption that rural-urban migration rates respond positively to both higher wage differentials and higher urban employment opportunities. At any given positive urban-rural wage differential, higher urban employment rates will tend to raise the expected wage differential and induce higher rates of rural-urban migration. Since Todaro's view about migration is pessimistic, his policy prescription concentrates on rural development programs in order to reduce economic incentives for potential rural-urban migrants.

FRIEDMAN AND DOUGLASS (1978), disagree with the old paradigm which obtains economic growth through rapid industrialization of a few urban centers. They suggest that the paradigm has failed to improve human welfare and happiness. They also relate the old paradigm to the transition of the international economy; social contradiction of dualistic dependency between town and countryside can cause the sustained national economy to collapse. They propose a policy called "agropolitan development" which involves moving certain elements of urbanism to specific

rural places. This policy attempts to increase the attractiveness of rural areas by investing in rural districts, so that this policy will discourage the potential migrants from moving from rural to urban places. The transformed rural areas would be a hybrid form called "agropolis" or "city-in-the-fields."

PRESTON (1979) examined the data assembled by the United Nations and came up with a conclusion contradictory to many common views. He claims that the population distribution in LDCs is not as disastrous as commonly viewed.

He claims that rural-urban migration has a significant role in the development process because of agglomerative economics as it appeared in the history of developed countries. The rural development policies are appropriate if the purpose is to bring the better living conditions to these people in rural areas but inappropriate if the purpose is to restrain the rural-urban movement.

SIMONS (1976) states that rural-urban migrants are relatively better off in urban places. Those migrants in Latin America and Asia move in response to higher wages, while in Africa the migrants respond more to urban social services, such as schools, medical facilities, piped water, etc. He explains that migrants are selective groups, such as the young (productive) group and the



educated (skilled) group; therefore, they are quite capable of doing more than just survive. He argues that even poor migrants are better off in big cities. The poor migrants usually build squalor houses on public land (squatting) and use their residences to earn income by renting rooms or practicing petty commerce. A survey of several of these low-income communities in large urban places in Africa, Asia, and Latin America reveals that at rather high levels the migrants are able to enjoy urban amenities; for instance, electricity, water, garbage collection, health care, etc.

Simmons, in his later work (1979), suggests accommodating families who move to big urban places rather than reversing the migration flows because the latter requires a high degree of policing that is neither economically nor administratively feasible for developing countries.

MERA (1978a and 1978b) started conducting his studies from Williamson's Rule (1965). The rule states that at the beginning of the economic development of each country, the country experiences an intensified income disparity between regions. After the country's economic development reaches a certain stage of development, the income differential declines as economic development increases. Mera infers in his studies that population concentration is a temporary problem that every country has to face as it experiences

economic growth.

Mera's thesis is verified by the Japanese data and the Korean data. Both countries experienced extremely rapid urbanization in the largest cities during the period of rapid economic growth. The urbanization was due mostly to the rapid shift of population towards the primate cities. The rates of population concentration in the big metropolitan areas declined as the economic growth rates diminished and as the income differentials between urban and rural areas decreased.

He postulates that there is a conflict between economic growth and decentralization of population. Rapid economic growth will enlarge the income differentials between regions which in turn will induce a rapid population shift from low-income rural places to high-income urban areas. Therefore, the slowing of population concentration can be obtained at the cost of a lower economic growth rate.

STARK (1982) states that most of the studies on migration have been conducted by starting from inflexible presuppositions. Therefore, the marginal benefit of any extra research in this area is almost zero. He suggests that there should be a reformulation of the policy-related presumptions on which research has been based.

Finally, he emphasizes that rural-urban migration carries with it a large array of potentially

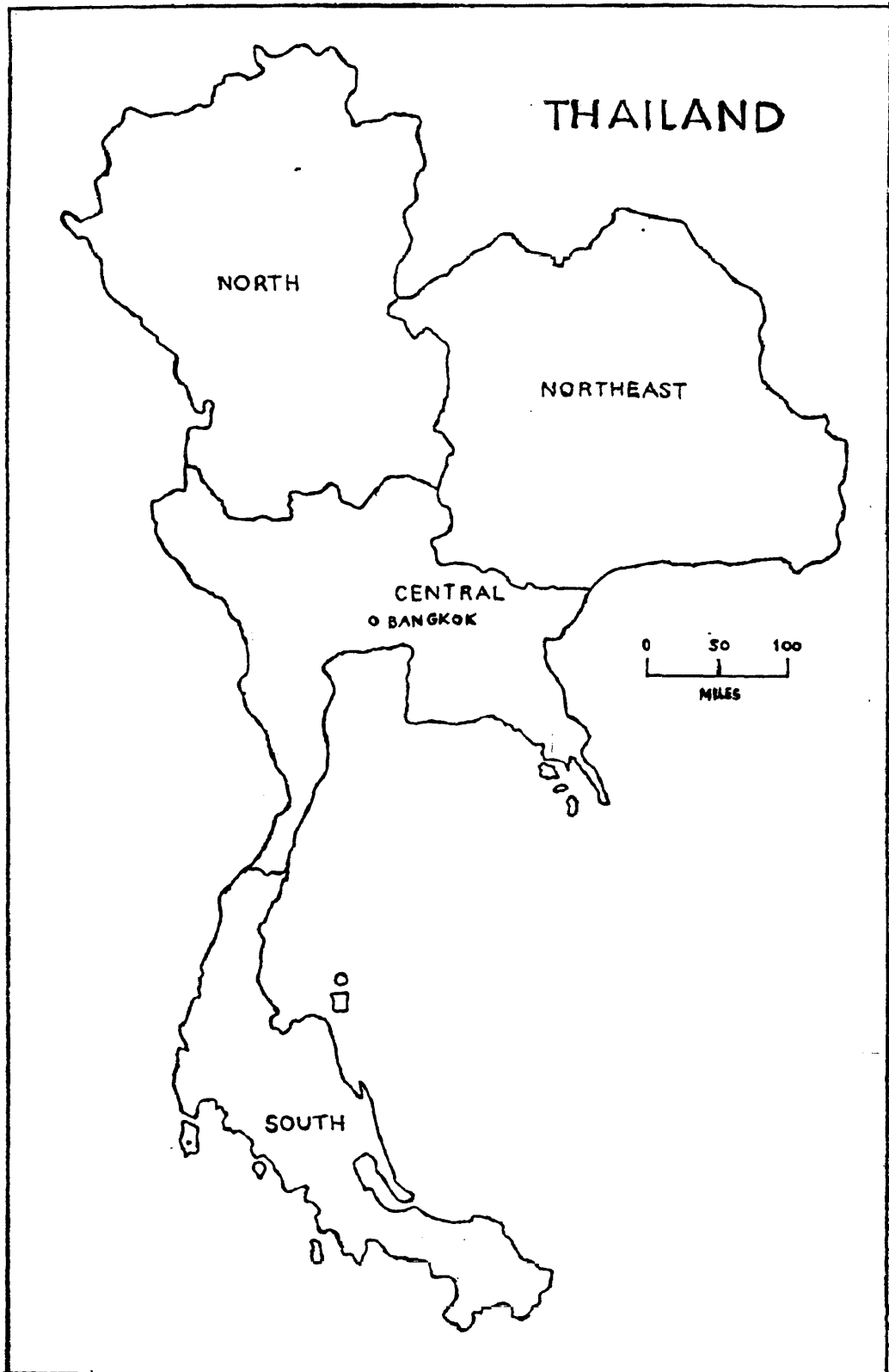
desirable repercussions, often realized and manifested. He proposes that good policies should employ effective means to minimize or eliminate the few (if any) undesirable consequences of migration, but not eliminate migration itself.

## II. THE REGIONS OF THAILAND

Thailand is a tropical country, situated in the Indo-Chinese peninsula between 5 and 21 degrees north of the equator and between 97 and 106 degrees east longitude. The country covers about 200,000 square miles, or 514,000 square kilometers, and is bordered by Malaysia and the Gulf of Thailand to the south, the Lao People's Democratic Republic and Democratic Kampuchea to the north and east, and by Burma on the west.

Thailand is a constitutional monarchy and is unique among the countries of Southeast Asia in that it was never subjected to direct colonial rule. Thailand, by administrative structure, is divided into 72 provinces or changwats. A changwat may also be subdivided into municipal and non-municipal areas. There are three classes of municipal areas: nakhon (city), muang (town), and tambon (small town), which are considered as urban areas in this study.

For statistical purposes on a broader level, the country is subdivided into four regions according to its natural topography. The North, Northeast and Central regions are formed by the Chao Phya river valley and the Korat river plateau of Northern Thailand. The Southern region is the narrow peninsula extending to the Malaysian border. In addition to the four regions, Bangkok is generally treated as



a region because of its unique characteristics and position in the nation's structure.

#### A. The Central

The Central region, which sometimes is referred to as the Chao Phya basin, is the most fertile area in Thailand, covers approximately 102,032 square kilometers and accounted for about 22 percent of Thailand's population in 1980 (Table I). This region contains the central plains and the well-watered coastal plains in the southeastern area where tapioca, rubber, pepper and tropical fruits are extensively cultivated. Close to the mouth of the Chao Phya River, as it flows into the Gulf of Thailand, is Bangkok, the capital city and the center of transportation and communication.

#### B. The Northeast

The Northeast is the largest region, covering 170,226 square kilometers and contained about one-third of the nation's population in 1980. In spite of being the largest region, its percentage share of GDP was only about 14.8 percent in 1977, and fell to 14.0 percent at the end of 1981, as shown in Table I.

There are low rugged hill barriers to the west and south, which have played a significant role in isolating the region from central Thailand. The rivers drain to the east. Apart from its isolation, the Northeast also has an undesirable physical environment. The soils are thin, and the

TABLE I: SELECTED DEMOGRAPHIC AND ECONOMIC INDICATION.

	BANGKOK	CENTRAL	NORTHEAST	NORTH	SOUTH	WHOLE KINGDOM
Area (km <sup>2</sup> ) <sup>a</sup>	1,547	102,032	170,226	170,006	70,189	514,000
1980 Population <sup>b</sup>	4,640,972	9,615,966	15,548,382	9,017,911	5,541,488	44,360,719
Percentage urban, 1980 <sup>b</sup>	100.0	9.9	4.0	7.5	12.6	17.0
Density per km <sup>2</sup> , 1980 <sup>b</sup>	2965.5	94.0	92.1	53.2	78.4	86.5
Growth rate, 1970-1980 <sup>c</sup>	4.3	2.4	2.5	1.8	2.7	2.5
Percentage share of GDP, 1977 <sup>a</sup>	30.5	29.5	14.8	13.2	12.0	NA
Percentage share of GDP, 1981 <sup>a</sup> (Fourth National Economic Plan)	32.0	30.7	14.0	12.1	11.2	NA
Relative gross regional product per capita (1975 nation=100) <sup>d</sup>	270	142	48	74	98	100

Sources: <sup>a</sup>Thailand, National Economic and Social Development Board cited by

<sup>b</sup>1980 Census of Thailand cited by Goldstein and Goldstein (1985), Table I.

<sup>c</sup>Economic and Social Commission for Asia and the Pacific (ESCAP) Country Reports, Vol. V. Migration, Urbanization, and Development in Thailand, (New York: United Nation, 1982) Cited by Goldstein and Goldstein (1985) Table I.

<sup>d</sup>E.R.LIM et al. Thailand: Toward a Development Strategy of Full Participation, (Washington, D.C.: World Bank, 1980) Cited in Goldstein and Goldstein (1985), Table I.

rainfall is unreliable; however, when the rain comes, it is usually torrential, and the run-off is rapid. Flooding is a problem in the valley bottoms. The undesirable physical environment and its location, isolated from the central plains to a large extent explain the pattern of out-migration, to be discussed later.

Population settlement is reasonably dense in the river valleys and has scattered into arid areas of the region. The most common cultivations are rice, corn, kenaf and tapioca.

Since the 1960's government development programs have focused on raising the region's low standard of living. The major parts of the program supporting the farming population are designed to provide better irrigation and widespread road construction.

### C. The North

The North region, encompassing 170,006 square kilometers, is almost as large as the Northeast (TABLE I). The intervening rivers drain to the south. Despite considerable deforestation, there are still substantial stands of the once ubiquitous teak forests. Only about 20 percent of the population resides in this part of the country. Plenty of water allows people of the North to produce rice, tobacco, timber and cattle, as well as a variety of vegetables and fruits, enough to maintain a better



standard of living than in the Northeast. Population settlement is relatively thin in the uplands of the North, due partly to poor transportation networks. In the isolated hill lands there are non-Thai people, colorful hill-tribe people, who still practice shifting subsistence cultivation, although the production of the opium poppy, with all the problems of local banditry and international notoriety that this entails, is a major "cash" crop.

#### D. The South

The South, the smallest geographic region, covering an area of 70,189 square kilometers, forms a narrow peninsula to Malaysia. In 1980, the 5.6 million people living there accounted for 12.5 percent of the country's population (TABLE I).

The South experiences the double monsoon. Abundance of rainfall and water permits farmers to earn a high standard of living. Other than its most common agricultural products, including tobacco, fruits, vegetables and rubber, the South also relies upon tin deposits and fish as sources of income.

Due to the South's geographic configuration and topography, the region has been isolated from the other part of Thailand. It is not only the distance that separates the South from other parts of Thailand, but also the fact that the majority of its population are Muslim, while the rest of

the country is dominated by Buddhism. This diverts the cultural and economical orientation of the Thai Muslims from Thai Buddhist toward the Malaysian Muslims. The region has also been the focus of concerted efforts to improve the quality of life and to integrate it more satisfactorily to the rest of the nation.

#### E. Bangkok

Bangkok, the capital with a population of 4.7 million in 1980, is treated as one region because of its eminent position as the political, cultural, commercial, and social center of Thailand. Until the late 1960s, communication between the regions of Thailand had to be channelled through Bangkok, even though the distance between themselves was shorter than that between them and Bangkok. Although this situation has changed considerably, the city's primacy has continued to grow. As indicated by demographic statistics, the population of Bangkok in 1947 was 21 times greater than that of Chiang Mai, the second largest city of Thailand. The capital was 27 times greater in 1960; 32 times greater in 1970; and 46 times greater in 1980, (Goldstein, et al., 1985:6). The integration of municipalities between Phra Nakhon Province and Thonburee (Bangkok now) accounts for a crucial part of the population growth during 1970 and 1980.

### III. PATTERNS OF MIGRATION

The highlights of the analysis of migration patterns

during 1955-1980 are reviewed. According to the 1960, 1970 and 1980 Censuses of Thailand<sup>(1)</sup>, two types of migration can be identified: 1) 5-year migration, restricted to persons aged 5 years or older at the time of the census and defined in terms of a change of changwats of residence within or between regions during the five years before the time of census; and 2) lifetime migration, based on a census question identifying changwat of birth. Based on the above information, recent migrants are identified as those persons who had been living in their places of residence for less than 5 years; and lifetime migrants are defined as all those persons whose changwat of residence at the time of census was different from their changwat of birth. Not identified as lifetime migrants are those moving within a changwat, even though the move may have been between a rural and an urban place. Therefore, the lifetime migration data do not allow for measurement of the migration between rural and urban places.

#### A. 5-Year (Recent) Migration

In Table II, the data on recent inter-provincial migration have been adjusted for bias in enumeration. The patterns of recent migration are discussed extensively in Goldstein et al. (1985).

The data from the three censuses suggest an increase in the inter-provincial movement between 1965-70 as compared to that during 1955-60 (5.9 and 3.6 percent, respectively)



and a decline in the same stream between 1975-1980 as compared to that during 1965-1970 (4.1 percent compared to 5.9). The decline in the 1975-80 period was due to the drastic decrease of intra-regional moves. The relative increase in the inter-regional migration compared to the intra-regional stream, as a possible result of the dramatic economic and social changes in Thailand during the 1960s and 1970s, suggests a greater adjustment to job opportunities through long-distance than through short-distance moves. Improvement of transportation, communication and education introduced by the modernization and development of the country may have had considerable influence on the pattern of the inter-regional migration.

During the 5-year period before the 1980 census, the North and Northeast had lower provincial migration as compared to that of the 1955-60 period, although in the former period (1975-80) the intra-regional moves of the North rose by 2.6 percent while those of the Northeast drastically decreased by about 10.5 percent. As indicated in the 1980 census, there are three regions: Bangkok, the Central and South, having a higher percentage of inter-changwat migrants than they had in the period 1955-60. Nevertheless, the comparison between the 1965-70 and 1975-80 period suggests the diminishing pace of movement to Bangkok, the Central, and Southern regions during the last decade.

From all three censuses, a continuation of narrowing differences between the percentage of migrants of Bangkok and the Central region is revealed. The evidence suggests that the attractiveness of the Central region has been increasing, while the attractiveness of Bangkok has been declining.

In 1975-80 compared to 1965-70, not only the percentage of the movement between provinces within the same region but also its absolute number dropped. Also, in the 1980 census, the Central region had a majority of its inter-changwat migrants coming from other regions, in contrast to the Northeast and South, which maintained the rate of intra-changwat migration at a level characterizing both regions for the preceding two decades.

As shown in TABLE III, every inter-regional stream of migration has its counterstream. A small part of the counterstream is the return stream of migration. The larger proportion of the counterstreams reveals the fact that individuals are seeking distinct kinds of opportunity, based on their unique combination of characteristics, needs, perceptions and resources.

Of all the migration streams between regions, according to the 1960, 1970 and 1980 censuses, the stream from the Central region to Bangkok was the largest. This reflects the factor of proximity. The Northeast region, known as

TABLE III. INTERPROVINCIAL RECENT MIGRATION STREAMS BY REGION, 1955-60, 1965-70, 1975-80.

Current Residence	Total Interprovincial Migrants	Region of Previous Residence			
		Bangkok	Central	North	South
		<u>1955-1960</u>			
Bangkok	131,370	-	81,214	13,947	26,745
Central	210,211	40,006	123,762	15,560	25,860
North	156,721	8,900	30,270	90,702	26,002
Northeast	206,149	8,890	10,758	4,896	180,353
South	84,555	6,529	10,850	1,482	6,998
		<u>1965-1970</u>			
Bangkok	289,791	-	166,181	36,555	66,813
Central	456,081	82,823	248,103	47,231	62,936
North	315,734	14,646	58,035	195,703	43,920
Northeast	430,668	23,592	45,646	26,130	330,486
South	173,730	8,867	18,486	3,775	11,519
		<u>1975-1980</u>			
Bangkok	340,792	-	144,397	43,178	119,661
Central	502,869	115,355	218,084	53,727	95,890
North	268,123	20,945	38,746	164,268*	40,558
Northeast	314,910	20,059	32,142	17,438	241,034*
South	185,501	14,033	20,046	7,225	12,582

\* Adjusted for movement between province split into two provinces between 1970 and 1980. Such movement was not considered interprovincial migration.

Source: Goldstein and Goldstein (1985), Table III

the most economically depressed area of the country, had the second largest stream of migration to Bangkok. By 1980, the rates of increases in the migration stream from the Northeast to Bangkok were much larger than those from the Central region. The data in TABLE III also indicate that over this period the North and the South had increasing out-migration to Bangkok, but the rates of increases were relatively low. These changes reveal the increasing attractiveness of the current residence, as well as the negative pressure of the place of origin.

Increasing continuously through the 1950s, 1960s, and 1970s, the recent migration stream from Bangkok to the Central was the largest stream, and that from the Northeast to the Central was the next largest, reported as 65 percent of the former stream in 1955-60, 76 percent in 1965-70, and 83 percent in 1975-80. The differentials between the two streams as seen from the succeeding period were narrowing. The rising volume of out-migration from the Northeast to the Central may be a result of the increasing attractiveness of changwats proximate to Bangkok.

In 1955-60, the North, Northeast and South had relatively small in-migration streams from each of the other region. For 1965-70, the basic pattern remained similar, although most streams increased considerably, and some rose drastically. During the 1960s, the popularity of the



Northeast as a destination of migration had increased. This may be the result of more job opportunities due to several airbases being used by the United States Air Force (until the mid 1970s).

During 1975-1980, the rate of in-migration of the North, Northeast and South dropped. In fact, many streams of migrants had reduced in volume as compared to that of 1965-70. The Northeast, replacing the Central region, became the largest supplier of migrants to the North. The Central region still maintained its position as the major region of origin of migrants to the Northeast and the South. In addition, Bangkok's streams of migrants to the North and South were the second largest in each group, next to the flow to Central. The migrants from Bangkok may have been return migrants, government personnel or private-sector employees whose jobs were transferred. Others probably moved in response to employment opportunities available in various parts of Thailand.

#### A.1 New Mobility Patterns

The decline in percentages of inter-regional migration, which is long-distance movement, from 2.7 to 2.2 percent in Column 6, during the 1975-80 period as compared to the 1965-70 period (refer to TABLE II), supports the "new mobility patterns" of McGee (1978) which is analogous to the "dynamics of urban dualism<sup>(2)</sup> in the incipient transformation

of rural areas" (Hackenburg, 1980).

While urbanization diffuses to rural areas, primitive production is replaced by capital-intensive production. The formal and informal sector of urban areas will be integrated, resulting in the appearance of petty capitalism which is run by the individual household, alongside the corporate capitalism which is run by the multinational corporation. In consequence, the growth processes are likely to generate the "new mobility patterns". During an early stage, employment for both skilled and unskilled laborers is available in most of the regional centers; therefore, short-distance migration to regional centers will replace long-distance movement to primate cities. This result is based on the assumption that the rural-origin migrants will not move farther than the job search requires. As rural transportation networks expand, there will be more short-distance migration resulting from multiple varieties of commuting, such as from farm residence to town employment, from town to provincial city and so on.

#### A.2 Net Gains and Losses from Recent Migration

As shown in TABLE IV, the gross exchange between regions far exceeded the net recent migration, resulting from the considerable size of the counterstream of each movement.

In all three censuses, only Bangkok and the Northeast

TABLE IV: REGIONAL NET GAINS AND LOSSES FROM RECENT MIGRATION,  
1955-60, 1965-70, 1975-80.

Region of Current Residence	Bangkok	Region of Previous Residence			Total
		Central	North	South	
		<u>1955-60</u>			
Bangkok	-	+43,341	+5,047	+17,855	+69,178
Central	-43,341	-	-14,710	+15,102	-48,776
North	-5,047	+14,710	-	+21,106	+30,134
Northeast	-17,855	-15,102	-21,106	-	-59,809
South	-2,935	+5,827	+635	+5,746	+9,273
		<u>1965-1970</u>			
Bangkok	-	+83,358	+21,909	+43,221	+168,863
Central	-83,358	-	-10,804	+17,290	-80,370
North	-21,909	+10,804	-	+17,790	+6,340
Northeast	-43,221	-17,290	-17,790	-	-85,006
South	-20,375	+3,498	+345	+6,705	-9,827
		<u>1975-1980</u>			
Bangkok	-	+29,042	+22,233	+99,602	+170,400
Central	-29,042	-	+14,981	+63,748	+49,454
North	-22,233	-14,981	-	+23,120	-17,713
Northeast	-99,602	-63,748	-23,120	-	-194,815
South	-19,523	+233	+3,619	+8,345	-7,326

Source: Goldstein and Goldstein (1985), Table 4.

maintained similar patterns of net migration. In each period, Bangkok consistently gained in its exchange with each of other regions; in contrast, the Northeast is a consistent loser to other regions. The Central region, in spite of being a region of net loss in 1955-60 and in 1965-70, became one of net gain in 1975-80. In contrast, the North showed a net loss in 1975-80 despite its net gains in two preceding periods, due to its reverse loss to the Central region and its accentuated loss to the South. The South went from a region of net gain to one of loss earlier than the North as a result of a dramatic increase in the net loss to the capital.

By 1975-1980, the pattern of migration between regions had changed considerably from what it appeared to be in 1955-60. During 1955-60, Bangkok, the North and the South had been gainers through the loss of the Central and the Northeast regions. In 1975-80, only Bangkok and the Central region gained. The Northeast had the greatest loss, of which the loss to Bangkok and the Central region alone accounted for about three-fourths of the gains made by both regions.

#### B. Lifetime Migration

As mentioned before, the data on lifetime migration were obtained from asking questions concerning the place of birth. The lifetime migration data reveal the patterns

which indicate the net result of inter-changwat moves over an unspecified period of time. However, persons who moved out of their changwat at some time after birth but returned before the time of census are not identified as lifetime migrants. Also excluded are any intermediate moves between the first and the last enumeration. Therefore, the census figures seem to understate the level of movement between changwats. In this section, only the data of the 1980 census is used in the analysis.

#### B.1 Lifetime Inter-regional Migration

Among the inter-regional streams of lifetime migration shown in TABLE V, the largest stream involved 584,800 migrants moving from the Central region to Bangkok. The next largest lifetime migration stream was the movement from the Northeast to Bangkok, followed by that from the Northeast to the Central region.

Lifetime migration patterns reveal the past importance of migration in the growth of Bangkok. Whereas between 90 and 96 percent of the 1980 population in each of Thailand's other regions were living in their region of birth, this was true of only 69.3 percent of the residents in Bangkok in 1980. The remainder of the capital's residents came predominantly from the Central region (12.4 percent), while about 6.2 percent were born in the Northeast, 2.8 percent in the North, and 2.4 percent in the South.

TABLE V: INTER-REGIONAL LIFETIME MIGRATION STREAM.

Region of Residence in 1980	Place of Birth [a]											
	Number Bangkok	Percentage of total Population	Number C [b]	%	Number North	%	Number Northeast	%	Number South	%	Total Population	
Whole Kingdom	3,636,400	8.2	9,638,100	21.8	8,586,900	19.4	15,556,600	35.1	5,483,500	12.4	44,282,300	100
Bangkok	3,263,200	69.3	584,800	12.4	132,800	2.8	292,000	6.2	115,200	2.4	4,711,200	100
Central	260,600	2.7	8,659,700	90.4	134,600	1.4	244,200	2.5	46,400	0.5	9,580,800	100
North	44,000	0.5	228,100	2.5	8,262,500	92.4	186,500	2.1	18,300	0.2	8,945,200	100
Northeast	41,300	0.3	97,800	0.6	42,600	0.3	14,816,600	95.8	19,600	0.1	15,461,000	100
South	27,300	0.5	67,700	1.2	14,700	0.3	27,300	0.5	5,284,000	94.6	5,584,100	100

[a] Excludes migrants with unknown province of origin and migrants from foreign countries.

[b] Central region excludes Bangkok (C)

Source: 1980 Population and Housing Census (Thailand), Subject Report NO. 2: Migration.

Bangkok and the Central region were also somewhat less successful in retaining persons born there than were the other three regions. Of all the persons living in Thailand in 1980 who had been born in the North and the South, just over 96 percent were still living in their region of birth. This was also true of 95 percent of those born in the Northeast region. Bangkok and the Central region had maintained only about 90 percent of their native populations. Again, the exchange of persons was relatively greatest between these two regions, reflecting their proximity and close social and economic interrelations.

#### B.2 Consistency and Inconsistency between Lifetime and Recent Migration

A considerable consistency of the migration patterns between lifetime and recent migration is indicated through the comparison between both types of migration data.

In TABLE VI, the lifetime in-migration, out-migration and net gains and losses from migration in 1980 are presented, in accordance with that of recent migration during 1975-80. The data in TABLE VI indicate consistently that Bangkok had by far the largest number of in-migrations (1,124,500), followed by the Central region (685,800), the North (476,900), the Northeast (201,300), and the South (137,000). The number of out-migrants was largest from the Central (978,400) and the Northeast (750,000). Only 373,200

TABLE VI: GAINS AND LOSSES FROM LIFETIME MIGRATION, BY REGION. (BASED ON SAMPLE DATA)

Region of 1980 Residence	Total Pop.	Lifetime Birth-1980 [a]			Recent Migrant 75-80 [b]		
		In- Migrants	Out- Migrants	Net- Migrants	In- Migrants	Out- Migrants	Net- Migrants
Bangkok	4,711,200	1,124,500	373,200	+751,300	340,792	170,392	+170,400
C *	9,580,800	685,800	978,400	-292,600	502,869	453,415	+ 49,454
North	8,945,200	476,900	324,400	+145,300	268,123	285,836	- 17,713
Northeast	15,461,000	801,300	750,000	-548,700	314,910	509,725	-194,815
South	5,584,100	187,000	199,500	- 55,300	185,501	192,827	- 7,326
Total	44,282,300	2,625,500	2,625,500	876,600			

[a] Excludes migrants with province of origin unknown

[b] Includes

\* The Central region excludes Bangkok (C)

Source: a) 1980 Population and Housing Census of Thailand  
The National Statistic Office, Table 18

b) Goldstein and Goldstein (1985), Table 4



lifetime out-migrants were reported for Bangkok. The net results of the lifetime migration exchanges<sup>(3)</sup> were not always consistent with those from the 5-year migration of the same census year. This suggests that there had been some changes in patterns of population redistribution in Thailand over the last several decades.

Through both recent and lifetime migration (TABLE VI), in 1980 Bangkok gained a substantial numbers of persons. This pattern is supported by the continuous gains of Bangkok over three decades in the recent migration, shown in TABLE IV. The substantial loss of the Northeast in lifetime migrants in 1980 is consistent with the minus sign in the net streams of recent migration for three consecutive decades. While the Central region had lost a large number of persons (-292,600) through lifetime migration, it gained 49,454 individuals during the 5 years preceding the 1980 census. This suggests a reversal in pattern in recent years. The reversal in the pattern is indicated in TABLE IV; the Central had a net loss in the recent migrants during 1955-60 and 1965-70, but had a net gain in 1975-80. The net gain of the lifetime migrants (+145,300) and the negative exchange of the recent migrants (-17,713) of the North also revealed the reversal in pattern in recent decades, as found in TABLE IV, which indicates that the North was a region of net gain in 1955-60 and 1965-70 but

one of net loss in 1975-80. The South's patterns of migration between lifetime and recent movements were consistent in 1980. However, a reverse pattern occurred in 1965-70 (TABLE IV), as indicated by the South's net gain changing to a net loss of the recent migrants. In addition to the change in pattern in 1965-70, the negative number of lifetime migrants (-55,300) compared to the net loss of recent migrants of the South in 1980 suggests a considerable excess of the loss of 5-year migrants during the last two decades over the gain in 1955-60 and before that.

#### C. Return and Repeat Migration

As extensively discussed in Goldstein et al. (1985), the return<sup>(4)</sup> and repeat migration<sup>(5)</sup> in the recent migration stream can be identified through the use of the recent migration data in conjunction with the lifetime migration data; however the analysis has a certain restriction.

Repeat migration was about 18 percent of recent migration in both the 1965-70 and 1975-80 periods in contrast to the return migrations which, increased sharply from 9.6 percent of recent migrants in 1965-70 to 21.2 percent of the 1975-80 group.

A considerable part of the return migration streams reflects the inability of urban areas to provide enough employment opportunities for the growing labor force,

resulting from in-migration and maturation of the young population. Furthermore, government development programs and improved transportation networks also have crucial influence on the return and repeat migration. The government development efforts in the North and Northeast regions between 1975-1980 may have provided an attractive alternative for migrants who were underemployed or only marginally viable in their previous destination, while the improved transportation networks make it possible for circulation and seasonal migration to become alternatives to long-term migration.

#### D. Summary

Thailand, currently changing from an almost entirely rural society to one which is approaching the status of a newly industrialized nation, is still largely rural and will be for a considerable time; even though a vibrant commercial, industrial and bureaucratic sector has grown up over the recent decades. These developments have not been evenly scattered but are concentrated in a few urban places and particularly in the metropolitan region of Bangkok. The distinction between the urban and rural places creates a serious imbalance in the distribution of wealth. An awareness of relative deprivation, scattering through modern communications and transportation, stimulates the movement of persons who seek better lives. Therefore, a majority of

migrants are bound toward urban places where they can expect a certain quality of life, even though they have to struggle more.

#### IV. RURAL/URBAN DISTRIBUTION

Since the 1940s, the municipal areas have grown considerably in size rather than in number. In 1947, only 5 percent of these urban places had a population of over 20,000; by 1979, 48 percent had the same (Goldstein, et al. 1985), while the 119 municipal areas in Thailand remained constant between 1970 and 1980 (ESCAP 1982). However, some administrative structures designated as sanitary improvement districts (6), not classified as municipal places, have taken on the characteristics of municipal areas. As a result, the size of the urban population, based on that of municipal areas, was expected to be understated.

##### A. Rural-Urban Migration

Since a changwat can be subdivided into municipal (urban) and non-municipal (rural) areas, the movement in the same changwat from rural to urban areas is included in the rural-urban stream, but excluded from the inter-changwat migration stream. . Therefore, when a basis of a change in locality (rural/urban areas) is used in identifying migrants instead of a change in changwat of residence, a substantially higher degree of population movement is expected. In 1970, 11.6 percent of the population were

classified as migrants (TABLE VII), while only 5.9 percent were classified as inter-changwat migrants (TABLE II).

The movement from rural to rural area is included in rural-rural stream. As shown in TABLE VII, 62.6 percent of the 3.3 million migrants were classified as rural-rural migrants during 1965-70. As expected, the stream of urban to rural was the smallest. The rural-urban stream was about 10.5 percent of all migrants between 1965-70. The magnitude of the rural-urban stream was considerably understated due to the fact that an additional 3.6 percent of all 1970 urban resident migrants did not indicate whether they came from a rural or urban place and that the large sanitary districts were excluded from the urban group. The latter exaggerated the size of rural to rural movement, since the rural-origin migrants who moved to the large sanitary districts and suburban locations were counted as rural-rural migrants instead of rural-urban migrants.

The fact that rural-urban migration in Thailand is not the main type of population movement is in common with other countries in Southeast and South Asia. Since Thailand is mainly rural like other countries in Southeast and South Asia, it is the rural-rural stream of migration that is dominant, even taking those overcountings into consideration. This reveals the importance of movement

TABLE VII: URBAN/RURAL RECENT MIGRATION STREAMS,  
1965-70 AND 1975-80. [1]

	1965-70		1975-80	
	Number	Percent	Number	Percent
Non-migrants	25,405,300	88.4	36,432,552	92.6
Total migrants	3,331,100	11.6	2,947,700	7.4
Total population age 5 and over	28,736,400	100.0	39,380,252	100.0
Rural-rural migrants	2,086,700	62.6	1,532,900	52.0
Rural-urban migrants	348,000	10.5	420,600	14.3
Urban-rural migrants	180,400	5.4	278,300	9.4
Urban-urban migrants	297,000	8.9	506,000	17.2
Total migrants	3,331,100	100.0	2,947,700	100.0

[1] Data for 1955-60 are not available in terms of rural/urban origin and destination.

Sources: Goldstein and Goldstein (1985), Table 5.

between rural places in the adjustment of rural residents to the changes in economic situations.

The size of the rural-urban stream, though small when compared to that of the rural-rural flow, is comparatively large relative to the urban population. The rural-urban movement plays a crucial part in urban growth. During 1960-1970, net migration accounted for about 44 percent of all urban growth in Thailand, even without the contribution of the children born to these migrants (Goldstein et al. 1985). Therefore, only a small increase in the absolute number of the rural-urban migrants can induce a substantial impact on the size of the urban population.

The urban residents also move from one urban place to another. In 1965-70, the urban-urban stream accounted for about 9 percent of all migrants. A quite interesting stream is the urban-rural migration, which accounted for 5 percent of the total migration and about half of the rural-urban migration. The fact that a substantial percentage of the urban-rural flow was likely return migration suggests that the demographic impact of rural-urban migration may, to a considerable degree, be cancelled by a return movement in a relatively short period (Goldstein et al. 1985:31).

Between 1970-1980, the Thai population age 5 and over had increased more than 10 million persons. Despite this fact, the number of persons moving between localities in

1975-80 dropped to 2.95 million, compared to 3.3 million in 1965-1970. In percentage terms, the same movement fell from 11.6 percent to 7.4 percent of the total population. A similar decline was also found in the 5-year (recent) inter-changwat migrants.

As indicated in TABLE VII, the entire decline in migration between localities belongs to the rural-rural stream, which includes migrants who were rural residents with rural/urban origin unknown. Each of the other migration streams increases in both absolute number and percentage.

These variations in pattern may be the result of 1) less rural land for settlement, 2) rural development programs, 3) family planning programs, 4) rising levels of urbanization, and 5) growing opportunities available in urban places (Goldstein et al. 1985).

Substantial increases in the urban-urban migration may be expected as the levels of urbanization in Thailand rise and as the location of urban places becomes more decentralized. The increase reflects the growing number of urban residents who perceived better opportunities in other urban areas. As the levels of urbanization rise, the number of potential migrants from urban to rural places increases; and as the size of the rural-origin in-migrants stream to urban places grows, a reservoir for potential return migrants enlarges.



Closely related to the rural-urban migration stream is the movement from the agricultural to the non-agricultural sector. The rural-urban migrants are usually those who move from an agricultural sector to a non-agricultural sector. One relevant factor stimulating this movement is the policy bias of the Thai government. Usher (1966) estimates that 22 percent of the rice premium was placed as an effective tax rate on the exporters who, in turn place this tax burden on the farmers. By contrast, a 10 percent average tax rate was placed on non-farm products. In addition, Lam (1977) estimates that during 1962-1972 the rice premium had absorbed 25 percent of the rural income and accounted for 57 percent of the aggregate tax burden of the nation. This tax bias against rural areas (agricultural sector) has been accompanied by a regressive tax system. In 1972, it was estimated that the poorest group, of which the majority lived in rural places, paid 17 percent of their income in taxes while the richest group, of which the majority lived in urban areas, paid only 13 percent of their income in taxes. Furthermore, the data on expenditures by the state showed that benefits accruing to the highest income group have been about ten times of those going to the lowest income group. This policy bias toward primate cities tends to increase the attractiveness of the urban places.

## B. Urbanization

Urbanizations, defined as the fraction of total urban population, have consistently increased in Thailand from 9.9 percent in 1947 to 12.5 in 1960, 13.2 in 1970, and 17.6 in 1980. By 1980, the level of urbanization was below that characterizing Southeast Asia (23 percent) and that of developing countries (31 percent) (Goldstein et al. 1985). The data shown in TABLE VIII are the average annual growth rate and the tempo of urbanization measuring the differential between rural and urban annual growth rates. Nationally, the tempo of urbanization of the 1970s far exceeded that of the 1960s with 3.2 percent compared to 0.6 percent. The large differential was due to the increase in the growth rate of urban areas from 3.4 percent to 5.3 percent and the drop in the growth rate of rural places from 2.6 percent to 2.1 percent. Most striking is that the tempo of urbanization of the Central region, including Bangkok, rose from 1.4 in the 1960s to 4.2 in 1970s as a result of the drop in the rural rate of growth from 2.1 percent to 1.5 percent and the increase in the urban rate of growth from 1.5 percent to 5.7 percent.

However, the tempo of urbanization is constant for the Central region, excluding Bangkok, with the rate of 0.4 percent in both periods. Thus, the difference between the Central, including Bangkok, and the Central, excluding Bangkok,

TABLE VIII: URBAN AND RURAL GROWTH RATES AND TEMPO OF URBANIZATION BY REGION, 1960-1970 AND 1970-1980.

Region	Average Annual 1960-1970		Growth Rate 1970-1980		Tempo of Urbanization [a] 1960-1970		Tempo of Urbanization [a] 1970-1980	
	Rural	Urban	Rural	Urban	1960-1970	1970-1980	1960-1970	1970-1980
North	2.8	1.8	1.6	4.2	-1.0		2.6	
North-east	2.9	3.6	2.5	3.3	0.7		0.8	
Central	2.1	3.5	1.5	5.7	1.4		4.2	
Central, excluding Bangkok	2.0	2.4	2.4	2.8	0.4		0.4	
South	2.6	3.2	2.5	4.3	0.6		1.8	
Whole Kingdom	2.6	3.4	2.1	5.3	0.6		3.2	

[a] Tempo of Urbanization = Urban Growth Rate - Rural Growth Rate

Source: ESCAP, 1982, Table 13.

suggests the substantial increase in the level of urbanization of Bangkok in the 1970s.

Urban growth is attributable to a natural increase in population and areal annexation. The contribution of the natural increase declined from just half in the 1960s to 41 percent in the 1970s, and that of net migration from 44 to about 30 percent in contrast to that of areal annexation, which increased from 6.5 percent to almost 30 percent (Goldstein et al. 1985:26).

In 1972, the two largest municipalities, Bangkok and Thonburi, were officially combined into one metropolitan area, and the municipal boundaries were extended to cover the total area of both changwats. As a result, about four-fifths of the capital's population growth in the 1970s was attributable to annexation (Goldstein et al. 1985:27). Without this change in boundaries, the rate of growth, the tempo of urbanization, and the distribution of the components of urban growth in the 1970s would have been more similar to those of the 1960s.

From 1955 to 1980, the evidence tends to indicate a concentration of population resulting from inter-regional migration in and around Bangkok. In 1960, the population in Bangkok accounted for 51.9 percent of Thailand's urban residents; by 1970, the percentage had risen to 54.8; and by 1980 to 61.1 percent (Goldstein et al.

1985:27).

For all other regions at the time of census, the level of urbanization was found highest in the South and lowest in the Northeast. While the percentage of people living in urban areas of the South had increased from 10 percent in 1960 to 12.6 percent in 1980 (refer to TABLE I), that of the North had increased from 6.4 to 7.5 percent, and that of the Northeast had risen from 3.5 to 4.3 percent. The faster urban development in the South contributed to the development of a new international airport at Had Yai and improvements in the highway system on the route to Malaysia and Singapore.

Although the levels of urbanization had not changed substantially between 1960 and 1980, the nation's ten largest urban places indicated some equalization in urban distribution. In 1960, three of the ten largest cities were in the Central region, four in the North, two in the South, and one in the Northeast, but by 1980, only the Bangkok Metropolis represented the Central region in the distribution, while each of the other three regions had three major urban places among the top ten (Goldstein et al. 1985:28).

### C. Urban Dualism

Rural-urban migration is a composite of migration into two urban sectors, formal and informal

sectors. According to Hackenberg (1980), the urban formal and urban informal sector has come to be known as "urban dualism" through the writings of McGee (1971, 1973, 1978). Mazumda (1976) indicates that the urban informal sector of a representative set of primate cities in Asia and Latin America was estimated to contain 70 to 90 percent of all employment in 1970. Souza and Tokman (1976) claim that the informal sector's growth rate of the same group of cities is greater than that of the formal sector. This is because there are only a few, if any, barriers to entry into the employment of the urban informal sector. Furthermore, Cole and Snaders (1985) claim that as the urban informal sector of the Third World grows, migration is becoming less and less selective. This urban informal sector is the main source of income for underqualified migrants, for instance the very young and very old migrants and female migrants.

However, there exist controversies over the urban informal sector. Both schools agree on the concept of personal social mobility--a person would want to have higher income or move upward occupationally or both. One school, which is led by Todaro, suggests that since employment in the urban informal sector is marginal, workers tend to move from the informal sector into the formal sector. The other school of argument, which is led by Friedman and Sullivan (1974), suggests otherwise. They argue that the

wages in the urban informal sector are frequently higher than that of the formal sector and there is better chance of moving upward occupationally through entrepreneurship in the informal sector. In reality, laborers in developing countries do not have the power to bargain wages with the employers. Furthermore, urban cities of developing countries rely on the technology inflows from developed countries, resulting in a small demand for skilled workers. Most workers in the urban formal sector are semiskilled or unskilled; therefore, their average income level is not far from that of the workers in the informal sector.

Mazumdar (1976) points out from his series of studies that while mean earnings per worker in the informal sector are lower than in the formal sector, the overlap between the distributions is quite substantial. However, Friedman and Sullivan seem to have it backward, since as the country grows the individual household businesses are replaced by corporate levels of production.

The contribution of the urban informal sector to the economy is explained by Cole and Sanders (1985) that since a considerable proportion of the urban informal sector's production is consumed by the urban formal sector, the growth of the formal sector increases its demand for the informal sector's exports. This increase in the demand has an upward pressure on wages in the informal sector. The

higher wage in the informal sector will attract more rural-origin migrants into the informal sector. Through these processes, the overall productivity of the economy increases. Therefore, the role of the informal sector is relevant to the development processes.

#### D. Summary

The fact that the model of urban industrialization is not applicable to LDCs suggests that a mature urban hierarchy might not emerge in Thailand. This is because the form of the evolving economy does not require it (Hackenberg 1980). This approach is supported by the existing demographic structure of Thailand and that the number of urban places has not changed during the last two decades.

Since Thailand has a comparative advantage in agricultural products, agriculture provides the major noncompetitive exports for Thailand. Therefore, future economic growth should lie in agriculturally based industries, such as food processings and farm product processings. The rural places will be developed into a combination form of formal and informal sectors, where a mature, technical-perfected and capital-intensive system of industrial production is adapted for a rural economy that is based on agricultural production. This form of development is designated as "a new pattern of secondary development" by Adams (1967) and applied to Southeast Asia by Hackenberg



(1971). Hackenberg (1980) states that this growth process will provide additional non-farm employment in rural areas, increase foreign exchange receipts through the export of processed goods rather than raw materials, plow back profits into essential services and credit for use of local entrepreneurs and improve wages paid to workers in the processing industries. The approach implies a decline in the rural-urban migration rate as a result of lower income differentials between rural and urban places.

#### V. REASONS FOR MIGRATION

In the 1980 census of Thailand, the inclusion of a question on reasons for moving asked of all 5-year migrants allows the analysis of factors affecting the migrants' decision making.

From TABLE IX, the data reveal the significance of economic factors in all migration streams. The contribution of economic factors is largest in the rural-urban stream for both males and females. Most rural-origin migrants moved to urban places to seek employment. For males, however, the number of urban-rural migrants who moved because of job transfers exceeded the number of those looking for a job. For those urban-rural migrant females and urban-urban migrant males citing economic motive, the number of persons moving because of job seeking was almost twice as large as

TABLE IX: REASONS FOR MIGRATION, BY URBAN/RURAL STREAM, BY SEX.

Reason for Migration	Rural-rural		Rural-urban		Urban-rural		Urban-urban	
<u>Males</u>								
<u>Economic</u>								
Look for work	27.5	49.7	21.0	24.6				
Job transfer	6.4	3.1	21.7	13.9				
Other	2.7	7.9	2.0	3.1				
<u>Education</u>	3.4	10.7	2.9	9.7				
<u>Family-related</u>								
Change in marital status	18.0	2.6	7.3	1.9				
Accompany person in household	30.3	14.8	30.5	29.0				
Other	9.3	5.0	11.9	12.5				
<u>Other</u>	2.5	6.3	2.8	5.3				
Total Percent	100.0	100.0	100.0	100.0				
<u>Females</u>								
<u>Economic</u>								
Look for work	16.5	39.4	11.4	16.3				
Job transfer	1.9	1.7	6.7	3.1				
Other	1.8	2.8	1.1	3.1				
<u>Education</u>	1.7	13.5	3.4	12.4				
<u>Family-related</u>								
Change in marital status	12.2	4.8	6.9	5.2				
Accompany person in household	59.3	33.1	59.6	49.3				
Other	4.3	2.0	9.2	6.1				
<u>Other</u>	2.3	2.8	1.6	4.4				
Total Percent	100.0	100.0	100.0	100.0				

Source: Goldstein and Goldstein (1985), Table 6.

the number of individuals moving due to job transfers. These data suggest that the rural-origin migrants perceived greater economic opportunities in urban areas. The high ratios of the number of migrants experiencing job transfers to that seeking jobs in both urban-rural and urban-urban streams indicate that the urban residents may be more willing to move when jobs in areas of destination are guaranteed.

Education is also a major attraction of the urban places for both male and female migrants. Astonishingly, a greater percentage of women than men cited education as the reason for their moves both from rural to urban and from urban to urban. This may partly reflect the increasing participation of women in Thailand in secondary and higher education.

For both sexes, the reason for changing marital status or moving to join family members was prevalent among rural-rural and female migrants who cited a changing marital status as a motive for the moves was relatively small among the rural-urban and urban-urban migration streams. This may indicate that single persons dominated the rural-urban and urban-urban migration streams.

## VI. CHARACTERISTICS OF MIGRANTS

Migration is usually a selective process of population redistribution. This part attempts to compare

characteristics of migrants and non-migrants by focussing on the 5-year migration data of the 1980 census.

A. Age Selectivity

One of the universal features of migration is age selectivity. The data in TABLE X show that Thailand also conforms to the pattern of age selectivity of migration. During the five years preceding the 1980 census, migration rates at ages 20-29 were nearly twice as high as in most age groups. For adjoining age groups they were also high.

For both sexes combined, migration reached a peak of 14.3 percent in the 20-24 age group. Then it began a steady decline, reaching a low of 2.7 percent among those 65 and over. A similar pattern was also seen during the five years preceding the 1970 census.

Of all 5-year migrants reported in the 1980 census, about 57 percent were less than 25 years old and only 9 percent, were age 45 and over (TABLE XI). The young adults, aged 15-24 years, were prevalent among the stream of migration to Bangkok, the biggest urban area of Thailand (1980 Population and Housing Census).

TABLE X: PERCENTAGE DISTRIBUTION OF THE POPULATION 5 YEARS OF AGE AND OVER BY LENGTH OF RESIDENCE LESS THAN FIVE YEARS AND SEX.

Both Sex	Whole Kingdom		Male		Female	
	Less Than 5 Years	Less Than 5 Years	Less Than 5 Years	Less Than 5 Years	Less Than 5 Years	Less Than 5 Years
5-9	7.6	8.0	7.1	7.1	7.1	7.1
10-14	5.4	5.5	5.3	5.3	5.3	5.3
15-19	5.2	5.2	5.1	5.1	5.1	5.1
20-24	8.7	7.7	9.7	9.7	9.7	9.7
25-29	14.3	14.8	13.8	13.8	13.8	13.8
30-34	13.1	15.5	10.9	10.9	10.9	10.9
35-39	9.1	10.5	7.7	7.7	7.7	7.7
40-44	7.1	8.1	6.0	6.0	6.0	6.0
45-49	5.7	6.6	4.8	4.8	4.8	4.8
50-54	4.6	5.2	3.9	3.9	3.9	3.9
55-59	3.7	4.4	3.1	3.1	3.1	3.1
60-64	3.6	3.8	3.4	3.4	3.4	3.4
65 and over	3.5	3.8	3.1	3.1	3.1	3.1
	2.7	2.9	2.6	2.6	2.6	2.6

Source: 1980 Population and Housing Census, Subject Report No. 2: Migration, Table 2.

TABLE XI: PERCENTAGE DISTRIBUTION OF MIGRANT AND NON-MIGRANT  
 BY REGION OF 1980 RESIDENCE, AGE.

Age	Recent Migrant (%)	Non-Migrant (recent)
5-24	57.0	50.0
25-44	34.0	32.6
45 and over	9.0	17.4

Source: 1980 Population and Housing Census  
 Subject Report No. 2: Migration, Table 9.

## B. Sex Selectivity

The sex ratio is the number of male migrants per 100 female migrants. For the overall recent migration stream, the sex ratio was 109.4. This reflects the prevalence of male migrants in the 5-year (recent) migration stream. In contrast, an overall sex ratio among non-migrants, who did not move during the 5 years preceding the 1980 census, was 96.8 (1980 Population and Housing Census). Furthermore, sex selectivity was highly dependent on the ages of the migrants. As shown in TABLE XII, male migrants predominated in the 24-44 and 50-54 age groups, while female migrants did so in the 15-24 age group; the sex ratios were over 130 for male and under 100 for female. This suggests the tendency of females to migrate at earlier ages than males. In addition, the sex ratio went under 100 again for the 60 and over age group. For the 5-14, 45-49, and 50-54 age groups, the sex ratios show a slight predominance of male migrants. These sex selective patterns were also similar to those observed during the 5 years preceding the 1970 census.

### B.1 Sex Ratios by Regional Streams

For the inter-regional stream, the sex ratios show considerable variation (TABLE XIII). Interestingly, the sex ratio for the migration stream from every region to Bangkok was lower than 100; particularly for the North and Northeast, the ratios went below 80, indicating a large

TABLE XII: SEX RATIO OF 5 YEAR MIGRATION BY AGE  
5 YEARS AND OVER.

AGE LEVEL	MIGRATED SINCE 1975		
	M	F	Sex Ratio=(M/F)*100
Whole Kingdom	1,540,200	1,407,500	109.4
5-9	160,900	147,500	104.1
10-14	153,400	146,900	104.4
15-19	203,500	257,800	78.9
20-24	307,700	311,600	98.7
25-29	270,100	195,800	137.9
30-34	141,800	105,400	134.5
35-39	95,700	71,700	133.5
40-44	70,000	52,600	133.1
45-49	47,300	38,000	124.5
50-54	33,100	24,000	137.9
55-59	20,900	19,000	110.0
60 and over	35,800	37,200	96.2

Source: 1980 Population and Housing Census, Subject Report  
No. 2: Migration, Table IX.



TABLE XIII: SEX RATIOS OF MIGRANTS 5 YEARS OF AGE AND OVER, BY REGION

Region of Previous Residence	Region of 1980 Residence				
	Total	Bangkok	Central	North	South
Total	109.4	89.0	104.7	111.4	108.4
Bangkok	99.0	93.2	102.6	113.1	114.7
Central	102.0	93.0	103.5	103.0	122.6
North	106.1	79.5	99.2	111.7	59.6
Northeast	122.3	76.0	111.4	100.6	148.1
South	106.8	97.6	147.1	121.4	105.6

Source: 1980 Population and Housing Census, Subject Report No. 2: Migration, Table E, P. 41.

excess of female migrants in these streams. Compared to the 5-year migration in the 1970 census, the sex ratios for the total 5-year migrants declined from 98.8 in 1970 to 89.0 in 1980, reflecting the increasing attractiveness of the capital for women. This may be explained by the fact that in Bangkok women were offered increasingly attractive opportunities in the service sector and in textile production.

In general, the sex ratios of the migration within and between regions other than those to Bangkok show the predominance of males over females. Among the inter-regional streams, the lowest sex ratio was of the North to the South stream (59.6). However, there is no clear explanation for the particularly low sex ratio.

#### B.2 Sex Ratios by Municipal and Non-municipal Areas (Urban and Rural Areas)

The data in TABLE XIV shows the obviously distinct sex ratios between the 5-year migrants living in municipal areas and those living in non-municipal areas in 1980. For the 5-year migrants living in municipal areas, the sex ratios of both migration streams, from another municipal area and another non-municipal area, show a clear pattern of female prevalence, 93.9 and 86.3, respectively. In contrast to the 5-year migrants living in non-municipal areas, both respective groups have sex ratios of about 120 which shows a

TABLE XIV: SEX RATIO OF 5-YEAR MIGRANTS 5 YEARS OF AGE AND OVER  
BY MUNICIPAL AND NON-MUNICIPAL AREAS.

Sex	Living in Municipal (Urban) Area in 1980		Living in Non-Municipal (Rural) Area in 1980	
	Migrated from Another Municipal (Urban) Area	Migrated from Another Non-Municipal (Rural) Area	Migrated from Another Municipal (Urban) Area	Migrated from Another Non-Municipal (Rural) Area
Male	245,000	194,800	151,600	838,800
Female	261,000	225,800	126,700	694,100
Sex Ratio	93.9	86.3	119.7	120.8

Source: 1980 Population and Housing Census,  
Subject Report No. 2: Migration, Table 5.

predominance of male migrants. This probably reflects the fact that urban places offered more attractive opportunities for women, such as work in the service sector. Comparing the sex ratios of the municipal origin migrants and non-municipal origin migrants who were living in municipal areas in 1980, the lower sex ratio of the latter indicates relatively more female migrants moving from rural to urban areas.

#### C. Educational Attainment

The data for Thailand (TABLE XV) are congruent with the studies in many countries where education serves as a stimulus to migration, especially for long distance moves. Young people may have to move in order to pursue their education, since schools are not evenly distributed throughout the country, especially at the secondary and university levels. Many who do so then do not return to their place of origin, since they cannot fully utilize their human capital there. Therefore, receiving higher education often induces migrants to search for suitable jobs.

From the data in TABLE XV, secondary school makes a clear entrance in migration patterns. About 7.3 percent of persons with a primary level of schooling moved in the 5 years preceding the 1980 census, while 12.8 percent of persons with a secondary school education and 19.3 percent of those who had attended university level (19.3 percent) did so in the

TABLE XV: MIGRATION OF THE POPULATION 6 YEARS OF AGE AND OVER,  
BY EDUCATION ATTAINMENT AND SEX (NUMBER AND PERCENTAGE OF  
TOTAL POPULATION). (Based on Sample Data).

Educational Attainment	Total Recent Migrants	Within Changwat		From Other Changwat (or abroad) [2]
		Same Amphoe	Different Amphoe[1]	
Male Migrants				
Whole Kingdom	1,493,700	154,500	346,100	893,100
	8.0	1.4	1.8	4.8
No Education	140,400	25,300	34,400	80,700
	5.4	1.0	1.3	3.1
Primary Level	982,100	184,300	224,600	575,200
	7.3	1.4	1.6	4.3
Secondary Level	265,500	32,700	64,300	168,500
	12.9	1.6	3.1	8.2
University	92,900	10,000	18,800	64,100
	19.4	2.1	3.9	13.4
Other Education	12,800	2,200	4,000	6,600
	15.8	2.7	5.0	8.1
Female Migrants				
Whole Kingdom	1,364,200	221,700	315,000	827,500
	7.2	1.2	1.7	4.3
No Education	192,800	31,400	50,300	111,100
	5.1	0.8	1.3	3.0
Primary Level	918,100	159,600	203,100	555,400
	6.8	1.2	1.5	4.1
Secondary Level	175,500	21,600	46,300	107,600
	12.6	1.6	3.3	7.7
University	77,100	8,900	15,000	53,200
	19.1	2.2	3.7	13.2
Other Education	7,000	200	300	200
	13.7	3.9	5.9	3.9

\* Percent = (Number of Migrants in Each Category/Total Population of Each Category) \* 100.

[1] Includes migrants whose amphoe of previous residence is unknown.

[2] Includes migrants whose changwat and place of previous residences are unknown.

Notes: Excludes 230,200 persons whose educational attainment is unknown.

Source: 1980 Population and Housing Census,  
Subject Report No. 2: Migration, Table 10.

same period. For those with no education, the migration rate was 5.3 percent.

As mentioned earlier, higher education is particularly conducive to longer distance moves. About 69 percent of the university educated migrants and 63 percent of migrants with a secondary school education moved between changwats. The migrants with a primary school education or no education moved between changwats in a smaller percentage (59 and 58 percent, respectively).

As mentioned before in the analysis of reasons for migration, a considerable part of migration--both short- and long-distance--was directly for the purpose of obtaining more education (refer to TABLE IX), because secondary schools and universities are not evenly distributed throughout the country as are primary schools. Students seeking higher education have to go to Bangkok, where the greatest number of colleges and universities are located, or to the major urban places of each region. Therefore, high rates of migration, particularly to Bangkok, may be expected at those ages during which enrollment in secondary school and universities occurs.

A number of other reasons may explain why migration is selective of persons with higher education. First, specialized skills acquired from secondary and university education are in demand in only selected areas. To match

the acquired skills with specific jobs, the migration from one place to another may be compulsory. Secondly, more highly educated men and women may obtain better information on job opportunities elsewhere and have better chances to afford the moving costs financially and psychologically which are involved in moving to a new location (1980 Population and Housing Census).

#### D. Marital Status

Generally, one or both partners of the married couple will have to move after getting married. As the communication networks expand, unmarried persons are subject to the increasing probability of choosing their marriage partners from outside their immediate place of residence, resulting in the growing number of long-distance moves.

Lacking information on the marital status of migrants at the time of migration, the census is unable to answer an assumption of whether or not more single persons move than married persons, because the migrants might change their marital status during the time of migration and the time of census.

When associated with the age level, recent migration among persons under age 30 was higher among married men (18.3 percent) and women (14.3 percent) than among those who have never married (11.1 percent for men and 10.3 percent for women). The difference was particularly clear for the

15-24 age groups, the ages during which most marriages in Thailand occur (1980 Population and Housing Census).

The data in TABLE XVI suggest that the dissolution of the marriage, divorce or separation, always results in the movement of at least one partner (11.5 for male and 8.2 for female); however, the more usual practice is for the men to move to a new location. The low migration rates were found among the widowed persons.

When associated with the distance of movement, married persons are more likely to move a shorter distance; 56.5 percent of recent (5-year) married migrants cross province boundaries, compared to 67.6 percent of the never-married migrants. In contrast, divorced or separated persons not only moved in relatively greater numbers, but also in longer distance; about 68.8 percent of this group changed changwat of residence. These differences strongly indicate that married persons made shorter moves compared to other groups. This may be because it is much easier to move greater distances if the migrants move alone rather than with family members. Also, the cost associated with the move makes it more possible for the never-married migrants to move a longer distance, while less possible for the recent migrants with a family.

The data in TABLE XVII show that the marital status of recent migrants living in urban (municipal) areas in 1980



TABLE XVI: MIGRATION OF THE POPULATION 13 YEARS OF AGE AND OVER BY MARITAL STATUS AND AGE (NUMBER AND PERCENTAGE OF TOTAL POPULATION IN EACH CATEGORY). (Based on Sample Data)

Marital Status	Total Recent Migrants	Within Changwat		From Other Changwat (or abroad)[2]	
		Same Amphoe	Different Amphoe[1]	Same Amphoe	Different Amphoe
Male Migrants					
Whole Kingdom	1,285,500	216,500	295,400	773,600	
Never Married	8.9	1.5	2.0	5.4	
Currently Married	449,000	49,000	94,800	305,200	
	8.0	0.9	1.7	5.4	
Widowed	758,400	150,200	185,900	422,300	
	9.3	1.8	2.3	5.2	
Divorced or Separate	11,900	1,600	2,500	7,800	
Priest (only male)	3.6	0.5	0.7	2.4	
	17,200	1,800	2,700	12,700	
	11.5	1.2	1.8	8.5	
	48,500	13,900	9,400	25,200	
	22.3	6.4	4.3	11.6	
Female Migrants					
Whole Kingdom	1,172,600	185,900	270,800	715,900	
Never Married	7.8	4.2	1.8	4.8	
Currently Married	402,200	47,600	84,800	269,800	
	8.0	1.0	1.7	5.3	
Widowed	685,700	126,600	166,100	393,000	
	8.3	1.5	2.0	4.8	
Divorced or Separate	48,900	7,500	12,300	29,100	
Priest (only male)	3.6	0.5	0.9	2.2	
	32,500	4,200	6,800	21,500	
	8.2	1.1	1.7	5.4	
	-	-	-	-	
	-	-	-	-	

[1] Includes migrants whose amphoe of previous residence is unknown.

[2] Includes migrants whose changwat and place of previous residences are unknown.

Note: Excludes 93,300 persons whose marital status is unknown.

Source: 1980 Population and Housing Census, Subject Report No. 2: Migration, Table 12.A.

TABLE XVII: MIGRATION STATUS OF POPULATION 13 YEARS OF AGE AND OVER,  
BY MARITAL STATUS, SEX, MUNICIPAL AND NON-MUNICIPAL AREAS  
(URBAN AND RURAL). (Based on Sample Data).

Marital Status	Male (1)					
	Urban Resident in 1980			Rural Resident in 1980		
	Urban-Urban	Rural-Urban	Urban-Rural	Rural-Rural	Urban-Rural	Rural-Rural
Whole Kingdom	206,200	172,600	692,700	125,500		
	1.4	1.2	4.8	0.9		
Never Married	98,800	91,300	180,000	47,600		
	1.8	1.6	3.2	0.9		
Currently Married	100,000	71,800	462,900	72,900		
	1.2	0.9	5.7	0.9		
Widowed	1,700	1,000	7,700	800		
	0.5	0.3	2.3	0.2		
Divorced or Separated	2,900	3,600	7,200	3,000		
	1.9	2.4	4.8	2.0		
Priest (only male)	2,800	4,700	34,700	1,200		
	1.3	2.2	15.9	0.6		
					Female (1)	
Whole Kingdom	227,700	205,000	561,000	101,300		
	1.5	1.4	3.7	0.7		
Never Married	100,500	114,000	131,600	28,800		
	2.0	2.2	2.6	0.6		
Currently Married	109,900	78,100	387,100	65,800		
	1.3	1.0	4.7	0.8		
Widowed	10,300	6,100	26,600	3,600		
	0.8	0.4	2.0	0.3		
Divorced or Separated	5,800	6,400	15,100	2,900		
	1.5	1.6	3.8	0.7		
Priest (only male)	-	-	-	-		
	-	-	-	-		

(1) Includes persons whose length of residence in the place of 1980 residence is unknown.

Note: Excludes 93,300 persons whose marital status is unknown.

Source: 1980 Population and Housing Census, Migration, Table 12.B.

differs sharply from that of rural-resident migrants and also differs by rural/urban origin. Both men and women among the rural-urban stream had the highest percentage of never married (54.4<sup>(7)</sup> and 55.6 percent, respectively) of any stream. One possible explanation is that most migrants move at an early age, the ages before or during which most marriages in Thailand occur. However, if this is based on the assumption that migrants' marital status does not change during the time they move and the time of census, the conclusion would be that single persons are more selective in the migration process as compared to married persons. Also, intra-urban migrants, both male and female, include a relatively high proportion of never married persons (48.6 percent<sup>(8)</sup> and 44.1 percent, respectively). On the other hand, intra-rural migrants were much less likely to be never married (27 percent of the men and 23.5 for women). Among urban-rural migrants, 38.3 percent of the males and 28.5 percent of the females were never married at the time of enumeration. These patterns are not surprising since a considerably higher proportion of rural migrants than urban migrants may move in connection with marriage (1980 Population and Housing Census).

#### E. Occupational Differentials

In more developed countries, migration is viewed as a means of economic improvement for both the migrants and the

natives. Migration, which is a population redistribution process, helps clear the excess supply of labor in the area of origin, mainly rural, and the excess demand for labor in the destination areas.

In contrast to the less developed regions of the world, migration does not always operate in a balanced manner, resulting in both origin and destination problems. Rural-urban migration is likely to be a consequence of push factors in the rural areas and pull factors (increasingly attractive employment opportunities) in the urban places, rather than the demand for labor itself. Migration in less developed countries shifts labor from the low productive agricultural sector to the low productive informal sector in the urban economy.

Occupational distribution among migrants is different from that between non-migrants when rural/urban origin and rural/urban destination were considered (TABLE XVIII). Among male residents of urban (municipal) areas in 1980, urban-origin migrants had an occupational distribution similar to those of non-migrants. The migrant administrative workers, including government workers, transferred between urban places in the 5 years preceding the 1980 census and accounted for a much higher percentage than non-migrants did. In contrast to non-migrants and urban-origin migrants in urban areas, rural-origin migrants

TABLE XVIII: MIGRATION STATUS OF THE ECONOMICALLY ACTIVE POPULATION  
 11 YEARS OF AGE AND OVER, BY PRINCIPAL OCCUPATION, SEX,  
 MUNICIPAL AND NON-MUNICIPAL AREAS (URBAN AND RURAL AREAS).  
 (Based on Sample Data).

Principal Occupation	Living in Municipal Area in 1980						Migrated From Unknown Place
	Total	Has Not Migrated Since 1975[1]	Migrated From Another Municipal Area	Migrated From Non-Municipal Area	(100%)	(100%)	
Male (Whole Kingdom) [2]	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)
Total	11,773,800	1,524,600	150,800	134,100	29,000	29,000	29,000
Professional, Technical and Related Workers	3.1	7.7	9.3	3.4	12.6	12.6	12.6
Administrative, Executive, Managerial Workers & Government Officials	358,900	116,900	14,000	4,600	3,700	3,700	3,700
Clerical & Related Workers	2.1	8.0	14.8	3.7	11.0	11.0	11.0
Sales Workers	248,500	122,100	22,400	4,900	3,200	3,200	3,200
Agricultural, Animal Husbandry & Forest Workers, Fishermen & Hunter	1.9	8.6	8.3	4.4	7.6	7.6	7.6
Miners, Quarrymen, Well Drillers & Related Workers	234,900	131,700	12,500	5,900	2,200	2,200	2,200
Transport Equipment Operators & Related Workers	5.3	19.0	15.9	11.1	15.5	15.5	15.5
Craftsmen, Production Workers & Laborers	629,000	289,500	24,000	14,900	4,500	4,500	4,500
Service Workers	69.8	8.1	3.0	6.4	4.1	4.1	4.1
Workers not classified by occupation or unknown	8,222,100	123,300	4,600	8,600	1,200	1,200	1,200
	.3	.3	.3	.1	.3	.3	.3
	28,900	4,000	400	100	100	100	100
	3.1	9.8	8.7	9.6	7.2	7.2	7.2
	369,500	149,600	13,000	12,800	2,100	2,100	2,100
	11.5	29.3	29.2	49.0	28.6	28.6	28.6
	1,349,300	447,000	44,000	65,700	8,300	8,300	8,300
	2.8	8.8	10.4	11.9	11.8	11.8	11.8
	332,100	133,800	15,700	16,000	3,400	3,400	3,400
	.1	.4	.1	.4	1.0	1.0	1.0
	10,600	6,700	200	600	300	300	300

TABLE XVIII: MIGRATION STATUS OF THE ECONOMICALLY ACTIVE POPULATION  
 11 YEARS OF AGE AND OVER, BY PRINCIPAL OCCUPATION, SEX,  
 MUNICIPAL AND NON-MUNICIPAL AREAS (URBAN AND RURAL AREAS).  
 (Based on Sample Data). (Continued)

	Living in Non-municipal Area in 1980				Migrated from Unkown Place (100%)
	Has not Migrated Since 1975 [1]	Migrated From Non-municipal Area (100%)	Migrated From Another Municipal Area (100%)	Migrated From Unkown Place (100%)	
Male (Whole Kingdom) [2]					
Total	9,167,000 (100%)	620,900 (100%)	105,200 (100%)	42,200 (100%)	4.3
Professional, Technical and Related Workers	2.0	4.0	10.9	11,500	1,800
Administrative, Executive, Managerial Workers & Government Officials	.7	2.7	10.5	11,000	1,100
Clerical & Related Workers	.6	1.3	6.1	6,400	800
Sales Workers	57,300	8,100	11.3	11,900	3.8
Agricultural, Animal Husbandry & Forest Workers, Fishermen & Hunter	258,200	24,400	11,900	1,600	1,600
Miners, Quarrymen, Well Drillers & Related Workers	83.1	66.7	22.5	68.0	28,700
Transport Equipment Operators & Related Workers	7,617,900	414,100	23,700	2,500	100
Craftsmen, Production Workers & Laborers	.2	.4	.7	.2	.2
Service Workers	21,000	2,500	700	100	100
Workers not classified by occupation or unknown	1.8	3.5	7.7	2.9	2.9
	161,200	21,500	8,100	1,200	1,200
	7.3	14.3	21.0	11.6	11.6
	668,800	88,500	22,100	4,900	4,900
	1.5	3.2	9.2	4.5	4.5
	131,600	20,000	9,700	1,900	1,900
	(a)	(a)	.1	.2	.2
	2,500	100	100	100	100

[1] Included persons whose length of residence in the place of 1980 residence is unknown.

[2] Excludes 33,400 persons whose work status is unknown.

Source: 1980 Population and Housing Census, Subject Report No. 2, Table 13.A, 13.B.

TABLE XVIII: MIGRATION STATUS OF THE ECONOMICALLY ACTIVE POPULATION  
11 YEARS OF AGE AND OVER, BY PRINCIPAL OCCUPATION, SEX,  
MUNICIPAL AND NON-MUNICIPAL AREAS (URBAN AND RURAL AREAS).  
(Based on Sample Data).

Principal Occupation	Living in Municipal Area in 1980					Migrated From Unknown Place (100%)
	Total (100%)	Has Not Migrated Since 1975 (1)	Migrated From Another Municipal Area (100%)	Migrated From Non-Municipal Area (100%)	Migrated From Municipal Area (100%)	
Female (Whole Kingdom) (2)						
Total	11,061,200	1,146,600	107,100	114,800	21,700	
Professional, Technical and Related Workers	356,200	151,200	16.8	7,100	9.7	
Administrative, Executive, Managerial Workers & Government Officials	.4	2.7	3.2	.6	1.8	
Clerical & Related Workers	45,000	30,800	3,500	700	400	
Sales Workers	1.5	9.3	8.8	5.2	10.6	
Agricultural, Animal Husbandry & Forest Workers, Fishermen & Hunter	165,100	106,700	9,400	6,000	2,300	
Miners, Quarrymen, Well Drillers & Related Workers	8.2	30.5	24.3	16.0		
Transport Equipment Operators & Related Workers	908,300	349,900	26,000	18,400	4,300	
Craftsmen, Production Workers & Laborers	75.7	8.6	3.1	5.6	.9	
Service Workers	8,371,400	98,400	3,300	6,400	200	
Workers not classified by occupation or unknown	.1	(a)	.1	.1	.5	
	12,700	400	100	100	100	
	.1	.2	.5	.3	.5	
	7,300	2,400	500	300	100	
	7.6	21.5	20.9	25.8	25.8	
	843,000	246,300	22,400	29,600	5,500	
	3.1	13.7	21.8	39.8	30.9	
	346,600	156,700	23,400	45,700	6,700	
	.1	.3	.5	.4	.4	
	5,600	3,800	500	500	--	

TABLE XVIII: MIGRATION STATUS OF THE ECONOMICALLY ACTIVE POPULATION  
 11 YEARS OF AGE AND OVER, BY PRINCIPAL OCCUPATION, SEX,  
 MUNICIPAL AND NON-MUNICIPAL AREAS (URBAN AND RURAL AREAS).  
 (Based on Sample Data). (Continued)

	Living in Non-municipal Area in 1980				Migrated from Unknown Place (100%)
	Has not Migrated Since 1975 (1)	Migrated From Another Non-municipal Area (100%)	Migrated From Municipal Area (100%)	Migrated from Unknown Place (100%)	
Female (Whole Kingdom) [2]	(100%)	(100%)	(100%)	(100%)	
Total	9,141,200	441,600	60,900	27,300	
Professional, Technical and Related Workers	1.5	4.5	23.3	5.5	
Administrative, Executive, Managerial Workers & Government Officials	.1	.3	1.8	1.500	
Clerical & Related Workers	7,200	1,300	1,100		
	.3	1.0	6.9	1.8	
	31,800	4,200	4,200	500	
Sales Workers	5.1	7.7	16.4	9.2	
	463,100	34,100	10,000	2,500	
Agricultural, Animal Husbandry & Forest Workers, Fishermen & Hunter	86.5	72.8	29.2	71.4	
Miners, Quarrymen, Well Drillers & Related Workers	7,904,200	321,600	17,800	19,500	
	.1	.4	.2		
Transport Equipment Operators & Related Workers	10,100	1,900	100	.4	
	(a)	.1	.3	100	
Craftsmen, Production Workers & Laborers	3,400	300	200	100	
	5.3	10.3	15.9	8.8	
Service Workers	481,500	45,500	9,700	2,400	
	1.1	2.9	5.8	2.9	
Workers not classified by occupation or unknown	97,200	12,600	3,500	800	
	(a)	(a)	.2		
	500	200	100		

[1] Included persons whose length of residence in the place of 1980 residence is unknown.

[2] Excludes 33,400 persons whose work status is unknown.

Source: 1980 Population and Housing Census, Subject Report No. 2, Table 13.A, 13.B.  
 a=less than 0.05



have a substantially higher percentage in the crafts workers, including production workers and laborers (49.0 percent compared to 29.2 percent for each of the other two groups). As expected, the rural-origin migrants in urban areas, compared to the other two groups, have much lower percentages in the white collar occupation categories which require a certain level of education. This supports a policy implication that raising the level of education in rural areas will result in more rural-urban migration. Even though the rural-origin migrants are quite successful in obtaining urban employment, there is little chance of moving upward occupationally for most poor migrants from rural places who move permanently to Bangkok (Douglas 1983).

Among females in urban areas, patterns similar to that of males are indicated (TABLE XVIII). For females, inter-urban migrants compared to non-migrants have higher percentage of professionals (16.8 and 13.7 percent, respectively) and a lower percentage of sales workers (24.3 and 30.5 percent, respectively). The results of comparisons between non-migrants and rural-urban migrants indicate the greater differences. The rural-urban migrant females in the service sector accounted for a very high percentage (39.8 percent) of total rural-urban migration in contrast to 21 percent among the urban-urban migrants and 13.7 percent

among the non-migrants. Thus, the service sector was a major source of employment opportunities for rural women who move to urban places.

In rural places in 1980, differences in occupational distribution are extreme between non-migrants and urban-rural migrants, while rural-rural migrants fall in between. Among males, a high percentage of the non-migrants were in agriculture (83.1 percent), but only 66.7 percent of rural-rural migrants and 23.2 percent of urban-rural migrants reported this occupation. As a result, sharp differences characterize every occupational category, especially professional, administrative, sales, and crafts work, in which urban-origin males were much more concentrated than were other groups.

Females in rural areas conformed to similar patterns. Among the urban-rural migrants, female professionals comprised a relatively high percentage (23.3 percent), followed by sales and crafts workers. The urban-rural migrant females also had a relatively high percentage in clerical work (6.9 percent compared to 0.3 percent of the non-migrants and 1.0 percent of rural-rural migrants). As also expected for women in rural areas, the differences between non-migrants and rural-rural migrants were less pronounced in most occupational groups, excluding professionals and crafts workers.

#### F. Unemployment

Migrants often move to a new area in search of better economic opportunities. The migration may contribute to higher levels of unemployment, resulting in major economic and social problems. For Thailand in 1980, the unemployment rate, just under 4 percent, is relatively low by international standards (1980 Population and Housing Census).

As indicated in Table XIX, levels of unemployment vary by rural/urban residence. Non-migrants in urban areas had a 7.3 percent rate of unemployment, while urban-urban migrants had a lower rate of 5.9 percent, followed by that of rural-urban migrants (4.4 percent). The differences indicate that the rural-origin migrants in the urban areas were more successful in finding employment than were the non-migrants in the urban places. Although the non-migrants in rural areas had a very low unemployment rate at only 2.6 percent, the urban-rural migrants had a relatively high unemployment rate (8.4 percent), while rural-rural migrants were characterized by the rate of 2.6 percent.

Especially noteworthy is that the same analysis using the data of the 1970 census (ESCAP 1982) indicates a very high rate of unemployment among rural non-migrants. This result was due to the census definition rather than the real situation. It was likely that many farmers reported

TABLE XIX: MIGRATION STATUS OF THE ECONOMICALLY ACTIVE POPULATION  
 11 YEARS OF AGE AND OVER, BY TYPE OF ECONOMIC ACTIVITY, SEX,  
 MUNICIPAL AND NON-MUNICIPAL AREAS.  
 (Based on Sample Data).

Type of Economic Activity	Total	Living in Municipal Area in 1980				Living in Non-municipal Area in 1980				Migrated From Unknown Place	Migrated from Unknown Place
		Has Not Migrated Since 1975 [1]	Migrated From Another Municipal Area	Migrated From Non-Municipal Area	Migrated From Another Non-municipal Area	Has Not Migrated Since 1975 [1]	Migrated From Another Non-municipal Area	Migrated From Municipal Area	Migrated From Non-municipal Area		
Male (Whole Kingdom)											
Total	11,721,800	1,628,500	158,400	140,000	30,000	9,013,700	603,400	107,100	40,700		
Employed	7,898,000	1,491,100	150,000	132,800	28,200	5,505,400	461,200	98,200	30,100		
Unemployed	489,700	117,300	8,400	5,500	1,800	276,600	13,900	4,900	1,300		
Waiting for the Farm Season	3,394,100	20,100	-	700	-	3,231,700	128,300	4,000	9,300		
Female (Whole Kingdom)											
Total	9,368,200	1,218,300	115,300	121,500	22,700	7,432,200	377,100	58,900	22,200		
Employed	6,544,000	1,109,700	107,500	114,500	21,200	4,824,600	297,200	52,300	17,000		
Unemployed	283,500	91,300	7,700	5,900	1,500	161,700	11,500	3,100	800		
Waiting for the Farm Season	2,540,700	17,300	100	1,100	-	2,445,900	68,400	3,500	4,400		

Source: 1980 Population and Housing Census. Subject Report No. 2, Table 18.b.  
 [1] Includes persons whose length of residence in the place of 1980 residence is unknown.

themselves as out of work during the week prior to the 1970 census date, since that time of the year was the beginning of the slack period in the agricultural cycle. As a result, the unemployment rate for rural places in the 1970 census was especially high.

#### G. Summary

Migrants, for both sexes, generally differ from non-migrants in several characteristics. Based on the 1980 census, the examination of the characteristics of recent migrants and non-migrants reveals that migration in Thailand also conforms to age, sex, education, occupation, and employment selectivity. The pattern of the differentials varies by urban-rural origin status. The urban-urban migrants were specially selective, while rural-urban migrants were not favorably selective when each was compared with non-migrants in their places of destination. However, the rural-urban migrants were highly selective when compared to those they left behind.

## SECTION TWO

The examination in the first section suggests the direction of the relationship between migration and its factors. In this Section 2, multiple regression analysis is applied to inter-regional lifetime migration data to assess and test the direction and degree of the relationships between the migration and its factors. The hypotheses of this section are based on the relationships that have been examined in the first section. The theoretical development is presented, then the fitted model is illustrated and, finally, the results are presented along with some policy implication.

## VII. THEORETICAL DEVELOPMENT

According to Schultz (1977), the approach that human mobility behaved according to laws of social interaction, which is called "gravity model" of migration was first introduced by Carey (1858-1859). The model has been tested on many data set the gravity model of migration is stated thus:

$$(1) \quad M_{ij} = N_i \cdot m_{ij} = \frac{N_i^{b_1+1} \cdot N_j^{b_2}}{D_{ij}^{-b_3}} \cdot Z(X_{1,i}, \dots, X_{n,i}, X_{1,j}, \dots, X_{n,j}),$$

$$(i, j=1, \dots, Z; i \neq j)$$

where  $M_{i,j}$  = gross flows of migrants from one place  $i$  to another place (place  $j$ )

$N_i$  = number of population in origin who are at risk of migration during a specified time

$m_{ij}$  = gross rate of migration from region  $i$  to region  $j$  per person

$N_j$  = number of population in destination

$D_{ij}$  = distance of population in destination

$Z(X_i, X_j)$  = function of other factors represented by the  $X_s$

$n+3$  = number of coefficients

$n$  = number of  $X_s$ .

Therefore, the equation assumes that the migrant

streams,  $M_{ij}$ , are directly related to the size of population in origin and destination,  $N_i$ ,  $N_j$ , and inversely related to the distance between origin and destination,  $D_{ij}$ , and conditional on a function  $Z$  of other related factors, represented by  $X_s$ .

According to statistical criteria, the equation must have a random disturbance term, independent of explanatory variables, to avoid bias and a constant variance (homoskedasticity) to increase efficiency. To achieve the statistical criteria, the gross migrant flows, which is the dependent variable, are normalized by dividing equation (1) by origin population.  $N_i$ , to obtain the gross migration rate and then taking logarithms of this gross migration rate equation. The final equation is

$$(2) \quad \ln M_{ij} = b_0 + b_1 \ln N_i + b_2 \ln N_j + b_3 D_{ij}$$

$$\sum_{k=1}^n \alpha_k \ln X_{k,i} + \sum_{l=n+1}^{2n} \delta_l \ln X_{l,j} + b_4 e_{ij}$$

where  $e_{ij}$  is the error of measurement or disturbance term and  $X_i$ ,  $X_j$  refer to conditioning characteristics of regions  $i$  and  $j$ .

## VII. ESTIMATED EQUATION AND VARIABLES

A lifetime measure of migration between regions is used in estimating the long-term trends of migration in 1980. Since Thailand has 5 regions, there are 5 origins and 4 destinations, or 20 observations. Multiple regression



analysis was applied on the data, and double-log relationships were fitted. The aggregate relationship is of the form:

$$\text{MIG8}_{ijt} / \text{PBP8}_{it} = f(\text{EARP}_{it}, \text{EARC}_{jt}, \text{RMUP}_{i,t-1}, \text{RMUC}_{j,t-1}, \text{UNEP}_{it}, \text{UNEC}_{jt}, \text{ATTP}_{it}, \text{ATTC}_{jt}, \text{DD})$$

where

$\text{MIG8}_{ijt}$  = number of persons born in region  $i$  and enumerated in region  $j$  in 1980.

$\text{PBP8}_{it}$  = number of persons born in region  $i$  and enumerated anywhere in Thailand in 1980, or number of persons at risk of migration in 1980.

$\text{EARP}_{it}$  ( $\text{EARC}_{jt}$ ) = average nominal earnings per household in the previous (current) region of residence in 1980.

$\text{RMUP}_{i,t-1}$  =  $\text{MPOP7}/\text{POPA7}$  ( $\text{RMUC}_{j,t-1}$  =  $\text{MPOC7}/\text{POPC7}$ )  
 = ratio of the number of persons age 5 years and over in municipal (urban) areas of the previous (current) region of residence to the total population of the same region in 1970.

$UNEP_{it}$  ( $UNEC_{jt}$ )

= unemployment rate (as percentage of economically active population) prevailing in the previous (current) region of residence at the time of the 1980 census.

$ATTP_{it}$  ( $ATTC_{jt}$ )

= number of persons who had secondary school and higher education in the previous (current) region of residence in 1980.

DD = proximity between the previous and current region of residence:

= 1 when the previous region is proximate to the current region of residence

= 0 otherwise

The dependent variable is expressed as a role relative to the population at the time of census, who are at risk as migrants. The independent variables are also defined at the time of census.

The estimated equation is

$$\begin{aligned} \ln (MIG8_{ijt}/PBP8_{it}) = & b_0 + b_1 \ln EARP_{it} + b_2 \ln EARC_{jt} \\ & + b_3 \ln RMUP_{i,t-1} + b_4 \ln RMUC_{j,t-1} \\ & + b_5 \ln UNEP_{it} + b_6 \ln UNEC_{j,t} \\ & + b_7 \ln ATTP_{it} + b_8 \ln ATTC_{jt} \\ & + b_9 DD; i,j=1,2\dots 5, i \neq j \end{aligned}$$

Since the equation is log linear in form, a

coefficient represents an elasticity measure or a percentage change rather than a unit change, for example

$$\text{if } (\text{MIG8}_{ijt}/\text{PBP}_{it}) = A_{ijt}$$

$$\frac{d \ln A}{d \ln \text{EARC}} = b_1$$

$$\frac{d A}{d \text{EARC}} \cdot \frac{\text{EARC}}{A} = b_1$$

The term,  $b_1$ , thus represents earning elasticity of migration. For the proximity variable (DD), which is a dummy variable, its positive sign shows that when the origin proximates the destination the rate of migration will shift up by  $b_9$  percent.

#### IX. HYPOTHESES

The general proposition underlying this study is that economic factors and selective processes are important determinants of migration in Thailand. This proposition may be restated as a series of specific hypotheses:

1. For earning variables (EARP, EARC), since migrants usually move from places with low returns to places with high returns, EARC would affect the migration positively. However, EARP could affect the migration negatively or positively. Since, on one hand, when the origin earnings increase, the rural-urban income differentials decrease, so that the out-migration rate would decline. On the other

hand, an increase in the origin earnings could lead to a higher out-migration rate, because more people can afford moving costs.

2. The ratio of urban population to total population ( $RMUP_{i,t-1} / RMUC_{j,t-1}$ ) is used to measure urban attraction. If the bigger the size of urban places the larger the migration flow would be, the coefficient of  $RMUC$  would have a positive sign, while that of  $RMUP$  would have a negative sign. The ratios are lagged one census period to avoid simultaneous bias resulting from the influence of migration on the explanatory variables.

3. For the unemployment rate variables ( $UNEP_{it}$ ,  $UNEC_{jt}$ ) the sign on the origin unemployment rate variable ( $UNEP$ ) would be positive, while that on the destination unemployment rate ( $UNEC$ ) could be negative, since migrants tend to move away from areas with relatively high unemployment rates to areas with relatively low unemployment rates, or positive, as suggested by Todara's model that "Urban Solution" to the urban unemployment rate (reducing urban unemployment rate) has tended to increase the pool of urban unemployed.

4. For education variables ( $ATTP_{it}$ ,  $ATTC_{jt}$ ), the highly educated individuals are the most likely migrants. Therefore, the number of educated persons in the previous region of residence ( $ATTP$ ) would affect the

migration positively. However, the opposite result on ATTP as suggested by Todaro model is a result of the failure of "Urban Solution". An alternative solution is the "Rural Solution," which is to bring "the city lights to the villages" by providing amenities such as electricity, decent housing, water supply systems, education, etc. Thus, if the "Rural Solution" could reduce rural-urban migration, ATTP could affect the migration negatively. The sign on ATTC would also be positive, because a number of migrants move to continue their education where the greater number of educated people indicated the availability of a larger number of schools.

5. The proximity variable (DD) would have a positive sign on its coefficient, because distance affects migration negatively.

Shown in TABLE XX are the data used in the multiple regression analysis.

TABLE XX: DATA USED IN THE MULTIPLE REGRESSION ANALYSIS

OBS	MIG8	PBP8	EARC8	EARP8	MPOC7	POPC7
1	584800	9633100	4814	2770	2200400	3077300
2	132500	8586900	4814	2048	2200400	3077300
3	292000	15566600	4814	1529	2200400	3077300
4	115200	5483500	4814	2422	2200400	3077300
5	260600	3635400	2770	4814	623500	7534600
6	134600	8586900	2770	2048	623500	7534600
7	244200	15566600	2770	1529	623500	7534600
8	46400	5483500	2770	2422	623500	7534600
9	4400	3636400	2048	4814	388600	7488700
10	228100	9638100	2048	2770	388600	7488700
11	186500	15566600	2048	1529	388600	7488700
12	18300	5483500	2048	2522	338600	7488700
13	41300	3636400	1529	4814	376400	12025100
14	97800	9638100	1529	2770	376400	12025100
15	47600	8586900	1529	2048	376400	12025100
16	19600	5483500	1529	2422	376400	12025100
17	27300	3636400	2422	4814	391000	4271700
18	67700	9638100	2422	2770	391000	4271700
19	14700	8586900	2422	2048	391000	4271700
20	27300	15566600	2422	1529	391000	4271700

TABLE XX: DATA USED IN THE MULTIPLE REGRESSION ANALYSIS  
(Continued)

OBS	MPOP7	POPA7	UNEC8	UNEP8	ATTP8	ATTC8	DD
1	623500	7534600	7.4	3.5	990942	1422944	1
2	388600	7488700	7.4	2.6	625531	1422944	0
3	376400	12025100	7.4	2.2	822376	1422944	0
4	391000	4271700	7.4	3.3	530198	1422944	0
5	2200400	3077300	3.5	7.4	1422944	990942	1
6	388600	7488700	3.5	2.6	625531	990942	1
7	376400	12025100	3.5	2.2	822376	990942	1
8	391000	4271700	3.5	3.3	530198	990942	1
9	2200400	3077300	2.6	7.4	1422944	625531	0
10	623500	7534600	2.6	3.5	990942	625531	1
11	376400	12025100	2.6	2.2	822376	625531	1
12	391000	4271700	2.6	3.3	630198	625531	0
13	2200400	3077300	2.2	7.4	1422944	822376	0
14	623500	7534600	2.2	3.5	990942	822376	1
15	388600	7488700	2.2	2.3	625531	822376	1
16	391000	4271700	2.2	3.3	530198	822376	0
17	2200400	3077300	3.3	7.4	1422944	530198	0
18	623500	7534600	3.3	3.5	990942	530198	1
19	388600	7488700	3.3	2.6	625531	530198	0
20	376400	12025100	3.3	2.2	822376	530198	0

Source: 1970 and 1980 Population and Housing Census.

## X. RESULTS

Shown in TABLE XXI are the double-log coefficients estimated by least squares techniques and the associated t-ratio.

Earnings ( $EARP_t$ ,  $EARC_t$ )

The coefficient on destination earnings (EARC) is positive and highly statistically significant as expected. The coefficient on origin earnings (EARP) has a positive sign and is not statistically significant. This result is similar to that obtained in several studies on migration in India and Mexico. Greenwood (1971a), in a study of migration to urban areas of India, found that the high-income urban areas of India experienced less out-migration to other urban areas, while the higher-income rural areas experienced more out-migration to urban areas. Unikel, Chiapetto and Lazeano (1973), in their study of rural to urban migration in Mexico, found that states with higher agricultural earnings experienced more rural to urban migration. Greenwood, Ladman and Siegel (1981) examined state-to-state migration of Mexico and concluded that out-migration rates are greater for the states with higher income levels.

Two possible causes for the positive coefficient of the origin earnings are that when the people in the origin have higher income levels, they will invest in their children's



TABLE XXI: GROSS INTER-REGIONAL MIGRATION FLOWS IN  
 THAILAND, 1980: DOUBLE-LOG COEFFICIENTS ESTIMATED LEAST  
 SQUARE TECHNIQUE (b) AND t-RATIO (t)

Independent Variables	Coeffiecient (b)	t-value
EARC	7.040	3.909
EARP	0.028	0.017
RMUC	3.561	3.185
RMUP	-0.623	-0.609
UNEC	-15.65	-3.185
UNEP	2.300	0.616
ATTC	2.758	6.407
ATTP	0.799	1.876
DD	0.662	2.498
CONSTANT	-85.262	-3.362

$$R^2 = .9586$$

$$\bar{R}^2 = .9213$$

The critical value for t-statistic at 5 percent level  
 (one tailed test) is 1.725.

human capital by sending them to school in big urban places. Secondly, they can afford the moving costs.

Urban Attraction ( $RMUP_{t-1}$ ,  $RMUC_{t-1}$ )

The coefficient on the lagged urban attraction variable in the destination ( $RMUC_{t-1}$ ) is positive and highly statistically significant, while that of the origin ( $RMUP_{t-1}$ ) is negative and not statistically significant. From these results, the conclusion is that bigger urban places in the destination attract more in-migrants, while the urban size of the origin has no effect on the out-migration. Therefore, a policy designed to develop a particular rural place tends to have a positive effect on the in-migration rate but has no effect on the out-migration rate. This suggests that the "growth pole" policy, which in a policy designed to accommodate or redirect rural-urban migrants to other cities, could be a possible solution for Thailand in solving the unemployment problem and the overcrowded population conditions in Bangkok.

Unemployment Rate ( $UNEP_t$ ,  $UNEC_t$ )

As expected, the sign on the origin unemployment rate variable is positive and not statistically significant, while that on the destination unemployment rate variable is negative and statistically significant. Both results are similar to those obtained by King (1978), in the study

of migration in Mexico. While King's destination unemployment rate variable is negative and only marginally significant, his origin unemployment rate variable is positive and statistically significant.

The results associated with unemployment rate variables indicate that a policy designed to reduce the unemployment rate in rural places could be included in the "growth pole" policy to redirect migration flows.

#### Education ( $ATTP_t$ , $ATTC_t$ )

The coefficient of the origin education variable ( $ATTP$ ), which is the number of individuals who have secondary school education or above, is positive and statistically significant. This suggests an increase in migration as the number of educated people in the origin increases. The coefficient of the destination education variable ( $ATTC$ ) is positive and highly statistically significant. The result suggests that the places with larger numbers of educated people are more attractive to migrants. This result is consistent with results obtained in reasons for migration that many migrants move in order to continue their education.

#### Proximity (DD)

The coefficient of the proximity variable is also positive and highly statistically significant. The result

does imply that there is a negative relationship between distance and migration. It is also expected that migration will tend to increase as the communication networks expand.

## XI. CONCLUSION

The first section of this study examines the migration, which is the population distribution, in Thailand. Migration occurs in response to the changes in socioeconomic factors. The changes in socioeconomic stimuli happen in different degrees in various areas of Thailand as a result of unevenly scattered developments. These developments are concentrated in a few urban places. This leads to the increasing migration flows moving toward those urban places. Based on the 1980 census, the examination of the characteristics of migrants compared to non-migrants suggests that migration in Thailand also conforms to age, sex, education, occupation, and employment selectivity. The urban-urban migrants were found to be especially selective, while the rural-urban migrants were less selective when each was compared with non-migrants in their destinations. As expected, the rural-urban migrants were highly selective when compared to those they left behind.

In the second section, the "gravity model" is employed in assessing the long-term trend in migratory behavior in Thailand by using the data on inter-regional lifetime migration in 1980. Multiple regression analysis is used to

estimate a log-linear form of the gravity model. The dependent variable is the gross rate of migration per person. The independent variables are the destination and origin earnings, the destination and origin relative urban size, the destination and origin unemployment rate, the destination and origin educated population and, finally, the proximity variable.

Examination of the estimated coefficients of various variables suggests different degrees of responsiveness of Thailand internal migrants to various socioeconomic stimuli. Therefore, the result reflects the relative importance among various migration determinants. However, changes in the relative importance of migration determinants might be expected over time.

In 1980, among all statistically significant variables, Thailand internal migrants responded to the destination earnings, the destination relative-urban size, the destination educated population size, the origin educated population size, and the proximity positively and to the destination unemployment negatively.

The positive and significant dummy variable (DD) which represents the proximity between destinations and origins, suggests the inverse relationship between distance and migration rate. However, as the nation's communications and transportation systems are expanded and improved, the

detering effect of distance to migration would be expected to decline.

The results indicate the statistical significance of all destination variables and the statistical insignificance of all origin variables except for the origin education variable (ATTP). In general, the findings of this study suggest the importance of the pull factors in the destinations rather than the push factors in the origins. Therefore, policy measures concerning the above variables will be more effective if aimed toward the pull factors rather than the push factors. This conclusion is applicable for policies designed to either discourage or encourage migration.

While the changes in the attractiveness of the destinations affect migration rate, the changes in the push factors in the origin do not affect migration rate. This suggests that a policy designed to redirect the migrants from rural to the new developing areas could be effective if it increases the attractiveness of the destinations. Therefore, the findings in this study support the "growth poles" or "Rural Solution" model, which is a policy designed to accomodate or redirect rural-urban migrants to other small towns.

## NOTES

(1) The census of Thailand, which has a 1 percent sampling ration, is enumerated every ten years (1960, 1970, 1980). For a detailed discription of the sample selection and estimation procedure and the definitions used in the 1970 and 1980 census, see F. Arnold and S. Boonpratuang, 1970 and 1980 Population and Housing Censuses, Subject Report No. 2: Migration, National Statistical Office, Office of the Prime Minister, Bangkok, Thailand (1976, 1985).

(2) Urban dualism refers to the existence of a limited "urban formal sector" which consists of capital-intensive industry and corporate commerce and an "urban informal sector" which consists of traditional, self-employed labor-intensive and petty forms of production. The urban formal and urban informal sectors of developing countries will be discussed more in detail later.

(3) Although the data of lifetime migration in TABLE VI exclude the migrants with unknown changwats of birth, the signs of the net migration streams (in net migrants column) are expected to be the same as that including the migrants with unknown changwats of birth. In addition, the net results of the lifetime migration exchanges are supported by the net results of the recent migration of the 1960, 1970 and 1980 censuses.

(4) The return migration is the stream of migrants who move back to their origin.

(5) The repeat migration is the stream of migrants who move between provinces, neither of which was the province of birth.

(6) There has been a proposition to classify large sanitary districts with a population of 5,000 or more and a minimum average density of 1000 persons per square kilometer as urban areas. It was also proposed that the suburban sanitary districts should be classified as urban places irrespective of size and density since they function as an integral part of the municipal areas.

(7) The percentage of the never married migrant male is calculated by subtracting the number of priests from the total number of the rural-urban stream which is the denominator of the percentage, in order to make the percentage comparable to that of the never married migrant female. This is because of the fact that all priests are male.

(8) The percentage of the never married migrant male has excluded the number of priests from its denominator.



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