THE ROLE OF POPULATION IN THE DEVELOPMENT OF SOUTHEAST ASIA

KATHRYN T. LOUKA

Population Research Project
The George Washington University
Washington, D. C.

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During the latter part of the nineteenth century, scientific advances in the control of communicable disease and improvements in health and sanitation practices were responsible for declines in the death rates of many countries in Europe and the New World. As these countries became more industrialized and urban, the birth rates also began to decline. Through trade and colonization, the Western nations came in contact with other countries of the world and introduced their practices of public health and sanitation. The spectacular success of modern techniques for the control of communicable and tropical diseases has produced extremely rapid declines in death rates in many of the less developed nations of the world. With traditionally high birth rates being maintained while death rates are dropping rapidly, the countries of much of Asia, Africa and Latin America are experiencing a population growth of unprecedented magnitude.

Many problems accompany a rapid increase in population but the most immediate is the failure of the food supply to keep up with the increasing numbers. Levels of living cannot be improved if the working population suffers from underemployment or unemployment caused by inefficient utilization of the land, lack of investment capital, inadequate transportation and communication facilities and a burgeoning rural population. Underdeveloped countries are hindered in their struggles for economic diversification not only by a shortage of capital and equipment but also by a lack of skilled and technically trained manpower. The complexities of population growth and economic, political and social development are extensive and vary in different areas of the world.

Asia with the largest land mass has the greatest population and most of the countries are classified as underdeveloped. With the exception of Japan, the economies of the countries are predominantly peasant-agrarian with rapidly increasing populations. In many countries, the production of food has not kept pace with the growing population and severe food shortages are not unusual. The majority of the people are undernourished and suffer from diseases caused by malnutrition. By the year 2000, the population of Asia is expected to reach 3.9 billion. With a projected population far greater than that of the entire world at the present time, population growth in Asia has world political and economic implications.

Despite individual variations, the countries of Southeast Asia[1] have certain common characteristics. Located in the tropics, monsoon rains drench the earth four months of the year. The coastal areas are humid with a more temperate climate as the land elevation increases. Rice is the subsistence crop of all the countries.

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[1]In this study, Southeast Asia includes the following countries arranged according to area: Indonesia, Burma, Thailand, Laos, Cambodia, South Viet-Nam, North Viet-Nam, Federation of Malaya and the State of Singapore.

Ethnically, each country has a number of diverse groups although the predominantly rural populations are unified by a communal social organization. Villages or tribal groups are headed by the elders and all work toward a common goal. With the exception of Thailand, all of the countries were colonial possessions and had developed economies based on the export of raw materials. Concomitant with independence came political and economic instability which are the result of cultural traditions and limited political autonomy under colonial rule. All of these countries have undeveloped resources but the lack of actual surveys limits economic planning and, to that extent, economic development. The countries are also distinguished by the dominance of certain minority groups in entrepreneurial activities and the absence of a skilled labor force. With population growing steadily as death rates continue to decline, all of the countries are faced with the problem of providing sufficient food for the increasing numbers while attempting to develop and diversify economically.

With a population of over 172 million in 1958, Southeast Asia is expected to have more than 415 million people by the end of the century. The state of Singapore which is experiencing the most rapid growth is expected to double in population in 18 years with Malaya requiring 20 years at the present rate of growth. Because of a very large immigration and a considerable decline in deaths, particularly infant mortality, Singapore experienced a 4.5 percent annual rate of growth during the 1947-1957 intercensal period. Growth at present is 3.8 percent but this rate is expected to rise slightly during the coming decade and may reach four percent. Malaya has been growing at the rate of 3.5 percent annually and this rate is expected to increase unless an unanticipated reduction in the birth rate should occur. The population of Laos can be expected to double within approximately 24 years. Although no census has been taken, estimates made by the United Nations and the Government of Laos place the annual percentage increase at 3.3 percent. Cambodia is increasing at a slightly lower rate and the present population of 4.7 million will double in about 25 years.

The population growth pattern of Viet-Nam was disturbed by the division of the country into North and South Viet-Nam in 1954. The population of South Viet-Nam was swelled by approximately 900 thousand refugees from North Viet-Nam in 1955. Between 1955 when the estimated population of South Viet-Nam was 9.6 million and 1958 when the population reached an estimated 12.9 million, the annual rate of growth was over ten percent. In comparison, North Viet-Nam had approximately 16.6 million in 1955 but only 15 million in 1960, according to census figures. Nevertheless, both countries appear to be growing at a rate of about 2.4 percent a year and should double in population in about 29 years if further population movements are halted. Increasing at a slightly slower rate, 2.3 percent a year, Indonesia's population is expected to exceed 200 million by the end of the century.[2] In Thailand, the 1.9 percent annual rate of growth is expected to increase as death rates decline further. Using the growth rate projected by the United Nations, the population is expected to double in about 26 years. By far the lowest rate of natural increase is found in Burma which is growing at a rate of only one percent a year. With an exceedingly high rate of infant mortality, growth patterns can be expected to shift upward as public health measures increase life expectancy.

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[2] *The Population of Indonesia*, United Nations Seminar on Population in Asia and the Far East, 1955, p. 5

TABLE I

POPULATION GROWTH IN SOUTHEAST ASIA, 1955–1958*

Country	Estimated Population July 1, 1955 (thousands)	Estimated Population July 1, 1958 (thousands)	Annual Rate of Increase	Number of Years to Double Population
Southeast Asia[a]	162,081	172,530	2.1	33
Indonesia	81,500	87,300	2.5	30
Burma	19,659	220,255	1.0	70
Thailand	20,302	21,474	1.9	37
Laos[b]	1,550	1,690	2.9	24
Cambodia	4,358	4,740	2.8	25
Viet-Nam[c]	26,300	27,900[d]	2.0	35
Malaya	5,883	6,515	3.5	20
Singapore	1,356	1,515	3.8	18

[a] Includes Brunei, North Borneo and Sarawak with a total population of 1,141,000

[b] Provisional

[c] Includes North and South Viet-Nam [d] Unofficial estimate

*Compiled from United Nations, *Demographic Yearbook, 1958, 1959.*

The only areas in Southeast Asia with relatively complete vital statistics are Malaya and Singapore.[3] Data for other countries are based on registration areas only and the statistics on births, deaths and infant mortality may be understated to a significant degree. Apparent increases in birth rates in recent years in some countries may merely reflect the more complete registration of births. Since improvements in birth statistics would normally be accompanied by better mortality statistics, the significant decline in deaths has probably been somewhat greater than the decrease shown by the official statistics.

TABLE II

BIRTH AND DEATH RATES IN SOUTHEAST ASIA, 1935-1939 AND 1955-1957*

Country	Birth Rates			Death Rates		
	Registered		Estimated	Registered		Estimated
	1935-39	1955-57	1955-60	1935-39	1955-57	1955-60
Indonesia[a]	-	29.3	43.1	-	13.4	23.5
Burma	32.1	36.7	44.1	22.0	21.4	27.9
Thailand	34.9	34.6	47.2	16.4	9.3[b]	21.8
Laos	-	-	45.7	-	-	26.7
Cambodia	-	-	47.2	-	-	21.8
Viet-Nam[b]	-	-	43.1	-	-	21.6
Malaya	40.2	44.9	45.2	20.8	11.7	15.2
Singapore	46.0	46.2	43.6	22.1	8.0	10.0

[a] Java only [b] 1955-1956

*Compiled from: United Nations, *Population of Southeast Asia, 1950-1980, and, Demographic Yearbook; 1958, Population Index* and publications of the League of Nations

[3] Relatively complete signifies at least 90 percent coverage.

Rates of natural increase in all countries can be expected to rise as death rates and particularly infant mortality rates are lowered. Public health measures have produced a sharp drop in mortality in Singapore in recent decades and somewhat smaller declines in Thailand which has introduced a variety of health measures as well as better diets and generally improved the economic well-being of the people.[4] In no country is there an indication that the birth rates will decline significantly and in some countries, an increase can be anticipated. Higher birth rates are expected in Malaya and Singapore between 1970 and 1980 when the number of potential mothers will be closer to the prewar level.

As in most underdeveloped areas, the proportion of the population 60 years of age and older is relatively small. Approximately 95 percent of the population of Southeast Asia is under 60 years of age. Of this group, some 60 percent are in the 15-59 age group and 40 percent are under 15 years. According to projections made by the United Nations, the only significant change in the age composition by 1980 will occur among those under 60 years of age. The 15-59 year group will decrease about six percent with a comparable increase in the population under 15 years of age.[5] This percentage redistribution will reflect the expected decline in infant mortality and the constant, and in some cases, slightly increased number of births.

TABLE III

AGE COMPOSITION OF THE POPULATION OF SOUTHEAST ASIA*

Country	Year	Percentage		
		Under 15 years	15-59 years	60 years and over
Indonesia	1955[a]	38.0	57.0	5.0
Burma	1953	37.1	58.4	4.5
Thailand	1958[a]	42.4	53.6	4.0
Laos	1950	40.8	54.9	4.3
Cambodia	1959[a]	45.0	51.0	4.0
Viet-Nam	1955[a]	43.0	60.1	5.9
Malaya	1957	43.8	51.6	4.6
Singapore	1957	42.8	53.4	3.8

[a]Estimated

*Compiled from: United Nations, *Demographic Yearbook, 1959* and *The Population of Southeast Asia, 1950-1980*

The agrarian population is very unevenly distributed in Southeast Asia with heavy concentrations in the more productive areas. The delta sections of Burma, Thailand, Malaya and the lowlands of Cambodia have population densities between 200 and 500 persons per square mile. Indonesia with over 575 thousand square miles of territory has a density of over 1,050 persons per square mile on the island of Java which is in sharp contrast to 17 persons per square mile on Borneo. Almost 30 years ago the Dutch government attempted to resettle some of the Javanese on the outer islands but the attempt failed because of the communal organization of the people. Similarly, current attempts to resettle some of the population have not met with any great degree of success.

As countries have achieved independence, programs for the redistribution of large estates have been undertaken but the rapid increase in population has produced

[4]Sharp, Lauriston, (ed.) *Handbook on Thailand*, 1956, p. 59

[5]United Nations, *The Population of Southeast Asia, 1950-1980*, 1958, p. 6

more farmers and individual holdings have increased only slightly. South Viet-Nam has initiated a program for the development of the highland area in the west central part of the country which contains over 3.5 million acres of potentially cultivable land. However, the Vietnamese dislike leaving the warm climate of the lowlands and wet-rice cultivation. Although the population of Southeast Asia is growing rapidly, the more serious consequences of overpopulation could be averted if economic planning and development can proceed at a sufficiently accelerated rate.

POPULATION GROWTH AND ECONOMIC DEVELOPMENT

The countries of Southeast Asia generally are confronted with the task of expanding their economies before population growth overtakes economic development. With the exception of Java in Indonesia, none of the countries are considered overpopulated. Population densities in certain areas are already very high but land is available in other areas not only for population redistribution but for the expanding population of the next few decades. With the exception of Singapore which is predominantly urban, the majority of the working force is engaged in subsistence agriculture. As is characteristic of underdeveloped countries, the proportion of the total population economically active is relatively low. Less than 40 percent are gainfully employed in all countries except Thailand, which in 1954 had 51 percent in the labor force.[6] One reason for the relatively low proportion of the population economically active is the large number of children under 15 years of age. Another factor operating in Southeast Asia is the extension of the period of formal education which limits the number of new entrants into the labor market. Nevertheless, a three to four percent annual augmentation of the labor force is anticipated.[7] The extension of the formal education of the young places a greater economic burden on the current work force but at the same time eases the already existing problem of unemployment. If adequate education and training can be given to more young people, the economic gains in an area woefully short of skilled workers will be great. However, unless large amounts of capital are available to develop resources, this trained personnel cannot be utilized.

With exports of raw material the chief source of revenue, the income of these countries fluctuates with changing prices in the world market. The production and pricing of commodities such as rubber and tin, the principal exports of several countries in the area, is governed by international controls and the competition of other products, including synthetics. The production of agricultural products is subject to the vagaries of weather, including floods and droughts. With little industrial development, these nations must necessarily import large quantities of heavy equipment and consumer goods. Trade deficits have occurred in a number of countries because of the necessity of importing food grains to compensate for poor harvests in recent years. This has reduced the sums available for the importation of machinery and thus slowed down the rate of economic development.

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[6] International Labour Office, *Yearbook of Labor Statistics*, 1958, p. 8

[7] United Nations, *op. cit.* 1958, p. 96

TABLE IV

FOREIGN TRADE OF SOUTHEAST ASIA, 1955-1958*
(Value in millions of U.S. dollars)

Country	Exports f.o.b.				Imports c.i.f.			
	1955	1956	1957	1958	1955	1956	1957	1958
Indonesia	945.6	882.0	969.5	755.4	629.9	859.6	803.4	513.5
Burma	226.8	250.3	229.4	193.4	180.6	198.0	295.9	203.5
Thailand	335.1	334.5	364.5	308.5	333.8	365.3	407.2	393.3
Laos	1.4	1.3	1.1	1.6	18.9	35.3	41.7	29.7
Cambodia	40.1	36.6	51.7	52.9	47.6	56.6	58.4	75.5
Viet-Nam, South	69.2	45.1	80.5	54.7	263.2	217.7	288.7	232.1
Malaya & Singapore	1357.7	1360.8	1362.6	1217.3	1248.5	1356.7	1440.7	1337.9

*Compiled from: United Nations, *Statistical Yearbook*, 1959

To offset the loss in revenue created by the decreasing value of exports, some of the countries have raised taxes or tried to encourage domestic savings and private investment in an effort to provide the capital needed for the development of production. Domestic savings and private investment, however, are still small; the per capita income in most countries is low and costs of living continue to rise leaving little for savings. In addition, many of the inhabitants have little knowledge of the operation of a cash economy and the values inherent in the system.

Not only the limited capital resources but the shortage and, in some cases, complete lack of certain natural resources will limit or preclude the establishment of heavy industry. The industrial pattern of the majority of the nations will necessarily be restricted to light or medium activities. Most of the present manufacturing establishments process agricultural products. Economic growth will also require the development of adequate transportation, communications and power facilities. But of basic importance is the creation of a trained labor force capable of manning newly developing industrial plants. The human resources are available and they can be trained to more effectively participate in the total development of the area.

Indonesia

The largest of the countries of the area, Indonesia consists of a group of islands extending 3,000 miles from east to west and 1,250 miles from north to south. Although Borneo or Kalimantan is the largest island, Java, Madura, Bali and Sumatra are the most developed and have the greatest population density. With a total land area of 575,893 square miles, at least two-thirds of the 87.3 million people live on these smaller islands with Java the most densely populated. All the larger islands contain central mountain ranges, the slopes of which are heavily forested and, where cleared, support large rubber, tobacco, tea, coffee, and sugar estates. The principal foods, rice and tapioca, are grown on the coastal plains. Other agricultural products include corn, soybeans, ground nuts, palm kernels, palm oil, and pepper. Lying on the equator, the islands have a hot and humid climate which becomes more temperate in hill and mountain areas and permits agricultural diversity.

In terms of population, Indonesia ranks sixth among the nations of the world. Although the population is growing at a rapid rate, overall population density is not great. The most serious problem is the uneven distribution of the people. Java has

over 1,000 persons per square mile but there are only 182 persons per square mile in the Lesser Sunda Isles, 82 in the Celebes, 65 in Sumatra, 21 in the Moluccas and 17 in Borneo. The land on Java is intensively cultivated with five to six persons per acre of rice land.[8] In contrast, the greater part of Sumatra still remains jungle with the inhabitants sparsely settled along the rivers and engaging in primitive forms of agriculture. The main concentration of population in Sumatra is to be found on the rubber plantations, in the oil fields, and in lumbering areas. Rice is cultivated along the coast and on the high plateaus with some cattle breeding on the grasslands of the mountainous areas. Most of Borneo is still impenetrable jungle and except for areas settled by recent migrants, agriculture is primitive and limited to river basins. Rubber estates, together with coconut and pepper plantations, are found on the northwest coast while rice is cultivated in the southeastern part. The latter area also contains most of the urban centers of Borneo.[9] Although diamonds and gold are found in the northwest and south and coal and oil on the east coast, timber is the greatest source of wealth for Borneo. In the fertile areas of the Celebes, rice and coconuts are cultivated. Iron and nickel are known to exist but the deposits have not been developed intensively.

Although the majority of the population of Indonesia is Malay, the Chinese, Indians, and Eurasians have held the key positions in economic activities. The Chinese, numbering almost two million, are chiefly merchants although many of them are engaged in industry, mining, and agriculture. Attempts to curtail the economic power of the Chinese have taken the form of governmental restrictions on immigration and a system of import and export licensing. Legislation also has been promulgated that will force the Chinese of Indonesia to choose between citizenship in Red China or Indonesia. This will probably eliminate some Chinese businessmen and permit more Indonesians to become entrepreneurs. Restrictions on the issuance of business licenses have not been very effective since not sufficient Indonesians have business training and many who attempt to enter business are not successful and ultimately sell their licenses to the Chinese.

About 80 percent of the Chinese living in Java are native born and they are considered to be the most thoroughly assimilated of all the Chinese in Southeast Asia. In contrast, nearly 50 percent of the much larger Chinese population in the Outer Islands were born in China.[10] The Indian population is concentrated primarily in Java and Sumatra with only a few thousands living in the Outer Islands. While the Indians in Java are predominantly retail merchants, those on Sumatra are chiefly skilled and unskilled laborers. Since World War II, the Indian population has been decreasing because of immigration restrictions and losses through emigration.[11] The Eurasians in Indonesia have been a problem to both the former Dutch government and the present Indonesian authorities. They are reluctant to accept Indonesian citizenship and consider such a move as economic and social retrogression. Since many Eurasians have received a Western education, they can be, and some are, economic assets to the country. Most of the Eurasians are salaried workers engaged in private enterprise or hold positions in the government.

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[8] Thompson, Warren S., *Population and Progress in the Far East*, 1959, p. 353

[9] Wertheim, W. F., *Indonesian Society in Transition*, 1956, p. 18

[10] Thompson, Virginia and Richard Adlof, *Minority Problems in Southeast Asia*, 1955, pp. 48-49

[11] *ibid.*, pp. 122-123

Agriculture, which utilizes about 70 percent of the work force, varies from the most primitive to highly efficient estate management. A shifting type of agriculture is found in the Outer Islands which requires the use of large amounts of land and is extremely inefficient. Sedentary subsistence farming is found in Java and Madura and in the more developed areas of Borneo and Sumatra. Under this system is produced much of the rice, corn and other basic food commodities. The third form of agriculture, the small farmer cash-crop system, produces mainly rubber, coconut, tea, spices, cacao, kapok, coffee and fibers but none in large volume. Although some farmers use modern techniques in producing their crops, traditional methods of cultivation still persist. Estate agriculture is the product of colonialism and is found chiefly in Java and Sumatra with smaller acreages along the coasts of Borneo, Celebes, and the Moluccas. Crops such as coffee, tea, cinchona and rubber are raised on the uplands while sugar cane and tobacco are grown on the lowlands.[12] Production on the estates reached a peak in 1930 and has gradually decreased since that time as a result of the economic depression and unsettled political conditions. With increasing population pressure on the land, the small farmer began to exert influence for the redistribution of estate land. After the Second World War many of the small farmers moved on to the estates and started to develop more small farms when the operators of the estates were slow to reorganize.

A problem facing Indonesia now is whether to continue the estate-type agriculture or whether to enlarge the number of small holdings. On Java where the population has grown faster than the food supply, some land has been taken out of commercial production in order to reduce the amount of food imports. Despite the increase in the production of foodstuffs during 1958, the country still had to import over 681 thousand metric tons of rice. Although the estates utilize the land more efficiently, population pressure necessitates the development of more small holdings. To increase their efficiency, farmers will have to be taught new techniques of cultivation, and better seeds and fertilizers will have to be utilized. All of this will require much capital investment in a country with inadequate capital formation. Other alternatives would be more irrigation and land reclamation which also necessitates heavy investments. Despite a rapidly growing population, the production of some agricultural crops, such as coffee, palm oil, tea and tobacco, is still below the 1934-38 average. Even where production has increased, exports are still below the average achieved during the prewar period. Despite the consistent increase in palm oil exports since 1955, exports in 1958 of 132.3 thousand metric tons remain below the prewar level which in 1938 was over 220,000 tons. Similarly, the production of copra exceeds the prewar level but exports are only one-half as large as in 1938.

Rubber, the chief export of the country, amounted to 42 percent of the total value of the exports of principal commodities in 1958. Rubber production reached a peak of about 828 thousand metric tons in 1951, but production has been declining since that time and in 1958 totalled only 678 thousand metric tons. The decline in rubber production can be attributed not only to political instability but also to the fact that production of rubber by smallholders has been increasing and the agricultural techniques of the smallholders are not as efficient as that of the estates. Another important factor is that many rubber trees were damaged during the Second World War and others were excessively tapped, impairing the vitality

[12]Spencer, Joseph E., *Asia, East by South*, 1954, p. 274

of the tree. The Government, in its rubber replanting program, has established a network of nurseries for providing plant material for the smallholders.[13]

Basically, then, Indonesia must not only stabilize but must expand in agricultural production if the economy is to keep up with the growing population. Not

TABLE V

RELATION OF POPULATION TO PRODUCTION, INDONESIA, 1934-38 and 1955-1958*

	Unit	1934-38 Av.	1956	1957	1958	Index 1934-38 = 100
Population	thousand	66,416	83,200	85,100	87,300	128.3
Production						
Agricultural						
Cacao[a]	tmt	1.6	1.5	1.2	1.2	81.3
Coffee	tmt	124.0	59.1	65.4	65.0	50.9
Copra	tmt	715	752	727	620	97.9
Corn	tmt	1978	1965	1860	2618	108.6
Ground nuts (in shell)	tmt	263	364	380	345	138.0
Palm kernels[c]	tmt	36.3	40.0	40.3	35.5	106.3
Palm oil	tmt	170.9	125.2	128.9	131.6	75.2
Rice	tmt	6529[d]	11403	11448	11784	176.8
Rubber	tmt	422.7	697.7	695.5	678.3	163.4
Soybeans[b]	tmt	263	357	339	422	141.7
Sweet potatoes and yams	tmt	1459	2638	2653	2813	185.1
Tea	tmt	75	42.9	47.6	46.2	60.8
Tobacco	tmt	111.2	60.9	77.1	78.0	64.7
Mining						
Bauxite	tmt	147[e]	303	241	344	201.4
Coal	tmt	1224	828	717	606	58.6
Manganese	tmt	5.4[f]	56.6	28.3	23.1	666.7
Petroleum	tmt	6647	12730	15468	16110	222.2
Salt	tmt	90	109	347	235	255.9
Tin	mt	28024	30535	28167	23573	97.9
Manufacturing						
Cement	tmt	140	145	267	218	150.0
Petroleum Products	tmt	5911[f]	10308.0	10933.2	10173.6	177.2
Sugar	tmt	913	786	828	775	87.2
Tin	mt	11964	305	327	600	3.4

[a]estate only [b]Java and Madura [c]export [d]1931-37 and 1948 for Outer Islands whose total product = 448 tmt [e]1935-38 [f]1937-38

*Compiled from: United Nations, *Statistical Yearbook*, 1959, and ECAFE, *Economic Survey of Asia and the Far East*, 1959

[13]U. S. Department of State, *The Colombo Plan*, 1958, p. 69

only must the small farmer be educated to new and better methods of raising and harvesting crops, if their numbers are to increase, but decisions will have to be made as to how much land will be kept under estate production and how much will be distributed to the smallholder. The expansion of estate industries would require large amounts of capital because they combine highly mechanized processing plants with labor-intensive agricultural production. Efficient operation of the plants requires that the agricultural production be at capacity. Many plants have had to cease operations because the area planted is only about two-thirds the prewar level and the output of some of the plantations is no longer sufficient to keep the plants processing to capacity. Plagued with losses of productive land through squatters, destruction, expropriation, blight, diseases and inadequate maintenance, the estates are having difficulty keeping down the costs of production. In a country where the strength of labor organizations has been increasing, the operators of the estates are confronted with higher wage rates without concomitant increases in production. The problem then becomes how to raise production above labor costs. This involves a long process of education and training to develop skills and a sense of social obligation on the part of the worker as well as giving him a better understanding of the relationship of his efforts to his standard of living.[14] In terms of political and social stability, which is also important and is related to economic stability, the development of smallholdings seems more likely. In terms of capital requirements, the needs are about the same as those of the estates. The smallholders' agricultural production is not as efficient as that of the estates, the processing techniques are inferior, but the labor problems are not as serious. Until indigenous systems are replaced by modern methods, an increase in the number of smallholders would seem to lend more social stability through the decrease of antagonisms on the part of the people toward estates.

With the exception of coal and tin, the production of minerals has remained above prewar levels. The quantity and quality of the mineral resources of Indonesia are not known because of the lack of complete surveys. Petroleum, one of the most important resources, is being extracted in north and southeastern Sumatra, along the eastern coast of Borneo as well as near Surabaya in Java and on the Island of Ceram in the Moluccas. In 1958 petroleum accounted for 45 percent of the total value of the principal export commodities of the country, an increase of seven percent over the preceding year.[15] However, the domestic consumption of petroleum and petroleum products has been increasing at the rate of 10 percent a year, and the industry needs to be expanded to keep up with the rate of consumption.[16] Imports of petroleum and petroleum products rose 141 percent between 1955 and 1958.[17] A shortage of trained technicians and lack of capital have prevented the country from expanding the industry to meet increased consumption and to provide increased amounts for export. The oil companies have greatly benefitted Indonesia; yet, the government has been reluctant to permit further exploration and issue development rights. Foreign investors are hesitant to act because the government has not clearly established the conditions under which foreign enterprise may operate. Since Indonesia is the chief petroleum producer in the Orient, this

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[14]Higgins, Benjamin, *Indonesia's Economic Stabilization and Development*, 1957, pp. 65-66

[15]United Nations, Economic Commission for Asia and the Far East, *Economic Survey of Asia and the Far East, 1959*, 1960, p. 135

[16]Higgins, Benjamin, *op cit.*, pp. 78-80

[17]United Nations, *Yearbook of International Trade Statistics, 1958*, 1959, p. 286

resource has great earning potential both in the foreign markets and at home, but unless the production of crude petroleum and petroleum products is increased, the export of those items will cease as domestic demands increase.

Tin is of importance commercially and Indonesia is the world's second largest producer. Most of the ore is exported and in 1958 provided six percent of the total value of exports of major commodities. Other minerals, largely developed since World War II, are manganese, bauxite and salt. Coal production continues to decrease and in 1958 was only one-half the prewar level. The coal is not particularly good for coking, but reserves sufficient for steam power are located in central and southern Sumatra, in the northwest and along the east coast of Borneo and in eastern Java. Because of the lack of coking coal, a steel industry has not been developed although voluminous deposits of iron ore have been found in the Celebes, southern Borneo and southern Sumatra. Large deposits of bauxite said to contain 50 percent alumina are located in the Riouw Islands off the east coast of Sumatra. Sulphur, phosphates, nickel and gold are other known minerals. Mineral resources are believed to be sufficiently extensive to provide for the development of the non-agricultural sectors of the economy.

In spite of the extraction of a variety of minerals, very little industry developed under Dutch administration. Raw materials for the home markets were more important than a balanced economy. Consequently, a planned program of industrial development was not established until 1951. Other than the few industries connected with estate production and mining, small-scale or cottage-type enterprises have made up the manufacturing component of the industrial activity of the country. In 1956 the manufacture of clothing and cloth goods was the major small-scale industry followed by tobacco, textiles, printing, and household utensils. Of the 3,698 firms reported as clothing and cloth goods manufacturers, 88 employed more than 100 workers while of the 536 textile firms 195 employed more than 100 workers.[18] Indonesia, with 122,000 ring spindles, one million handlooms and 11,477 power looms, produced about 60 million yards of cotton cloth in 1958.[19] However, production only fulfills about 10 percent of the demand and the country must continue to import large amounts of cotton fabric. Research is being conducted on methods for improving techniques of production, color, dyes and design.

Besides providing firewood and charcoal, large amounts of timber are used industrially and also supply the raw materials for the manufacture of paper as well as for tanning. The production of paper increased from 5,300 tons in 1956 to 6,500 in 1957.[20] This production by no means meets the demand as evidenced by the import of over 84 thousand metric tons of paper and paper products, including pulp, in 1957.[21] However, the government is aware of the importance of timber as a basis for domestic industries and the planting of new trees and reforestation continues to increase under the "Industrial Forest Plan".

Since fish comprises a significant part of the daily menu of the people, fishing and canning industries are being developed. More fishing vessels are being motorized.

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[18] Government of Indonesia, Central Bureau of Statistics, *Statistik*, 1956, p. 87

[19] United Nations, ECAFE, *op. cit.*, 1959, p. 121

[20] U. S. Department of State, *op. cit.*, p. 65

[21] United Nations, *op. cit.*, 1959, p. 287

By the end of 1957 there were 251 fishery cooperatives with 35,355 members.[22] Livestock production of cattle, pigs and horses has continued to grow and milk production has been increasing steadily. An extensive campaign to improve the standards of nutrition has been a factor in the increase in milk consumption.

With growing industrial development, supplying the necessary power becomes an important feature in economic development. The total hydroelectric potential in Indonesia is not known. In 1957, the total installed capacity of hydroelectric power was 131 thousand kilowatts. A multi-purpose dam under construction at Djatiluhur in Western Java with a capacity of 150 thousand kilowatts is expected to be partially completed this year and to generate 130 thousand kilowatts. Another large project under preparation is the Asahan Project in Northern Sumatra and minor generation plants are being constructed throughout the country.

The development of transportation is particularly vital in Indonesia, not only as a factor in economic development but also as a key factor in the unification of the Outer Islands with the Central Government in Java. Confronted with intense regional jealousies, adequate inter-island transportation and communication facilities are essential to create a closer unity among the many islands which make up the nation. The need to improve rail and shipping facilities and to repair and extend existing roads as well as constructing new roads are of prime importance for better transportation and communications. With the withdrawal of the Dutch-owned shipping fleet, the national lines have been able to handle only 22 percent of the total traffic and the Government has had to purchase and charter additional vessels. In the 1958 budget estimates, railways were allocated the largest amount, followed by posts and telegraphs, ports and harbors, and shipping. Roads and air transport received equal amounts with emphasis on road repair, rather than the construction of new highways.[23]

As in most underdeveloped countries, the formation of capital necessary for economic development is a major problem. With an economy based on the export of raw materials subject to the vagaries of the international markets and a population increasing more rapidly than economic growth, Indonesia has been faced with unbalanced budgets, balance of payment problems, pressures of inflation, and social ills reflecting the overall problem of poverty. With an annual per capita income of $100, the country is in a better position than some of her neighbors. However, the continued increase in population has led to a lowering of the level of living. In 1958 Indonesia experienced a 28.3 percent decrease in export earnings as compared with 1957.[24] This was primarily the result of a decrease in export prices along with a decrease in the volume of exports. To curb the rapid inflation which occurred in the last half of 1957 and first half of 1958, the Government established restrictions on the imports of consumer goods which, in turn, reduced the tax revenue received from this source. Revenue from both export and import duties decreased in 1957 and 1958. However, Government expenditures have shown a steady increase since 1954, with expenditures in 1958 12,039 million rupiah above total revenue.[25]

Planning for the 1956-60 period was based on the expectation that a three percent annual increase in national income would be maintained. With the current population growth estimated at 2.3 percent per year, the increase in per capita income

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[22] U. S. Department of State, *op. cit.*, p. 69

[23] *ibid.*, p. 74

[24] United Nations, *op. cit.*, 1960, p. 24 •

[25] *ibid.*, pp. 150 and 152

would be less than 1 percent. Statistics on Indonesian national income have not been available since 1954 and it is difficult to ascertain whether the three percent level of increase has been maintained. Unless per capita income can be increased greatly, the steady growth in population will tend to reduce the potential for savings and investment. Private savings and investment, although making some contribution to capital formation, continue to be inadequate. An upward trend in wages has been apparent, but these increases have been offset by the rising price of food and other consumer products.

Added to the shortage of capital, lack of technical knowledge, managerial ability, and good business organization have hampered Indonesian efforts to utilize the available manpower and resources which could produce a diversified economy. Consequently, the country finds itself in an ambivalent position. Requiring an estimated 12 billion rupiah ($528,600,000) a year for a successful economic development program, the government of Indonesia must choose between obtaining foreign aid and foreign private investment or attempting to develop domestic sources of capital. Since the Indonesian people have only recently emerged from colonial status, unwillingness to encourage foreign investment is natural. Unfortunately, levels of living are too low to permit adequate domestic capital formation. Most likely a compromise effort to use foreign aid as well as domestic resources will result.[26] Current sources of foreign aid have been the Colombo Plan, the International Bank for Reconstruction and Development, and the United Nations as well as the United States, Great Britain, Canada, and Australia. However, the amounts made available so far have not been large. Between 1954 and 1958 total aid amounted to 61.4 million dollars.[27] Indonesia faces a difficult period of economic development in the coming years and a successful transition from a traditional agrarian society to the early stages of industrialization will take the combined efforts of the Indonesian people and the industrialized countries of the free world. Not only must the capital and facilities for economic growth be provided but a rapid evolution in culture patterns must take place. A large segment of the population will have to be trained in machine skills, learn to live in a money economy, to save and invest, and to accept the responsibilities of industrial workers.

Burma

Burma, with an area of 261,757 square miles, is the second largest country in Southeast Asia. A framework of high mountains has created a demographically and economically nucleated area in the central part of the country. This elongated region, the Irrawaddy Valley, extends from the delta in the south to Bhamo in the north and contains the largest total regional population, the most productive agriculture, and the most culturally advanced group in the country. The surrounding regional units, with smaller populations less economically and politically advanced, are slowly developing and demanding their place in the total political and economic development of the nation. Consequently, the regional ethos has presented a problem in the political integration of the country.

Controlled by the rain-bearing southwest monsoon, the climate of Burma is generally warm with variations in the uplands permitting a diversified agriculture. Heavy rainfall averaging twenty to fifty inches a month occurs between June and August with the Arakan and Tenasserim coastland regions, which are covered with a broadleaf evergreen rain forest, receiving as much as one hundred twenty to two hundred

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[26]Higgins, Benjamin, *op cit.*, p. 125.

[27]United Nations, *Statistical Yearbook, 1959*, 1960, p. 428

inches annually. The Irrawaddy Delta, the wet-rice growing area of Burma, has sixty to one hundred inches of rain annually while the Shan Plateau which provides most of the commercially important teakwood receives forty to eighty inches. In the middle of the valley from Prome to Mandalay the rainfall lessens to about forty inches creating a relatively dry zone. The temperature remains relatively constant in the lowlands of Burma with maximum monthly averages ranging from eighty-five to ninety degrees during the coolest months.[28]

Possessing ample land, with a warm climate and more than adequate rainfall, Burma has been able to provide sufficient food for the existing population. Population growth has been comparatively slow and this can be attributed to a high infant mortality rate as well as a lack of social and religious incentives to produce large families. Growing at a rate of one percent a year, the estimated population of over 20 million is concentrated primarily in the Irrawaddy Delta and the dry zone around Mandalay. In these areas, population densities vary from 200 to 500 persons per square mile. Other heavy concentrations of population are to be found around Akyab on the northwest coast and Moulmein in the southeast near the Gulf of Martaban. The overall density of the country is approximately 77 persons per square mile.

The heterogeneity of the population of Burma has contributed to the problem of political instability in the country. The cultural regionalism of the people has somewhat deterred economic development because of sectional interests and insurgent activities. Although the Burmans comprise the largest segment of the population, many minority groups including Indians, Chinese, and Karens are found throughout the country. Other people are the Shans, Kachins, Chins, Wa-Palaung, and Nagas with smaller tribal groups scattered throughout the mountainous areas. The Indians and Chinese are predominantly urban dwellers and business men. Prior to the Second World War, the Indians comprised more than half of the population of Rangoon and the Chettiars, the wealthiest Indian element, owned about one-fourth of the rich rice lands of Burma and controlled more than half of the rice exports as well as rice mills, sawmills and smaller industries manufacturing soap, knit goods and matches. Following the War, Government controls designed to develop Burmese entrepreneurs greatly reduced the commercial activities of the Indians, particularly among the smaller merchants. Immigration restrictions have also curtailed the growth of the Indian population.[29] The Chinese, located mostly in the Irrawaddy Delta, are scattered throughout the urban centers, especially Rangoon and Moulmein. With the decline in the commercial activities of the Indians, the Chinese have been quick to take over their economic functions. Commercially, the Chinese are expanding and entering new fields where their enterprise and hard work produce economic success.[30] The Karens, a group indigenous to Burma, are found primarily in southern Burma and are predominantly agriculturalists. The Karens are becoming politically cohesive and demanding participation in governmental affairs and this has created some political instability.

Agriculture is the dominant activity with rice contributing over 80 percent of the total value of export earnings. However, rice production still has not reached the prewar level with the total acreage sown in paddy averaging 80 percent of the prewar acreage in recent years.[31] The reclamation of unused paddy lands and the improvement in quality and yield continue to be a major part of the agricultural development program. In addition to rice cultivation, cotton, groundnuts, maize, leguminous crops, millet, sesame, sugar cane, tobacco, and vegetables provide

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[28] Ginsburg, Norton, (Ed.), *The Pattern of Asia*, 1958, pp. 445-446

[29] Thompson, Virginia and Richard Adloff, *op. cit.*, 1955, pp. 75-91

[30] *ibid.*, pp. 5 and 54-55

[31] Trager, Frank N., *Building a Welfare State in Burma, 1948-1956.* 1958, p. 42