Philippine Review of Economics and Business
Volume XVIII, Nos. 3 & 4, September & December 1981

DEMOGRAPHIC DEVELOPMENT IN ASEAN: A COMPARATIVE OVERVIEW

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1. Introduction

In 1980, the ASEAN countries, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand had a population of 258 million, comprising about 6 per cent of the world population. The average per capita gross domestic product for the region in 1978 was $1,148 compared to $1,250 for the middle income countries and $8,070 for the industrialized nations (World Bank, 1980).

Behind these broad aggregates, one finds in the region common as well as contrasting population and development characteristics. Population size varied from 2.4 million in the island state of Singapore to 148 million in Indonesia in 1980. While Singapore's population is totally urban, the populations of the rest of the ASEAN countries are still basically rural. The percentage of the population living in urban areas is 14 in Thailand, 20 in Indonesia, 29 in Malaysia, and 36 in the Philippines. Per capita gross national product in the region ranged from as high as $3,290 for Singapore to $360 for Indonesia in 1978. The figures for Malaysia, the Philippines and Thailand are $1,090, $510, and $490, respectively (World Bank, 1980).

In addition to these characteristics, one also finds common as well as contrasting patterns of demographic development, perceptions of population-related problems, and strategies for economic-

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demographic development. The rapid growth of population in the early postwar period generated increased concern among the ASEAN and other developing countries regarding the effects of such growth on the attainment of their development goals. These concerns were later expressed formally in their development plans. In ASEAN, the set of common concerns generally centered around the following: (a) the increased pressure on the attainment of development objectives especially in the provision of basic services such as health, education, nutrition and others arising from continued rapid population growth; (b) the increased pressure on the creation of productive employment opportunities arising from the rapid growth of the labor force; and (c) the increased pressure on the provision of adequate social services and employment arising from the rapid growth in urban centers, especially in the primate cities.

The increased concern about the impact of population on development led Singapore in 1965, Malaysia in 1966, Indonesia in 1968, and the Philippines and Thailand in 1970 to adopt official population policies whose major focus was the reduction of the rapid population growth through fertility control. The main program was the family planning program aimed at providing contraceptive technology to reduce fertility on a voluntary basis.

Even as efforts were being made to reduce population growth through fertility reduction, attention was broadened to other population concerns including mortality and morbidity, population distribution and rural development, and the social and economic welfare of specific population subgroups, namely, the aged, women, youth and the major poverty groups. The broadening of population concerns led to the recognition of the need to strengthen efforts in the integration of population into development planning as well as of the potential benefits of collaborative activities among ASEAN countries in solving common problems.

In 1976, the Declaration of ASEAN Concord, issued by the five heads of government called for, among other things, the "intensification and expansion of existing cooperation in meeting the problems of population growth in the ASEAN region." Responding to this call, the ASEAN Heads of Population Programmes and ASEAN experts convened in 1976 to review each country's population programme, identify common areas for collaborative activity, and develop the framework for the ASEAN Population Programme (ASEAN Population Programme Special Report, 1982). Since then, significant progress has been achieved in implementing collaborative projects in the broad areas of human resource development, informa-

tion and communication, and research and policy studies, with the overall aim of cumulating the knowledge base for the successful integration of population into development planning.

The preliminary results of one of these projects is the basis of this current report.[1] Essentially, by synthesizing existing information, this research attempts to provide an analytical perspective on the demographic development of each member country, with the aim of identifying common problems and new directions. At the country level, the results are expected to provide additional information as a basis for population planning in the 1980s; at the regional level, the results are expected to provide a basis for future ASEAN collaborative activity in the field of population and development.

In the next section, we provide a comparative overview of the demographic development in ASEAN countries based on the findings of individual country studies.[2] The last section summarizes the emerging issues and directions for population planning in ASEAN.

2. Demographic Development in ASEAN[3]

Mortality

Progress towards mortality reduction is often associated with increasing per capita income, improvements in income distribution, increased access to medical and health services and, to a varying

[1] This project entitled: "Population-Development Dynamics and the Man/Resource Balance" is implemented by Indonesia, Malaysia, Philippines and Thailand. This project has two broad components, namely, (a) a macro-level analytical review of the current state, probable trends and interactions between demographic, economic and ecological factors in each of the ASEAN countries, with the aim of identifying key elements of population and development strategies for the 1980s and beyond; and (b) special micro-level studies of the demographic, economic and ecological interactions focusing on significant population subsectors that so far have been given insufficient attention (e.g., artisanal fishermen, slash-and-burn farmers, landless agricultural workers, the urban informal sector, etc.). This report forms part of the first project component.

[2] Data on Singapore's demographic development are based on published studies.

[3] Country-specific data presented in this section are based on the data compiled in the individual country reports. See Pardoko (1982) for Indonesia; Lim (1981) for Malaysia; Herrin (1981) for the Philippines and Hongladarom (1981) for Thailand. Because available data for each country refer to different periods, and are based on various sources and methods of estimation, the comparisons presented here should be taken as broad indications of contrasting experiences.

extent, the successful control of specific diseases most responsive to inexpensive, narrowly-based public health measures.

Differential progress towards mortality reduction in each ASEAN country is inferred from the trends in life expectancy at birth and infant mortality (See Table 1). In Indonesia, the earliest reliable figure on life expectancy at birth is for 1971, which stood at 46 years, suggesting very slow mortality improvements prior to 1971. Relatively rapid improvements appear to have occurred in the 1970s, averaging 0.87 year annually, so that life expectancy rose to 53 years in 1978. In the Philippines, life expectancy rose rapidly from 43 years in 1948-50 to 53 in 1960; thereafter the rate of increase decelerated so that life expectancy had risen to only 59 years in 1975. In Thailand, life expectancy at birth rose from 42 years in 1947 to 59 in 1964-65. Thereafter, the rate of increase declined, so that life expectancy had risen to only 61 years by 1974-75. In contrast, Singapore has already achieved a life expectancy of 63 years in 1957, a level higher than what Indonesia, Thailand and the Philippines achieved by the 1970s. In 1970, Singapore's life expectancy had risen to 68 years, just about three years lower than the average for the more developed countries in the world in the same year. Peninsular Malaysia has likewise experienced rapid mortality improvements prior to the Second World War, so that by 1957, its life expectancy had risen to 57 years. This further rose to 65 years in 1966 and to 67 years in 1977.

The slow pace of increase in life expectancy in some countries is reflected in the corresponding slow improvements in infant mortality defined as the proportion of a birth cohort dying before reaching age one, q_o. Indonesia still had a very high infant mortality of around 107 infant deaths per 1,000 births in 1978, while both Thailand and the Philippines had rates of 76 at around 1975. In contrast, Singapore had an infant mortality rate of 14 in 1975 while the figure for Peninsular Malaysia was 45 in 1974 (United Nations, 1980, Table 40).

Thus while Singapore and Malaysia have reached relatively low mortality levels, Thailand, the Philippines, and particularly Indonesia still exhibit high mortality rates. In addition, significant mortality differentials by regions and by social groups exist in these latter three countries. For example, in Indonesia, infant mortality rates (q_o) in 1978 varied from as high as 156 in the Other Islands to as low as 90 in Sumatra (Pardoko, 1982). Conversely, life expectancy varied from only 44 years in the Other Islands to 52 years in Java. In the Philippines in 1970, infant mortality rate (q_o) varied from 135 in Northern

Mindanao to 75 in Southern Tagalog (including Metro Manila), while the life expectancy at birth varied from a low of 48 years in Western Mindanao to a high of 60 years in Southern Tagalog (Flieger et al., 1981). In Thailand, infant mortality rates, defined as the number of infant deaths per 1,000 live births (IMR) during the 1974-75 period varied from 96 in the North to 50 in the Central region (excluding Bangkok-Thornburi) (Knodel and Chamratrithirong, 1978). In Peninsular Malaysia where infant mortality is relatively lower than in these three countries, the infant mortality rate (IMR) varied from 30 in the high income state of Selangor to 47 in the low income state of Kelantan (Lim, 1981).

In areas where mortality is still high, one can expect large mortality differentials by social groups as well. Thus, in the case of the Philippines, data for 1978 reveal substantial infant mortality (IMR) differentials by education of mother (e.g., 105 for women with no schooling, 73 for women with some primary education and 37 for women with some college education) (Esclamad et al., 1982).

In sum, there is uneven progress towards mortality reduction in ASEAN, reflecting partly differences in the pace of economic development and partly, differences in geographic, economic and social factors related to the provision of basic health services.

Fertility

Conceptually, fertility change can be viewed as proximately determined largely by changes in nuptiality and in marital fertility. The change in marriage patterns, in turn, is generally influenced by the rise in female education and labor force participation resulting from general economic and social development as well as changes in the economic structure. Changes in marital fertility, however, depend upon the household's perception of the changing structure of costs and benefits of children, and on the effective cost of contraception. Both these changes in turn are dependent on socioeconomic development and the impact of family planning programs. The dimensions of fertility change in each ASEAN country are reflected in Table 2.

The fertility transition in Singapore seems to have begun as early as 1957 (Fawcett, J.T. and Siew-Ean Khoo, 1980; Cheng Siok-Hwa, 1979). In 1957, the total fertility rate was 6.5 children per woman of reproductive age. It declined to 4.7 in 1965 and fell further to 2.1 in 1975 when replacement fertility was reached, and to 1.8 in 1978. Between 1957 and 1965, changes in nuptiality patterns accounted for 55 per cent of the fertility decline while marital fer-

Table 1 — Selected Estimates of Mortality, ASEAN

Country and Years	Life Expectancy			Infant Mortality		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Indonesia[a]						
1971	46.5	45.0	48.0	141	152	129
1978	52.6	51.1	54.2	107	116	97
Peninsular Malaysia[b]						
1950				102		
1957	57.0	55.8	58.2	76		
1960				69		
1966	64.6	63.1	66.0	48		
1970				41		
1975				33		
1977	66.8	66.1	71.4	32		
Philippines[c]						
1948-50	42.5	—	—			
1960	52.8	51.0	54.5	113.3	126.1	99.9
1970	55.8	54.2	57.5	93.2	99.0	87.1
1975	59.4	56.9	61.8	76.0	90.2	78.7
Singapore[d]						
1946-50				82.4		
1951-55				63.6		
1957	62.8	60.3	65.2			
1956-60				39.7		
1961-65				29.6		
1966-70				23.1		
1970	67.6	65.1	70.0			
1971-75				18.1		

Table 1 (Continued)

Thailand[e/]	Life Expectancy			Infant Mortality		
1947	41.9	40.2	43.5	112.5	121.8	102.7
1964-65	58.5	55.2	61.8	85.6	95.4	75.3
1974-75	60.6	57.6	63.6	76.1	91.9	59.6

[a]See Pardoko (1982, p. 66). Data for 1971 from Cho et al., 1976; for 1978 from the Indonesian Central Bureau of Statistics. Infant mortality rates are measured as the probability of dying from birth to age one, q_o.

[b]See Lim (1981, pp. 99-100). Life expectancy estimates are based on various reports of Malaysia Department of Statistics. Infant mortality rates are based on vital statistics, various years, and defined as number of infant births per 1,000 live births (IMR).

[c]See Herrin (1981, pp. 30-31.) Data for 1948-50 are based on Madigan (1965) while those for 1960, 1970 and 1975 are based on Flieger et al. (1981). Infant mortality rates are measured as q_o.

[d]See Cheng Siok-Hwa (1979, text p. 79 and table 5.13, p. 91). Infant mortality rate is defined as number of infant deaths per 1,000 live births and is based on registration data.

[e]See Hongladarom (1981). Data for 1947 are based on Rungpitarangsi (1974), while those for the other years, from the Survey of Population Change, National Statistics Office.

tility accounted for 25 per cent (Fawcett, J.T. and Siew-Ean Khoo, 1980). Between 1956-60 and 1966-70, the median age at first marriage rose from 21.4 to 23.1 years. After 1965, marital fertility decreased sharply. The decline in marital fertility contributed about 80 per cent to the decline in the total fertility rate during 1965-70, and 60 per cent during 1970-76.

It is difficult to separate the effects on marital fertility of socio-economic development and of the national family planning program established in 1966. Singapore is unique among the ASEAN countries in many respects including her rapid economic transformation, her island environment, and her efficient civil service. These factors, among others, have facilitated the development of a well-organized and vigorous family planning program. Given Singapore's present situation, the major concern is to maintain replacement fertility in the decades ahead towards the achievement of zero population growth.

In Peninsular Malaysia, the total fertility declined from 6.8 births per woman in 1957 to 5.6 in 1965 and to 3.9 in 1977 (Nor Laily Aziz et al., 1981). The corresponding crude birth rates for these periods were 46, 37 and 30, respectively. The singulate mean age at marriage for females rose from 18.5 years in 1947 to 19.4 in

Table 2 — Selected Estimates of Total Fertility Rates, ASEAN

	All Areas	Java/Bali	Sumatra	Kalimantan	Sulawesi
Indonesia					
1967-70[a/]	5.6	5.2	6.6	6.1	6.2
1971-75[a/]	5.2	4.9	6.1	5.6	5.9
1976[b/]	—	4.6	—	—	—
Malaysia[c/]					
1957	6.8				
1960	6.2				
1965	5.6				
1970	4.8				
1975	4.2				
1977	3.9				
Philippines[d/]		Metro Manila	Other Urban	Rural	
1958-62	6.5	—	—	—	
1963-67	6.3	—	—	—	
1968-72	5.9	4.1	4.5	6.7	
1973-77	5.2	3.4	4.2	5.9	

Table 2 (Continued)

Thailand[e/]		North	Northeast	Central	South	Municipal Areas	Non-Municipal Areas
1960	6.4						
1964-65	6.3	6.5	6.6	5.9	6.0	4.2	6.5
1970	5.6						
1974-75	5.2	3.8	6.6	4.7	6.3	4.6	5.3
Singapore[f/]							
1947	6.5						
1952	6.6						
1957	6.5						
1965	4.7						
1975	2.1						
1978	1.8						

Sources:

[a/] Suharto and Cho (1978, p. 15).

[b/] Suwardjono et al. (1978, p. 126).

[c/] Nor Laily Aziz et al. (1981, p. 72).

[d/] Herrin (1981, pp. 30-31).

[e/] Arnold et al. (1977, pp. 3 & 10).

[f/] For years 1965 to 1978, Fawcett and Khoo (1980, p. 556).
For years 1947, 1952 and 1957, Cheng (1979, p. 93).

1957 and to 22.3 in 1970 (Hirschman, 1980). A decomposition of the crude birth rate from 1960 to 1969 revealed that 67 per cent of the change in fertility was accounted for by changes in marriage patterns and 28 per cent by changes in marital fertility (Cho and Retherford, 1974). In contrast, in the period 1970-77, marriage patterns accounted for only 16 per cent of the fertility decline, whereas marital fertility declined more than sharply enough to compensate for the positive effect of the age structure on fertility (Nor Laily Aziz et al., 1981).

The Malaysian National Family Planning Board (NFPB) was set up in 1966. The relatively more rapid fertility decline since then could be taken as having been facilitated by family planning efforts. In 1974, 48 per cent of ever-married women ever used some form of contraception, of whom 85 per cent used the pill (Nor Laily Aziz, 1978).

In the Philippines, fertility trends can be characterized as follows. From a level of 50 or more births per thousand at the turn of the century, the crude birth rate remained fairly constant during the first half of the century. Since the 1950s, fertility began to decline gradually reaching around 46 births per thousand in 1960 and about 40 in 1970. A somewhat faster decline occurred in the mid-1970s so that by 1977, the crude birth rate had been reduced to around 32 per thousand. Total fertility rates reveal a decline from 6.5 births per woman in 1958-62 to 6.3 in 1963-67, 5.9 in 1968-72 and 5.2 in 1973-77 (see Herrin, 1981).

A significant long-term trend in Philippine marriage patterns for females is revealed by the following: the singulate mean age at marriage rose from 20.9 years in 1903 to 23.2 years in 1975. In 1978, a survey estimate placed the figure at 24.4 years. Prior to the 1960s, changes in marriage patterns had been traced to the effect of selective migration with respect to age, sex and marital status. In the more recent period, changes in nuptiality patterns have been associated with the expanding roles of females in urbanization, the rise in mass education, and the growth of the nonagricultural labor force (Smith, 1978).

Between 1960 and 1970, 28 per cent of the decline in the Philippines' crude birth rate was accounted for by changes in marriage patterns while changes in marital fertility accounted for 54 per cent. During the 1970-75 period, however, *all* of the decline in crude birth rate was due to the reduction in marital fertility through contraception (Concepcion, 1980). Contraceptive prevalence increased

from 16 per cent of currently married women of reproductive age in 1968, prior to the formal launching of the Philippine Population Program, to 42 per cent in 1980 (Herrin and Pullum, 1981).

Data on differential fertility across regions in the Philippines reveal that, between 1958-62 and 1973-77, the fastest decline occurred in Metro Manila Manila and other urban areas with percentage declines in total fertility rate of 21 and 12, respectively. In contrast, the fertility decline in the rural areas was relatively small (only 6 per cent over the 15-year period), all of which occurring only in the last five-year period.

In Thailand, estimates of fertility show that birth rates have remained high and relatively constant, as in the Philippines, throughout most of the first half of the twentieth century. In the mid-1960s, the total fertility rate was around 6.3 children per woman. It then began a fairly sharp decline reaching 5.6 children per woman in 1970 and continuing through the early 1970s to the level of 5.2 in 1974-75. Nuptiality patterns have changed little; the singulate mean age at marriage for females was 21.1 years in 1947 and 21.6 in 1960. By 1970, it rose only a little to 21.9 years (Arnold, et al., 1977). Hence, much of the fertility decline since the end of the 1960s was due largely to reductions in marital fertility through contraception. Contraceptive use rose one-and-a-half times during the first half of the 1970s; by 1975, 37 per cent of Thai couples were using a method. Although Thailand has about the same level of contraceptive prevalence as the Philippines, 91 per cent of all of the contraceptives used in Thailand is in the "more efficient" methods (i.e., pill, IUD, sterilization and injection), compared to only a third in the Philippines (Knodel and Devavalya, 1978).

Most significant about the fertility transition in Thailand is the fact that rapid fertility declines were not confined to urban areas or higher socioeconomic groups. In spite of the large disparities in income and education between urban and rural areas, most of the changes in fertility between 1965 and 1975 occurred relatively faster in rural areas than in cities (excluding Bangkok-Thornburi). Furthermore, looking at Thailand's regions, the rapid decline of fertility during the 1965-75 period occurred in the North (from a total fertility rate of 6.5 in 1964-65 to 3.8 in 1974-75) where levels of health care, per capita income and other development indicators are among the lowest in Thailand (Hongladarom, 1981). In 1974-75, total fertility rates in Thailand varied from as low as 3.6 and 3.8 in the Central and Northern regions, respectively, to as high as 6.6 and 6.3 in the Northeast and the South, respectively (Arnold et al., 1977).

The coincidence of the rapid fertility declines in Thailand with the implementation of the government's family planning program suggests the important role played by the program. This role tends to be magnified when cognizance is taken of the fact that socioeconomic development in Thailand in the 1970s had not been especially rapid as in the more developed countries in the ASEAN region such as Singapore, and that Thailand's population is still heavily rural and agricultural. The apparent lack of fit of Thailand's demographic experience with the stylized version of the demographic transition may be traced, however, to certain dynamic aspects of Thailand's economic development (e.g., the role of transportation and communication in spreading ideas), and culture (e.g., the relative favorable position of women) (see Knodel and Devavalya, 1978).

In Indonesia, the total fertility rate for Java-Bali was 5.2 in the period 1967-70, ranging from a high of 5.8 in West Java to a low of 4.7 in East Java (Suharto and Cho, 1978). By 1976, the total fertility rate for Java and Bali, as a whole, was estimated to be between 4.5 and 4.6, a 12-16 per cent decrease (Suwardjono et al., 1978). The crude birth rate for Java-Bali was estimated in the period 1965-70 to range from 38 to 41, whereas by 1976, it was estimated to have declined about 10 per cent to between 34 and 37.

Regional fertility estimates for 1976 reveal a gradient from east to west. Total fertility rate was lowest in Bali (3.8) and East Java (3.9), followed by Yogyakarta (4.4) and Central Java (4.4), then Jakarta (4.5) and finally West Java (5.3). Available evidence for 1973 suggests moderate trends toward increasing age at marriage associated with education, urbanization and female employment. Increasing age at marriage was more notable in urban than in rural areas, and more in West Java than in East Java and Bali (Jones, 1978). Hence, the larger declines in fertility in the latter regions can be attributed largely to changes in marital fertility through contraception. Evidence for 1975-78 shows that contraceptive prevalence was 42 per cent in Bali, 38 per cent in East Java, and from 19 to 25 per cent for the rest of Java. Like Thailand and Malaysia but unlike the Philippines, contraception in Indonesia tends to be towards the use of modern and effective methods, notably the pill and IUD. In sharp contrast to Java-Bali, contraceptive prevalence in the Other Islands averaged only 8 per cent, varying from as low as 2 per cent in South Sulawesi to only 12 per cent in South Kalimantan (Suwardjono et al., 1978).

Of particular interest is that the regions in Indonesia with the lowest fertility and faster fertility declines are among the poorest areas, with lowest educational attainment and very high population density. As in the case of Thailand, the conventional demographic

transition scenario does not fit well for Indonesia. Hence, the dynamic aspects of development and of the cultural differences between regions need to be identified for their contribution in explaining the recent demographic change in Indonesia.

In summary, the fertility transition experiences in ASEAN countries contain common as well as contrasting patterns both in terms of the speed of the transition and in the underlying forces behind the process. Singapore, with her unique island environment and rapid socioeconomic transformation, is well ahead in the fertility transition, having achieved replacement fertility in 1975, at least 25 years ahead of the Philippines (assuming replacement fertility is achieved in year 2000 as targeted). Malaysia comes next, with the decline in fertility in the past two decades having accelerated in the last decade. Both Singapore and Malaysia have achieved high levels of economic development compared to the rest of the ASEAN countries. The impact of development on fertility was first manifested in changes in nuptiality patterns and later on in changes in marital fertility. This decline in marital fertility is understandable in terms of the changing structure of costs and benefits of children and the greater use of contraception, the latter being effectively facilitated by a vigorous family planning program.

The Philippines is much way behind both Singapore and Malaysia in the fertility transition process. In addition, the pace of fertility decline has been slower than in Thailand and Indonesia. The overall Philippine pattern is similar to that of Singapore and Malaysia in terms of the relative roles played by changing nuptiality patterns and marital fertility. In the Philippines, however, the effect of socioeconomic development on nuptiality appears to be much sharper than in Singapore and Malaysia as well as in the rest of the ASEAN countries. In another vein, the pace of Philippine economic transformation has been much slower and more uneven than in Singapore or Malaysia. This led not only to the slackening of mortality declines in 1960s, but also to large differentials in fertility declines between the few more developed regions and the rest of the country.

The forces underlying fertility transition in Thailand and Indonesia differ from those of Singapore, Malaysia and the Philippines. Age at marriage tends to be lower in these countries and nuptiality patterns have changed little or only moderately. Hence, much of the fertility decline even prior to the 1970s can be attributed largely to declines in marital fertility. The more rapid declines in the 1970s associated with the increased use of modern contraception may be attributed largely to the effects of the family planning program and

perhaps to specific elements of development and social structure in these countries rather than to broad-based economic transformation and urbanization. In both countries, fertility declines in the more recent period have been more rapid in rural and less developed regions than in urban or more developed areas.

In all countries, the recent fertility declines have been due largely, if not solely, to reductions in marital fertility through contraception rather than to changes in nuptiality patterns. These reductions appear to have been facilitated, if not induced, by the more intensified family planning program efforts in the 1970s. Underlying these macro-level patterns are the micro-level dynamics of fertility, social and economic change and cost of fertility regulation that have yet to be unraveled by further research.

Migration, Spatial Distribution, and Employment

With the exception of Singapore, areal differentials in agricultural potentials, spatial distribution of economic activities arising from the postwar industrialization policies and regional development efforts, and government-sponsored resettlement schemes account for most of the internal population movements in ASEAN. In addition to government-sponsored movements, migration tended to be frontierward or rural-to-rural in the early periods: either short distance intra-regional moves as in the case of Thailand, or long distance interregional moves as in the case of the Philippines. The more recent period saw relatively greater movements from rural and small urban to metropolitan areas. In Thailand, the Philippines and Malaysia, these movements have become noticeably female-dominated as more and more young single women flock to the cities in search for education and jobs. However, inspite of the rapid increase of urban population, the tempo of urbanization has been slow owing to the relatively more rapid natural increase of the rural population. These recent developments, together with the rapid population growth during the early postwar period that is now being translated into a large proportion of working age population, have given rise to several interrelated concerns, namely, (a) the pressure to provide productive employment to the growing labor force, execerbated by their concentration in urban areas where the labor absorptive capacity of the modern sector is limited; (b) the pressure to provide basic urban services for the growing population arising from continued rural-urban migration; (c) the welfare aspects of female migration to urban areas; and (d) the increasing outflow of skilled manpower to the developed countries, and the more recent outflow of temporary migrant workers primarily to the Middle East.

The highly uneven geographical distribution of the population in Indonesia is well known. In 1971 as in 1980, almost two-thirds of the population are concentrated on the relatively small island of Java which comprises only less than 7 per cent of the country's land area. Java and Bali, being the more developed islands tended to attract people for economic reasons. This has resulted in shortage of labor in the Other Islands needed to exploit the natural resources. On the other hand, the increasing density in Java and Bali has contributed to the deterioration of the natural environment, the increasing number of landless farmers, and the increasing trend of rural-urban migration of males and females in search for jobs, mainly to Jakarta (Pardoko, 1982).

The present Indonesian government policy in dealing with the unequal distribution of population among the islands is through transmigration and regional development in the context of a more systematic exploitation of natural and manpower resources. The long-term objective is to develop a strong economic and community base for the spontaneous transmigration to the Other Islands. Although operational transmigration targets have been set for the Third Five-Year Development period, several constraints still have to be overcome, including the limited budget and manpower needed for such a huge undertaking.

In Malaysia, migration patterns from 1957 to 1970 tended to be essentially intra-rural and intra-urban rather than rural-urban (Lim, 1981). The rural-to-rural movement has been mainly government-induced in terms of movement to the land schemes, while the more spontaneous movement has been from smaller to larger urban centers especially towards Kuala Lumpur where the bulk of modern sector employment is located. Unlike other countries in ASEAN, there has been relatively less primacy. In 1970, Kuala Lumpur was only 1.7 times the size of the next largest city, Penang.

In the light of the unequal distribution of natural resources and population, Malaysia's concern is for selective relocation of people to areas where development opportunities and potentials exist. Such relocation is viewed as necessary to reduce pressures in areas where population density is high and the environment for development less favorable, as well as to provide the labor force needed for land settlement and other development projects in population-scarce areas. Given this broad framework, new land development will continue to be a major means for influencing balanced regional development and distribution of population. In addition, industrial decentralization and the development of a viable hierarchy of urban centers, *in situ*

rural development to complement land development and industrialization policies, and urban development and renewal are among the major development thrusts that are expected to have broad consequences for future movements and spatial distribution of the population.

Even as regional development in Malaysia is being pursued, the pull to the urban areas is expected to become stronger in the future. As such, pockets of labor shortages in the agricultural areas are increasingly being experienced. Because the increasing participation of young women in the urbanward migration process is expected to continue, concerns regarding their welfare are also increasingly being expressed.

Internal migration in Thailand tends to be characterized more by intraregional migration than interregional migration (Hongladarom, 1981). As such, the population distribution of Thailand's four major regions remained more or less constant between 1947 and 1970. The pace of urbanization in Thailand has been modest despite rapid absolute gains in urban population (Arnold et al., 1977). Between 1960 and 1970, the percentage residing in urban areas increased only from 12.5 to 13.2 per cent. The central region, however, has exhibited faster growth in urban population: from 27.4 per cent of the regional population in 1960 to 30.3 per cent in 1970. This is partly due to the rapid intraregional migration towards the Bangkok-Thornburi areas. Thailand has one of the highest primacy indices in the region. In 1972, the Bangkok Metropolitan Area had 40 times the population of the next most populous city, Chiang Mai.

Until the mid-1970s, Thailand had relatively little international migration except for the outflow of nurses and doctors to the developed countries. Since the mid-1970s, however, large numbers of skilled and semiskilled Thai workers left to earn higher wages in the Middle East (Hongladarom, 1981).Currently, the government policy is to promote this export of labor mainly due to their contribution to foreign exchange and partly to alleviate domestic pressure on employment. The economic and social implications of such outflows have yet to be fully studied.

In the Philippines, the early migration during the first half of the century was male-dominated and frontierward. While rural-urban streams were significant, their volume was small compared to the frontierward movement. During the period 1960 to 1970, while long distance frontierward flows continued to be a major component

of the total migration pattern, the pull to the Metropolitan Region has replaced the push to the frontiers. This pattern contributed to the predominance of female migrants to the urban areas (Smith, 1977).

The early frontierward movement was mainly a response to the poor resource base of the areas of origin and to the opportunities available in the agriculturally rich and less densely populated areas of Mindanao and Cagayan Valley. The predominantly urbanward pattern characteristic of the more recent period was more a response to the greater attraction for wage employment and educational opportunities which tended to concentrate in urban areas, especially in Metro Manila. This, in turn, can be traced to the industrialization policies of the early postwar period which persisted into the 1970s, and the relative neglect of the subsistence agricultural sector in the 1950s and 1960s.

The rapid growth of population in the postwar period is now being translated into a rapidly growing labor force. The absorptive capacity for industrial employment is now being taxed more strongly than in the past, making opportunities for temporary employment abroad by skilled and semiskilled labor quite attractive, leading to the increasingly large outflows of migrant workers in the recent period, especially to the Middle East.

3. Emerging Issues and New Directions

In spite of the substantial gains in mortality reduction during the early postwar period, mortality as reflected particularly in infant mortality rate and life expectancy at birth is still high in Indonesia, Thailand and the Philippines compared with Malaysia, Singapore and other advanced countries in Asia. In addition, significant mortality differentials still exist among regions and provinces and among social groups within these ASEAN countries, reflecting inequalities both in the distribution of income and in access to health and medical facilities and services. This suggests that efforts to hasten the pace of mortality reduction would require widening the rural health outreach, increasing the pace of development in the lagging regions and increasing the purchasing power of the poor. All these efforts necessarily take time, huge amounts of scarce resources and increased organizational capacity. In addition to the planned and ongoing programs aimed to increase employment, production and incomes among the poorest segments of society, the potential for further mortality declines may be enhanced through selective direct health intervention focusing on specific health and nutrition problems in

certain areas. The nature of such interventions will depend on what we know about the prevailing morbidity and mortality patterns in these areas and of the specific determinants of these patterns.

Because further gains in mortality reductions will tend to increase population growth rates, greater efforts at fertility reduction will be needed in the 1980s to sustain the impressive gains already made in the 1970s. The required efforts will tend to be greater in the 1980s for additional reasons: (a) the past rapid population growth is now being translated into a large proportion of women in the reproductive ages; (b) the limits of nuptiality pattern changes as a significant factor in fertility decline may have already been reached in most countries; and (c) significant fertility differentials still exist among regions and among social groups, especially in Indonesia and the Philippines. Can population programs already in place be adequate to sustain fertility declines in the 1980s? Will further fertility declines be now more closely associated with the extent to which socioeconomic changes alter the structure of costs and benefits of children? Will the programs now in place and those that are planned for the future be adequate to achieve each country's population growth targets? If so, what are the short-term and long-term implications of these and how do we address the emerging consequences (e.g., the effect of declining population growth rates on the economic structure, the implications for the ageing of the populations, etc.)?

Finally, one may expect increased population movements in the decades ahead in response to increased economic and social development. However, the type of development that will be pursued in the 1980s and its impact on the spatial distribution of economic activities will surely have a significant impact on the spatial distribution of the population. Significant changes in sectoral flows may be expected arising from the vanishing of the frontiers and increasing urbanization in the decades ahead especially in Thailand and the Philippines. The impact of rapid population growth felt at the national level in the past would now be felt more keenly in the rapidly expanding urban areas. Will the problems of urban unemployment and underemployment and the pressure on urban services persist and even intensify in the decades ahead? What policies and programs should now be formulated to address these potential problems?

In sum, demographic and socioeconomic trends can be expected to be more closely interrelated in the 1980s and beyond than in the past. The evolving patterns of morbidity and mortality suggest that the simple transfer of health and medical technology from the ad-

vanced countries can no longer be relied upon to effect significant declines in mortality without concomitant economic and social change in the rural areas and among the poor. While further fertility declines may be expected from development and family planning efforts already in place, more rapid and sustained fertility declines may now have to increasingly depend on the extent to which economic and social transformation significantly alter the prevailing structure of costs and benefits of children at least as perceived by parents, on the one hand, and on the extent to which program efforts significantly reduce the effective cost of contraception, on the other. With the disappearance of the agricultural frontier in some countries, population movements will now be increasingly tied to the types and spatial distribution of industrial activities. All these factors suggest a greater need for integrating population objectives into development policy and programs. How this can be done is the challenge of policy makers, planners and social science researchers in ASEAN for which continuing collaborative efforts can be expected to enhance the achievement of country-specific objectives.

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