1998

Modernization and migration in Indonesia

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MODERNIZATION AND MIGRATION IN INDONESIA

Thesis Submitted to
The Graduate School of
Marshall University

In partial fulfillment of the
Requirement for the Degree of
Master of Arts
in Sociology

by

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Marshall University

Huntington, West Virginia

May 1998

This thesis was approved on April 15, 1998
Month Day Year

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ACKNOWLEDGEMENTS

I express my appreciation to Dr. Ahmad Khalili for his support and encouragement in persuading me to write this thesis. I would also like to extend my heartfelt gratitude to Dr. William S. Westbrook for his able guidance and personal interest in me. It is a fact that without his continuing assistance and suggestions, this thesis could not have been done in the manner in which it has been. My appreciation also goes to Dr. Kenneth P. Ambrose and Dr. Richard A. Garnett for their support during my studies at Marshall University.

My sincere thanks goes to Ni Made Aryati for her help in acquiring statistical information from Indonesia. Even with her busy schedule, she still took time to obtain the data for me. This thesis could not have been done without her help.

On a personal note, my deep affection and great appreciation goes to Virginia Lewis and Lois Ratanamalaya for their moral support during this period of study and for their valuable time in checking my work whenever I asked.

Last, my love and thanks to my wife, Wati, for her support and patience and to my friends for their encouragement and support during this research.

ABSTRACT

This research is a step toward understanding the nature of the relationship between population movement and the level of modernization in Indonesia as that country continues with its development program all across the provinces. From the Intercensal Population Survey 1995, migration and seven modernization indicators of the 27 provinces were explored. The results of the findings indicated there was a correlation between modernization and migration although the outcomes vary from one variable to another. In combining those seven variables to one modernization variable, the relationship was weak but positive. The study shows the uniqueness of Indonesian migration because it is not simply voluntary but there is also government involvement in the form of transmigration programs. Government transmigration programs affect the relationship between migration and modernization.

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INTRODUCTION

"In the village I was often hungry; here I can always fill my belly" (Papanek 1975: p.9), a remark by a cigarette butts collector in Jakarta explaining why migrating to a city was a good thing for him to do. Pascal, on the other hand, says that "the sole of man's unhappiness is that he does not know how to stay quietly in his room" (Weeks 1989: p.185). Both of these men expressed nothing different and they both believed moving or getting out was the best thing to do in order to satisfy their needs or to get a better life than they had before. As technology and economic progress continue, more and more people are moving in and out around the globe. As we pay attention to our surroundings, particularly our community or neighborhood, we will witness people moving in and out of cities, states, and countries. This kind of behavior we observe seems to be normal because these activities are a part of our lives that shows things are changing. Not only is our weather changing but also the entire system of the world is undergoing significant change.

Globalization and easy access to the transportation system due to modernization makes it possible for people to move within a limited time from one destination to another. As a result, the mobility of people is increasing and there are a variety of reasons why people move. However, the economy is the most important factor

influencing people to move or migrate. Many people move because economic conditions at former locations are less advantageous than at their present one. People are driven to move because of the need to find new jobs and better wages. They also move because there are not enough jobs available in their hometown and surrounding area. Intellectuals and those in academic community, especially students and professors, usually have to move to seek an educational opportunities and a teaching positions.

Many migrate because of political turmoil in their home country and escape is the only way to avoid genocide or political persecution. There are many countries experiencing this situation and many citizens migrate to other countries to seek political asylum. Today, the number of people who migrate for political asylum is large.

In Indonesia, migration has always been part of the country's history. Since its early history, people have moved from one island to another for many reasons. They called their country 'Negeri Maritime' or ocean country because of a large ocean territory and large islands that make Indonesia the largest archipelago in the world. With the 'perahu' or boat as transportation, they moved back and forth for trade or to seek a better life outside their island. Sometimes it is their way of life; they have to travel from one island to another to survive.

Today, there is a continuing flow of migration from one island or province to another island or province in order for the people to seek jobs and reunite families. Getting an education or being married to someone from another island or province are also major factor in migration. Government transmigration programs move people from densely populated areas to less crowded areas as part of the population redistribution.

As Indonesia continues its quest for modernization, migration is increasing. In this study, the relationship between modernization and migration is going to be studied.

PURPOSE OF THE STUDY

Indonesia, like any other country, evolves in the process of modernization although its achievements lag behind many of the developed countries. Striving for such accomplishments certainly is on the mind of government officials as well as the Indonesian people. Since Indonesia is a vast country with a large population, having the same level of modernization in all 27 provinces is not possible because of limited government and individual resources. Consequently, modernization in some provinces has resulted in population mobility. The main purpose of the study is to determine the relationship between modernization and the rate of in- and out-migration in 27 provinces in Indonesia for the year 1995.

IMPORTANCE OF THE STUDY

Migration in Indonesia has received much attention since the era of Dutch colonization. After Indonesia proclaimed its independence, the government launched the First five-year development program (PELITA I). In this program redistribution of total population from densely populated areas to less populated areas was a government priority of with emphasis on increasing the standard of living as well as maximizing manpower and natural resources. In recent years, people also migrated because of the government transmigration program. As economic progress continues, the migration stream continues. However, few studies have been conducted in terms of the relationship between modernization and migration. This research is designed to discover any correlation between these two phenomena.

DEFINITION OF CONCEPTS

Migrant : A person who moves from one political area to another.

Transmigration: Indonesia's famous resettlement program which moves people from overcrowded areas to a less crowded area or from a densely populated area to a less populated area.

Area of Origin: The area from which a migrant moves.

Area of Destination: The area to which a migrant moves.

In-Migration: A person who enters a migration defining area by crossing its boundary from some point outside the area but within the same country.

Out-Migration: A person who departs from a migration defining area by crossing a boundary to a point outside the area but within the same country.

Net-Migration: The balance between in-migration and out-migration.

Recent Migration: The most current migration data available or recorded.

Lifetime Migration: Migration that has occurred between an individual's birth and the time of the census survey. A lifetime migrant is one whose current area of residence is different than his area of birth.

Migration Stream: A group of migrants having a common origin and destination in a given migration period between two geographical areas.

Counterstream Migration: The opposite direction of the migration stream.

STATEMENT OF HYPOTHESES

Two central hypotheses of this study are:

1). In-migration is positively related to modernization meaning that in-migration increases with modernization.

2). Out-migration is also positively related to modernization and increases with modernization.

Chapter II

MODERNIZATION AND MIGRATION

LITERATURE REVIEW

The concept of modernization was known a long time before the name itself became popular in modern society. To many classical theorists, the idea of modernization has been widely discussed although such words as modernization never came into their discussions. Durkheim, for instance, used 'mechanical solidarity and organic solidarity' to explain changes in the social organization and the need for division of labor as society became more complex. The idea was also discussed by Tonnies in explaining how society undergoes transition from 'Gemeinschaft to Gesellschaft', while Weber perceived modernization as a process change in value orientation from 'traditional rationality to practical rationality'. None of them used the word 'modernization' in their works but their concept was the same in explaining how society evolves from less complexity to more complexity and they explained how to cope with such changes (Fuse 1975).

Contemporary social scientists applied the concept of modernization in a variety of subject areas. They linked modernization with one or two subject areas. Many studies have been linked to modernization such as gender roles and female crime by

Hartnagel and Mizzanuddin (1986), social stress and emigration by Ujimoto (1975), modernization with infant mortality by Roberts (1973) and modernization with economic development by Roberts and McBee (1968). In the case of Rostow, modernization was seen as associated with economic development and certainly this modernization, as we know, it is one of the earliest theories of development. W. W. Rostow's theory of modernization was formulated after World War II and since then it has become the most significant role in the theories of social change. In his 1960 book, *The Stages of Economic Growth: A Non-Communist Manifesto*, Rostow explained that all societies will experience five stages of economic development. These five stages are: the traditional society, the preconditions take-off, the take-off to sustained growth, the drive to maturity and the age of mass consumption (Rostow 1960).

In the early stages, particularly during the traditional stage, the application of technology is very limited. Many of the activities mainly center on the agricultural sector from which large resources were derived. Input on technological know-how is still very limited even though possibilities for expansion in agricultural sector is still exist. As societies pass through the second, third, fourth and fifth stages, their use of technology increases and they become more sophisticated. They conduct businesses and other types of activities efficiently including the establishment of governments and other organizations. All of these activities result in continued of the application of technology which helps increase the standard of living of their society. Rostow also believed the characteristics of the stages sometime overlap in some of the societies because the preconditions of society differ from one another. He also recognized that development

would be uneven between one society and another. In spite of these differences, he thought capitalist society is necessary for economic development and modernization (Rostow 1960).

Rostow's theory of economic development received an enormous amount of attention both western and developing countries. Despite the simple and captivating imagery and large appeal from many American policy elites, the model has been under some criticism (Hulme & Turner 1990).

In the first criticism, Rostow's model of economic development puts too much emphasis on economic growth and too little on local social and cultural values. Economic growth alone cannot be heavily emphasized as the cause of modernization without taking into consideration other social and cultural aspects. In order to have complete modernization, all aspects of development should be included. He also suggested that third world values are an obstacle rather than an aid to progress. Western values, he argued, facilitate progress in his model. He also pointed out that modernization is a part of western philosophy and very often any society which experiences or achieves modernization is called 'Westernized' or is referred to as undergoing a process of 'Westernization.' This is because such ideas originated in the West. This is a 'historical coincidence' because modernization is a global process without concern for race, creed and geography. Japan's modernization did not come from the West because Japan had no contact with the West. Japan's modernization comes from internal and domestic factors that are exclusively Japanese (Fuse 1975). Despite these criticisms, Rostow's five stages of economic development was one of the

popular modernization theories that many countries considered or adopted for designing their policy to achieve economic goals and modernization.

Before further discussion of modernization in relation to migration, we should deal with migration theory. One of the earliest and best known theories of migration is Ravenstein's. In 1885, Ravenstein presented his first paper at the Royal Statistical Society based on the British census of 1881. In spite of many criticisms from his colleagues, he continued to believe his theory was valid and proof would come soon. In 1889, he supported his theory by presenting data from twenty countries. He wrote two papers which he named "The Laws of Migration". In these two papers, Ravenstein outlined his summary of seven laws of migration.

In his first law, Ravenstein argued that people migrate because of political oppression, heavy taxation and unattractive climate conditions. However, when he compared the number of those moving due to economic and employment opportunities, he found that more people migrate because of economic reasons. As one part of the country or the world enjoys economic progress, there is continual population drifting from countries with less economic growth to places of opportunity (Maamary 1976). This is obvious when we observe the number of people who migrate from Mexico to the United States. A large number of people from Mexico, both legal and illegal, try to enter the United States on a regular basis.

Ravenstein also said migrants travel short distances. This he observed in England during the stage of industrialization where a large rural population migrated to the city where industries were located. In the early 1980s growing numbers of people

moved from nearby small cities to the central city. Ravenstein clarified this argument in his second paper by saying that whenever there is a surplus of labor in one province and a deficiency in another, there is a tendency for people from the surplus province to migrate to the province with a labor deficiency (Maamary 1976).

Ravenstein also discussed the relationship between large industrial cities and long distance migration. According to him, large industrial cities induce long distance migration (Maamary 1976). Kleniewski (1997) discussed this scenario as applied to the US in terms of the expansion of the railroad in the north and growing cities such as Detroit. In 1918, a large population of blacks from the south moved to the north. Today, this scenario is reversed due to the economic expansion in the south and many people from the north are moving to the south for jobs.

Current and counter-current or stream and counter-stream migration is another important aspect of the subject discussed in Ravenstein's laws of migration. According to the theory, for each current migration there will result a counter-current migration (Maamary 1976). Patricia Gober (1993) in her study of "*Americans on the Move*" studied current and counter-current migration in different regions as well as some cities in the United States. Based upon her findings in terms of migration efficiency for current and counter-current, she found that between California and Arizona both current and counter-current migration efficiency are nearly equal. Within the United States a large population from the northeast moved to the west as well as to the south.

Rural-urban migration differential was also part of Ravenstein's central arguments in his laws. According to this, city dwellers are less migrant than those in

rural areas (Maamary 1976). This could also be true for a town where economic growth is higher, or at least stable, where not as many city dwellers are unemployed. If we take an example such as the city of Huntington where the city lost many jobs, the situation is the reverse. According to census tract analysis (Bartram et al. 1997) based upon the 1980 and 1990 census figures, the total city population of Huntington declined by 8,000 people from the previous ten years. What Ravenstein set forth in his theory along time ago may be true as related to most cities but many cities will not experience it. Perhaps England's intervening variables differed significantly from those of Huntington. The continuation of business closings and worker layoffs forces many Huntingtonians to move out.

Another disturbing finding of Ravenstein's study concerned gender migration. He found more females migrate than males (Maamary 1976). This is suprising knowing that since early history men have traveled more than women. In hunting and gathering communities, men would travel long distances to hunt while women stayed behind with the family. Even during the industrial revolution where men occupied many positions, what Ravenstein found was surprising. It could have happened in England but some studies have found that as far as the sexes are concerned, men migrate more than women. According to a study done in Vietnam based on census 1984 to 1989, males dominated females in the population movement (Dang et al. 1997). Perhaps today with women seeking jobs, some findings show the women migration is increasing. According to the International Labor Office, 1.5 million female workers from Asia are employed outside their countries (Migration News 1996).

Last in Ravenstein's law of migration is the relationship between technology and industrialization. Migration increases as technology change and industrialization occur (Maamary 1976). This is true when we look at today's world conditions, especially the United States and other highly industrialized countries. A continuing stream of migration from different parts of the world is becoming a problem. California is a good example of how fast the migration population is growing. During the early 90's so many immigrants moved into California that causing the state government deny educational and health benefits to illegal immigrants. In Germany a conflict is becoming unavoidable between Germans and non-Germans immigrants. Public issues on migration will continue to be serious problems for both sending and receiving countries; however, the more serious problems are for those countries receiving immigrants.

Another important aspect of the theory of migration is the socioeconomic push-pull hypothesis which is widely used by many researchers in analyzing and predicting migration. Socioeconomic imbalances between two countries or regions encourage migration. The pull factor is defined as people migrating because their destination is pulling them to come in the hope of finding a better life and higher wages. Some countries promote a pull factor because of their good policy of receiving immigrants. Again, the United States and other developed countries are good examples of how a country can pull people from third world countries because of economic advantages (Maamary 1976).

The push factor, on the other hand, is the reverse situation in which people migrate because of internal conditions in their country. Political instability, genocide or

natural disaster can cause the living conditions to be intolerable. Many of the people in third world countries experience one or more of these situations and are forced to move out of their country. One example of this push factor was the civil war in Cambodia which forced many Cambodians to flee the country seeking political asylum in different parts of the world.

Ravenstein, in his analysis of the 1881 census of England and Wales discovered that the pull factors were more important than the push factors. People migrate, as he said, not because of bad oppressive laws or heavy taxation but because of their desire to better themselves in material respect. People in England, during the nineteenth century, migrated due to their desire to get ahead rather than unpleasant conditions (Weeks 1989).

Jenkins' study of push-pull factors on Mexican migration to the United States reveals a different story. Examining labor migration and economic conditions in both countries indicate push factor of Mexico accounting for far more migration than the pull factors of economic opportunity in the United States. One explanation of migration of Mexican people has to do with the government policies regarding agricultural development. Privatization was encouraged rather than peasant agriculture reforms. Because of this privatization, large numbers of farm workers became landless. Another contributing factor was urbanization and population growth in Mexico leading to fewer rural or urban economic opportunities (Jenkins 1977).

The Zipf hypothesis was introduced by George K. Zipf in 1947. Originally drawn from Ravenstein this hypothesis was developed into a demographic law of spatial interaction by Zipf. According to this hypothesis, migration relates to distance and

population size. There are three basic assumptions underlying this hypothesis.

(1). The in-migration rate is inversely related to the distance from several other points to a central point.

(2). The out-migration rate is also inversely related to the distance between several points from a central point and,

(3). The amount of interchange between any two areas is directly proportional to the product of the population of two areas and inversely proportional to the distance between them (Maamary 1976).

In 1962, Hagerstrand found that nineteenth century migration involved on shorter distance compared to the twentieth century (Willis 1974).

Economists, as Maamary (1976) pointed out, most often use this theory of labor market because it is closely related neoclassical perspective. This theory assumes that large movements of the labor force are determined by the availability of jobs. People will be expected to move from an area of less job availability to one of more jobs. A number of studies have been done on the labor market. Elkan based his study on labor migration from Botswana, Lesotho, and Swaziland, also known as BLS. He found South Africa benefited from these countries' surplus labor force for gold mining and agricultural work. Despite low wages paid in South Africa, the migrants still made more money than they would have earned at home (Elkan 1980). This situation is happening not only in South Africa but wherever job availability is greater.

Everett Lee formulated the multifactor theory as a result of the inadequacy of Ravenstein's Laws of Migration. Lee used different factors such as origin and

destination, intervening obstacles, and personal factors. From these three, he developed his theory of migration on the subject area of: volume, stream and counterstream, and characteristics of migrants (Maamary 1976).

On the subject of volume of migration, Lee discussed six topics: (1) territory, (2) diversity of people, (3) intervening obstacles, (4) expansion and depression in the economy, (5) state progress, and (6) measurements to prevent a large volume of migration. With all of these conditions, the rate or volume of migration will vary (Maamary 1976).

For the stream and counter-stream migration, Lee also looked at six characteristics such as: (1) migration tends to be large within a well-defined stream; (2) for every major migration stream there will be a counterstream; (3) the efficiency of stream -- which is the ratio between stream and counterstream -- is high when major factors of the migration stream are push factors at origin; (4) the low efficiency on both stream and counterstream are attributed to the same condition at origin and destination; (5) high efficiency of migration stream occurs when the intervening obstacles are great and (6) in terms of economic conditions the efficiency migration varies. During economic prosperity efficiency migration is high; efficiency is low during time of economic depression (Maamary 1976).

In terms of the characteristics of migrants, Lee viewed migration as selective; positively selective in response to pull factors and negative or low quality when the push factor is at its origin. Lee believed that "the degree of positive selective increases with the difficulty of the intervening obstacles" (Maamary 1976). Taking all migrants

together, "selection tends to be bimodal forming a U shaped curve along poor to excellent continuum" (Maamary 1976) The heightened propensity to migrate is important and the characteristics of migrants between population at origin and population at destination tend to be intermediate (Maamary 1976).

In 1940 Samuel A. Stouffer introduced the theory of intervening opportunities of migration. Stouffer combined Ravenstein's law of migration with distance, Zipf hypothesis and theory of competing migrants. According to this theory, the number of people going a given distance is directly proportional to the percentage of increase in opportunities at that distance (Maamary 1976).

The typological theory arose as a result of Petersen's view of the inadequacy of migration theories. He combines his refined push-pull factor theory with migrants' level of aspiration. Five broad classes of migrations in this typology are: primitive, forced, impelled, free, and mass migration. Based on these classes one can categorize the type of class involved in migration (Maamary 1976). This typology provides a simple and easy understanding of both the migration process and the type of migration.

A final theory of migration is that introduced by Bogue. Based on the discussion of stream migration, Bogue provides empirical research supporting the validity of his twelve generalizations. The first three of Bogue's generalizations are nothing more than a restatement of Zipf's three main assumptions. The fourth generalization concerns the net migration in relation to distance. Net migration rate of two areas changes proportionately with the level of living and inversely with distance. If two areas are different economically, the relationship between distance and the number of migrants may be

affected (Maamary 1976).

The number of people going a specific distance is directly proportionate to the number of opportunities at that distance and inverse to the intervening opportunities. Bogue also suggested the rate of migration between communities varies with the type of community of origin, destination, direction, and age as well as the characteristics of the migrant. A high rate of in-migration is accompanied by a high rate of out-migration (Maamary 1976).

The last four of Bogue's generalizations are concerned with the type of community migration, direction, size and net effect. In the modern world, urban to urban migration is considered the largest of any type of migration. Migration streams are lower at high unemployment. Size, direction and the net effect of the migration stream are sensitive to socioeconomic changes. The overall pattern of net migration for several decades continues to remain constant (Maamary 1976).

In recent years, as Kubat and Nowotny (1981) point out, interest in migration is growing because not only do the census agencies collect and study migration but some private or special interest groups now collect and study it as well. Generating data on migration is becoming very important in modern society; however, some of the data are not easily accessible.

When we speak about migration and need to obtain information on the subject, we refer to population and demography studies; our traditions dictate it. Because of this perception, Mangalam and Schwarzweller (1968) proposed a new general theory in the study of migration. They offer useful guidelines for research in many areas and

disciplines. Consequently, today there are many studies done on migration from different areas, but particularly from a sociological perspective.

Inclusion of the sociological perspective meant a significant contribution to new developments in the study of migration in the use of a diverse variables regarding the study of migration selectivity. Instead of the traditional method, especially from a demographic standpoint, relevant variables such as sex, age, distance, race, ethnic origin, education, occupation, and income have come to be viewed as important. Recent studies have added attitudes, aspirations, motivation, values and other socio-psychological factors. Attempting to explain the dynamics of migrants and their population linkage to resulting social change, complex interrelationships have been made for both demographic and sociological variables (Mangalam & Schwarzweller 1968).

There is an emphasis in these new studies on current research in migration. According to Mangalam and Schwarzweller (1968), Thomas and Znaniecki study of the *"Polish Peasant in Europe and America in 1927"* was the best migration study from sociological perspective. Another example of helpful research would be Eisenstadt's study of the absorption of Jewish immigrants into the state of Israel. He used "the immigrant's basic motivations and role expectation" (Mangalam & Schwarzweller 1968: p.9) to study the migration process.

Bruce Koppel (1976) used Philippine data to study migration using the sociogenic approach. In generating a sociogenic model, Koppel introduced two critical structural dimensions of social collectivities such as differentiation and centrality. Differentiation is defined as the capacity of a collectivity to process information while centrality refers to

the extent to which a collective identity is recognized. Two hypotheses are recognized:

(1). Population loss is positively related to low centrality and high differentiation.

(2). Population gain is related to low differentiation and high centrality.

Data drawn from the Philippines were based on the interrelationship of technological change in agriculture and institutional change in barrios (villages). Two models were specified: Model I concentrates on whether this class affects population gain or loss, and how solidarity plays an important part in intervening for 1970 differentiation and centrality levels. Model II explored the operation of changing differentiation and centrality rates and the presence in solidarity class in accounting for the likelihood of presence in population change (Koppel 1976).

In Model I, population gain is associated with lower differentiation and a higher centrality level in 1960, and population loss is associated with high differentiation and a lower centrality level. Solidarity, on the other hand, is associated with lower differentiation. In all three class-related studies centrality, solidarity and population gain are associated positively whereas loss of population is associated negatively. In Model II, solidarity is associated with population loss while non-solidarity is associated with population gain (Koppel 1976).

In responding to the need for a general theory to study migration Mangalam & Schwarzweller (1968) offer some theoretical guidelines for a sociological study of migration. According to them, in developing a sociological framework should study should study the reality of specifics, a reference for the study of society must be selected,

and theoretical treatment should be indicated. They also discuss some sociological dimensions of migration. Many researchers identify migration as an individual event although collectivity migration is not excluded and migration tends to be described as physical movement from one location to another resulting in a more or less permanent change of residence. But for Mangalam & Schwarzweller, these prevailing views are sociologically inadequate. They defined migration as:

> "...a relatively permanent moving away of collectivity called migrants, from one geographical location to another, preceded by decision-making on the part of the migrants on the basis of a hierarchically ordered set of values or valued ends and resulting in changes in the interactional system of the migrants" (Mangalam & Schwarzweller 1968: p.8).

From this above migration definition, Mangalam and Schwarzweller show how 'permanent moving away' excludes the commuter, the salesman, and the tourist because they are not permanent. Changing one's geographical location temporarily is not migration. Second, the phrase 'a collectivity called migrants' is fundamental to sociological disciplines. The reason collectivity is so important is that an individual migrant is less meaningful than collective migrants.

Third, the phrase 'preceded by decision-making on the basis of a hierarchically ordered set of values' is also an important aspect of migration. According to Mangalam and Schwarzweller (1968), migration 'cannot be treated as random behavior'. In order to explore the dynamics of migration, one should take into account the process as well as the effect of the decision to migrate. A migration decision is a subjective act and what

is important is how migrants feel about this situation. Factors encouraging people to migrate are not always openly logically articulated by migrants. Therefore, we must accept that no matter what the degree of migration is it will affect the migration process.

Finally, 'change in the interactional system' is one primary cause of relocation or migration. However, it does not seem so in collectivity migration because they establish their own community where there is little effect on this interactional system. Tibetan people who were forced out of Tibet, now living in Northern India, are a good example of this condition. Their interactional system is still intact. Quite the opposite is the situation with individuals where interaction within their own community is no longer possible.

In the relationship between migration and modernization, migration increases with modernization. According to Parish, Jr. (1973), in the case of Europe, better transportation facilities increased long distance migration particularly in Sweden from 1850 to 1950. Parish (1973) also found in Italy, Netherlands, Switzerland and the United States modernization of transportation systems allowed for moving longer distances. In terms of migration and information sources, in traditional societies, information heavily depends on kin and friends but in modern society more information is available in relation to jobs and events. Similar studies based on modernization and migration, according to Taeuber (1951) and Wilkinson (1965) showed internal migration in Japan increased from the agrarian to the industrial period. From these studies, it is clear that modernization has a positive relationship to migration.

Chapter III

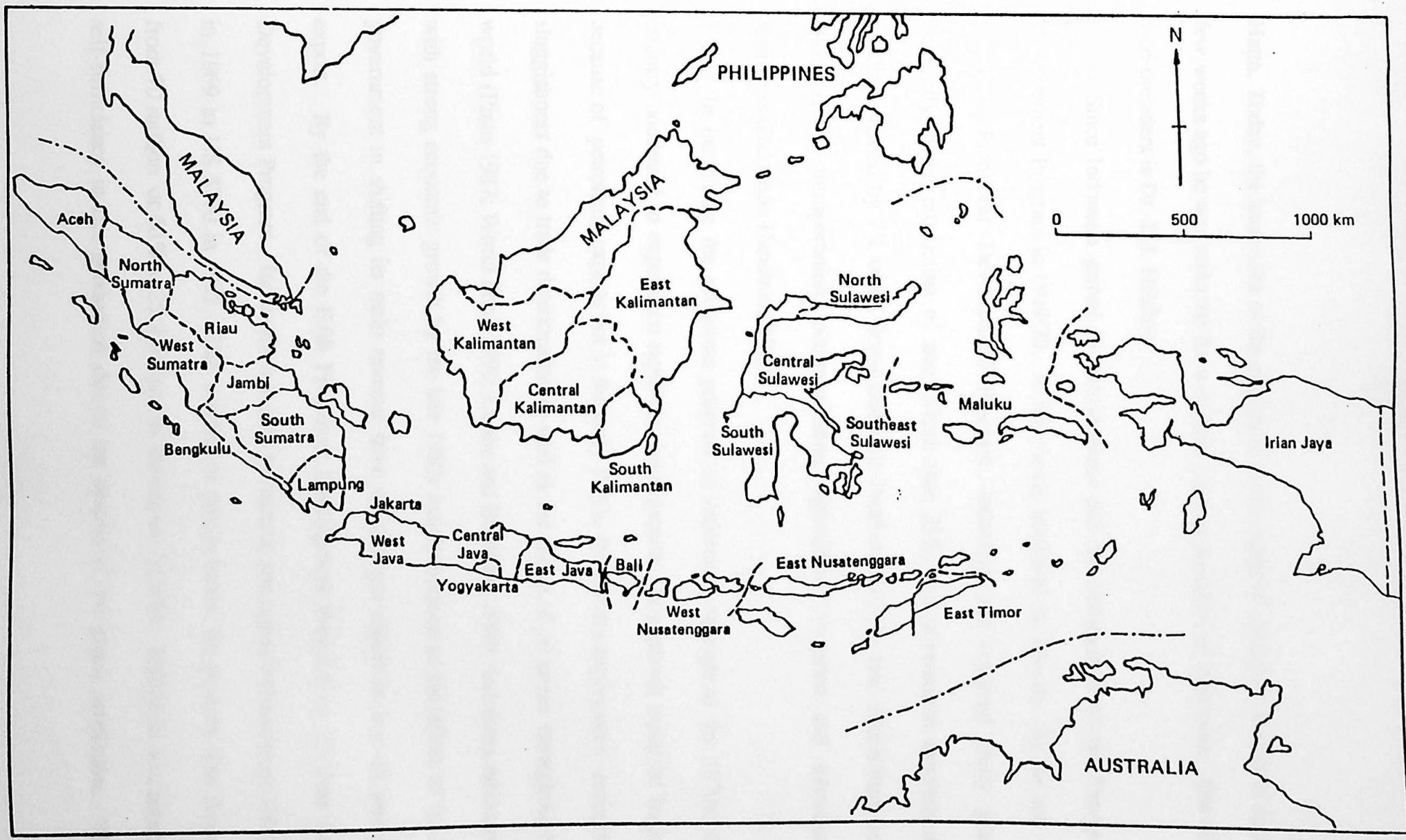
MODERNIZATION & MIGRATION IN INDONESIA

To understand the history of modernization and migration in Indonesia, it is necessary to have some general information about the country in order to help us identify the effect modernization has on migration. Knowing this general information will enable us to judge the pattern and type of migration associated with modernization.

Indonesia, as many people have discussed lately, is not simply a country troubled by economic and monetary crisis. It is the largest archipelago in the world. Indonesia consists of 13,677 islands with five major islands which are Sumatra, Java, Kalimantan, Sulawesi and Irian Jaya. Indonesia is also divided into 27 provinces shown in figure 1. The total population is estimated at about 200 million and it is the fourth largest country in total population in the world. In spite of many islands with large population, the unequal distribution of total population remains a major problem in Indonesia. Consequently, Java continues to be the most densely populated island in Indonesia because most of the total population of Indonesia is concentrated there.

During Dutch colonization which lasted more than three centuries, Indonesia was known as the Dutch East Indies. Indonesia proclaimed its independence on August 17, 1945 under the leaderships of President Soekarno and Vice President Mohammad

Figure 1. Provinces of Indonesia



Source: United Nations-ESCAP Region 1981

Hatta. Today, the leadership of the country is in the hands of President Soeharto. Just a few weeks ago he was reelected for a seventh term as president of Indonesia. The new vice-president is Dr. B.J. Habibie.

Since Indonesia gained its independence and the introduction of the five-year Development Program in 1969/70, it has slowly improved the country. By the end of the First Five-Year Development Program, Indonesia had achieved many goals especially in the production of rice, which rose 25%, and government expenditures which increased by 7% of its Gross Domestic Product. Half the total expenditure was allocated for transportation, communication, agriculture, irrigation and subsidized fertilizers (Indonesia Handbook 1985).

In examining the economic progress of Indonesia, throughout the 1970s, the country continued to experience rapid economic growth. This growth occurred largely because of petroleum exports but in the early 1980s, the country experienced economic sluggishness due to trade deterioration as well as the slump of oil prices throughout the world (Pinto 1987; World Bank 1990; Cobbe and Boediono 1993). Indonesia rebounded with strong economic growth by the late 1980s mainly because of the effort of by the government in shifting its main revenue from oil and gas export to non-oil and gas export. By the end of the Fifth Five-Year Development Program or 25-Year Long Development Program, Indonesia was able to increase per capita income from US $70 in 1969 to US $770 in 1995. The number of people below the poverty line dropped from 70 million or 60% to 25.9 million by the end of 1993/94. Indonesia also achieved self-sufficiency in rice production due to the success of the green revolution. These

accomplishments certainly contributed to a continuing economic growth. For Indonesia to attain these achievements was a near miracle because there were not many countries which could achieve this success with such a large total population. Not only did Indonesia raise its per capita income as well as self-sufficiency in rice production due to economic growth, many other sectors benefited from this economic growth. Education, health, tourism, trade, science, and technology are among those sector growing rapidly. Indonesia, as many economists say, has been on the edge of take-off or sustained growth of take-off. In spite of these achievements, Indonesia has a long way to go to fully attain modernization. However, looking back on the country five decades ago, Indonesia has achieved superb performance in lifting its people (Indonesia Handbook 1995).

With continued development in all sectors particularly in the fields of transportation and communication, migration remains nearly irresistible. Its large population and vast geographic areas extend a distance equal to that from New York to California, making migration in Indonesia too attractive to resist. Total migration–both internal and international--has been increasing at a high rate migration is also. Based on the census data of 1971, total internal migration was 5 million and in 1995, total internal migration increased to 17 million. In the last 25 years, total increase of migration in Indonesia was about 12 millions. To understand the history of migration in connection with modernization, we must divide the time frame into three parts: the pre-colonial era, colonial era and post-colonial era.

Human migration in Indonesia existed a long time ago although migration was usually manifested in small numbers. During the pre-colonial era and before the

Christian era, particularly during the period 3000 - 500 BC, the first people identified as having migrated to Indonesia were the Sub-Mongolian migrants. Later, beginning with the first century until the seventh century, a large number of migrants came from India. Not only did they bring religions with them, they also brought rich Indian cultures from their respective regions. Major religion contributions of these people were Hinduism and Buddhism. These easily influenced the local people and the many island kingdoms. As a result, from the first century until the twelfth century, Indonesia was very much under the control and influence of Hindu and Buddhist Kingdoms. This long and continuing relationship with India resulted in a transfer of culture from India to Indonesia. Today, many of the Indonesian cultures can be traced back to India (Indonesia Handbook 1985).

In the thirteenth century, merchants from Gujarat and Persia who embraced Islam began trading with Indonesia. Along with trade, some merchants settled in Indonesia, occupying the coastal regions of the islands. As resettlement grew, they gradually moved inland and converted the locals and many Hindu rajas to Islam. The first Hindu Kingdom which converted to Islam was the Demak and later many former Hindu and Buddhist Kingdoms embraces Islam. Today, Islam is the major religion in Indonesia (Dept. of Information 1985).

The Christian period in Indonesia did not start until the colonial era began. The first Europeans to arrive in Indonesia were the Portuguese, in 1511, in search of Indonesian spices. After conquering the Islamic Kingdoms, they began to propagate Christianity. As the Portuguese succeeded in finding spices, many other European

countries began their journey to Indonesia. The Dutch were very successful in their efforts to spread Christianity in Indonesia. These efforts paid off as today many people, particularly in the east part of Indonesia, practice Christianity (Dept. of Information 1985).

During the Dutch occupation of Indonesia, Governor General J.P. Coen, established Batavia (now Jakarta) at the mouth of the Ciliwung River as the headquarters of the Dutch East Indies in 1611. By the 1770s, Batavia had become the second largest city of the Netherlands empire. Three times as large as Rotterdam and four times as large as the Hague, Batavia not only became the Netherlands most important city for economic activities but also known as the Queen of the Orient where the Dutch enjoyed power and prestige. As economy and trade expanded, the city continued to become a most attractive place for both internal and international migration. In 1673, the total population of Batavia was 27,068, but by 1790 the number had increased to 134,739. A tremendous increase in total population continued due to a large number of migrants. According to the total distribution of population by ethnic group, Javanese and Balinese accounted for one third of the total city population while European, Eurasian, Chinese, Malay and several local ethnic groups made up the balance. Among international migrants, the number of Chinese migrants outnumbered European migration from 1673 to 1790. The Javanese and Balinese migrants were certainly larger than any other ethnic group because of their advantage of having short distances to travel. This allowed them to have greater mobility than any other ethnic groups (Spooner 1986).

Naim (1976) presented his papers "Voluntary Migration in Indonesia" at the VIII

Congress of Sociology held in Toronto for the session of the International Sociological Association's Research Committee on Migration. Based on the census data of 1931, Naim found there are two different intensities of migration among ethnic groups in Indonesia. The two types of intensity are higher and lower. Higher intensity is defined as those ethnic groups who migrated in large numbers outside their territory while lower intensity of migration is those who migrated in smaller numbers outside their territory. Of twenty-four ethnic groups, those with had the highest intensity of migration are Baweanese, Batak, Banjarese, Minangkabau and Buginese while those with the lowest intensity of migration are Sasak, Balinese, Dayak, Torajan and Lampungnese.

Naim also predicted the internal migration for the census data of 1961 even though the census did not have the same information as in 1930. He also analyzed both higher and lower migration intensity using multidimensional approaches to categories and to determine why there was a difference among ethnic groups in terms of having higher intensity as well as low intensity. The multidimensional approaches Naim employed are ecological, location, economic, demographic, educational, urban attraction and political unrest. For the ecological factor in respect to the fertile soil, migration is negative whenever the ecological factor is an advantage; meaning that fertile soil induced people to stay at their place. On the other hand, people moved out whenever the soil became infertile. Naim (1976) found that some groups such as Banjarese and Buginese have a high intensity of migration moving even when their locations are favorable

In terms of location as a factor of migration, Naim (1976) defined location as a geographical area that is basically favorable both politically and economically. Some

theories say that whenever geographical areas are favorable it is likely that people in those areas are having greater intensity in mobility because they have less difficulties of accessing transportation as well as other facilities that promote migration. Findings in the case of ethnic groups in Indonesia revealed the opposite. Many ethnic groups that have a very good location have a lower intensity of migration. A similar finding also showed that some societies with low economic pressure, such as the Banjarese and Buginese, have higher intensity of migration as compared to Balinese and Javanese, where high economic pressure with low intensity of migration is found. In examining the theory of push factors, the above finding indicates that high economics pressure does not always compel people in that area to migrate. The theory seems not to apply to some ethnic groups in Indonesia.

Another important factor Naim (1976) applied in looking at the low and high intensity are demographic factors and education. In demographic factors, particularly total population, Naim found nothing different than what he had found earlier. High total population density among Javanese, Balinese and Madurese did not make them migrate while people from lower population density such as Batak, Buginese, have higher intensity in migration. With respect to education, Batak, Menadonese, Ambonese and Minangkabau are among the ethnic groups that appear to have a higher desire for education. This desire for education was strongly influenced by Christian missionaries. The groups benefited from the missionaries encouragement and by understanding the importance of education. As many schools facilities were located in Java, migration was the only way to acquire an educated. The Javanese and Sundanese did not have to

travel out as they were in the location of the school facilities.

As Indonesia continues to progress and prosper, there also comes a stage of modernization. The first location where modernization takes place is in towns. The modernization and the continuation of growth grow in all aspects of towns and their activities, create many opportunities in these locations. Therefore, the abundance of opportunities of urban centers attracts many people from different parts of the country. This is particularly true of educated people, traders, and landless agricultural workers who experience a lack of opportunity in their own rural area or territory which forced them to migrate to the urban centers. Between the early 30's to 60's urban centers development in Indonesia had not yet experienced a take off. During this period the primary site of development was concentrated on the island of Java, where the capital of Indonesia is located, thereby making its development in all sectors the primary focus of the Indonesian government. Because Java continues to be the main priority for development, many people decided to migrate to Java. In regard to Batak, Minangkabau, Ambonese, and Menadonese, it appears that their high intensity of migration is due to the lack of development in their region. Balinese and Acehnese, on the other hand, experience low migration intensity because of their lack of desire to change their lives due to cultural bonds and strong family ties. The Balinese have been particularly reluctant to migrate because the attachment between family members is very strong. They would rather starve or die than be separated (Naim 1976).

The last factors that Naim (1976) employed in the study of voluntary migration were the political and social factors. Political unrest contributes to high intensity of

migration. One explanation for this is that whenever there is political unrest, people in that area have a tendency to move out to destinations where there is no political unrest. Some examples of having to migrate because of political unrest can be seen in the rebellion of South Maluku, Sulawesi and Sumatra. The Darul Islam movement in West Java, South Kalimantan, Central Sulawesi, and Aceh forced people to move to places of less political unrest.

In term of social factors, some explanations have been given above particularly in explaining that low intensity migration among the Balinese people was due to the strong relationship among family members. The chances of Balinese people migrating out of their territory is rather slim because not only is there a strong relationship among family members but also they are devoted to their community. In their traditional culture being a member of a community gives them numerous responsibilities which prevents many Balinese people from leaving.

In Batak and the Minangkabau cultures the word "merantau" means voluntary leaving for outside territory. This has a significant meaning for them because of the differences in their cultural orientation or tradition. As Naim (1976) pointed out the Minangkabau people embrace a pattern of matrilineal society where women control everything while men have only the responsibilities for procreation and provide the welfare or as supervisors, while in Balinese society, men control the family as well as the major inheritances. In Minangkabau, men do not inherit because they are considered guests. Consequently, because of this treatment, the only way to avoid it is migrate out of the territory. The differences in children's upbringing between Balinese and

Minangkabau is stark. The Minangkabau children, particularly the boys, start learning the Quran when they reach the age of six or seven. Boys are not provided with their own room because all rooms are allocated to female members. They have to sleep in the prayer house which is the boarding place for both boys and men and are discouraged from staying. When they are old enough to go out on their own, they are encouraged to leave and seek experience and to earn money for their own wedding expenses. This early training helps them to be responsible for themselves and teaches them their function as members of the family. This is the main reason for people, particularly men, leaving their own territory (Naim 1976).

Naim and indigenous period explanation of migration above dealt primarily with voluntary migration which is the major type of migration in Indonesia. Another type of migration that is equally important to discuss is the migration that is planned and organized by the government. This type of migration is known as 'transmigration'. According to government sources, particularly the Department of Transmigration of Indonesia, this program was started in 1905 moving people from Java to Lampung in Sumatra. By 1941, a total of 144,000 families were transmigrated to South Sumatra.

During World War II, this program was halted but later resumed after the war. According to the Department of Transmigration (1997), the number of transmigrations can be seen on the table below based on the five-year plan (PELITA) period:

Table 1. Number of Transmigrations

PERIOD	FAMILIES	PEOPLE
1950 - 1968 (PRE-PELITA)	98.316	400.992
1968/69 - 1973/74 (PELITA I)	39.346	177.462
1973/74 - 1978/79 (PELITA II)	62.364	280,638
1978/79 - 1983/84 (PELITA III)	535. 474	2.302.538
1983/84 - 1988/89 (PELITA IV)	750.150	3,225.645
1988/89 - 1993/94 (PELITA V)	265.295	1.140.614
TOTAL	1.750.999	7.569.319

SOURCE: Department of Transmigration R I, 1997.

The objective of transmigration programs is to balance the population density as well as to increase the standard of living for the people. Other objectives are regional development, maximizing both manpower and natural resources and strengthening the national security. While taking into consideration the receiving provinces or destinations, the main objective for the government is to open up new settlements to migrants. Providing human resources along with maximizing the benefits from their natural resources, transferring technology, improving infrastructure and extending new growth and improving farming production are all important factors. As for the origin or the sending provinces, the goals are to reduce population density and prevent further urbanization. They also resettle victims of natural disasters and social disturbances. The target areas of transmigration programs focus on the river banks, slum areas, densely populated infertile areas. Areas that have been affected by natural disaster are also targets for transmigration. In terms of group targets, transmigration programs mainly

move the poor peasant, the landless farmer, the poor fishermen, the unemployed and the school dropouts (Dept. of Transmigration 1997).

Although transmigration is a government program, it allows for private or individual contributions and involvement in the program. Based upon the funding of the program, transmigrations are divided into two categories: the sponsor which is fully funded by the government and the spontaneous which is funded by the private sector. In recent years, another type of migration was proposed which is the collaboration between private individuals and the government. This type of transmigration is called Self Motivated and Subsidized Spontaneous Transmigration (Dept. of Transmigration, 1997).

Unlike the voluntarily type of migration where destination is the migrant's choice, in the transmigration program the destination is very much decided by the government. Based on government data, the island destinations of transmigration are Sumatra, Kalimantan, Sulawesi and Irian Jaya. These four main islands are the islands where total population is very low and where there is an abundance of natural resources. On the other hand, islands such as Java, Bali and Lombok are sending transmigrants because their islands over-populated and there they superior knowledge in farming can be benefited in new locations. They have attained self-sufficiency in rice production and other agricultural products. There are many criticisms regarding this program particularly the belief that they are ruining the ecology because of clear-cutting forests for new settlements. Transmigration does help individuals as those who have no resources at their place of origin can become productive at their new locations.

To see the flow of recent migration in Indonesia based upon inter-provincial migration, figure 2 provides good information about the pattern of recent migration in Indonesia for 1995. Based on figure 2, large migration is mostly concentrated on Java island. The heavy migration as indicated by bold lines took place in the west part of the country. In the east the flow of migration is rather in small number. The exact number, the origin and the destination of recent migration for the year 1995 can be seen in the appendix.

According to the *Intercensal Population Survey of 1995* as shown Table II, the first reason people migrated was to join their families in almost all provinces except Yogyakarta where the main reason people migrated there was education. From the Table II we see 62% of migrants in Maluku, 57% in North Sumatra, 56% in Bengkulu, Lampung and East Nusa Tenggara. The lowest percentage was in Yogyakarta which had only 19% of total migrants. The second reason that most people migrated was because of jobs or seeking jobs. The percentages range from 22% in Yogyakarta to 53% in Irian Jaya. The third reason for people to migrate was the education factor. The largest migration for education purposes occurred in Yogyakarta with 56% followed by South Sulawesi at 28%, North Sulawesi had 25% and North Sumatra had 22%. The lowest migration because of education was in East Nusa Tenggara which had only 1% of migrants. Jakarta and West Java were the main migration for the purpose of housing. In terms of changes in marital status were happened in East Kalimantan and West Sumatra which each accounted for 3% of migrants.

Figure 2. 1995 Recent Inter-Provincial Migration

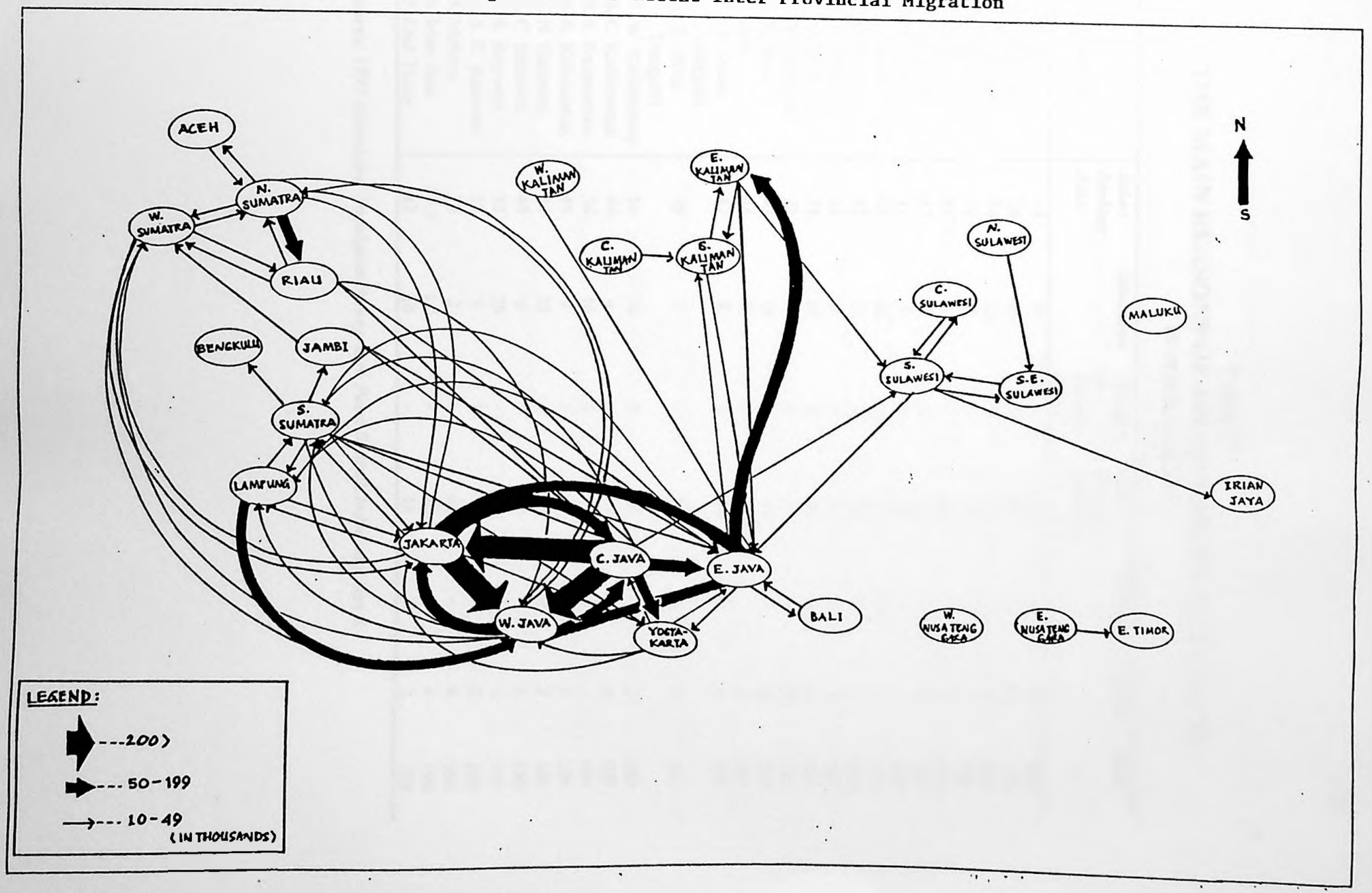


Table II
THE MAIN REASONS OF MIGRATION BY PROVINCES
(IN PERCENTAGES)

Province	*Jobs / Seeking Jobs*	*Education*	*Changed in Marital Status*	*Joint Family Members*	*Housing*	*Others*	*Total %*
1. Aceh	39	9	-	50	-	2	100
2. N. Sumatra	26	10	2	57	.5	4.5	100
3. W. Sumatra	24	22	3	44	3	4	100
4. Riau	44	3	1	51	-	1	100
5. Jambi	43	3	1	52	-	1	100
6. S. Sumatra	37	5	2	52	-	4	100
7. Bengkulu	31	5	2	56	-	6	100
8. Lampung	30	10	1.5	56	1.5	3	100
9. Jakarta	52	3	2	35	7	1	100
10. W. Java	44	5	2	41	7	1	100
11. C. Java	34	12	2	46	3	3	100
12. Yogyakarta	22	56	1	19	-	2	100
13. E. Java	42	15	1	39	1	2	100
14. Bali	44	7	2	41	-	6	100
15. W. Nusa Tenggara	47	8	1	38	2	4	100
16. E. Nusa Tenggara	39	1	-	56	1	3	100
17. W. Kalimantan	34	10	2	51	2	1	100
18. C. Kalimantan	44	4	-	49	-	3	100
19. S. Kalimantan	34	16	2	47	1	-	100
20. E. Kalimantan	48	4	3	43	-	2	100
21. N. Sulawesi	26	25	1	44	2	2	100
22. C. Sulawesi	40	6	1	52	-	1	100
23. S. Sulawesi	33	28	-	37	1	1	100
24. S. E. Sulawesi	33	8	1	56	-	2	100
25. Maluku	32	2	-	62	-	4	100
26. Irian Jaya	52.5	1.5	-	42	-	4	100
27. East Timor	42	10	-	46	-	2	100

Source: *1995 Intercensal Population Survey, Biro Pusat Statistik Indonesia: Seri 4.*

In recent years, migration not only occurred internally between the islands or between one province and another but has also grow at the international. Large Indonesian populations are emigrating to different parts of the world. Many of them are labor migrants because the main purpose of their emigrating is in search of employment. In 1997, the total number of Indonesian workers overseas was about 900,000 of which 70% to 80% were women. Indonesia is planning to increase this number by sending 1.2 million workers by the year 2000. The total number of Indonesians already abroad is 2.5 million. Continued efforts to send Indonesian workers abroad is part of a government plan to boost its earnings by receiving remittance from Indonesian workers hiring abroad and to control high unemployment due to limited availability of jobs in Indonesia (Migration News 1995; 1997). As uneven development continues between provinces, the flow of migration from less advantageous to more advantageous regions continues. In many Indonesian provinces one province receives or sends more migrants than the other. For the 27 provinces, the in-, the out-, the net-migration and the migration rate can be seen in the appendix.

Chapter IV

METHODOLOGY

SOURCE OF DATA

This research is based upon cross-sectional census data from the government of Indonesia particularly from the *1995 Indonesian Intercensal Population Survey*. Some data are also taken from other government sources--footnotes for such data are indicated. As indicated in the previous chapter, there are 27 provinces in Indonesia which means that the unit of analysis is the province. Indonesia is located between the two continents of Asia and Australia. It is one of the largest and most populous nations in Southeast Asia with different ethnic groups, languages, and traditions.

VARIABLES AND THE UNIT OF MEASUREMENT

1). Dependent variable consists of two variables: In-Migration (INMIG) rate and Out-Migration (OUTMIG) rate of the recent migration. The unit of measurement of the dependent variable is percentage. The rate of both migrations is calculated by dividing the total number of in- and out-migrants by the total population, times 100. In calculating the in- and out- migration rate for each province, the total number of in- and out-migration of each province is divided by total population of each province times 100. The use of percentage for the rate of migration is to provide a fair comparison

between large population of some provinces and small population of some provinces. Using raw numbers total in- and out-migration will overpower the small provinces.

2). Independent variable. The independent variables are modernization indicators. Modernization indicators for this study are based upon the Roberts and McBee (1968) study of Mexico. Ideas for selecting the modernization indicators are taken from this study. Roberts and McBee used twenty variables to measure modernization which were: percent of places with 2,500 and over; percent of places with 10,000 and over; percent of places with 100,000 and over; percent literate; percent completing 6 years of schooling; percent completing 12 years of schooling; per capita sugar consumption; percent electricity consumption and many others. For the purpose of this study, seven modernization indicators are chosen such as:

a). Percent in Urban Population (URBAN): is the percent of total population living in urban areas. In determining the differences between urban and rural population, the people are categorized base upon the area where they live. It is the interviewer's task to assign the type of area. In Indonesia, the differences between rural and urban areas are very clear. Rural area is an area where many of the government administration offices are not present as compared to an urban area. The total of urban population is divided by total population, times 100, to get the urban population percentage.

b). Percent in Private Bathing Facility (PBATH): is the percent of households which own private bathing facilities. In Indonesia, owning a private bathing facility is a privilege which shows higher economic status. Public or community baths are

common in Indonesia. Similar calculation is employed as in percent of urban population.

c). Per Capita Income (INCOME): is the average income of the population. The data is based on the provinces' per capita income taken from the Indonesia handbook published by the Department of Information. Since this is already in a ratio type of measurement, there is no need to divide by the total population.

d). Percent in Private Toilet Facility with septic tank (PTOILET): is the percentage of the number of households which own private toilets with septic tanks. Having private toilet facility is another household improvement in the standard of living particularly private toilet with septic tank. Unlike in the West, where the outlet of private toilet is through a large system of the city or community sewer, in Indonesia it is still based on an individual outlet system like a septic tank.

e). Percent in Electrical Lighting (ELECTRIC): is the percentage of number of households whose source of the lighting for their home is electricity. Indonesia has not yet provided all their people with electricity. In some areas, other sources of lighting are being used such as gas, pumped lamp and kerosene lamp. To have electricity as a source of lighting is an achievement of progress or to have modernized in some way.

f). Percent in Non-Agricultural Income (NONAG): is the percentage of households whose main income is from non-agricultural income. As a society continues to progress, more and more people leave agricultural work for other sources of income because of the low wages and time for harvest takes longer. In Indonesia, more and more people are leaving agriculture not only because the wages are low but the ability to

provide enough work is a problem.

g). Percent in Roof Tile Construction Material (ROOFTILE): is the percentage of households with tile roofs. One way to see if modernization has taken place is by looking at what type of roofing material is used. In Indonesia, having a tile roof is a status symbol and shows affluence or success. Other types of roofing that many Indonesians use for their homes are concrete, wood, asbestos, corrugated zinc, sugar palm fiber, and leaves.

STATISTICAL ANALYSIS

The statistical methods employed in this study are the Pearson's r correlation and regression analysis. All the variables both dependent and independent are correlated to one another using zero-order correlation. Then, the dependent variables such as in- and out-migration along with independent variables which are the modernization indicators are examined using linear regression to explore the relationship between the pairs of variables. R Square, beta weight or standardized coefficient and the significance are also examined. Scatter plot or graph method are also employed on a one-by-one basis between two dependent variables and the seven modernization indicators to see how closely the data conform to a straight line.

Chapter V

FINDINGS AND DISCUSSION

In this chapter the results of the statistical analysis are discussed along with the presentation of tables of data. The discussions are mostly based upon the relationship between independent variables and dependent variables.

In looking at the zero-order correlation of all variables that is presented in table III, all the variables have a correlation to one another although not all have the same degree of relationship. The high number correlation occurred on non-agricultural income with urban population, electrical lighting, private toilet and a correlation between private toilet and urban population. All these variables correlated with a level of significance at .001. The lowest correlation occurs between roof tile material and per capita income with negative correlation of (-.063). What this number explains is that as per capita income increases there is a decrease in the number of households whose houses are made of tile material. Similar results also found to in- and out-migration with respect to the seven modernization indicators all have some relationship. They did not have the same relationship because they did not have the same Pearson r correlation. For in-migration, all seven variables have positive correlation although the degree and the level of confidence are different. Urban population, per capita income,

Table III. Zero-Order Correlation of All Variables

		Urban Population	Private Bath	Per Capita Income	Private Toilet	Electrical Lighting	Non-Agri. Income	Roof Tile Material	In-Migration	Out-Migration
Urban Population	*Pearson R*		.648**	.364*	.836**	.792**	.883**	.494**	.494**	.717**
	Sig. (1-tailed)	-----	.000	.000	.000	.000	.000	.004	.004	.000
Private Bath	*Pearson R*			.437*	.727**	.500**	.619**	.436*	.347*	.491**
	Sig. (1-tailed)		-----	.011	.000	.004	.000	.011	.038	.005
Per Capita Income	*Pearson R*				.513**	.228	.498**	-.063	.501**	.481**
	Sig. (1-tailed)			-----	.003	.126	.004	.378	.004	.006
Private Toilet with	*Pearson R*					.722**	.859**	.440*	.582**	.766**
Septic Tank	*Sig. (1-tailed)*				-----	.000	.000	.011	.001	.000
Electrical Lighting	*Pearson R*						.840**	.649**	.300	.397*
	Sig. (1-taild)					-----	.000	.000	.064	.020
Non-Agricultural	*Pearson R*							.537**	.604**	.716**
Income	*Sig. (1-tailed)*						-----	.002	.000	.000
Roof Tile Material	*Pearson R*								.150	.214
	Sig. (1-tailed)							-----	.228	.142
In-Migration	*Pearson R*									.678**
	Sig. (1-tailed)								-----	.000
Out-Migration	*Pearson R*									
	Sig. (1-tailed)									-----

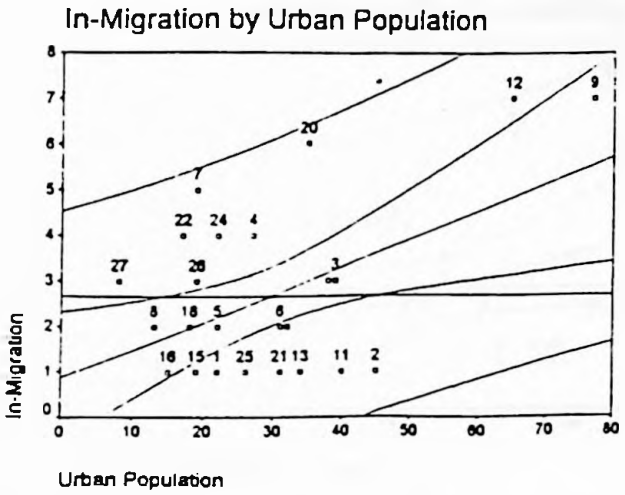
**. Correlation is significant at the .001 level (1-tailed).

*. Correlation is significant at the .005 level (1-tailed).

private toilet with septic tank and non-agricultural income all have a correlation with the level of significance at .001 while private bath has a level of significance at .005 with a small correlation with in-migration such as with the electrical lighting. A very small correlation occurred with roof tile material. On account of out-migration, a correlation occurred with urban population, private toilet with septic tank and non-agricultural income with level of significance at .001. While the level of significance at .001 takes place with private bath and low correlation occurs with roof tile material. They are all positively correlated to one another.

Although with the Pearson r correlation, one can try to judge the degree of correlation but it will be difficult to determine the relationship of one variable to another or compare one to another. Only by squaring the Pearson r, can one determine variance of one variable accounted for the other. The coefficient of determination (r square) is the coefficient which tells whether the relationship is weak or strong. Cohen and Holliday grouped the coefficient into four categories as follows: below .19 is considered very low or very weak; .20 - .39 is low or weak; .40 - .69 is modest; .70 -.89 is high or strong, whereas .90 and above is considered very high or strongly correlated. In other words, as the coefficient is closer to one, the stronger the relationship. The relationship becomes weak as the coefficient moves toward zero. There is no correlation when the coefficient equals zero. Although Cohen and Holliday grouped the relationship into four, they warned that these rules should not be used for definite explanation because there have not been concrete guidelines for this interpretation (Bryman & Cramer 1994). For this study such an explanation can be.

Figure 3A. In-Migration by Urban Population



Note:

1=17
3=10
6=14,19,23

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.49425
R Square	.24429
Adjusted R Square	.21406
Standard Error	1.63099

Analysis of Variance:

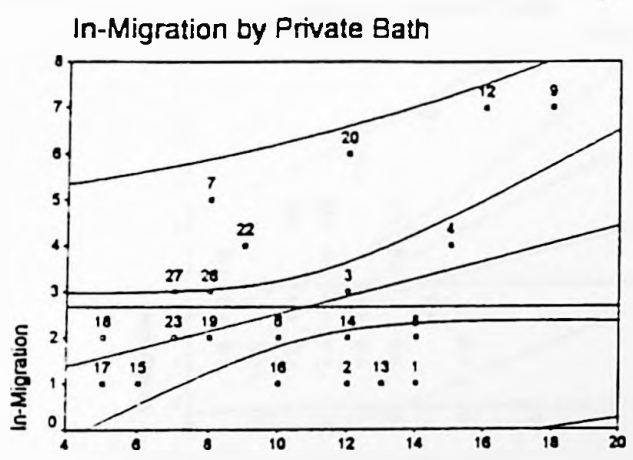
	DF	Sum of Squares	Mean Square
Regression	1	21.497172	21.497172
Residuals	25	66.502828	2.660113

F = 8.08130 Signif F = .0088

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
URBAN	.060329	.021222	.494253	2.843	.0088
(Constant)	.881380	.702083		1.255	.2209

Figure 3B. In-Migration by Private Bath



Note:

1=21
2=11,25
3=10
22=24

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.34656
R Square	.12011
Adjusted R Square	.08491
Standard Error	1.75989

Analysis of Variance:

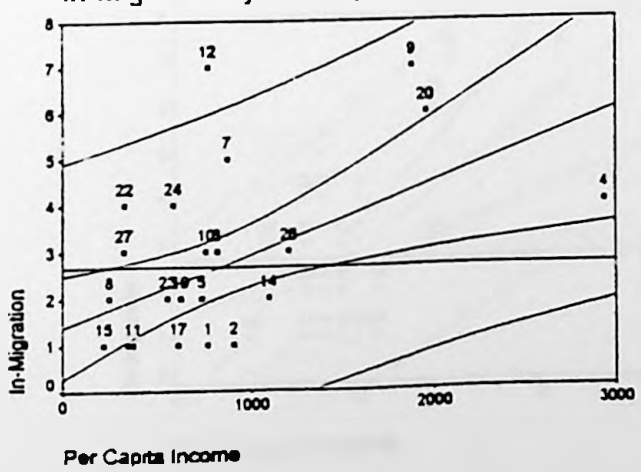
	DF	Sum of Squares	Mean Square
Regression	1	10.369353	10.369353
Residuals	25	77.430647	3.097226

F = 3.41252 Signif F = .0766

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
PBATH	.189869	.102782	.346564	1.847	.0766
(Constant)	.627337	1.134738		.553	.5918

Figure 3C. In-Migration by Per Capita Income



Note:

1=25
2=13
5=6,18
11=16,21

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.50132
R Square	.25132
Adjusted R Square	.22137
Standard Error	1.62338

Analysis of Variance:

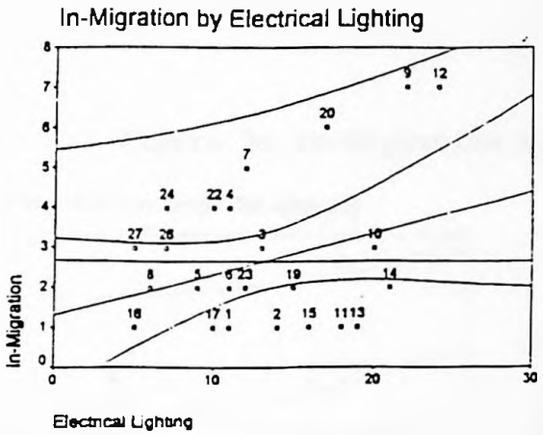
	DF	Sum of Squares	Mean Square
Regression	1	22.116257	22.116257
Residuals	25	65.883743	2.635350

F = 8.39215 Signif F = .0077

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
INCOME	.001550	.000535	.501319	2.897	.0077
(Constant)	1.388701	.540570		2.569	.0166

Figure 3D. In-Migration by Electrical Lighting



Note:

1=25
6=18
11=21

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.30006
R Square	.09004
Adjusted R Square	.05164
Standard Error	1.78971

Analysis of Variance:

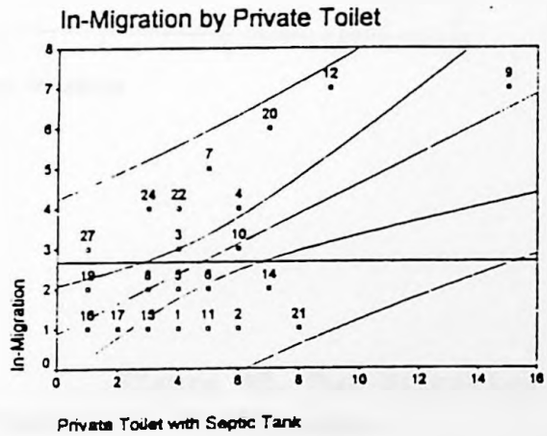
	DF	Sum of Squares	Mean Square
Regression	1	7.9231970	7.9231970
Residuals	25	80.076803	3.2030721

F = 2.47362 Signif F = .1283

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
ELECTRIC	.103797	.065996	.300061	1.573	.1283
(Constant)	1.301924	.933587		1.395	.1754

Figure 3E. In-Migration by Private Toilet



Note:

1=25
3=26
5=23
8=18
11=13

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.58206
R Square	.33879
Adjusted R Square	.31234
Standard Error	1.52560

Analysis of Variance:

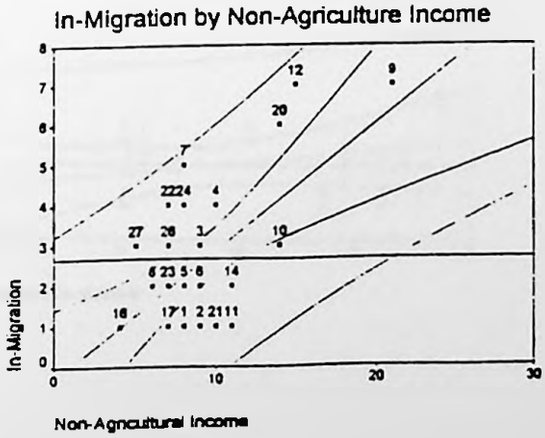
	DF	Sum of Squares	Mean Square
Regression	1	29.813665	29.813665
Residuals	25	58.186335	2.327453

F = 12.80956 Signif F = .0014

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
PTOILET	.372671	.104126	.582058	3.579	.0014
(Constant)	.886128	.577666		1.534	.1376

Figure 3F. In-Migration by Non-Agricultural Income



Note:

1=15
5=18
11=13
14=19
17=25

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.60358
R Square	.36431
Adjusted R Square	.33888
Standard Error	1.49587

Analysis of Variance:

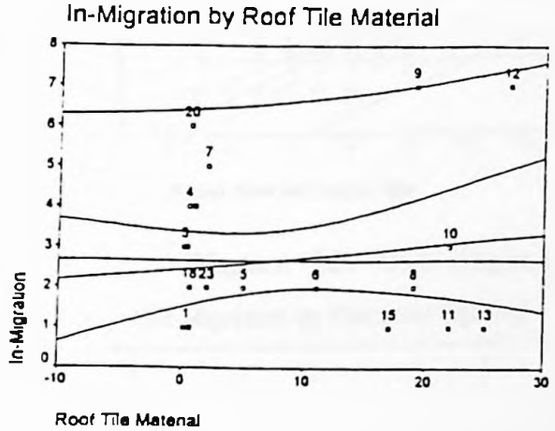
	DF	Sum of Squares	Mean Square
Regression	1	32.059204	32.059204
Residuals	25	55.940796	2.237632

F = 14.32729 Signif F = .0009

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
NONAG	.316374	.083583	.603580	3.785	.0009
(Constant)	-.297872	.834437		-.357	.7241

Figure 3G. In-Migration by Roof Tile Material



Note:

1=2,16,17,21,25
3=26,27
4=22,24
8=14
18=19

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.14981
R Square	.02244
Adjusted R Square	-.01666
Standard Error	1.85499

Analysis of Variance:

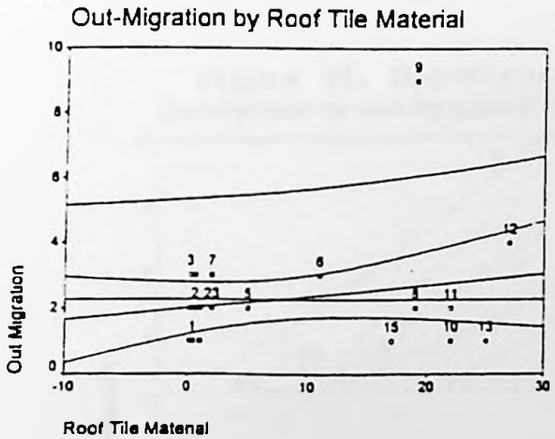
	DF	Sum of Squares	Mean Square
Regression	1	1.9748682	1.9748682
Residuals	25	86.025132	3.4410053

F = .57392 Signif F = .4558

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
ROOFTILE	.028580	.037725	.149805	.758	.4558
(Constant)	2.458351	.450618		5.456	.0000

Figure 3H. Out-Migration by Roof Tile Material



Note:

1=16,17,22,26
2=19,21,25
3=14,18,20
8=14
23=24

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.21355
R Square	.04560
Adjusted R Square	.00743
Standard Error	1.57730

Analysis of Variance:

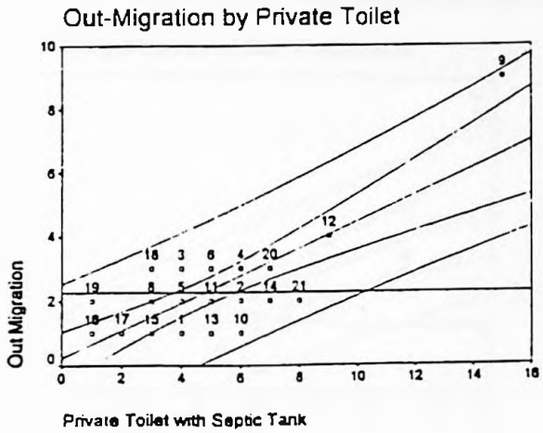
	DF	Sum of Squares	Mean Square
Regression	1	2.9726666	2.9726657
Residuals	25	62.212519	2.4885008

F = 1.19456 Signif F = .2848

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
ROOFTILE	.033064	.032082	.213550	1.093	.2948
(Constant)	2.003680	.383208		5.229	.0000

Figure 3I. Out-Migration by Private Toilet



Note:

1=22,26
5=23,25
6=7
8=24
19=27

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.76552
R Square	.58603
Adjusted R Square	.56947
Standard Error	1.03894

Analysis of Variance:

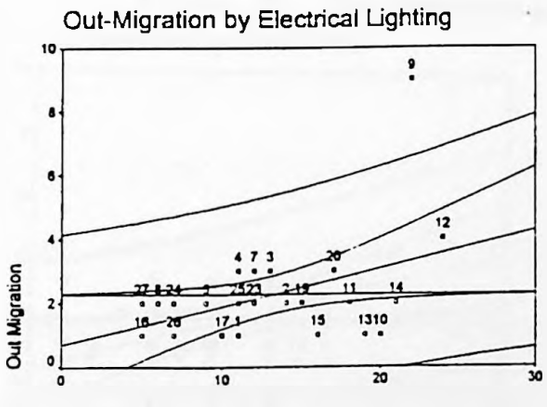
	DF	Sum of Squares	Mean Square
Regression	1	38.200196	38.200196
Residuals	25	26.984990	1.079400

F = 35.39023 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
PTOILET	.421843	.070910	.765523	5.949	.0000
(Constant)	.243789	.393394		.620	.5411

Figure 3J. Out-Migration by Electrical Lighting



Note:

1=27
4=6,18
11=21
17=22

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.39719
R Square	.15776
Adjusted R Square	.12407
Standard Error	1.48191

Analysis of Variance:

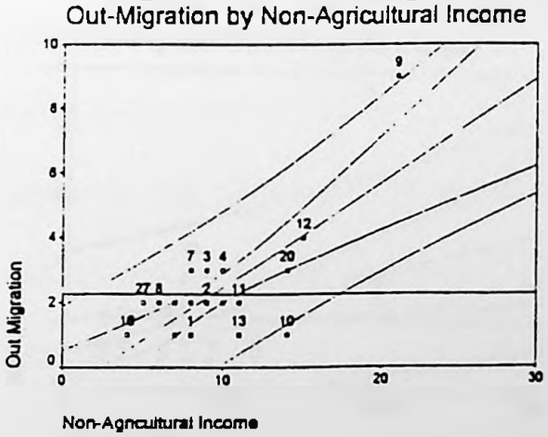
	DF	Sum of Squares	Mean Square
Regression	1	10.283493	10.283493
Residuals	25	54.901692	2.196068

F = 4.68268 Signif F = .0402

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
ELECTRIC	.118251	.054646	.397188	2.164	.0402
(Constant)	.704472	.773027		.911	.3708

Figure 3K. Out-Migration by Non-Agricultural Income



Note:

1=15
2=5,24
3=6,7,18
8=23,25
11=14,19,21
17=22,26

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.71565
R Square	.51216
Adjusted R Square	.49264
Standard Error	1.12783

Analysis of Variance:

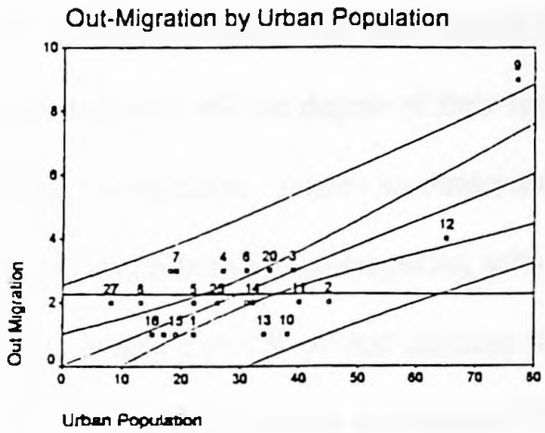
	DF	Sum of Squares	Mean Square
Regression	1	33.385000	33.385000
Residuals	25	31.800185	1.272007

F = 26.24592 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
NONAG	.322849	.063019	.715651	5.123	.0000
(Constant)	-.765957	.629135		-1.217	.2348

Figure 3L. Out-Migration by Urban Population



Note:
1=17
5=24
7=18
14=19,21,23
15=22,26

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.71693
R Square	.51398
Adjusted R Square	.49454
Standard Error	1.12572

Analysis of Variance:

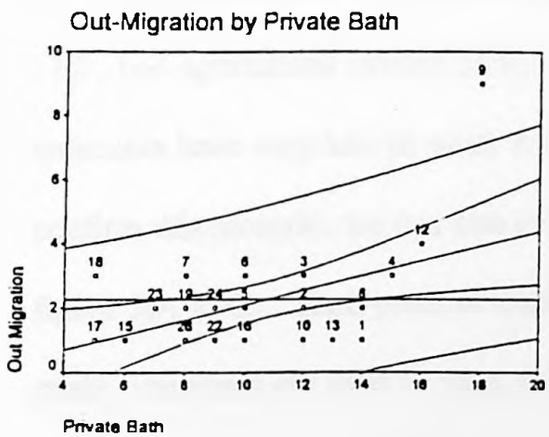
	DF	Sum of Squares	Mean Square
Regression	1	33.504199	33.504199
Residuals	25	31.680986	1.267239

F = 26.43873 Signif F = .0000

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
URBAN	.075315	.014648	.716927	5.142	.0001
(Constant)	.030481	.484583		.063	.3503

Figure 3M. Out-Migration by Private Bath



Note:
2=11,14,25
3=20
8=21
23=27

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.49055
R Square	.24063
Adjusted R Square	.21026
Standard Error	1.40712

Analysis of Variance:

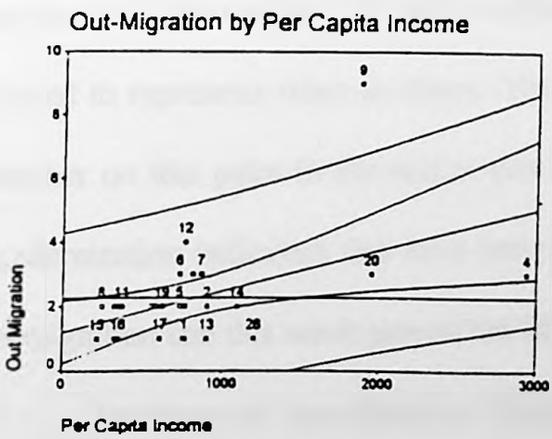
	DF	Sum of Squares	Mean Square
Regression	1	15.685817	15.685817
Residuals	25	49.499368	1.979975

F = 7.92223 Signif F = .0094

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
PBATH	.231304	.082179	.490545	2.815	.0094
(Constant)	-.225114	.923266		-.244	.8094

Figure 3N. Out-Migration by Per Capita Income



Note:
1=10
6=3,18
8=27
5=25
11=21,27
19=23,24
16=22

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.48060
R Square	.23097
Adjusted R Square	.20021
Standard Error	1.41604

Analysis of Variance:

	DF	Sum of Squares	Mean Square
Regression	1	15.056086	15.056086
Residuals	25	50.129099	2.005164

F = 7.50866 Signif F = .0112

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
INCOME	.001279	.000467	.480598	2.740	.0112
(Constant)	1.204825	.471528		2.555	.0171

As previously indicated all variables correlate to one another. For this study the focus of the relationship is on two dependent variables such as in-migration and out-migration with respect to the seven modernization indicators. Examining the scatter plot or scatter graph and also the r square using the Cohen and Holliday grouping ideas we can definitely tell the degree of their relationship. Figure 3(A to G) provides a picture of how in-migration relates to modernization indicators on one basis relationship. The relationship between in-migration with roof tile material is very low-only .150 or 2%. This means that 2% of that variance is due to the other variance or simply tells us that only 2% of in-migration is attributed to roof tile material. Other modernization indicators are: urban population 24%; private toilet 34%; per capita income 25%; private bath 12%; non-agricultural income 34%; and electrical lighting 9%. We can say that all the indicators have very low or weak relationships with respect to in-migration. To further confirm this scenario, we can also examine the scatter plot/graph of each relationship on figure 3(A to G). Each point of scatter plot represents one case. For the purpose of this study, numbers are used to label the points and in this case those numbers are the 27 provinces in Indonesia. Because one case overlaps another or is very close, the numbers for the label also overlap. To have a better representation of each case, only one number is used to represents other numbers. The note beside the graph represents the substitute number on that point in the scatter plot. Despite weak relationships between the seven modernization indicators that have been chosen, they all have positive correlation with in-migration and this result proved the first hypothesis.

In terms of out-migration figures 3(H to N), the r square of the seven

modernization indicators are: 51% for urban population; 24% for private bath; 23% per capita income; 57% private toilet with septic tank; 51% for non-agricultural income; 16% for electrical lighting; and 5% for roof tile material. All these numbers tell us is that out-migration is attributed or explained by those percentages. Three indicators have modest relationships which are: private toilet with septic tank, urban population and non-agricultural income while the others remaining have low relationships. Comparing out-migration with in-migration, it seems that out-migration is better explained by modernization indicators. They all have positive correlation between out-migration and seven modernization indicators. This finding proved the second hypothesis that out-migration is positively correlated with modernization.

The regression outcomes not only provide information of the degree of relationship to in- and out-migration but also other information as shown on Table IV and V such as: the constant, the Beta, the F ratio, and the significant F. The graph also shows the outlier of the observed cases. Examining the out-migration in all the seven modernization indicators, case 9 which is Jakarta, six of seven were outliers. This is because Jakarta is the capital city of Indonesia as a province where all of the seven indicators used dominate the other provinces. This was not the case in in-migration for Jakarta. For in-migration, only Yogyakarta was an outlier in the case of per capita income. The cause of this outlier was due to a high number of in-migrations and moderate per capita income. People migrate to Yogyakarta not necessarily because of their desire to earn income, but perhaps to seek a good education since the city and the province have an excellent reputation for higher education. The Gajah Mada

Table IV. Regression Coefficient with In-Migration as Dependent Variable

Independent Variable	Constant	Beta	F	Sig. F
Urban Population	.881	.494	8.08	.009
Private Bath	.627	.346	3.41	.076
Per Capita Income	1.388	.501	8.39	.007
Electrical Lighting	1.301	.300	2.47	.128
Private Toilet	.886	.582	12.809	.001
Non-Agricultural Income	-.297	.603	14.327	.000
Roof Tile Material	2.458	.149	.573	.455

Table V. Regression Coefficient with Out-Migration as Dependent Variable

Independent Variable	Constant	Beta	F	Sig. F
Urban Population	.304	.716	26.438	.000
Private Bath	-.225	.490	7.922	.009
Per Capita Income	1.204	.480	7.508	.011
Electrical Lighting	.704	.397	4.682	.040
Private Toilet	.243	.765	35.39	.000
Non-Agricultural Income	-.765	.715	26.24	.000
Roof Tile Material	2.00	.213	1.19	.284

University is one of the best schools in Indonesia

Another part of linear regression which might be useful to examine is the standardized coefficient of the regression simply known as *beta weight* (Bryman & Cramer 1994). This standardized coefficient provides us with information on how each variable has an impact on the dependent variable. Table VI shows regression coefficients based on two dependent variables such as in- and out-migration.

Table VI. Standardized Regression Coefficient

Independent Variables	In- Migration	Out-Migration
Urban Population	-.033	.441
Private Bath	-.205	-.213
Per Capita Income	.101	-.021
Private Toilet With Septic Tank	.377	.614
Electrical Lighting	-.665	-.802
Non- Agricultural Income	.928	.608
Roof Tile Material	.030	.012

The above table shows that for in-migration the highest standardized coefficient is non-agricultural income which is .928. What this number means is that for one unit of non-agricultural income change, there is a standard deviation change in in-migration of .928. Similarly for out-migration, the highest standardized coefficient is for private

toilet which is .614. This also implies that for one unit changed in private toilet, there will be a change of .614 in out-migration. The same explanations apply for each independent variable with respect to two dependent variables. Changes in independent variables affect dependent variables. Since one causes the other, there is an absolute correlation among them as with the same result discussed in the earlier paragraph.

The above explanation centers on in- and out-migration with respect to the seven modernization indicators and the result of the findings have been discussed. Instead of examining each independent variable with respect to in- and out-migration, a new approach is combining all independent variables as one variable. The same analysis is applied. Combining all the seven modernization indicators as an index of modernization variables (MODERN) has an effect on the output because the per capita income has a very high proportion among modernization indicators. Also, high per capita income does not necessarily show modernization. To have a fair comparison between one province and the other, two types modernization index are produced: MODERN1 which includes all the seven modernization indicators and MODERN2 excludes per capita income. The result of the correlation between in- and out-migration with respect to MODERN1 are: in-migration with r=.517 or 27% of the correlation explained by MODERN1 and out-migration with r=.507 or 26% of the correlation explained by MODERN1. The standardized coefficient (*Beta*) for both is equal to the r value. This means that when every unit of MODERN1 is changed, there will be a .517 change in in-migration and .507 in out-migration. The scatter plot shown for both are weak but positively correlated. The province of Yogyakarta is an outlier in the in-migration and

Jakarta is an outlier in the out-migration. A complete picture of scatter plot and the equation can be seen in figure 4 for MODERN1.

In regard to MODERN2 (modernization index without per capita income) as independent variable, the result showed that the r correlation is .454 for in-migration and .628 for out-migration. The r squared, how much of the variance explained, is 21% for in-migration and 39% for out-migration. So, out-migration is explained far better by modernization without per capita income than in-migration. The scatter plot for both showed weak and positive correlation. The standardized coefficient for both are the same as the value of r. Comparing the two modernization indexes, almost equal r value is shown in MODERN1 as in MODERN2. In-migration r squared is lower in MODERN2 as compared to MODERN1; however, the out-migration is higher in MODERN2 as compared to MODERN1. Sixteen percent is explained without per capita income in respect to out-migration in MODERN2 as in MODERN1. Similarly 6% less is shown in in-migration without per capita income. What all these results tell us is that in-migration is better explained when per capita income is included and reverse with respect to out-migration. Figure 5, provides all the information with respect to MODERN2. Both the scatter plots with regard to MODERN1 and MODERN2 are positively correlated with the dependent variables.

Figure 4. In- and Out-Migration by Modernizationl

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.51716
R Square	.26745
Adjusted R Square	.23815
Standard Error	1.60579

Analysis of Variance:

	DF	Sum of Squares	Mean Square
Regression	1	23.535637	23.535637
Residuals	25	64.464363	2.578575

F = 9.12738 Signif F = .0057

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
MODERN1	.001568	.000519	.517156	3.021	.0057
(Constant)	1.256138	.559896		2.244	.0340

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.50654
R Square	.25659
Adjusted R Square	.22685
Standard Error	1.39226

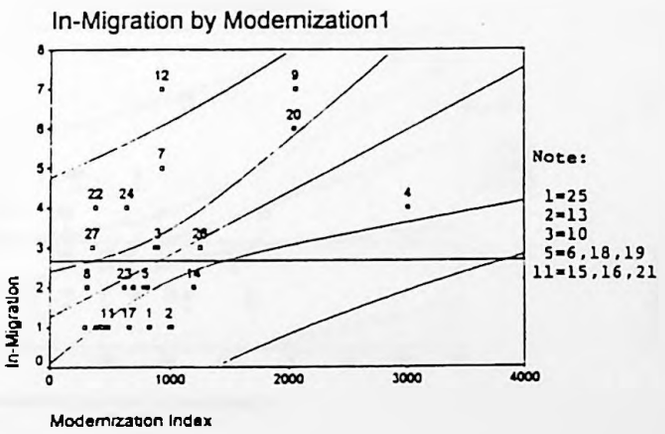
Analysis of Variance:

	DF	Sum of Squares	Mean Square
Regression	1	16.725615	16.725615
Residuals	25	48.459570	1.938383

F = 8.62864 Signif F = .0070

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	S
MODERN1	.001322	.000450	.506543	2.937	.
(Constant)	1.070182	.485442		2.205	.



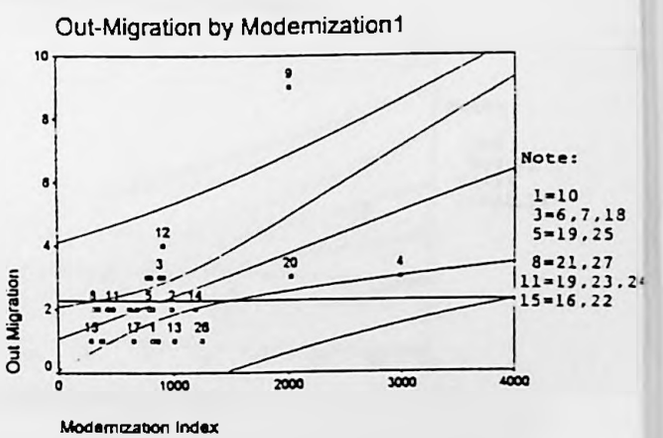


Figure 5. In- and Out-Migration by Modernization2

Dependent variable.. INMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.45445
R Square	.20653
Adjusted R Square	.17479
Standard Error	1.67123

Analysis of Variance:

	DF	Sum of Squares	Mean Square
Regression	1	18.174571	18.174571
Residuals	25	69.825429	2.793017

F = 6.50715 Signif F = .0172

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
MODERN2	.024601	.009644	.454455	2.551	.0172
(Constant)	.823579	.790874		1.041	.3077

Dependent variable.. OUTMIG Method.. LINEAR

Listwise Deletion of Missing Data

Multiple R	.62781
R Square	.39415
Adjusted R Square	.36991
Standard Error	1.25687

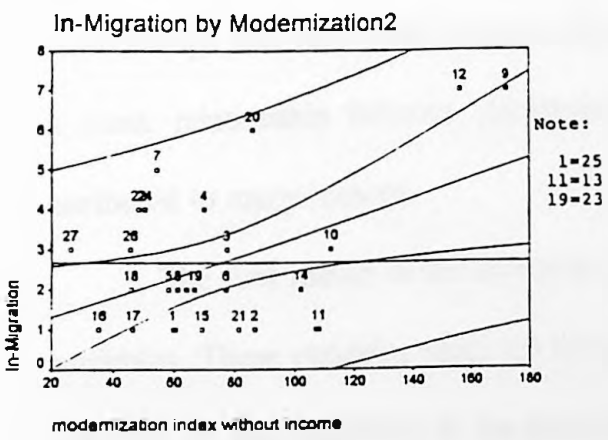
Analysis of Variance:

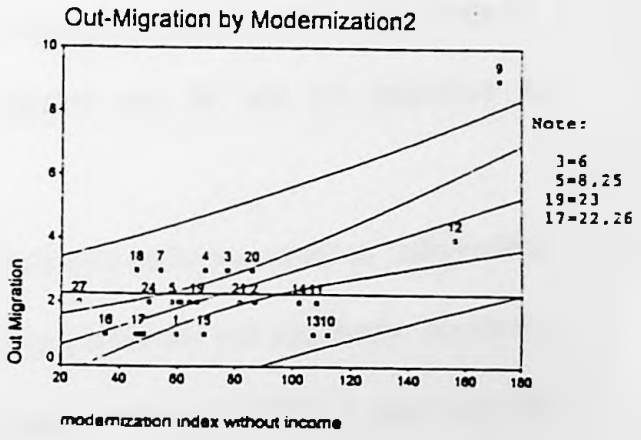
	DF	Sum of Squares	Mean Square
Regression	1	25.692415	25.692415
Residuals	25	39.492770	1.579711

F = 16.26400 Signif F = .0003

Variables in the Equation

Variable	B	SE B	Beta	T	Sig T
MODERN2	.029250	.007253	.627810	4.033	.0003
(Constant)	.067886	.594784		.114	.9102





Chapter VI

SUMARRY AND CONCLUSSION

The relationship between modernization and migration in Indonesia is, in a way, supported by the argument of many previous studies where modernization is positively related to migration. However, the outcome of the Indonesian model with such relationships was very weak except in the case of non-agricultural income. The cause of a weak relationship between modernization indicators and in- and out migration is attributed to many reasons.

The first reason is the selection of modernization indicators used as independent variables. These variables were not the preferred indicators for use this study; however, the lack of data available in the *Intercensal Population Survey 1995*; it was unto the researcher's discretion to employ those variables to measure the level of modernization. It is believed those data are comparable enough to measure modernization, particularly for Indonesia. There are other types of variables that are much better indicators for the level of modernization. Some of the most common indicators used by many researchers are the per capita consumption of energy, per capita telephone installed, per capita newspapers circulated, literacy rate and number of physicians and per capita of hospital beds (Oechsli and Kirk 1975).

The second reason is the fact that much of migration in Indonesia is quite different from that of many other countries. Migration in Indonesia is not based solely on the decision of people to migrate but also based on the governments policies for migration itself. The government program of transmigration is certainly a key factor in Indonesian migration. Many of the people migrated not because the other places are more modern than their place of origin but because of the government transmigration program to transfer people from high density populated to regions less densely populated. Many of the transmigrants are farmers or other employed in related agricultural work where land for cultivation is limited. The same applies to those whose income depends on agricultural work. They leave their homes with the idea that the government will provide land and housing and that they will have a better life at their places of destination. Other groups of people migrate not because modernization takes place but because they are government officials or workers, including military personnel. A large number of government officials come from Java island. Many migrants are people seeking to be reunited with other members of their family (UN-ESCAP 1981). These types of migrants certainly need to be discounted for the purpose of finding the relationship between migration that is solely related to modernization. In true migration with respect to modernization, migration tends to be examined in the form of economic factors such as industrialization and economic growth or economic development. The push-pull factors are better indicators.

The third reason that contributes to have weaker relationships between migration and modernization is due to the fact that Indonesia is a vast archipelago where there are

more than two dozens ethnic groups. Their socialization as well as their way of life differs widely. Because many of them cling to their beliefs, it also affects their attitude toward migration. The example of different ethnic groups' ideas and practices in relation to migration has been discussed in the previous chapter. What is more important to the ethnic groups is their life-style in their place of origin. Because of differences in the location, Indonesians certainly have different types of life-styles ranging from the type of houses, daily diet and frequency of contact with outsiders which, in a way, is part of the process of modernization.

In choosing some of the modernization indicators, such as the tile roofing material, it is a fact that there are some areas where tile roofing material is not available or not common in addition to not being compatible with the environmental condition. They build their houses based on the indigenous or available materials. In some areas where wood resources are abundant, it is used for housing. Consequently the number of those incorporating tile material into their houses is less than in the other provinces. Again, choosing of a common variable is very important in cross-sectional study. Per capita income is another important issue as some provinces have very high per capita income yet only a small numbers of migration both in and out.

The per capita income of a province is not a good representation of the entire total population because it is the aggregate of all total income divided by total population. In compare to other provinces, the province of Irian Jaya has a high per capita income, yet the number of migration is very low. This high per capita income in province is due to a large mining business where income is concentrated in the hands

of a small handful of people. Because of the low total population in the region, the per capita income is higher than in some provinces.

The concept of modernization itself has a problem too. Modernization, as many researchers explain, is based mainly on the western ideas or experience. The magnitude of modernization in third world countries differs greatly from developed countries. What the third world considers modern is much different than in the developed countries. Having a private toilet, or private bath is considered one of the achievements or status symbols in Indonesia because such privileges are not common there. In the West to have these facilities is not considered something one should be proud of but rather a basic necessity of life. The concept of modernization certainly has been scrutinized, particularly in the comparison between third world countries and developed countries (Hartnagel & Mizanuddin 1986: Giddens 1982: Frank 1971). Modernization in the third world countries is at a lower stage than in most Western countries. This is due to the fact that many of these countries were either colonized or have been economically exploited by Western capitalist nations. For many years, their resources have gone to other countries or have been depleted even before they could be used by these third world countries. A good example of this is in Indonesia where the Dutch controlled the country for three and half centuries, and during that period extracted large amounts of raw natural resources to build the great Netherlands.

Finally, a suggestion for future research, selection of variables needs to be carefully chosen particularly for variables that are going to be used to measure modernization. It would be very effective to conduct a population survey where answer

to particular questions pertaining to the information that is going to be used or analyzed are collected. There should be separate data that records transmigration programs and voluntary migration. Instead of asking a question about what is the purpose of migrating, a researcher should ask direct questions such as whether the migration decision is primarily for the modernization factor. To narrow it down to the concept of modernization, it would be better to use economic development or economic growth as a modernization factor.

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Appendix I
MODERNIZATION INDICATORS USED IN THE STUDY BY PROVINCE (IN PERCENTAGES)

Province	*Urban Pop*	*Private Bath*	** Per Capita Income in Rupiah*	*Private Toilet with Septic Tank*	*Electrical Lighting*	*Non-Agricultural Income*	*Roof Tile Material*
1. Aceh	22	14	761	4	11	8	.4
2. N. Sumatra	45	12	902	6	14	9	.6
3. W. Sumatra	39	12	811	4	13	9	.2
4. Riau	27	15	2,936	6	11	10	.5
5. Jambi	22	10	731	4	9	8	5
6. S. Sumatra	31	10	729	5	11	9	11
7. Bengkulu	19	8	865	5	12	8	2
8. Lampung	13	14	242	3	6	6	19
9. Jakarta	77	18	1,872	15	22	21	19
10. W. Java	38	12	752	6	20	14	22
11. C. Java	40	12	367	5	18	11	22
12. Yogyakarta	65	16	760	9	24	15	27
13. E. Java	34	13	900	5	19	11	25
14. Bali	32	12	1,090	7	21	11	19
15. W. Nusa Tenggara	19	6	213	3	16	8	17
16. E. Nusa Tenggara	15	10	345	1	5	4	.1
17. W. Kalimantan	22	5	606	2	10	7	.2
18. C. Kalimantan	18	5	729	3	11	8	.6
19. S. Kalimantan	31	8	619	1	15	11	.6
20. E. Kalimantan	35	12	1,950	7	17	14	.6
21. N. Sulawesi	31	14	348	8	18	10	.3
22. C. Sulawesi	17	9	322	4	10	7	1
23. S. Sulawesi	32	7	549	4	12	7	2
24. S. E. Sulawesi	22	9	579	3	7	8	1
25. Maluku	26	12	762	4	11	7	.2
26. Irian Jaya	19	8	1,201	4	7	7	.4
27. E. Timor	8	7	320	1	5	5	.1

Source of Data:

1995 Intercensal Population Survey, Biro Pusat Statistik, Indonesia.

** Indonesia 1995: An Official Handbook, Dept. of Information, Republic Indonesia.*

Appendix II
MODERNIZATION INDICATORS USED IN THE STUDY BY PROVINCE (IN THOUSANDS)

Province	*Urban Population (1)*	*Private Bath (1)*	*Per Capita Income in Rupiah (2)*	*Private Toilet with septic Tank (1)*	*Electrical Lighting (1)*	*Non-Agricultural Income (1)*	*Roof Tile Material (1)*
1. Aceh	829	531	761	147	431	313	15
2. N. Sumatra	4,982	1,370	902	651	1,606	1,040	62
3. W. Sumatra	1,688	372	811	159	554	405	8
4. Riau	1,072	598	2,936	230	438	399	21
5. Jambi	528	248	731	94	236	195	112
6. S. Sumatra	2,267	729	729	380	812	649	827
7. Bengkulu	271	111	865	65	164	112	24
8. Lampung	898	913	242	227	419	415	1,255
9. Jakarta	7,028	1,627	1,872	1,371	2,021	1,955	1,753
10. W. Java	14,924	4,822	752	2,526	7,706	5,485	8,802
11. C. Java	11,994	3,659	367	1,543	5,601	3,177	6,399
12. Yogyakarta	1,892	472	760	252	701	425	788
13. E. Java	11,622	4,399	900	1,650	6,540	3,758	8,452
14. Bali	924	336	1,090	206	616	313	542
15. W. Nusa Tenggara	703	211	213	122	582	309	603
16. E. Nusa Tenggara	524	357	345	44	170	160	4
17. W. Kalimantan	809	174	606	64	357	245	9
18. C. Kalimantan	281	88	729	53	181	135	9
19. S. Kalimantan	909	231	619	41	437	309	18
20. E. Kalimantan	808	280	1,950	164	393	323	13
21. N. Sulawesi	809	360	348	206	475	266	7
22. C. Sulawesi	338	170	322	81	201	141	18
23. S. Sulawesi	2,421	522	549	278	925	591	58
24. S. E. Sulawesi	344	138	579	48	112	105	24
25. Maluku	549	243	762	92	232	155	4
26. Irian Jaya	366	153	1,201	75	134	131	8
27. E. Timor	64	62	320	5	40	43	1

Source of Data:

1. *1995 Intercensal Population Survey, Biro Pusat Statistik, Indonesia.*
2. *Indonesia 1995: An Official Handbook, Dept. of Information, Republic of Indonesia*

Appendix III
POPULATION GROWTH AND DENSITY BY PROVINCE FOR 1995

PROVINCE	*ANNUAL POP. GROWTH RATE 1990-95*	*POP. DENSITY PER SQ. KM*
1. Aceh	2.41	69
2. N. Sumatra	1.62	157
3. W. Sumatra	1.56	87
4. Riau	3.38	41
5. Jambi	3.24	53
6. S. Sumatra	3.69	70
7. Bengkulu	3.63	66
8. Lampung	2.04	200
9. Jakarta	1.99	13,786
10. W. Java	2.07	848
11. C. Java	0.78	867
12. Yogyakarta	0.03	920
13. E. Java	0.81	706
14. Bali	0.83	521
15. W. Nusa Tenggara	1.59	181
16. E. Nusa Tenggara	1.82	75
17. W. Kalimantan	2.40	25
18. C. Kalimantan	3.11	11
19. S. Kalimantan	2.18	77
20. E. Kalimantan	4.28	11
21. N. Sulawesi	1.34	139
22. C. Sulawesi	2.52	28
23. S. Sulawesi	1.60	104
24. S. E. Sulawesi	3.29	57
25. Maluku	2.35	28
26. Irian Jaya	3.34	5
27. E. Timor	2.35	101

Source of Data: *1995 Intercensal Population Census, Biro Pusat Statistik, Indonesia.*

Appendix IV
RECENT IN-, OUT-, NET-MIGRATION & TOTAL POPULATION BY PROVINCE
(IN THOUSANDS & PERCENTAGES)

PROVINCE	*TOTAL IN MIGRATION* #	%	*TOTAL OUT MIGRATION* #	%	*TOTAL NET MIGRATION*	*TOTAL POPULATION*
1. Aceh	29	1	48	1	-19	3,848
2. N. Sumatra	103	1	199	2	-96	11,115
3. W. Sumatra	139	3	145	3	6	4,323
4. Riau	148	4	126	3	22	3,901
5. Jambi	57	2	53	2	4	2,370
6. S. Sumatra	128	2	187	3	-59	7,208
7. Bengkulu	66	5	36	3	30	1,409
8. Lampung	114	2	166	2	-52	6,658
9. Jakarta	595	7	823	9	-228	9,113
10. W. Java	1,118	3	449	1	668	39,207
11. C. Java	352	1	732	2	-380	29,653
12. Yogyakarta	165	7	111	4	54	2,917
13. E. Java	438	1	411	1	27	33,844
14. Bali	58	2	45	2	13	2,896
15. W. Nusa Tenggara	46	1	35	1	11	3,646
16. E. Nusa Tenggara	33	1	43	1	-10	3,577
17. W. Kalimantan	45	1	34	1	11	3,636
18. C. Kalimantan	36	2	43	3	-7	1,627
19. S. Kalimantan	69	2	56	2	13	2,893
20. E. Kalimantan	139	6	76	3	63	2,314
21. N. Sulawesi	22	1	48	2	-26	2,649
22. C. Sulawesi	71	4	28	1	43	1,938
23. S. Sulawesi	137	2	149	2	-12	7,558
24. S. E. Sulawesi	57	4	39	2	18	1,587
25. Maluku	23	1	46	2	-23	2,087
26. Irian Jaya	53	3	26	1	27	1,943
27. E. Timor	21	3	13	2	8	840

Source of Data:

a. Intercensal Population Census 1995: Serial # 4, Biro Pusat Statistik, Indonesia.

b. Intercensal Population Census 1995, Biro Pusat Statistik, Indonesia.

Appendix V
RECENT MIGRATION BASED ON ORIGIN AND DESTINATION
(10,000 or ABOVE)

PROVINCE OF ORIGIN	*PROVINCE OF DESTINATION AND NUMBER OF PERSONS IN BRACKET **
1. Aceh	N. Sumatra (26)
2. N. Sumatra	Aceh (13); W. Sumatra (22); Riau (55); Jakarta (30); W. Java (29)
3. W. Sumatra	N. Sumatra (12); Riau (38); Jakarta (25); W. Java (27)
4. Riau	N. Sumatra (18); W. Sumatra (37); W. Java (15); C. Java (14); E. Java (18)
5. Jambi	W. Sumatra (12); C. Java (10); E. Java (10)
6. S. Sumatra	Jambi (14); Bengkulu (23); Lampung (21); Jakarta (20); W. Java (40) C. Java (15); Yogyakarta (11); E. Java (16)
7. Bengkulu	-
8. Lampung	S. Sumatra (34); Jakarta (13); W. Java (51); C. Java (17); E. Java (24)
9. Jakarta	N. Sumatra (14); W. Sumatra (22); S. Sumatra (10); Lampung (11); W. Java (541); C. Java (100); Yogyakarta (19); E. Java (58)
10. W. Java	N. Sumatra (13); W. Sumatra (12); S. Sumatra (10); Lampung (23); Jakarta (184); C. Java (80); Yogyakarta (16); E. Java (36); W. Kalimantan (17)
11. C. Java	S. Sumatra (16); Lampung (19); Jakarta (203); W. Java (239); Yogyakarta (72); E. Java (85); S. Sulawesi (13)
12. Yogyakarta	Jakarta (17); W. Java (22); C. Java (31); E. Java (11)
13. E. Java	S. Sumatra (13); Lampung (14); Jakarta (59); W. Java (84); C. Java (42); Yogyakarta (11); Bali (29); S. Kalimantan (20); E. Kalimantan (51);
14. Bali	E. Java (22)
15. W. Nusa Tenggara	-
16. E. Nusa Tenggara	East Timor (10)
17. W. Kalimantan	E. Java (10)
18. C. Kalimantan	S. Kalimantan (15)
19. S. Kalimantan	E. Java (16); E. Kalimantan (16)
20. E. Kalimantan	E. Java (24); S. Kalimantan (12); S. Sulawesi (12)
21. N. Sulawesi	S. E. Sulawesi (12)
22. C. Sulawesi	S. Sulawesi (11)
23. S. Sulawesi	E. Java (11); C. Sulawesi (26); S. E. Sulawesi (28); Irian Jaya (17)
24. S.E Sulawesi	S. Sulawesi (17)
25. Maluku	-
26. Irian Jaya	-
27. East Timor	-

Source of Data:

--1995 Intercensal Population Survey, Biro Pusat Statistik, Indonesia

-- Number of persons in thousands*

APPENDIX VI

Population 5 Years of Age and over by Place of Residence 5 Years Ago and Place of Present Residence, 1995

					Place of Present Residence				
Places of 5 Yrs Ago	Aceh	North Sumatra	West Sumatra	Riau	Jambi	South Sumtara	Bengkulu	Lampung	Jakarta
Aceh	**3,365,955**	25,600	4,713	2,415	296	2,128	879	1,545	2,467
N. Sumatra	12,613	**9,673,424**	22,450	55,101	5,600	8,802	4,665	5,379	29,858
W.Sumatra	4,611	12,491	**3,691,951**	37,638	630	4,076	8,070	5,407	24,600
Riau	525	17,504	36,794	**3,293,276**	4,443	3,965	623	1,156	5,071
Jambi	525	141	11,644	2,309	**2,039,171**	6,021	1,274	1,698	3,364
S. Sumatra	198	6,384	7,174	8,683	13,571	**6,271,545**	23,434	20,881	19,873
Bengkulu		926	5,898	1,451	909	5,640	**1,181,053**	2,451	2,370
Lampung	99	1,141	3,467	1,331	2,905	33,546	9,263	**5,797,921**	13,235
Jakarta	2,781	13,535	21,533	6,590	4,423	9,993	2,274	10,673	**7,730,113**
W. Java	3,542	12,322	12,162	9,380	1,501	16,294	4,738	22,903	184,286
C. Java	601	4,211	3,679	9,048	7,394	15,751	4,398	19,360	202,596
Yogyakarta	494	622	130	2,026	1,157	5,674	2,540	5,833	16,790
E. Java	978	3,019	4,946	7,567	3,593	13,263	3,315	13,893	59,268
Bali	780	52	496	118	302	638			2,374
W.Nusa Tenggara				236					2,482
E. Nusa Tenggara			324	727	302				1,629
W. Kalimantan		320		190	151	481			7,637
C. Kalimantan		756			165				218
S. Kalimantan		76							763
E. Kalimantan	99	831	16		906	544			1,820
N. Sulawesi		311		236		84			3,118
C. Sulawesi				401				968	434
S.Sulawesi		622	170	1,408	881	253		1,437	6,382
SE. Sulawesi				380	906	422			327
Maluku	48		390	165				283	543
Irian Jaya			38		302	436		321	981
East Timor	198		23						108

Source of Data: *1995 Intercensal Population Census, Biro Pusat Statistik, Indonesia, Jakarta.*

APPENDIX VI

Population 5 Years of Age and over by Place of Residence 5 Years Ago and Place of Present Residence, 1995

					Place of Present Residence			
Places of 5 Yrs Ago	**West Java**	**Central Java**	**Yogyakarta**	**East Java**	**Bali**	**West N.Tenggara**	**East N.Tenggara**	**West Kalimantan**
Aceh	3,403	2,550	807	1,175				
N. Sumatra	29,260	4,276	4,483	4,988	568	96	418	3,941
W.Sumatra	27,013	2,251	967	6,833	159	741		2,139
Riau	15,148	13,625	2,832	18,410		1,117	349	1,383
Jambi	286	10,320	2,217	10,433				
S. Sumatra	40,250	14,591	11,455	15,739	429		74	408
Bengkulu	4,495	6,472	1,853	2,695				
Lampung	50,508	16,553	6,365	24,340	787			
Jakarta	541,031	100,429	19,187	58,319	5,096	1,678	1,283	2,299
W. Java	**33,873,333**	80,256	15,611	36,120	4,569	4,619	511	16,803
C. Java	269,284	**26,425,956**	72,435	84,652	2,068	3,106	2,054	4,536
Yogyakarta	21,802	30,854	**2,532,464**	10,609	530	61	408	640
E. Java	84,455	42,336	10,514	**30,362,374**	28,651	7,288	4,780	6,318
Bali	2,004	3,041	450	21,970	**2,585,771**	4,407	1,090	
W.Nusa Tenggara	5,404		649	6,572	4,785	**3,146,224**	2,418	135
E. Nusa Tenggara	2,414	481	865	7,180	4,032	1,168	**3,053,212**	3,241
W. Kalimantan	5,549	1,026	3,494	10,276	318	1,220	296	**3,184,455**
C. Kalimantan	5,039	5,386	729	8,879	284	676	74	253
S. Kalimantan	3,598	1,330	1,476	15,684		359		544
E. Kalimantan	3,845	4,831	1,860	23,969	1,376	3,609	1,494	
N. Sulawesi	7,742	84	583	3,585	416	288	237	347
C. Sulawesi	996	801		3,625	115	1,173	74	
S.Sulawesi	4,473	2,029	1,557	11,365	1,239	2,184	5,149	560
SE. Sulawesi	2,972			1,909		1,047	148	
Maluku	5,496	3,166	900	7,952			893	
Irian Jaya	3,188	168	1,424	6,362	795	107	210	
East Timor	436	265	1,589	1,010	1,960	1,095	2,920	124

Source of Data: *1995 Intercensal Population Census, Biro Pusat Statistik, Indonesia, Jakarta*.

APPENDIX VI

Population 5 Years of Age and over by Place of Residence 5 Years Ago and Place of Present Residence, 1995

				Place of Present Residence				
Places of 5 Yrs Ago	Central Kalimantan	South Kalimantan	East Kalimantan	North Sulawesi	Central Sulawesi	South Sulawesi	Southeast Sulawesi	Maluku
Aceh						267		233
N. Sumatra	595	763	2,577	176	384	617	112	
W.Sumatra	110	137						212
Riau			402			2,114	874	
Jambi	110					1,980	336	
S. Sumatra	246	68	214	464	336	2,100		
Bengkulu	275					267		
Lampung	246	661	657					149
Jakarta	791	2,691	4,656	2,074	2,097	5,462	1,103	881
W. Java	1,217	2,131	3,668	836	1,851	8,701	1,691	901
C. Java	6,502	8,185	11,812	884	6,804	13,739	828	1,923
Yogyakarta	923	1,199	2,589	398	392	1,926	756	1,292
E. Java	8,611	19,881	50,975	1,174	9,114	10,337	2,406	2,957
Bali		137	73	489	2,064	3,498	360	
W.Nusa Tenggara	585	334	864	212	3,222	5,412	316	
E. Nusa Tenggara	63		3,540	184	510	5,396	470	
W. Kalimantan	220	513	1,045			1,060		
C. Kalimantan	**1,418,237**	15,282	4,177	176		448		212
S. Kalimantan	14,431	**2,518,378**	16,155		400	1,151	393	
E. Kalimantan	314	12,103	**1,907,340**	1,302	1,084	12,262	2,330	
N. Sulawesi	646	621	3,242	**2,348,636**	12,389	5,781	1,041	2,364
C. Sulawesi			977	5,064	**1,645,892**	10,740	2,025	439
S.Sulawesi	456	3,286	24,965	4,383	26,334	**6,575,381**	28,235	2,947
SE. Sulawesi			2,884		3,120	17,162	**1,320,500**	6,328
Maluku	136		672	1,820	419	7,733	7,887	**1,802,080**
Irian Jaya			1,895	1,276		3,961	2,598	1,914
East Timor				176	100	1,479	917	

Source of Data: *1995 Intercensal Population Census, Biro Pusat Statistik, Indonesia, Jakarta .*

APPENDIX VI

Population 5 Years of Age and over by Place of Residence 5 Years Ago and Place of Present Residence, 1995

	Irian Jaya	**East**				
Places of 5 Yrs Ago		**Timor**				
Aceh						
N. Sumatra	684	449				
W.Sumatra	448	74				
Riau		37				
Jambi		37				
S. Sumatra	576	65				
Bengkulu		37				
Lampung	668					
Jakarta	1,376	790				
W. Java	1,917	249				
C. Java	5,370	1,195				
Yogyakarta	610	764				
E. Java	8,587	2,383				
Bali	280	675				
W.Nusa Tenggara	484	806				
E. Nusa Tenggara	485	10,237				
W. Kalimantan	204	30				
C. Kalimantan	30	287				
S. Kalimantan						
E. Kalimantan	1,266	148				
N. Sulawesi	4,897	130				
C. Sulawesi	185					
S.Sulawesi	16,872	1,961				
SE. Sulawesi	1,053	148				
Maluku	7,040	393				
Irian Jaya	**1,618,177**	520				
East Timor	154	**679,001**				

Source of Data: *1995 Intercensal Population Census, Biro Pusat Statistik, Indonesia, Jakarta .*