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POPULATION AGING IN URBAN CENTERS OF THE PACIFIC RIM

Implications for Planners

Marie E. Cowart and William J. Serow

Simultaneous with the global urbanization of the Pacific Rim countries is a change in the age structure of these populations. This article discusses the aging of the Pacific Rim countries and the implications for planners by exploring two concerns: housing and care giver supports.

Not only are countries of the Pacific Rim experiencing the economic development of expanded metropolitan regions, they are also undergoing changes in the age structure of their populations. The development of a global urban economy and society, heavily reliant on technological advances, can create goals which compete with meeting the needs of an aging population. To avoid future social problems, planning for demographic aging of the population must occur while adapting to the further development of these extensive urban centers.

In this article, we explore two aspects of population aging which arise during the rapid urbanization in the Pacific Rim. First, using examples of retirement and pension policies, we examine the implications of assuring income security for the elderly while making economic development a national priority. Second, we discuss the options for meeting an aged population's needs for housing, and informal and formal care. Lastly, we pose some considerations for planning and policymakers. Given the nexus between aging and the demand for health services, refocusing health and long term care services to improve the health of all age groups in the population can support rather than act as a drain on an expanding economy.

Background

The expansion of urban metropolitan regions of the Pacific Rim is well documented. In 1950, except for Tokyo, the large urban cities were in the western world. This pattern has changed markedly. Tokyo, New York, Sao Paulo, Mexico City and Shanghai were the leading five urban areas of the world according to the

most recent United Nations' estimates. By 2015, four of the top five projected urban areas will be in the Eastern Pacific Rim: Tokyo, Bombay (actually on the Indian Ocean), Lagos, Shanghai, and Jakarta (United Nations 1995). In this article we examine nine East Asian Pacific Rim countries where rapid urbanization is occurring: Hong Kong, India, Indonesia, Republic of Korea, Japan, Malaysia, Philippines, Singapore, and Thailand.

Table 1

Population by Age for Select Pacific Rim Countries, Various Years 1980 to 1990.

	Total	Less than 15	Age 15-60	60 plus
Hong Kong (1986)	5,395,997 100.0%	1,246,947 23.1%	3,530,894 65.4%	618,156 11.5%
India (1981)	665,287,849 100.0%	263,107,050 39.5%	358,679,639 54.0%	43,167,386 6.5%
Indonesia (1990)	179,247,783 100.0%	65,403,730 36.5%	102,284,67 57.1%	211,551,693 6.4%
Japan (1990)	123,611,167 99.7%	22,486,239 18.2%	79,158,962 64.0%	21,639,609 17.5%
Rep. Korea (1985)	40,419,652 100.0%	12,094,890 29.9%	25,567,917 63.3%	2,756,425 6.8%
Malaysia (1980)	10,944,844 100.0%	4,272,417 39.0%	6,032,215 55.1%	640,212 5.8%
Philippines (1980)	48,098,460 100.0%	20,221,547 42.1%	25,335,076 52.6%	2,541,837 5.3%
Singapore (1990)	2,690,100 100.0%	625,700 23.3%	1,819,800 67.6%	244,600 9.1%
Thailand (1990)	54,532,300 100.0%	15,710,300 28.8%	34,847,100 63.9%	3,974,900 7.3%

Source: United Nations 1993.

Also well documented is the change in age structure over time. Low fertility accompanied by increased life expectancy results in fewer workers to support the dependent elderly population. If fertility rates do not decline and life expectancy increases because of better nutrition and sanitation, total dependency ratios increase (Habib 1988). Of the nine countries presented in Table 1, Japan

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stands alone as the Pacific Rim country with a population age structure similar to the United States and Western European countries. Its over age 60 population was at 17.5 percent in 1990. Hong Kong and Singapore are in a middle position with 11.5 percent and 9.1 percent over age 60 respectively. The remaining

Table 2

Select Demographic Characteristics Select Countries, Various Years 1980 to 1990.

	<i>Fertility</i>	<i>Male Life Expt.</i>	<i>Female Life Expt.</i>	<i>Ave. HH Size</i>	<i>% Single/ Widowed Male Elders</i>	<i>% Single/ Widowed Female Elders</i>
Hong Kong (1986)	1.3	74.3	79.8	3.7	17.3	55.9
India (1981)	4.7	55.4	55.7	5.5	21.4	64.8
Indonesia (1990)	3.1	58.5	62.0	4.8	15.9	60.3
Japan (1990)	1.5	75.9	81.8	3.0	11.7	46.4
S. Korea (1985)	1.7	66.2	72.5	4.1	13.2	64.4
Malaysia (1980)	3.9	67.2	72.5	5.1	17.0	56.4
Philippines (1980)	4.7	60.2	63.7	5.6	18.3	48.4
Singapore (1990)	1.7	70.8	76.4	4.6	21.3	57.4
Thailand (1990)	2.2	63.8	68.9	5.2	21.2	53.6

Source: United Nations. 1993.

(less developed) countries (India, Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand) fall into the group having the smallest percent of elderly.

The pattern of population aging in the nine countries is consistent with the fertility and average life expectancy patterns

shown in Table 2. Those countries having the largest percent elderly population also have low fertility and long life expectancy; those countries having the smallest percent elderly population have high fertility and lower life expectancy.

Population projections show that as the nine study countries further urbanize and industrialize, population aging will take place as a function of declining fertility rates. Table 3 shows that although Japan was the unquestionable leader in population aging in 1990, Hong Kong and Singapore will join Japan with an elderly population of 21 percent each forty years later. The Republic of Korea will follow with 16 percent elderly in 2030 while the remaining countries will have more than doubled their percent elderly in the same period. In absolute numbers, Japan will double its age 65 and over population while the Republic of Korea, Singapore, and Malaysia will quadruple their aged populations (Martin 1991).

Table 3

Population Projections for Select Countries, 1990 and 2030.

	1990 Pop. (Mil.)	Av. Yr Growth Rate	Percent Aged 65+ (1990)	2030 Pop. (Mil.)	Av. Yr. Growth Rate	Percent aged 65+ (2030)
Hong Kong	5.8	1.3	8.6	7.3	0.05	21.1
Indonesia	181.6	2.0	3.9	290.0	0.75	9.4
Rep. Korea	43.7	1.3	4.9	56.5	0.29	16.1
Japan	123.3	0.4	18.5	123.5	-0.30	21.2
Malaysia	17.8	2.5	3.8	31.4	0.88	9.9
Philippines	62.2	2.2	3.4	104.8	0.86	8.4
Singapore	2.7	1.0	5.6	3.1	-0.08	21.4
Thailand	56.3	1.7	3.8	85.0	0.62	10.3

Source: Bulatao et al. 1990; Serow and Cowart 1993; Beregi, et al.

Less well documented throughout the countries of the Pacific Rim is the percent of elderly living in urban and rural areas. Heligman et al. (1993) estimate that by 2015, half of the persons age 65 and over living in the developing regions of Asia and Oceania will reside in urban areas. For China, the percent of urban elderly will be 56 percent, and for India, 38 percent. As the urban mega-regions extend across countries and the city cores

deconcentrate into suburban areas, the distinction between urban and rural areas may blur (United Nations 1995). However the needs of the rural elderly are likely to become more acute due to continued rural-urban migration of younger persons (duGuerny 1997).

Economic Development, Retirement, and Pensions

Population aging is occurring at a different stage of national development in Asian countries than it occurred in the developed countries of western Europe and the U.S. For Asia, industrialization and widespread economic development are expanding simultaneously with a rapid aging of the population, whereas, in western Europe and the U.S., population aging followed industrialization and major economic development. Asia thus has a simultaneous competition between meeting the needs of the elderly and developing the infrastructure for economic and urban development (Habib 1988). As a result, countries must decide on the percentage of public funds to be invested in economic development and in support and services for the elderly. Because some may not see a connection between national well-being and the well-being of the elder group, a strong focus on developing the economy may lead to less attention to providing health and other services which are especially important to older persons. However, a recent report of the World Health Organization indicates that investments in health have system-wide payoffs, and neglect of health needs can impede overall national development (World Health Organization 1995).

An essential need of the elderly is income security; yet, not all elders have pension plans. This may be due to national policy or the nature of the elders' previous work and their lack of education. For example, in China, 10 percent of the working population receives pensions, in India it is 8 percent (Holden 1996). Singapore elders are in a better position as 37 percent of the population aged 50-54 are eligible for pension income in their later years (Martin 1991). The percent of workers covered with some level of pension for the other countries are: Indonesia, 12 percent; Malaysia, 73 percent; Philippines, 53 percent; and Thailand, 3 percent (Hugo 1991). As countries age the dependency ratio increases, resulting in fewer workers to support the pension fund and concern over financing the pension coverage will increase (Hugo 1997). Without adequate pensions, the economic status of the elderly lowers to poverty levels. Poor data about the health and disability status of the aged is an added concern for the long term viability of these

nations in the Pacific Rim. Clearly, the countries examined here fall into two distinct groups in terms of the immediacy of concerns with pension funding. Those such as Japan, Hong Kong, and Singapore, with low fertility and rapidly rising numbers of elders (relative to the working age population) will need to address this issue sooner than the other nations.

Employment and retirement practices contribute to the adequacy of pension funds necessary to support elders in their later years. Not unlike the U.S., the elderly in Asian countries frequently are not employed after age 55 (Martin and Kinsella 1994). In Japan, the retirement age was recently increased from 55 to 60, and there are plans to further raise the retirement age to 65 (Martin 1991; Oshima 1996). Raising the age of retirement does not necessarily mean the elder population will choose to work, but it provides an avenue for the elderly to continue to contribute to the economy and to the pension fund rather than becoming recipients of public funds and services. Singapore has provided lower tax rates for persons age 55 and over to encourage older persons to continue to work (Martin 1991). For older persons who moved to the cities during the 1970s and 1980s and have since "aged in place," continued contributions to productive work may be more likely than for older persons who have only recently moved to urban areas and lack the education and employment skills that are adaptable to the cities. In the less developed nations of the Pacific Rim where fertility, though falling, remains high, and many younger workers are awaiting productive jobs, raising the retirement age may be seen as an impediment to younger workers. The perceived intergenerational competition can be reduced by training younger workers for jobs that require new skills, or by moving the older worker into positions that place less demand on their time and provide a good fit with their abilities (Treas and Logue 1986). For example, the older worker can transfer from full time to part time work, or can assume a new career that supports the employment of the young such as meeting the child care needs of the young worker.

Treas and Logue (1986) suggest that a country may choose to view the aged from four perspectives that may not be mutually exclusive: (1) low priority in development efforts; (2) impediments to development; (3) a resource in the development process; and (4) potential victims of modernization if their status declines while development is occurring. If retirement and pension policies remove the elderly from making contributions to the economy through productive work, they may more likely be viewed as either low priority or an impediment to development. However, longer life

expectancies that can be expected to result from improved housing, sanitation, and nutrition that accompany economic development can allow the elderly to make productive contributions to the economy. Countries that are rapidly urbanizing may want to consider changing retirement and pension policies periodically to account for the needs of all ages as the country goes through different phases of development. Again, particular attention may be needed for the rural elderly in these circumstances, since they will be most likely to suffer from the lack of familial support mechanisms. Data show that developing countries have lower retirement rates than developed countries, and countries that have undergone population aging raise their retirement age (Habib 1988).

Housing, Caregiving and Support Services

In the past, the primary concern was that elderly would be left alone in the rural area as their adult children moved to the city to seek new employment opportunities (Martin and Kinsella 1994). However, with the expansion of metropolitan areas into regional megacities, a new possible pattern for the future will be the elder population residing in the older central core of the city as the adult children move to the edges to seek employment. Of particular concern about urban elderly is the cost of living gap: urban housing and other costs of living are higher than for rural areas (Hugo 1991). Unlike patterns in North America, elders living in developing countries may not have the capital resources gained from home ownership (Hugo 1991). This is particularly true of elders who reside in urban areas where the cost of housing precludes home ownership.

There is some evidence that the traditional patterns of multi-generational family living in the Asian countries are changing. Whether the elderly reside in rural or urban areas, the traditional practice of living with their children has declined. Contributing to this practice are the expense and small size of urban housing, housing designed for nuclear families, adult children migrating away from parents to seek employment, the education and employment of women, and preferences of the elderly for living independently.

For the nine countries studied, average household size for varying years from 1980 to 1990 ranged from 3.0 to 5.6 persons and the percent single or widowed persons ranged from a low of 11.7 percent among male elders to a high of 64.8 percent for female elders (Table 2). In the mid-1970s, only 9 percent of elderly

Japanese lived alone (Hugo 1991). In 1980, about one fourth of Indonesian elders lived with their adult children or other relatives (Hugo 1991). In Malaysia, about three-fourths of elders live with adult children, with more urban than rural elders living in multi-generational households (Andrews 1986 cited in Hugo 1991). Martin (1991) indicates that about 75 percent of East Asian elderly live with their adult children, but in Japan, the Republic of Korea, and Taiwan the rates of intergenerational co-residence are declining. For example, in the Republic of Korea, the percent of elders living with adult children dropped from 71 percent in 1970 to 64 percent in 1980. Similarly, in Taiwan the percent living with adult children dropped from 81 percent in 1983 to 69 percent in 1985 (Martin 1990).

Patterns of institutionalization of the elderly reinforce the prominent role of the family in Asian countries. In the U.S., 5 percent of persons age 65 and over lived in nursing homes in 1990, while 6.7 percent resided with family members (this excludes those living only with a spouse). This compares with only 1.5 percent of the elderly population in Japan living in nursing homes, although this low rate may in part be due to the 2.5 percent who are in hospitals where less stigma is perceived (Martin 1991). In 1991 in Hong Kong, 1.7 percent of elders lived in institutions compared with 85 percent who lived with family members, and about 5,000 elders were on wait lists for institutional care (Chow 1994).

Asian countries have created various solutions for their aged who live alone. In Singapore, about 3,000 elders without families live in sheltered homes for the aged. Urban apartment blocks have been fitted with support services such as activity centers but policies limit the ratio of elderly residents to 50 percent to prevent age segregated environments, and condominium style retirement villages are in the development stage by private developers (Harrison 1997). In Hong Kong there are three publicly supported housing options: housing for 2-3 unrelated elders; housing for adults who live with either elderly parents or other dependent elderly relatives; and two housing units in one block for adult children and their elderly parents or other dependent elder relatives. Because Hong Kong's housing policies for elders have been in place since the early seventies, some older housing blocks with small units have concentrations of elder residents as younger couples move to the outlying New Territories (Chi and Chow 1997).

In the Republic of Korea, a different pattern exists. Two-thirds of the urban elderly, and over 90 percent of rural elderly own detached houses resulting in most elderly owning their own homes. A recent trend of building apartments, particularly in Seoul, will change the ownership pattern for the future residents who are "aging in place" from home owners to renters. For dependent elders, there are free homes for the aged and free nursing homes for elders who have no family or financial resources. Low cost and for-profit housing for the aged and nursing homes are also available (Kim 1997).

Less than 10 percent of Indian elders live alone. There are no organized programs of housing for the elderly or elderly poor leaving the poor elderly to subsist on earnings from day work or hawking (Ara 1997).

It was not until the late 1970s, that the rapid pace of aging in Japan became apparent. Formal policies for suitable housing for the elderly were not instituted until 1986. Now, public programs provide rental housing for the poor, rental or purchase programs for the middle income population, and purchase options through loan programs for more affluent persons. Housing for the elderly may be in two generation units, adjoining units, or elder households in the same neighborhood as the adult child. Housing for elders provides special accommodations for safety and mobility of the elderly. Newer initiatives include "silver housing" for elders, life care communities, revising existing housing, and "aging in place," all with support services (Kose 1997). During the 1980s, Japan also coped with its expanding elder population by establishing communities for elders overseas in Spain and Hawaii.

Although each country has different housing policies to accommodate its growing aged population, each builds in access to formal services or informal care by relatives. Traditional patterns of relying exclusively on family care are rapidly changing with urbanization and economic development. Obstacles to family caregiving can include: lack of mobility for adult children to obtain employment; lack of education and employment of women; declining fertility rates; a need to focus on raising children rather than caring for elders; and the high cost of urban housing which is often physically too small to accommodate multi-generational family living. These are essential elements of urbanization and development but deter providing care for elder family members as is evidenced by some abandonment of elder members in industrialized areas like Singapore and Hong Kong (Hugo 1991). In Japan and Singapore, tax incentives are in place to encourage care

of elder parents, and in China, daughters and sons and even grandchildren are encouraged to care for aged family members (Martin 1991). Modern pressures for increasing productivity make it difficult for families of shrinking size to provide complete care for the frail or dependent elderly. As societies age, and at the same time focus on using their employable members to boost the economy, provisions for social support will need to augment the care families are able to give. Such supports will need to be directed to all elders rather than targeting only those who are in poverty or without families.

Similarly, as these populations age, different health services must be created from those services used in a younger country with a younger population age. Developing countries focus on delivering primary care, immunizations, and sanitation. As fertility rates decline and mortality shifts from communicable diseases to chronic conditions of the aged, there will be a need to reexamine health systems that emphasize acute care and substitute services that are directed to health promotion and maintenance care for chronic conditions to prevent disability. Using acute hospitals instead of homes for the aged as is the practice in Japan (Martin 1991) is an avoidable pitfall.

As these countries' populations age, refitting the system of health services to meet the major conditions of the population will assist in containing rising costs of health care that accompany an aging population. Refocusing health services and providing community based home care will be less expensive than providing nursing home or other institutional care for debilitated elderly (Micklin 1994). Japan has a ten-year plan to limit institutional care and instead to provide home care and geriatric rehabilitation (Martin 1991). Mechanisms such as co-payments, or the establishment of medical savings accounts as in Singapore can limit the portion of the national budget spent on health services. Countries will need to recognize that paying for the health services required of an aging population will be higher than the costs of care for a younger population.

Conclusions and Implications

Undisputedly, countries of the Pacific Rim will undergo changes in their age structure that will increase the absolute numbers and percentage of the elderly in the population. At the same time these countries are undergoing rapid urbanization. How these changes occur will impact the quality of life of the entire population, old and young. Much depends on the ability of planners and

policymakers to recognize the needs of an aging society and take appropriate action to meet these needs while their attention is focused on expanding the economy.

Long term benefits to the population and to the economic well-being of the country will be gained from establishing pension and retirement policies. To establish such policies, regular assessment of current and projected dependency ratios will be needed. Such baseline data will allow policymakers to make informed decisions about pension funding and retirement age, two interactive dimensions of income security. As a country's population ages through lowered fertility and lengthened life expectancy, raising the age of retirement and other incentives for continued employment will allow the older population to extend their years of contributions to the pension fund rather than taking from the fund at an early age. Periods of high unemployment require accommodations in these policies. As a country ages, retirement and pension policies must change to maintain the balance between adequate income for retirees and affordable contributions by employees and employers.

In an environment of high productivity from an active work force, systems of support services for elders and their family members who are care givers are essential. Housing that meets the needs of the aged as well as their adult children and their families will need to be planned. As countries mature, the spatial concentration of the aged will gradually shift from predominately rural to predominately urban, requiring a corresponding shift in the placement of housing, social and health services, and transportation that is suited to the elderly. The above mentioned local planning efforts must be combined with an equal emphasis on promoting the economic functions of the city.

Changes in health services that focus on primary care and the prevention of communicable disease in a younger population should shift to services that are directed to preventing the complications of chronic conditions through health maintenance programs. Promoting active life expectancy and minimizing disability through refocused health services will result in lower costs for tertiary health services and institutionalization for disabled who have multiple limitations.

Finally, reliable and regular demographic and health data collection systems must be in place and refocus from monitoring only communicable diseases to assessing a combination of demographic, health status and economic measures (Manton and Stallard 1993). Throughout all phases of a country's economic

development, surveillance of mortality and morbidity will reveal an epidemiological transition that occurs simultaneously with demographic aging (Micklin 1994; Bulatao 1993). Periodic monitoring of the population for mortality and morbidity causes will provide the data needed to design an appropriate mix of health services for each phase of population aging. Rice (1992) recommends the following areas of data collection for an aging society: health status and quality of life, health transitions and compression of mortality, health promotion and disease prevention, quality of care, long term care, financing health services, and health services utilization.

How the cities of East Asia respond to the local needs of their aging population at the same time their economies are expanding globally will not only be a planning challenge, but will provide lessons for other countries with aging populations.

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