

Chapter

3

Impact of Population Change on Well-being of Elderly in Thailand

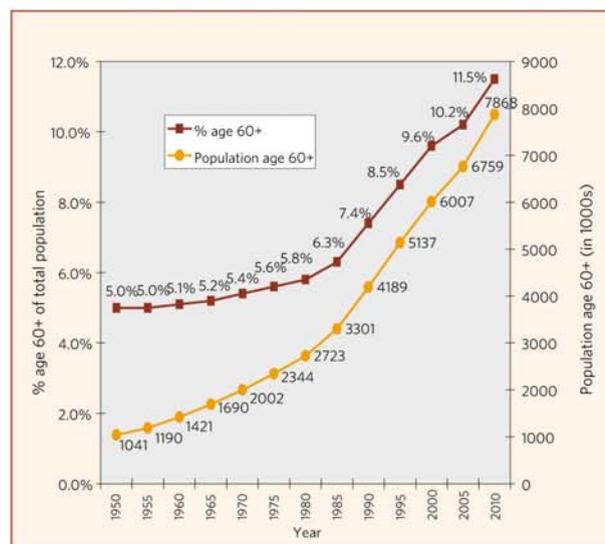
An ageing population in the context of economic growth

Population ageing

Among the most prominent features of Thailand's population in recent decades is the rapid growth in the numbers of older persons and their increasing share of the population. The rapid growth is a legacy of the high levels of fertility that prevailed at the time when the cohorts now entering older ages were born and the subsequent improvements in mortality over their lifetime. The increasing share that they represent of the total population is attributable mainly to the rapid decline in fertility during the three decades following the mid-1960s and the below replacement level of fertility since the early 1990s. Improved life expectancy is also contributing to the ageing of Thailand's population but to a lesser extent.

Figure 3.1 shows the very substantial growth in the number of persons 60 and older as well as the increase in the percent they represent of the total population between 1950 and 2010 based on estimates and projections from the 2008 assessment by the United Nations Population Division. Population ageing, as distinct from increases in the number of older persons, occurs when the growth rate of older population exceeds that of the total population, a circumstance that has increasingly characterized Thailand in recent decades. The Thai population age 60 and over more than doubled between 1950 and 1975 even though their share of the total population increased only very modestly from 5.0 to 5.6 percent. This was so because the overall population growth rate was also high during those years. Since then, fertility decline slowed overall population growth while the growth rate at older ages remained high and even accelerated. As a result population ageing and the size of the older population rose in tandem.

FIGURE 3.1 POPULATION AGEING AND GROWTH OF THE OLDER POPULATION, THAILAND 1950-2010



Source: United Nations World Population Prospects: The 2008 Revision (Medium Variant)

In the coming decades beyond those shown in Figure 3.1, the UN projections anticipate even more dramatic population ageing. According to the medium variant projection, the numbers of persons age 60 and above will approach 14 million by 2025 and exceed 19 million by 2050. At the same time their share of the population will rise to 19% by 2025 and will constitute 26% of all Thais by 2050.

Population ageing in Thailand, as in a number of other Asian countries, is occurring faster than in more developed countries in the West in the past. For example, the amount of time it took for the percent of the population in ages 65 and over to double from 7% to 14% took many decades in the developed countries of the West (UN 1956). In contrast, UN projections indicate in Thailand it will take just under two decades. Thus Thailand will need to adapt far more rapidly to the transformation in

its age structure than has been the case historically in those countries where population ageing is already advanced. This adaptation, however, will be occurring within a very different and evolving social, economic and technological environment.

Past trends and differences in material well-being

The rapid ageing of the Thai population has been occurring within a context of substantial economic and social development. Although there have been spells of economic downturn, the most notable during the latter part of the 1990s, much of the period during which population ageing has been taking place was also characterized by a thriving economy. To be sure, the benefits from this have been unevenly shared across different segments

of Thai society. Still the economic growth and improved standards of living that characterized Thailand during most of the last several decades also benefited many older persons. This is apparent in the improved quality of their housing and the far higher proportions that live in households with appliances and amenities that make daily life more convenient.

As Table 3.1 shows, there has been a clear trend for older persons towards residing in better constructed houses. Between 1994 and 2007, those that lived in dwellings made of cement or brick increased from 14% to over one third by 2007 and the share who lived in houses with a flush toilet rose from one tenth to almost one fourth. Even more dramatic is the increased availability of piped water inside the dwelling which rose sharply from under a third to almost four-fifths.

TABLE 3.1 HOUSING QUALITY AND HOUSEHOLD POSSESSIONS, PERSONS 60 AND OLDER, 1986-2007

	All persons age 60 and older				Residence 2007	
	1986	1994	2002	2007	Urban	Rural
% in dwellings made of mainly cement or brick	n.a.	14.4	21.4	34.1	53.1	26.6
% in dwelling with flush toilet	n.a.	9.9	12.2	24.2	49.8	13.9
% with piped water inside house	n.a.	31.9	54.6	79.1	91.5	74.2
% in households with the following possessions						
Television	47.7	83.7	n.a.	95.7	98.0	94.8
Video/DVD	—	17.3	n.a.	63.0	74.5	58.5
Refrigerator	24.5	52.5	n.a.	87.4	95.0	84.3
Phone (landline or cell)	—	15.4	n.a.	76.0	89.5	70.6
Air conditioner	1.4	7.0	n.a.	16.0	39.2	6.7
Washing machine	—	14.7	n.a.	48.0	69.6	39.3
Motorcycle	27.8	45.9	n.a.	67.2	56.1	71.6
Car/truck	7.1	16.7	n.a.	30.9	48.6	23.8
Computer	n.a.	n.a.	n.a.	17.1	35.0	9.9
Annual income in 2007 Baht (% distribution)						
Under 10,000	56.4	38.6	23.8	16.8	10.5	19.3
10,000 to 99,999	39.9	53.9	65.8	67.8	61.3	70.4
100,000+	3.8	7.5	10.5	15.4	28.2	10.3
Total	100	100	100	100	100	100

Sources: 1986 Survey of Socio-economic Consequences of Aging of the Population in Thailand; 1994, 2002 and 2007 Surveys of Older Persons in Thailand

Table 3.1 also reveals substantial increases in percentages of older age Thais who live in households with a number of important possessions. For example, although less than a fourth lived in a household with a refrigerator in 1986 the vast majority did by 2007. One of the most striking changes is the increased access to telephones. In 1994 only 15% of older persons lived in households with a telephone compared to over three fourths by 2007. This increase is due largely to the spread of mobile (cell) phones. As with other household possessions, even if the mobile phone belonged to another household member, the elderly member would still likely be able to benefit from it. The spread of phones has radically altered the ability of older persons to keep in contact with adult children who live elsewhere and thus has important implications for their social well-being (Knodel & Chayovan 2008; Knodel & Saengtienchai 2007). In addition phones can be used to get help in case of health emergencies, a major concern for many older persons and this allows their children to communicate with each other about the situation of their parents and better coordinate assistance when needed.

Incomes of older persons have also increased considerably. As Table 3.1 shows, over half of persons age 60 and above in 1986 reported annual incomes of less than 10,000 Baht (expressed in 2007 values to adjust for inflation). By 2007 this declined to only 17%. During the same period, the percent reporting incomes of 100,000 Baht or more rose from only 4% in 1986 to over 15% by 2007.

The improvements in material well-being appear to have benefited both older women and men. According to the 2007 Survey of Older Persons, there is little difference with respect to the percent of men and women that live in better quality housing and in households with important appliances and amenities (Knodel and Chayovan 2008). In addition the percents who report sufficient income and satisfaction with their financial situation are almost identical for men and women. Among married persons, women disproportionately report low personal income and lower wealth compared

to men but as wives they likely share in the benefits from their husbands' income and wealth. In contrast, among unmarried older persons, women fare at least as well as men. The general lack of gender inequality in material well being among older Thais is fortunate given the predominance of women within the older age population (as discussed below).

Although the material situation of older persons has clearly improved in urban and rural areas, substantial rural and urban differences remain and are often quite pronounced. For example, as Table 3.1 shows, in 2007 more than twice the percent of urban than rural elderly lived in houses made of cement or brick and those who lived in dwellings with a flush toilet constituted almost half of urban but only 14% of rural older persons. Urban dwellers are considerably more likely to live in better constructed houses and to live in households with the possessions shown than their rural counterparts. While some items such as televisions, refrigerators, electric fans, and rice cookers are almost universal even in rural areas, motor vehicles, air conditioners, microwave ovens, and computers are still largely limited to urban households. Likewise substantial income differences are evident. In 2007, urban elderly were more than twice as likely as rural elderly to report incomes of 100,000 Baht or more and only half as likely to report incomes of under 10,000 Baht.

Despite the significant improvement in material well-being, considerable poverty and economic hardship remains among substantial numbers of older people. According to the 2007 Survey of Older persons, 21% of persons 60 and older said that their income was inadequate and an equal share said that their income was adequate only sometimes. In addition 28% said that they were not satisfied with their financial situation. Together, almost a fifth (19%) reported both an inadequate income and dissatisfaction with their financial position. This differed considerably between rural and urban older persons with only 13% of urban elderly compared to 21% of rural elderly saying both that their income was inadequate and financial position unsatisfactory.

Trends in likely determinants of elderly well-being

Declining potential support ratio

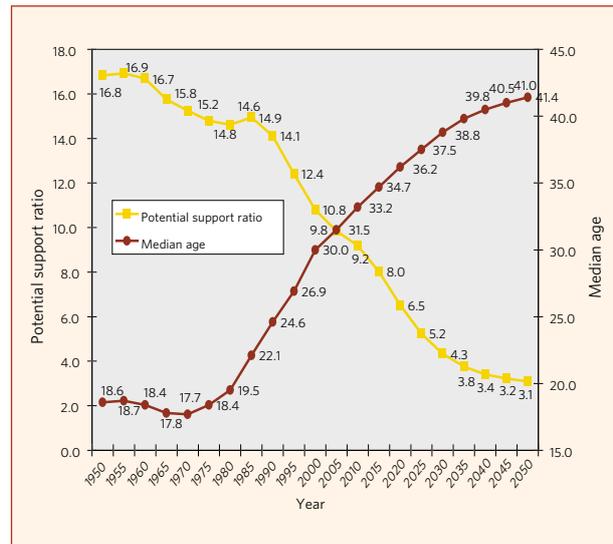
Dramatic shifts in the relative numbers of economically active persons available to support those who are no longer active are accompanying population ageing. At the societal level, a common age structure measure that captures this change is the potential support ratio, defined as the ratio of the population aged 15-64 to that aged 65 and older. The measure is intended to reflect the support base of persons in ages most likely to be economically productive and hence able to support those in older ages through taxes to pay for retirement benefits and health care.

Although most of this chapter refers to the older population as age 60 and above, for the purpose of calculating this measure those 60-64 are grouped together with productive age adults to conform with the standard definition of this measure and also because more than half of Thais age 60-64 are still working (see Table 3.5 below). A falling potential support ratio reflects a shrinking support base of adults on whom the old age population can depend. The ratio is only an approximate measure of this issue since some persons age 65 or older still work or are otherwise self-supporting and not all persons in ages 15 to 64 are economically active, especially among those at the low end of this age range who are still attending school. Nevertheless, as evident in Figure 3.2, the median age of the Thai population is projected to more than double by 2050 while the support ratio declines precipitously, from a high of almost 17 to 3 over the hundred year period shown. There can be no doubt that there will be far fewer productive age persons per capita to support older age Thais in the future.

Declining family size

The fertility decline that started over four decades ago and is largely responsible for the dramatic changes in the potential support ratio is equally evident at the family level. This is clearly seen in the declining family size of the cohorts that have been successively entering the older age range and that are poised to do so in the coming years. Figure 3.3 shows the mean number of living children of the different age groups that constitute the population

FIGURE 3.2 MEDIAN AGE AND POTENTIAL SUPPORT RATIO (POPULATION 15-64/65+), 1950-2050

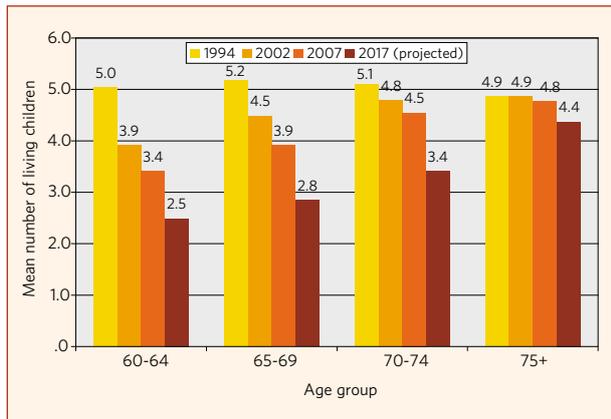


Source: United Nations *World Population Prospects: The 2008 Revision* (Medium Variant)

age 60 and over as documented in the 1994, 2002 and 2007 NSO Surveys of Older Persons and estimates for these age groups in 2017.

Very substantial declines in the average number of living children have already taken place among the youngest elderly, i.e. those in the 60-64 age group and fairly substantial declines have also characterized the 65-69 age group. By 2017, all age groups under 75 will show very substantial declines in their average number of living children. Moreover, these declines will continue past 2017 given that persons in the prime adult ages have been averaging two or fewer children over the last two decades. So far childlessness among older persons has been rare although it is beginning to increase. In 1986, only 3% of older persons had no living children and this increased to only 5% by 2007. However, this could increase by at least a moderate extent in the future as suggested by the fact that 7% of persons age 55-59 and 8% of those 50-54 were childless in 2007. A contributing factor to increased childlessness in the future is the likely increase in the proportions who never marry (see discussion below).

FIGURE 3.3 MEAN NUMBER OF LIVING CHILDREN BY AGE, 1994-2017



Sources: 1994, 2002 and 2007 Surveys of Older Persons in Thailand.

Note: Living children include own, step and adopted children. Estimates for 2017 equal the mean number of children of the age cohort that is 10 years younger in 2007 than that shown for 2017. These estimates do not allow for the fact that some children may die, that some elderly men may have additional children if they remarry women below reproductive ages, and there may be differential mortality among the elderly in relation to the number of children they have. Nevertheless they should be approximately correct.

Increased dispersion of children

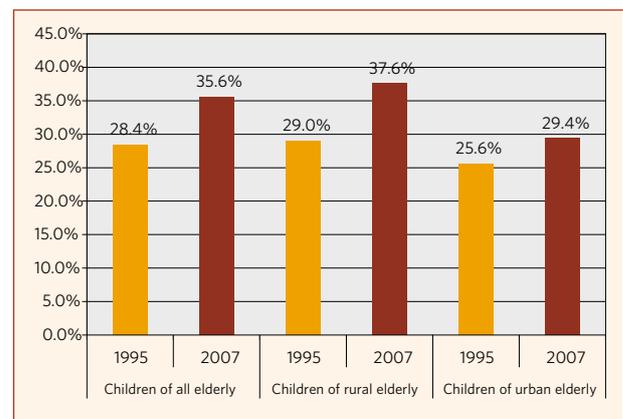
In addition to declining family size, the increased tendency for adult children to migrate for employment in recent years further contributes to lesser availability of children nearby who could assist their older age parents on a routine basis. As Figure 3.4 shows, the percentage of children of persons aged 60 and older who lived outside their parents' province not only is substantial but increased considerably between 1995 and 2007. In both years, the proportions that lived outside the province of their parents are greater for children of rural than urban elderly. This likely reflects the better employment opportunities available in urban areas and thus the greater necessity for rural compared to urban young adults to migrate to take advantage of them. Moreover, increases in the percent that lived outside their parents' province were greater among children of rural than urban elderly. Given the directions in which the Thai economy is heading, it seems reasonable to expect further increases in the migration for employment of both rural and urban young adults.

Changing living arrangements

The decline in the average number of living children of older persons that has already taken place and the increase in the proportion of children that moved away both contribute to changes in the living arrangements of Thai elderly. As Figure 3.5 shows a clear decline in coresidence with children is evident over the last two decades. The overall percent of persons 60 and above who live in the same household with a child fell from 77% in 1986 to only 59% by 2007. Also of interest is the proportion of older persons that lives independently of others, either alone or with only a spouse. The percent who live alone has been quite low although it increased during the last decade to almost 8%. However if those who live only with a spouse were included, the percentage living independently increased steadily during the last two decades reaching almost one fourth of Thais age 60 and over by 2007, up from only 11% in just over two decades earlier.

Measures of literal co-residence ignore situations in which elderly parents and their children live very near each other but in separate dwellings, an arrangement that can meet many of the same needs of both generations as coresidence. Such situations are common in Thailand, especially in rural settings (Cowgill, 1972; Knodel & Saengtienchai, 1999). Figure 3.5 thus includes the percent of persons who either lived with or very near to a child for the three

FIGURE 3.4 PERCENT OF CHILDREN OF PERSONS AGE 60+ WHO LIVE OUTSIDE THEIR PARENTS' PROVINCE



Sources: 1995 Survey of Welfare of Elderly in Thailand; 2007 Survey of Older Persons in Thailand

surveys that included the requisite information. While this situation declines more or less in parallel to the decline in coresidence, significantly higher percentages of older persons are encompassed by this more inclusive measure.

When interpreting the measures of living alone or living only with a spouse, it is important to recognize that in a substantial share of these cases, the older persons are living very nearby one of their children. For example according to the 2007 Survey of Older Persons, both among those who lived alone and among those who lived with only a spouse about a third lived next door to a child and slightly over half either lived next door or within the same locality (Knodel & Chayovan 2008).

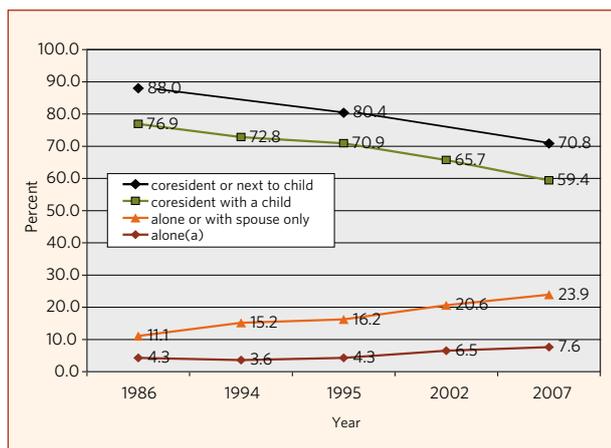
Age and gender composition

The elderly age span, especially when defined as starting at age 60, covers a wide range of ages. Since important characteristics and situations are closely associated with age, changes in the age composition of older persons are of considerable interest. According to the 2007 Survey of Older Persons, almost 60% of the population age 60 and above are under 70 and only 10% are 80 and

older. The 2008 medium variant United Nations projection for Thailand indicates that the projected age distribution of older persons for 2030 will be similar to that in 2010. However, the projections anticipate considerable ageing of the older population in the subsequent two decades. The share in their 60s is projected to fall from 56% to 45% and those in their 80s to double from 10% to 20%. Although projections for situations so far in advance are necessarily uncertain, unless mortality or international migration change in quite unexpected ways, in the intermediate future the population of older persons in Thailand will itself be considerably older than it is currently.

One feature of the current older population is the predominance of women, especially among the very old. According to the 2008 United Nations assessment, currently (in 2010) women constitute 55% of persons 60 and older and 59% of those 80 and above. The relative excess of women over men among the Thais 60 and older is projected to change little during the coming decades, rising slightly to 56% by 2030 and 57% by 2050. Among the population age 80 and over, the share that is women is projected to remain at 59% through 2025 but then to rise steadily to 67% by 2050. The excess of women over men at older ages is a result of more favorable female than male survival rates at virtually all ages and an even more pronounced female survival advantage at the older ages.

FIGURE 3.5 LIVING ARRANGEMENTS OF PERSONS AGE 60 AND ABOVE, THAILAND 1986-2007



Sources: 1986 Socio-economic Consequences of the Ageing Population in Thailand; 1995 Survey of Welfare of Elderly in Thailand; 1994, 2002 and 2007 Surveys of Older Persons in Thailand.

Notes: (a) 1/3 of those who live alone live next door to children and 1/2 live next door or in the same locality as one of their children. The 1986 percent for 'coresident or next to a child' refers to 'coresident or in daily contact with a child'.

Age and gender differences in marital status

Spouses can be primary sources of material, social and emotional support for older persons and provide personal care during times of illness or frailty. Thus an elderly person's marital status has important implications for many aspects of their well-being. As Table 3.2 shows, only 3% of Thai elders never married. Over 60% remain married and reside with their spouse while almost a third is widowed. Almost all who are married live together with only a few percent living separately. Likewise only a small share are separated or divorced. At the same time, pronounced age and gender differences in marital status are apparent.

TABLE 3.2 MARITAL STATUS DISTRIBUTION, BY AGE AND GENDER, PERSONS 60 AND OLDER, 2007

	Total	Current age				
		60-64	65-69	70-74	75-79	80+
Total						
single	2.7	3.0	3.2	2.1	2.5	2.1
married living together	60.1	72.1	65.8	55.3	47.1	29.4
married living separately	2.4	3.0	2.1	2.2	1.8	2.2
widowed	32.4	18.7	26.4	38.2	47.0	65.1
separated/divorced	2.4	3.2	2.4	2.3	1.7	1.2
total	100	100	100	100	100	100
Men						
single	1.5	1.4	1.9	0.8	1.7	1.7
married living together	79.8	87.3	84.5	77.4	66.3	57.8
married living separately	2.7	2.8	2.0	3.2	2.6	2.9
widowed	14.3	6.9	9.9	16.7	27.6	35.9
separated/divorced	1.7	1.7	1.7	2.0	1.8	1.6
total	100	100	100	100	100	100
Women						
single	3.8	4.5	4.3	3.1	3.1	2.4
married living together	44.2	58.8	50.2	37.9	33.1	11.6
married living separately	2.1	3.0	2.2	1.5	1.3	1.7
widowed	46.9	29.1	40.2	55.0	61.0	83.4
separated/divorced	3.0	4.6	3.0	2.5	1.6	0.9
total	100	100	100	100	100	100

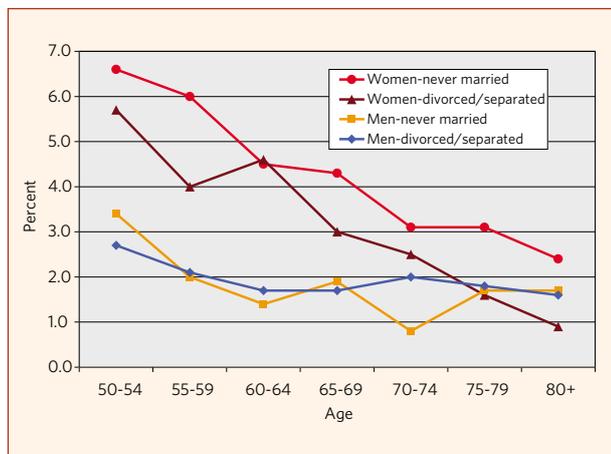
Source: 2007 Surveys of Older Persons in Thailand

The percent that are currently married declines sharply with age accompanied by a commensurate increase in the percent widowed. Pronounced gender differences are also evident. Among the total population of persons age 60 and over, 80% of elderly men are currently married and living with a spouse compared to less than half of elderly women. Moreover, these gender differences increase with age so that among persons aged 80 and above the proportion of men who are married and living with a spouse is five times greater than for women. Women are far more likely to be widowed than men throughout the elderly age span and among all elderly women the number who are widowed actually exceeds the number in an intact marital union. These gender differences reflect a combination of higher male mortality, a tendency for men to marry women younger than themselves,

and more frequent remarriage among men than women following marital dissolution, situations that are unlikely to change in the foreseeable future.

Over recent decades, the proportion of Thai adults remaining unmarried during their lifetime has been increasing (Jones 2008). Figure 3.6 provides evidence suggesting that this is beginning to affect the marital status distribution of the older population and will become more evident in the coming years. The proportion who never married among women as recorded in the 2007 Survey of Older Persons declines fairly steadily with each successive five-year age group from ages 50-54 on. Given that few women are likely to marry for the first time after age 50, the higher proportions single in the younger age groups are very likely to translate into higher proportions single in older age groups in

FIGURE 3.6 PERCENT NEVER MARRIED AND PERCENT DIVORCED OR SEPARATED, BY AGE AND GENDER, THAILAND 2007



Source: 2007 Survey of Older Persons in Thailand

the coming years through cohort succession. While association between age and proportion single is slightly more irregular among men, the pattern is more or less similar. Hence the share of the elderly population that has never married in Thailand is likely to increase in the near future.

Figure 3.6 also shows the proportions that are currently divorced or separated (not counting those who are married but living separately). The fact that the proportions of both men and women who are divorced or separated are highest in the age group 50-54 and at least as high as any subsequent age group for those 55-59 suggests that more elderly in the future will be from broken marriages.

Another potential change in the marital status distribution of older persons is the likelihood that, as a result of improving mortality at older ages, the proportion of elderly who were widowed at any given age will decline. Women will be especially affected because they are much more likely than men to be widowed (East West Center 2002).

Improving educational composition

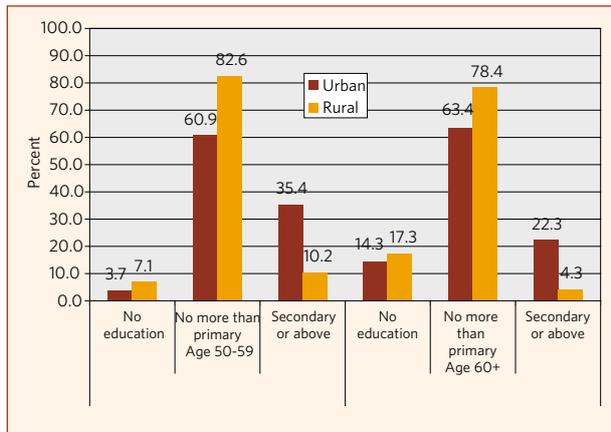
Literacy and educational levels of the older population have important links to their well-being. Literacy provides much greater access to information. Formal education not only influences

employment opportunities but is strongly correlated with health. Moreover, education enables older persons to deal more effectively with government agencies and health services.

Universal education was enacted into law in Thailand before all but the very oldest elderly were born. Implementation was a prolonged process and involved a number of changes in the educational system that impacted men and women differently. The spread of literacy and how it differed by gender is evident from results from the 2007 Survey of Older Persons. For example, only 48% of persons age 80 and older were literate compared to 86% of those 60-64 and 91% of those 50-54. Likewise the percent with any formal schooling was only 62% for persons age 80 and older compared to 90% of those age 60-64 and 94% of those 50-54. The fact that the percent literate declines and the percent with no education increases with age among the elderly population testifies to the rapidly increasing availability of education during the past when the current cohorts of older persons were school age. Gender differences are also very apparent testifying to the slower spread of universal education to girls than boys. Among all persons 60 and older, 85% of men were literate compared to only 69% of women while only 10% of men lacked any formal education compared to 22% of women.

Considerable differences in educational attainment among older-age Thais are also evident by area of residence. Figure 3.7 clearly shows that in 2007 rural residents were more likely to lack formal schooling both among persons 60 and older and those currently in their 50s, although this is becoming a small minority for both groups. Very substantial differences exist in terms of the percent that have no more than a primary education as well as those who completed at least lower secondary school or beyond. The fact that the difference is at least as pronounced among those age 50-59 compared to persons 60 and older strongly suggests that pronounced inequality in education between the urban and rural elderly will persist for at least some time into the future.

FIGURE 3.7 EDUCATIONAL ATTAINMENT, BY AGE AND AREA OF RESIDENCE, THAILAND 2007



Source: 2007 Survey of Older Persons in Thailand

The fact that formal education in Thailand has been continually expanding at all levels means that educational levels of younger adults are substantially higher than those of older persons. At the same time, this also means that those who will be entering their elderly years in the future will be better educated than those currently in older ages and that through the process of cohort succession educational levels of elderly will improve considerably. Educational attainment is generally completed by early adulthood and thus remains a relatively fixed characteristic from then on. Thus the future educational attainment of persons in older ages can be projected based on the levels of younger cohorts that have passed the ages when schooling typically takes place (Hermalin, Ofstedal & Tesfai 2007). Table 3.3 provides the current and projected percent that lack any formal education and who have at least secondary or higher education for three broad age groups within the elderly age span for the period 2010-2050. Results are based on the 2010 Labour Force Survey conducted by NSO in the first quarter of the year. Information in the survey permits determination of these measures for persons age 20 and above including cases of those who are still in school (see Appendix A for details).

The results clearly point to the fact that future elderly will be increasingly better educated than those currently in older ages in Thailand. Increases in the compulsory level of education that have taken place in Thailand ensure that this trend towards a better educated older population will continue for quite some time. The percent that lack any formal education will dwindle to only a few percent while the percent that has at least some secondary education will increase dramatically, rising from 12% to 80% among those in their 60s between 2010 and 2050.

Besides the fact that educational levels will improve dramatically among older persons, several other patterns are clear from the results in Table 3.3. The considerable differences by age within the elderly age span that are evident currently with respect to the percent with no education will essentially disappear. In contrast, age differences in terms of the percent that have a secondary or higher education that are currently evident within the elderly age span will become increasingly pronounced. This reflects the rapid change that has occurred among young adults during the last two decades particularly with respect to increases in the compulsory level of education. In addition, gender differences in education which are prominent currently will contract and even start to reverse by 2050 when the percent with secondary or higher education among persons in their 60s will be higher for women than for men. This reflects the closing and reversal of the gender gap in education that has taken place in Thailand during the last couple of decades (Knodel 1997). However, it is clear that for the next several decades, older-age women in each age group will continue to be substantially less educated than men although their education levels will increase even more rapidly.

This improvement in education among older persons will undoubtedly contribute to their well-being. In addition, the eventual closing and even reversal of the gender gap in education will remove an important source of disadvantage among older women. At the same time, however, older persons will still remain considerably less educated than younger adults at any given time. This in turn may affect intergenerational relations and also affect the competitiveness of older persons compared better educated younger persons for employment in the formal sector.

TABLE 3.3 CURRENT AND PROJECTED PERCENT WITH NO EDUCATION AND WITH SECONDARY OR HIGHER EDUCATION, BY AGE AND GENDER, 2010-2050

<i>No education</i>	2010	2020	2030	2040	2050
Total					
60-69	9.0	5.0	3.1	2.3	2.2
70-79	16.8	9.0	5.0	3.1	2.3
80-89	26.0	16.8	9.0	5.0	3.1
Men					
60-69	5.5	3.4	2.2	2.1	2.2
70-79	10.4	5.5	3.4	2.2	2.1
80-89	16.4	10.4	5.5	3.4	2.2
Women					
60-69	12.1	6.5	3.8	2.6	2.2
70-79	21.4	12.1	6.5	3.8	2.6
80-89	32.4	21.4	12.1	6.5	3.8
<i>Secondary or higher</i>					
Total					
60-69	12.3	20.0	33.4	53.3	79.6
70-79	6.7	12.3	20.0	33.4	53.3
80-89	5.6	6.7	12.3	20.0	33.4
Men					
60-69	16.4	25.0	36.9	54.2	76.5
70-79	10.4	16.4	25.0	36.9	54.2
80-89	8.0	10.4	16.4	25.0	36.9
Women					
60-69	8.8	15.5	30.2	52.4	82.8
70-79	3.9	8.8	15.5	30.2	52.4
80-89	4.0	3.9	8.8	15.5	30.2

Source: 2010 Labour Force Survey, First Quarter.

Note: Information on the projection method is provided in Appendix A.

Improved overall health and vision

Although the NSO Surveys of Older Persons included a number of items concerning health, only those asking about specific diseases, self assessed health, and vision permit comparable measures to be constructed across all three surveys. Accurate knowledge of many specific diseases, however, requires diagnosis by professionals and thus trends in self reports can be misleading and are not presented here. Instead the consideration is limited to self-assessed overall health and vision. Although

self assessments are subjective, ones that refer to overall health have been shown to be reasonably valid, relating well to other more objective measures as well as being a reasonably effective predictor of mortality (Jylha 2009).

Table 3.4 shows the percent who reported their health as good or very good and who reported they could see well without glasses among persons age 50 and older in each of the three NSO Surveys of Older Persons. Both self assessed health and good vision have improved over the period covered.

Improvements are evident for men and women, all three age groups shown, and those in rural and urban areas. The results also indicate that in each survey women are less likely to report good health than are men and that the percent with good health declines considerably with age. There is also a moderately higher percentage of urban than rural residents reporting good health.

The reported improvement in vision over the period covered is even more substantial than in overall health. Gender differences in the percent reporting good vision are modest but there is a substantial decline in the percent reporting good vision by age.

Rural residents are also more likely to report good vision without glasses than are urban residents. This latter difference reflects the far greater tendency to have glasses among urban than rural residents and to be able to see well with them. The share who say they see well (with or without glasses) is higher for urban than rural residents (86% vs. 76%—not shown in table). The dramatic improvement in vision overall undoubtedly reflects the active government program to provide cataract and other eye surgery to all who need it that has operated during the period being covered (Jenchitr & Pongprayoon 2003).

TABLE 3.4 SELF ASSESSED GOOD HEALTH AND GOOD VISION WITHOUT GLASSES, BY GENDER, AGE, AND RESIDENCE, PERSONS 50 AND OLDER, 1994-2007

	Good health (%)				Good vision w/o glasses (%)			
	1994	2002	2007	Ratio 2007/1994	1994	2002	2007	Ratio 2007/1994
Total sample	47.5	55.5	56.3	1.19	42.5	51.7	61.5	1.45
Gender								
Men	53.8	62.4	62.1	1.15	41.8	53.4	63.2	1.51
Women	42.1	49.5	51.4	1.22	43.0	50.1	60.0	1.40
Age								
50-59	56.7	66.0	65.9	1.16	48.8	61.5	69.3	1.42
60-69	43.5	52.9	55.1	1.27	40.8	48.1	60.7	1.49
70+	29.1	33.6	35.1	1.21	27.7	32.9	43.7	1.58
Residence (a)								
Rural	47.2	53.9	55.2	1.17	44.6	53.5	64.6	1.45
Urban	48.4	59.1	59.1	1.22	37.4	47.8	54.0	1.44

Source: 1994, 2002 and 2007 Surveys of Older Persons in Thailand

Notes: Good health includes those who rate their health as very good or good.
(a) urban residence includes sanitary districts in 1994

Work status

Information on the work status of older persons is available from the several rounds of the Labor Force Survey conducted by NSO each year. A recent report issued by the ILO Regional Office summarizes trends based on published reports for the third quarter rounds for selected years (Fujioka & Thangphet 2009). Since the NSO reports group all persons 60 and older into a single category, differentiation by age within the elderly age span is unavailable from this source. Results from the ILO report plus updated results for 2008, provided in

the top panel of Table 3.5, make clear that there is no consistent trend in the percents of either older men or women who are working (i.e. considered in the labor force). Although there is some fluctuation over time, the percentages for 1991, the first year shown, and those for 2008 are remarkably similar. Moreover all surveys show quite similar gender differences with men considerably more likely to be working than women. The exclusion of housework from "work" accounts at least in part for this difference.

TABLE 3.5 TRENDS AND DIFFERENTIALS IN LABOR FORCE PARTICIPATION FOR PERSONS 60 AND OLDER.

	Total	Men	Women
<i>From Labor Force Surveys</i>			
1991	37.7	50.1	27.4
1995	35.4	47.6	25.0
2000	33.6	45.8	23.1
2005	38.8	51.0	28.8
2008	37.9	50.3	28.1
<i>From 2007 Survey of Older Persons</i>			
Total	37.3	50.4	26.7
By area of residence			
Rural	40.8	55.3	28.8
Urban	28.5	37.6	21.6
By age			
60-64	56.7	71.0	44.1
65-69	41.3	55.4	29.5
70-74	26.2	37.2	17.5
75+	13.2	20.5	8.2

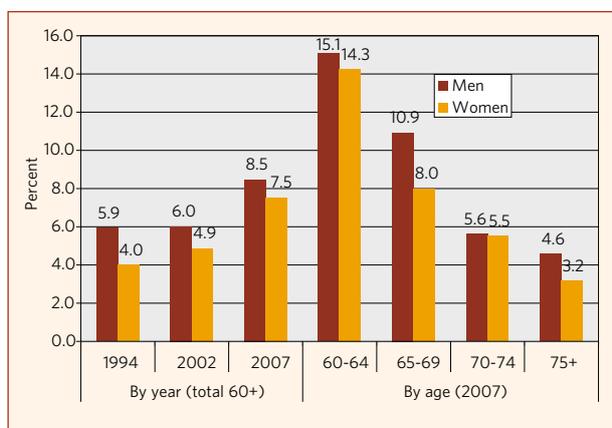
Sources: 1991 to 2005 labor force participation rates from Fujioka & Thangphet 2009; 2008 from Labor Force Survey report published by NSO (Table C).

Notes: The Labor Force Survey results refer to the third quarter of each year shown. Both the Labor Force Survey results and those for the 2007 Survey of Older Persons treat persons who are waiting for season as participating in the labor force. The Labor Force Surveys also include the small number of unemployed persons who are looking for work in the participation rate while the 2007 Survey of Older Persons results exclude the 0.1% who are unemployed and looking for work.

The bottom panel of Table 3.5 shows labor force participation by area of residence and age groups within the elderly age range based on the 2007 Survey of Older Persons. Labor force participation is substantially higher among rural than urban older persons. The percent of persons age 60 and older who are working declines sharply with increasing age. Over half of persons age 60-64 worked compared to only a small minority of those 75 or older. In addition, for any given age group, men were considerably more likely than women to work.

There are numerous reasons why persons stop working as they get older. In Thailand the conventional retirement age is typically considered to be 60, the mandatory retirement age for government employees and workers in state enterprises. Only a minority of the population, however, are subject to such mandatory retirement requirements. Although employees in private sector enterprise may have retirement ages set in their contract, the age is up to the enterprise. In addition, it is thought that many stop working before reaching the set age (Fujioka & Thangphet 2009). For the large share of persons who are self employed, including most farmers and informal sector workers, both the concepts of mandatory retirement and a discrete retirement age are inapplicable. Instead, exiting from economic activity is likely a process of reducing activity over time and is a matter of their own discretion. This

FIGURE 3.8 PERCENT WHO ARE WILLING TO WORK AMONG THOSE WHO DID NOT WORK DURING PREVIOUS WEEK AND ARE NOT WAITING FOR SEASON TO WORK, PERSONS 60 AND OLDER



Source: 1994, 2002 and 2007 Surveys of Older Persons in Thailand

likely accounts for the higher participation rates among rural compared to urban elderly given that far higher proportions in rural than urban areas are in the informal agricultural sector and are own account workers while formal sector work is far more common in urban areas.

In each of the three NSO surveys of older persons, respondents were asked if they were willing to work. Figure 3.8 indicates the proportion willing to work among those who not working during the previous week nor waiting for the season to work. Only a modest minority of men and women aged 60 and older among this group were willing to work. In all three surveys, the percentages are somewhat higher for men than women. The percentage who indicated a willingness to work, however, increased for both sexes between 1994 and 2007.

Figure 3.8 also shows that the percent of those who were not working but said they were willing to work in 2007 clearly declines with advancing age. Among 60-64 year-olds, 15% of men and 14% of women who were not working said they were willing to work but less than 5% of non-working men and only 3% of women age 75 and older were willing to work. At each age, higher proportions of nonworking men than women indicate a willingness to work.

Increased formal support

In recent years the proportion of the labor force that is covered by some formal scheme that will provide financial benefits during retirement has expanded considerably. At present this is largely limited to those employed in the formal sector of the economy although efforts are underway to launch a nationwide savings program for informal workers including farmers and other self employed persons (Bangkok Post 2010). Government and state enterprise employees have long been covered by government guaranteed retirement benefits but broader coverage to employees in the private sector is only recent with the most significant advancement being the establishment in 1999 of the Old Age pension Fund within the national Social Security System. As a result of these ongoing developments, the share of the older population with some source of formal financial retirement

benefits is virtually certain to increase substantially in coming years.

In conjunction with the 2007 Survey of Older Persons, a supplementary survey of adults age 18 to 59 was also conducted. Results for persons age 25 and over are presented in Table 3.6 and provide some evidence of the substantial increase in the proportion covered by formal support that will characterize cohorts entering the older age span in coming decades. The proportion of adults who have some sort of formal financial retirement benefit declines with each successive five-year age group. This undoubtedly reflects cohort differences in types of employment. The proportion who work as employees in the formal sector (both private and government) declines steadily with age falling from 53% for those 25-29 to only 9% of those 55-59, a pattern that likely reflects in part the increased educational attainment over time among those entering the labor force (not shown in table).

Also shown in Table 3.6 are differences according to gender and area of residence. As indicated by the ratio of the men to women that have some coverage, in general men are modestly more likely to have entitlement to retirement benefits than are

women. However, the male advantage is limited to ages 35 and over. At younger ages women are either equally or more likely to be covered. Far more pronounced and consistent than differences associated with gender are those associated with place of residence. Urban dwellers are much more likely to have retirement benefit coverage than their rural counterparts regardless of age cohort. This obviously reflects the far higher portion of urban compared to rural residents who are employed in the formal private sector and in civil service or state enterprises. At the same time, a decline in the portion entitled to retirement benefits with successive age is clearly evident both among urban and rural residents again reflecting the fact that elderly will be more likely to have formal sources of support in the future even if current benefit plans are not expanded. Since expansion seems virtually certain, the actual increases through cohort succession over the coming decades in the proportion of elderly who have retirement benefits could be far greater than even the current cohort differences among those under the elderly age range suggest.

An additional form of formal support that has expanded substantially in recent years is the government welfare allowance that is provided to

TABLE 3.6 PERCENT OF PERSONS AGE 18-59 WHO HAVE SOME FORM OF FORMAL FINANCIAL COVERAGE FOR RETIREMENT, BY AGE, PERSONS 18-59, 2007

Age	Total	Gender			Area of residence		
		Men	Women	Ratio (men/women)	Urban	Rural	Ratio (urban/rural)
25-29	51.9	51.0	52.6	0.97	61.7	41.1	1.50
30-34	44.6	44.5	44.7	1.00	55.3	35.0	1.58
35-39	38.3	42.8	34.7	1.23	51.6	27.1	1.90
40-44	28.1	29.2	27.2	1.08	38.8	20.9	1.85
45-49	26.3	31.7	21.3	1.49	35.7	20.8	1.71
50-54	19.9	24.5	15.9	1.53	29.4	13.4	2.20
55-59	16.6	18.5	14.8	1.25	21.3	13.3	1.60
Total	31.8	34.2	29.8	1.15	42.9	23.4	1.83

Source: 2007 Survey of Knowledge and Attitudes on Elderly Issues among Population Age 18-59.

Note: Old age financial coverage includes persons who are currently civil servants or members of the social security system, are government or state enterprise employees and expect to have pension or lump sum payment when they retire, or are aged 50+ and are not currently working but have a pension.

persons age 60 and over. It was established in 1993 and originally intended for indigent older persons. Subsequently coverage expanded and currently is virtually universal for all elderly regardless of financial need. In addition, while still quite modest, the amount of the allowance has increased from 200 to 500 Baht. Whether or not this will be sustained in the indefinite future in its present form is uncertain but at least currently this formal mechanism is available as a modest supplement to the income of all who apply for it.

Implications for material well-being

As noted above, two major demographic trends that could potentially impact the material well-being of older persons in Thailand are the decline in the number of living children that will characterize

future cohorts of older persons and the increased likelihood of migration of those children leading to a reduction in the proportion that remain in the same household or locality as their parents. The decline in the number of living children raises questions concerning the availability of filial material support and, together with the increased migration of children, raises questions concerning availability for personal care and assistance, especially once frailty or chronic illness set in. In addition to these demographic trends, other factors come into play, not the least of which, given the traditional dependence of parents on their children in old age, is possible weakening of a sense of filial obligations on the part of both generations. At the same time the educational levels of adult children of older Thais are improving and likely increasing their earning power.

TABLE 3.7 SOURCES OF INCOME DURING THE PREVIOUS 12 MONTHS, 1994 AND 2007, AND BY AGE AND AREA OF RESIDENCE, PERSONS AGE 60 AND OLDER, 2007

	Total population age 60 and over		Population age 60 and over in 2007			
	1994	2007	Age		Area of residence	
			60-69	70+	Urban	Rural
Any income from source						
work	38.0	37.8	50.2	20.1	28.7	41.4
pension (a)	4.1	5.4	6.2	4.2	12.2	2.6
elderly allowance	0.5	24.4	17.7	34.0	14.1	28.6
interest/savings/rent	18.2	31.7	33.7	29.0	36.8	29.7
spouse	21.4	23.3	30.0	13.7	20.3	24.5
children	84.5	82.7	79.0	87.9	77.6	84.8
other relatives	11.4	11.0	9.7	12.9	11.0	11.1
Main source of income						
work	32.0	29.0	39.7	13.7	23.5	31.2
pension (a)	4.0	4.4	4.9	3.7	10.2	2.1
elderly allowance	0.0	2.8	1.2	5.0	1.4	3.3
interest/savings/rent	1.7	2.9	2.6	3.3	5.1	2.0
spouse	4.7	6.1	7.9	3.6	6.7	5.9
children	55.0	52.5	41.9	67.8	50.1	53.5
other relatives	2.5	2.3	1.8	3.0	2.9	2.0
total	100	100	100	100	100	100

Sources: 1994 and 2007 Surveys of Older Persons in Thailand

Note: results exclude a small number of cases who reported no income or income from other non-classified sources.

(a) 2007 includes lump sum payments on retirement

Sources of income

Table 3.7 examines the various sources of income as well as their main source that persons age 60 and over reported in the 1994 and 2007 Surveys of Older Persons. Among all persons age 60 and above, their children are by far the most common source of income as well as the most common main source. In both surveys over 80% reported at least some income from children during the prior 12 months and over half reported children as their main source. In addition, only rather modest declines are evident for both of these measures between the two surveys.

Older persons' own work is clearly the second most common source as well as second most common main source with just under two fifths overall reporting income from work. The importance of work is likely understated in the sense that responses refer to own work and do not take account of income from a spouse's work which most married couples likely put to mutual use. Note that almost a fourth of respondents cite their spouse as a source of income although far smaller percentages say that it is their main source. Assuming that this category mainly reflects income from a spouse's economic activity, the vast majority of older Thais in both surveys rely either on children or work as their main income source. The substantially increased percentages reporting income from welfare allowances between 1994 and 2007 reflects the expansion of the program as noted above. However, few report the elderly allowance as their main source of income reflecting the modest sizes of the allowances. Another interesting change between the 1994 and 2007 survey is the substantial increase in older persons who report their own financial resources (investments, savings or rent) as a source of income although very few in both years cite this as their main source. This increase likely reflects the changing nature of the Thai economy, especially the expansion of financial institutions and their accessibility to the general population.

Results from the 2007 survey make clear that sources of income and especially the main source vary considerably with age. Consistent with the decline in economic activity with age discussed above, work is much less common as a source of income and infrequently cited as the main source

for persons age 70 and over compared to those in their sixties. The decline in economic activity with age, together with increases in widowhood, likely account for the lower percentages of persons 70 and above reporting their spouse as a source of income compared to those in their sixties. In contrast, while children are commonly reported as a source of income even for younger elderly, their importance as a main source of income increases very substantially with age.

Several differences among rural and urban elderly are also pronounced. Rural elderly are considerably more likely to report work both as a source of income and as the main source, reflecting the tendency to remain economically active longer into life among persons engaged in agriculture where retirement is likely to be a gradual process and not subject to a prescribed age. At the same time, urban elderly are far more likely than their rural counterparts to report pensions either as a source of income or a main source although even for urban elderly only a modest 12% receive pensions. The contrast in pensions between urban and rural older persons undoubtedly reflects differences in lifetime occupational histories. Urban elderly are more likely than those in rural areas to have had jobs in the formal sector and particularly in the government civil service. As noted above, this urban-rural difference is likely to remain in the future, although efforts to widen coverage to self-employed and the informal sector may mitigate the gap.

Support from children

Of particular interest in Table 3.7 is the minimal change evident between 1994 and 2007 in children as a source of income and particularly as the main source. Although some financial contributions from children are of little more than symbolic value, in many cases the extent of such support is sufficient to serve as the main income source. Table 3.8 focuses more closely on changes in the extent that children serve as a source of income and how these changes correspond to changes in the family size of different age groups of persons age 50 and above based on the 1994 and 2007 Surveys of Older Persons. Results are limited to those who have at least one living child.

TABLE 3.8 CHILDREN AS A SOURCE OF INCOME AND MEAN NUMBER OF LIVING CHILDREN AMONG PERSONS 50 AND OLDER WITH AT LEAST ONE CHILD, BY AGE, 1994 AND 2007.

Age	Any income from children			Children as main source of income			Mean number of living children		
	1994	2007	2007/ 1994	1994	2007	2007/ 1994	1994	2007	2007/ 1994
50-54	66.2	57.9	0.87	15.5	12.4	0.80	4.15	2.72	0.65
55-59	76.0	71.7	0.94	23.0	20.8	0.91	4.76	3.06	0.64
60-64	82.2	81.1	0.99	39.6	37.7	0.95	5.26	3.60	0.68
65-69	87.8	85.9	0.98	52.9	51.7	0.98	5.33	4.11	0.77
70-74	92.4	89.9	0.97	72.2	65.5	0.91	5.32	4.73	0.89
75+	93.6	93.3	1.00	78.4	74.4	0.95	5.04	4.98	0.99
Total	79.4	75.5	0.95	37.6	35.8	0.95	4.86	3.57	0.74

Sources: 1994 and 2007 Surveys of Older Persons in Thailand

Although in all age groups there has been some decline in the percent of respondents who reported any income from children as well as who indicated their children as their main source, the reductions are modest. Declines in the mean number of living children, however, are quite substantial especially for the cohorts that are below age 70 and in these cases far greater than the proportionate reductions in the percent who cite children as an income source. For example, among persons in their 60s, there is little decline in the percent who received any income from children and only a very small decline in the proportion for whom children were their main source. Yet the average number of living children for persons in these ages fell substantially. Nevertheless, there is some suggestion that a reduced number of children is associated with reduced financial support. Among persons in their 50s, especially those age 50-54, declines in support from children and in the number of living children are both above average.

Family size and filial financial support

A more direct examination of the association between number of living children and filial financial support is provided in Figure 3.9 for persons age 60 and above in 2007. Since both the number of children and dependence on children for support increases with the age of parents, the results are adjusted by linear regression for the age of

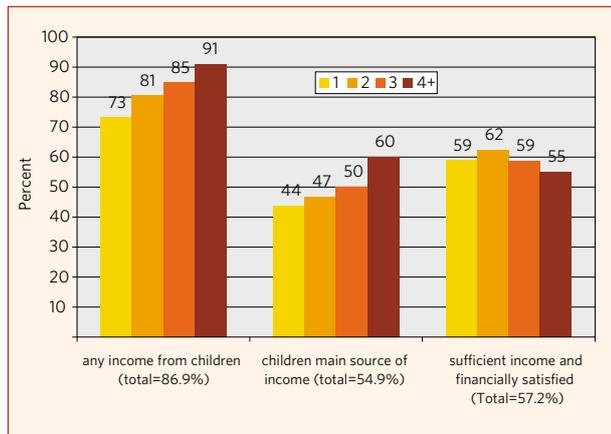
respondent. Successive increases are evident in the proportion who receive at least some income from children and who rely on children as their main income source. For both cases, those with four or more children are more likely to receive financial support than those with fewer children, suggesting that the reduced family sizes of future cohorts of elderly Thais could portend lesser financial support.

Also shown in Figure 3.9 is the association between number of children and the percent of older persons who said both that their income is sufficient and that they are satisfied with their financial situation, presumably implying that their economic situation is adequate for their needs. The share of older persons with small families is actually somewhat above average in expressing economic satisfaction compared to those with more children. Indeed the lowest percent is found among those with four or more children.

One possible reason underlying this finding despite the lower likelihood of financial support from children among those with only few could be that older persons with few children are less likely to be in financial need compared to those with more. One study conducted in rural Thailand two decades ago found that couples with few children were better able to accumulate wealth than those with larger numbers (Havanon, Knodel & Sittitrai 1992). This suggests that smaller family sizes could

possibly facilitate wealth accumulation for later in life thereby reducing a need to depend on filial financial support. Just what the implications are for estimating the impact of smaller family sizes on material well being of the coming generation of older-age Thais depends on how the causal connections between support, wealth accumulation and family size operate. Moreover, future declines in family size among older age groups will be very substantial and any offsetting benefits for wealth accumulation may be overwhelmed by the smaller number of children on whom elderly parents will be able to depend. Thus firm conclusions about the future implications of declining family size remain elusive. The safest approach is simply to recognize that the extent to which the smaller family sizes of the future elderly may jeopardize their material well-being is uncertain.

FIGURE 3.9 CHILDREN AS SOURCE OF INCOME AND SELF ASSESSED ECONOMIC SITUATION, BY NUMBER OF ADULT CHILDREN, PERSONS AGE 60 AND ABOVE, THAILAND 2007 (ADJUSTED FOR AGE)



Source: 2007 Survey of Older Persons in Thailand

Notes: Results are adjusted by linear regression for the age of respondents. Adult children include all children who live outside the household and children age 18 and over who live in the household.

Migration of children and material support

Migration of adult children, especially from rural areas, is virtually an inevitable aspect of economic development. As noted above, the proportion of children of older persons who migrate away from their parents' locality is on the increase in Thailand. Concern is often expressed in the mass media and even in UN forums that such geographical dispersion of adult children poses risks of undermining material support as well as personal care to elderly parents (e.g. Charasdamrong 1992; United Nations 2002, paragraph 29). Yet material support does not require geographical proximity, a point often overlooked in such discussions.

Table 3.9 examines monetary support to parents from non-coresident adult children during the previous year according to their location in relation to their parents. Such support from coresident children is not shown because of the difficulty of interpretation when the children giving the money are part of the same household economy. One set of results is based on the 2006 Migration Impact Survey (MIS) which was conducted in rural and semi-urban areas of three Thai provinces and focused on parents in the age groups 50-54, 60-64 and 70-79 (Knodel et al. 2007). Another set of results comes from the nationally representative Survey of Welfare of the Elderly in Thailand (SWET) conducted in 1995 of persons age 50 and over. Both surveys asked respondents how much monetary support was provided from each of their children during the previous year. The measures in Table 3.9 focus on provision of more than a token amount of money. Due to differences in the information collected, the measure for SWET refers to at least 1000 Baht and for MIS to over 5000 Baht. The table also shows the relationship of the educational attainment of adult children to the provision of monetary support. Note that adult children who migrate out of the province tend to be better educated than those who do not (Knodel et al. 2007). The relation of location and provision of monetary support is also shown within each educational category to enable assessment of the association with each characteristic independent of the other.

TABLE 3.9 MONETARY SUPPORT IN PREVIOUS YEAR TO PARENTS AGE 50 AND OVER FROM NON-CO-RESIDENT GROWN CHILDREN, BY EDUCATION AND LOCATION OF CHILD, 1995 AND 2006

Year of survey and location of child in relation to parent	Total (a)	Educational attainment of child			
		Primary or less	Lower secondary	Upper secondary	Tertiary
% giving 1000+ Baht, 1995 (based on national sample)					
Same locality	22.1	19.9	29.9	41.8	54.2
Same province	32.1	24.6	46.4	52.3	60.1
Elsewhere	48.0	43.5	53.4	58.1	59.0
Total	35.2	29.3	46.5	54.3	58.9
% giving over 5000 Baht, 2006 (based on non-urban sample from 3 provinces)					
Same locality	10.6	7.5	19.1	22.6	47.8
Same province	18.9	9.1	27.1	30.1	41.7
Elsewhere	37.3	27.9	43.8	42.6	60.5
Total	26.4	17.0	36.5	37.4	54.5

Sources: 1995 Survey of the Welfare of Elderly in Thailand and 2006 Migration Impact Survey.

Notes: The Survey of the Welfare of Elderly in Thailand is nationally representative; the Migration Impact Survey covered persons age 50-54, 60-64 and 70-79 in rural and semi-urban areas (tetsabaan tambol) in three provinces (see Knodel et al. 2007). Grown children include all children age 16 and older.

(a) includes unknown education

The results from both surveys are quite consistent. Almost without exception, regardless of educational level, monetary support to parents was most likely to be provided by children who lived outside the province and least likely by non-co-resident children who lived in the same locality as their parents. Moreover, regardless of where the non-co-resident child was located, the higher their education the more likely they were to provide meaningful monetary support. These findings likely reflect the fact that much migration of adult children is related to seeking better employment opportunities and that better educated children are able to earn better incomes which many still appear to be willing to share with parents. Overall, these results are reasonably encouraging concerning the implications of the trends towards increased migration and higher levels of educational attainment of children for monetary support of older age parents in the future.

Expectations of filial financial support in the future

Results of the 2007 survey of adults aged 18 to 59 referred to above indicate the extent to which a sense of filial obligations will be maintained by future older persons. Respondents were asked if they expected to receive money from various sources including from children and which source they expected to be the most important. As evident in Table 3.10, expectations of filial support in old age are shared widely by the current generation of adults. Even among adults under age 30, almost three fourths expect to receive some financial support from children in old age and among those who had ever married (i.e. the ones most likely to have children), four fifths expect such support. It is also striking that almost 90% of ever married persons aged 50-59 (i.e. those who will enter the elderly age span in the following decade) expect such support.

TABLE 3.10 EXPECTATIONS OF FINANCIAL SUPPORT IN OLD AGE, BY AGE, PERSONS 18-59, 2007

Age	% expecting to receive financial support from children in old age			% expecting children to be main financial support source in old age		
	All	Ever married	Never married	All	Ever married	Never married
under 30	72.7	80.4	69.3	22.7	28.8	20.1
30-39	76.5	83.2	46.7	27.2	30.0	14.6
40-49	80.3	83.9	34.9	35.1	36.9	12.4
50-59	86.4	88.7	29.6	45.4	47.0	6.9
Total	60.1	84.8	79.0	32.6	37.1	17.8

Source: 2007 Survey of Knowledge and Attitudes on Elderly Issues among Population Age 18-59.

Although it is common for even the youngest adults to expect some financial support from children, there is a much more pronounced age pattern with respect to the percent who expect their children to be their main source of support in old age. Among ever married persons age 50-59, almost half expect that their children will be the main source of support, a share that is only slightly below the reported percent of persons currently in their older ages who report children as their main source of support as noted above. However, the percentage expecting children to be their main source of financial support decreases with each successively younger age group. Among those under age 30, even for those who are ever married, less than 30% have this expectation. Whether this reflects a weakened sense of filial obligations to parents among younger cohorts is unclear. It could instead reflect anticipation among younger adults that when they reach old age they will have other sources than their children as a means of material support, particularly formal channels such as the retirement benefit plans as discussed above.

Expectations for filial financial support are not static and may well change in the future especially as older persons' abilities to support themselves increase or the sense of obligation of children to support parents decreases. Nevertheless, these results suggest that despite the major social and economic changes that have characterized Thai society, the normative foundation of family support for older persons is still widely shared even if the role it plays may be reduced.

Implications for social support and personal care

Unlike material support, social support in the form of frequent face-to-face interaction requires some level of physical proximity. However, technological advances in communications, especially widespread accessibility to cell phones, have greatly enhanced the ability of migrant children to keep in contact with their older age parents other than through face-to-face interactions. Thus the ability to provide social support by children who are geographically distant from their parents varies according to the type of social support being considered. Routine personal care by an adult child, however, requires very close proximity typically in the form of coresidence or residing very nearby. Thus to better understand how changing family size and increased migration of children affects social support and personal care it is useful to examine the association between family size and proximity to children. As Figure 3.10 shows the location of the nearest adult child is clearly associated with family size. The greater the number of adult children the more likely that an adult child coresides, that one is either in the household or next door, that at least one is in the same locality, and that at least one is within the same province. This in turn affects the likelihood that services which depend on an adult child being close by or at least not at a substantial distance will be provided.

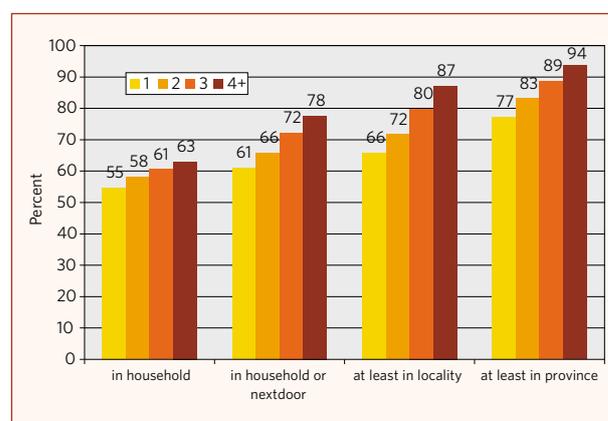
Social contact and psychological well-being

For most older-age parents, maintaining contact with children who move out of the household is important for their social and emotional well being, especially if no other children are nearby. Migration

of children reduces opportunities for face-to-face interactions although contact can be maintained through other means, especially phone calls now that cell phones are common.

The 2007 Survey of Older Persons included questions about the frequency of visits and phone contact with non-coresident children. The questions were phrased in terms of non-coresident children overall rather than individual children. Also the survey did not enquire about contact with coresident children since it presumably occurs on a daily basis. As results in Table 3.11 show, the percentage who reported face-to-face contact on either a weekly or a monthly basis with a non-coresident child increases with the number of adult children among those respondents age 60 and over who had at least one non-coresident child. When telephone contact is included, however, the relationship disappears. Note that if the measures of contact encompassed coresident children, the association with family size would be stronger given that the likelihood of coresidence increases with family size as discussed above.

FIGURE 3.10 LOCATION OF NEAREST ADULT CHILD, BY NUMBER OF ADULT CHILDREN, PERSONS AGE 60 AND ABOVE, THAILAND 2007



Source: 2007 Survey of Older Persons in Thailand.

Notes: Adult children include children age 18 and over who live in the household and all children who live outside the household. Each successive location category includes the previous categories as well.

TABLE 3.11 CONTACT OF PARENTS DURING THE PAST YEAR WITH NON-CORESIDENT CHILDREN, BY NUMBER OF TOTAL ADULT CHILDREN AND LOCATION OF CHILDREN, PARENTS AGE 60 AND OLDER OF NON-CORESIDENT CHILDREN, 2007

	Face-to-face contact		Face-to-face or telephone contact	
	At least weekly	At least monthly	At least weekly	At least monthly
Total	37.8	55.9	58.7	85.9
Number of adult children				
1	27.0	48.9	57.9	85.1
2	33.2	54.4	58.1	85.9
3	36.5	56.2	59.3	86.4
4+	39.9	56.6	58.8	85.7
Location of nearest child (excluding coresident children)				
same locality	63.6	71.3	75.0	90.4
same province	26.4	56.3	54.0	86.6
elsewhere	0.0	5.9	34.6	82.8

Source: 2007 Survey of Older Persons in Thailand.

Notes: Adult children include all children who live outside the household and children age 18 and over who live in the household.

Not surprisingly, the frequency of face-to-face contact with non-coresident children is strongly associated with their location relative to the parents. If a non-coresident child is in the same locality as the parent, almost two-thirds of parents report seeing a child at least weekly and over 70% at least monthly. In contrast, weekly contact is nil for parents whose non-coresident children all live outside the province and only a very small percent report even monthly face-to-face contact with such children. However when telephone contact is also included, the relationship between location of the nearest non-coresident child and frequency of contact is considerably weakened. Although contact either through visits or telephone calls, especially on a weekly basis, still has a clear relationship to the location of the nearest non-coresident child, monthly contact is quite common even if the nearest child lives outside the province.

Presumably social contact with children generally promotes psychological well-being. In addition to asking about contact with children, the 2007 Survey of Older Persons included a series of questions intended to measure psychological well-being. The questions asked how often during the past month the respondent lacked appetite or felt stressed, moody, hopeless, useless, unhappy and lonely. To calculate an overall psychological well-being score for each item 2 points were assigned for "not at all", 1 point for 'sometimes', and no points for 'always' and summed across all seven items. Thus higher scores signify better psychological well-being. Given that migration of children as well as being childless could deprive older-age parents of important social interaction, responses concerning feeling lonely are of particular interest. Table 3.12 therefore shows both the percent who said they were lonely at least sometimes during the last month and the mean overall psychological well-being score.

TABLE 3.12 PERCENT WHO FELT LONELY AT LEAST SOMETIMES IN THE LAST MONTH AND PSYCHOLOGICAL WELL BEING SCORE, PERSONS 60 AND OLDER, 2007

	% lonely at least sometimes	Psychological well being score
All persons 60 and older	34.9	11.43
Number of children		
0	42.9	11.30
1	34.0	11.50
2	30.7	11.79
3	30.6	11.69
4+	36.8	11.26
Nearest child (among those with living children)		
same household	30.9	11.51
next door	39.4	11.26
same locality	44.3	11.21
same province	40.8	11.32
elsewhere	38.3	11.51

Source: 2007 Survey of Older Persons in Thailand.

Notes: See text for definition of psychological well being score.

The results show that older persons who are childless are distinctly more likely to say they were lonely. They also score lower than average on overall psychological well-being although no lower than those with four or more children. Among those who have at least one living child, no consistent relationship between the number of children and either the percent who felt lonely or the overall psychological well-being score is evident. The association with the location of the nearest child also generally lacks a consistent pattern with these two measures. However, those who have a child in the household were the least likely to say they felt lonely during the previous month. However, among non-co-resident respondents loneliness does not appear to be related to how near their children are. The highest overall psychological well-being scores are found both for those respondents who co-reside with a child and for those whose children all live outside their parents' province. These findings suggest that reduced family size as long as

there is at least one child and increased migration of children will not necessarily undermine older age parents' psychological well-being in the future. Nevertheless the association could change once much smaller families characterize older persons and few children remain nearby.

Personal care. The 2007 Survey of Older Persons asked respondents if anyone provided care and if so who was the main caregiver. The large majority (88%) of persons age 60 and over indicated that they could take care of themselves and thus presumably did not need a caregiver. This percent declined modestly with age, falling from 94% of those age 60-64 to 83% of those 75-79. Among those 80 and over, however, only two thirds indicated that they could take care of themselves. Among those who did not indicate they could take care of themselves, most had a caregiver although some indicated that they needed assistance but no one provided care.

TABLE 3.13 PERCENT WHO CAN CARE FOR SELF AND DISTRIBUTION OF CAREGIVERS FOR THOSE WHO NEED HELP OR ARE RECEIVING CARE, BY NUMBER OF ADULT CHILDREN AND LOCATION OF NEAREST ADULT CHILD, PERSONS AGE 60 AND OLDER, 2007

	Percent who can take care of self	Caregiver among those who need help or are being cared for (percent distribution)						Total
		No one, but needs help	Spouse	Child/child-in-law	Other family member	Paid-help (a)	Other	
Total	88.0	9.2	26.3	56.7	4.7	2.6	.5	100
Number of adult children								
1	88.0	10.2	26.3	47.0	9.7	6.8	0.0	100
2	91.3	8.7	41.0	42.3	5.2	2.2	0.5	100
3	88.9	12.6	24.8	51.8	5.3	4.1	1.4	100
4+	86.8	8.2	24.1	61.7	3.9	1.8	0.3	100
Location of nearest adult child								
same household	85.7	7.1	17.1	69.6	3.1	2.6	0.6	100
next door	90.8	10.3	39.9	39.9	8.0	1.7	0.3	100
same locality	88.8	13.3	56.0	22.2	8.1	.4	0.0	100
same province	92.2	19.3	61.4	6.0	8.4	4.8	0.0	100
elsewhere	94.1	20.0	53.8	6.3	13.8	5.0	1.3	100

Source: 2007 Survey of Older Persons in Thailand

Notes: Adult children include all children who live outside the household and children age 18 and over who live in the household.

(a) Nurses and servants

As Table 3.13 shows, in general, the percent of older persons that can care for themselves shows no consistent relationship with the number of adult children. At the same time, there is some suggestion that those who coreside with a child are less likely to be able to care for themselves than those who do not and especially than those whose nearest child lives outside their province. This is consistent with a recent analysis based on the Migration Impact Survey that found some tendency for migrant children to return to their parental household if parents are in poor health (Zimmer & Knodel, forthcoming). Having a parent who needs help may also deter children from leaving the parent without assistance.

Among those who do not indicate that they can take care of themselves, the percent that need assistance but have no one helping them shows no consistent relationship with the number of adult children although some difference in who acts as caregiver is apparent. Most striking is that those with one or two adult children are considerably less likely to be cared for by a child or child-in-law than those with three and especially those with four or more children. They also tend to rely more on a spouse. Only a small minority rely on paid help for their care although this is highest for those with only one adult child.

In contrast to the number of adult children, the location of the nearest adult child is clearly associated with the percent who indicated that they need care but do not receive help among those who can not care for themselves. The further away that the nearest adult child lived, the more likely a respondent was to lack a caregiver even though assistance was needed. Among those older persons who could not care for themselves, fully one fifth of those whose nearest child lived outside the province indicated that no one provided care for them. This is almost triple the share that lacked needed assistance for those who had a adult child coresident in the household suggesting that migration of children puts some older parents who need personal care at risk of lacking it.

Attitudinal data from the 2006 Migration Impact Survey indicates that almost 90 percent of parents feel that the absence of children nearby is acceptable as long as social contact is maintained and parents are still in good health (Knodel et al.

2007). However, less than 30 percent said it was acceptable for their children to hire someone to help the parents if parents are old, not in good health and all their children live elsewhere. Moreover over 80 percent felt under such circumstances it is better for parents if a child moves back to care for them rather than if they move to join a child. Thus there still appears to be a strong preference for children to care for parents once frail health sets in and that at least one child should return if all have moved away.

Preparation for old age

Well-being during old age largely depends on how well the society and individuals prepared for quality ageing. Insufficient, inappropriate or late preparation at the national, community and individual levels may degrade the quality of life of older persons and their ability to make contributions to society.

Preparation at the national level

During the last decade, the Thai Government has increasingly recognized that the potential impacts of the rapid population ageing require attention and it has responded in various forms. These include the establishment of the National Commission on the Elderly in 1999, and launching the Second Plan for Older Persons covering the period 2002-2021. One main strategy of the plan is to promote preparation for quality ageing. Several measures are stipulated to achieve this goal. These include expansion of old age financial security coverage, curriculum development at the primary and secondary education levels regarding self-preparation for a good quality life in later years and improvement of environment and public facilities for older persons. The enactment of the 2003 Elderly Act, the establishment of the Elderly Fund and an agency specifically responsible for work on older persons, and the inclusion of the elderly issues in the 10th Five Year Socio-Economic Development Plan can all be seen as part of a national preparation to cope with rapid population ageing in Thailand.

Preparation at local and community levels

Local government, especially the Tambon Administration Organization (TOA) at the

sub-district level, is the agency closest to the community. In theory it understands the problems and needs of elderly within a local context and should be in a better position than other agencies to respond. However, weaknesses in management and budget allocation have been obstacles to carrying out this responsibility. Lack of personnel knowledgeable about geriatrics and frequent turnover of top-executives by political decisions has led to discontinuity in plans and policies regarding older persons (Prachuabmoh, Vipap et al., 2008). Moreover, TAO tend to give higher priority to work on infra-structure than on quality of life and geriatrics.

One crucial obstacle to the effectiveness of local programs for older persons is the lack of updated databases providing detailed attributes of older persons at the local level. This is a barrier especially for identifying appropriate target groups for services and protective measures. Moreover, some TAO are primarily interested in older-persons as electoral bases rather than in developing solutions to issues related to their problems. Some also lack proactive action plans beyond providing living allowances to deal with the increasing number of older persons in the community (Prachuabmoh, Vipap et al., 2008).

Preparation at the individual level

Since both formal and informal systems of support for the elderly have limitations, self responsibility to prepare for quality ageing is essential. Information on this matter is available from both the 2007 Survey of Older Persons and the supplemental survey of adults in ages 18-59. Respondents in both were asked whether they had thought about and made preparation for old age with respect to finance, living arrangements, physical health, care giver arrangements, and spiritual/religious practice. Those who reported preparation in any of the five areas before age 60 are classified as having done something to prepare for old age.

Results in Table 3.14 reveal that the present elderly are less likely to have prepared for old age than the future elderly (57% versus 76%). This could possibly reflect bias in the reporting of this by the older elderly, who may be overlooking some of the things they did (quite some time ago) to prepare for old age. The near elderly group (50-59) is

characterized by a higher proportion preparing for old age than either younger or older age groups. The lower percentage that prepared for old age among younger cohorts (distant future elderly) likely reflects that they are still far from old age. Gender differences are minimal although those that are evident are in opposite directions among the present elderly and future elderly cohorts. Rural residents among the present elderly are less likely to have prepared for old age than their urban counterparts but this is less pronounced among those in the adult sample. Previous analysis indicates that the present elderly started making preparation for old age relatively late with about one-fifth starting only after reaching age of 60 and another one-third when they were in their 50s (Prachuabmoh 2009).

Examination of the specific types of preparation made reveals only small differences in the percent reporting each type ranging only from 34 for caregiver arrangements to 44 percent for physical health (not shown in table). The emphasis in the Second National Plan on the Elderly on health promotion and economic security, however, may be enhancing awareness of the need to prepare in these areas and explain why these are clearly the most common types of preparation reported by the adult sample.

In sum, preparation for old age among future cohorts of elderly of both sexes in Thailand appears to be expanding and starting earlier than was the case for the present elderly. However, the expected age to start preparation for the majority is still after the age of 40. Several types of preparation, such as those regarding health and savings, are best started earlier and sustained throughout adulthood. The government should incorporate efforts to encourage such preparation at an early age through both formal and informal educational channels. It should also promote realistic expectations regarding how much financial support can be expected from the various measures and programs that it is establishing. Given limited national financial resources and rapid growth in the number of older persons, a substantial degree of self-dependency and life style practices need to be encouraged. At the same time, the government should recognize its responsibility to provide assistance with respect to the needs that individuals, their families, and communities

cannot adequately provide by themselves. Given limited government resources, efforts will likely need to be targeted to those groups of elderly with greater need, such as the poor, the oldest old, or the disabled rather than to all elderly equally.

Conclusions and recommendations

Population ageing is well underway in Thailand driven largely by the past decline in fertility and the below replacement levels that have prevailed since. The size of older population and its share of the total have been increasing dramatically and will continue to do so in the coming decades. Sharp decreases are underway in the potential support ratio as the number of non-working seniors increases while the number of working age adults who typically provide support through taxes to pay for retirement

and health care benefits stagnates and then declines. These trends have important economic as well as social implications at the macro societal level, although their nature and extent remain a matter of debate. While many commentators stress the potential threats to economic growth and exacerbated competition between generations for resources, others take a more benign view, emphasizing compensating effects of low fertility. These include the reduced youth dependency ratio, increased female labor force participation and improved human capital accumulation that lower fertility likely promote as well as increased labor productivity from a better educated work force combined with technological advancements (e.g. Bloom, Canning and Fink 2009).

While such macro societal implications are of great importance, in this chapter we focus on the implications of trends at the family level. We view

TABLE 3.14 PERCENT WHO MADE ANY PREPARATION FOR OLD AGE BY AGE GROUP, GENDER AND AREA, THAILAND, 2007

Age	Percent who prepared for old age				
	Total	Gender		Area	
		Males	Females	Rural	Urban
<20	57.1	50.7	63.6	57.0	57.3
20-29	63.5	62.5	64.2	63.2	63.7
30-39	75.1	72.3	77.5	75.3	74.9
40-49	79.7	78.7	80.6	78.5	81.6
50-59	85.5	84.0	86.8	83.9	87.8
Total for future elderly (aged 18-59)	75.8	74.1	77.3	76.0	75.6
60-69	64.0	65.3	63.0	63.0	66.7
70-79	48.1	49.3	47.2	45.4	55.0
80+	40.3	42.5	39.0	38.3	45.2
Total for present elderly (aged 60+)	56.7	58.5	55.3	55.0	60.9

Note: Preparation for old age refers to preparing in at least one of the following five areas: finance, living arrangements, physical health, care giver arrangement and spiritual practice.

Sources: 2007 Survey of Knowledge and Attitudes on Elderly Issues among Population Age 18-59; 2007 Survey of Older Persons in Thailand.

such a focus as appropriate given that traditionally primary responsibility for the care and support of older persons and hence their well being lay with the family through a system defined mainly in terms of filial obligations of adult children. In particular, we examine the trends and potential implications of two demographic trends that are commonly cited as threatening family support for the elderly: 1) the decline in the number of living children of older persons brought about through cohort succession and 2) the increasing dispersion of adult children away from their parents' locality due to migration typically related to employment opportunities. Together, these trends are resulting in continuing change in the living arrangements of older persons including a decline in coresidence with a child among persons 60 and older from 77% in 1986 to 59% by 2007.

There are several important issues that contribute to uncertainty when attempting to assess implications of population ageing at the family or societal level. The economic, social, political and technological environments in which Thais live out their lives are constantly changing, often in substantial ways. In addition, future elderly will differ considerably from those of today. They will be better educated, likely in better health, and far more will be covered by some form of formal retirement benefits. Given a strong association between health and education, the higher educational attainment that will characterize future older age cohorts should reinforce the trend towards better health. It also appears that an increasing number will have made preparations for old age in a variety of ways. At the same time, a growing proportion of elderly in the future will have never married and among those who have married more may remain childless. Finally, it is critical to recognize that parents and their adult children as well as those who will be childless in old age are unlikely to stand by passively as the world about them changes. Instead, they will exercise human agency to minimize negative impacts and maximize potential benefits, thereby modifying their current arrangements to adapt to new circumstances.

Despite these sources of uncertainty, it is safe to assume that the implications of demographic change for the existing family support system differ by type of support and services under consideration and thus so will the need for related government responses. So far filial material support shows

only modest decline. Financial support does not require physical proximity and the size of monetary contributions appears to be enhanced by the better employment opportunities that migration can facilitate. Thus greater dispersion of children may well not threaten filial financial support. Although older persons with larger numbers of children are somewhat more likely to receive financial support, they are somewhat less likely to indicate that their economic situation is better than those with few children. While the underlying mechanisms for these seemingly anomalous findings remain unclear, restricting family size may permit greater wealth accumulation and thus compensate for fewer children to provide material support.

An important caveat to the suggestion that the threats to filial material support are modest is that reductions in family size of the future elderly will be far more drastic than has occurred so far and be accompanied by even greater geographical dispersion of adult children. Hence past trends may not be appropriate as guides to the future. Still, the higher education and changing employment patterns of adult children may improve their ability to provide financial support and compensate for their lesser numbers. In addition, the expansion of retirement coverage of future older persons through the Old Age Pension Fund under Social Security as well as new government initiatives underway or being planned can also help compensate for any declines in filial material support. Increased formal support can also be important to counteract the increased proportion who are childless and thus for whom filial support is clearly unavailable.

Another approach to promote material well-being among older persons is to increase the proportions that remain economically active and thus contribute to their support through their own work. One positive trend that should facilitate this possibility is improving health of older persons. The possibility of extending the official retirement age from 60 to 65 has received some attention as a way to increase work among the 60-64 age group. However the impact of such a change is likely to be quite modest since, as already noted, only a minority of the population, primarily those in government employment, is subject to a mandatory retirement age. Moreover, a more general barrier to expanding employment is that the large majority of older persons who are not economically active express

a lack of willingness to work. Research is needed into the reasons that underlie the lack of interest in working among older persons and whether or not the causes can be addressed. In addition, with respect to formal sector jobs, assessments are needed of the willingness of employers to hire or retain older workers. Possibly more flexible work conditions could be developed that would meet the concerns of both parties. These might include options for part-time employment, flexible hours, and adjusting compensation to productivity rather than being based on seniority. Also within the informal sector, income generation activities through community-based cottage industry could be organized through Old Persons Associations with government or NGO guidance to provide at least a supplemental source of livelihood (Fujioka & Thangphet 2009).

With respect to social support, frequent face-to-face interaction requires some level of physical proximity. Yet distance does not prevent contact in other forms. Advances in communications technology, especially the spread of cell phones, has made such contact far more possible currently than just a decade or so earlier. Phone contact has been replacing and complementing face-to-face interactions. Future advances in communication technology as well as the spread of home computers are likely to increase the ability of parents to keep in touch with their adult children who live at a distance and further mitigate the effect of increased dispersion of adult children on social support. Efforts by the government and NGOs to encourage and improve computer literacy among older persons and those soon to reach old age could usefully contribute to this end which in any event will be facilitated by the increased educational attainment of the cohorts that will be entering old age. In addition, measures to expand community based social support outside the family deserve consideration including strengthening Older Persons Associations (OPA).

Personal care clearly requires physical presence. It can and often is provided by a spouse. If a spouse or other relative is unavailable and no children live nearby, short term care associated with acute illness or other brief emergencies could still be provided by a child as long as temporary leaves of absence from employment are possible. The need for long term personal care from an adult child that arises

when severe disability, serious chronic illnesses, or advanced frailty set in, however, present the greatest challenge in the face of smaller family sizes, the greater dispersion of adult children, and increased proportions who have no children. How both future older persons and their children anticipate dealing with the potential need for long term care is an important question needing study.

The Thai government is clearly aware of the challenge that long term care arrangements in the context of reduced availability of family assistance poses and is actively experimenting with pilot programs to promote community based home care assistance through either paid or non-paid volunteers. This could prove to be an effective strategy to help meet the need for assistance with instrumental activities such as meal preparation, shopping and cleaning that are typically required only on a part time basis. It is harder, however, to see this as a realistic solution when personal care is required on a sustained full time basis as would be the case for those who suffer serious chronic illnesses, are bedridden or severely disabled (Chen & Thompson 2010).

Hired full time help with eldercare is likely on the rise in urban areas among middle class families in which a child is coresident or lives nearby but needs to work outside the home. Such services and the private agencies that offer or arrange them are largely unregulated, a matter that deserves government attention (Jitapunkul et al. 2008). While full time hired help is one solution to long term care, it is an option only for families with sufficient incomes. Moreover, attitudinal data suggest that many elders still believe that if no child is present when the need for long term care arises, at least one should return to provide care rather than hiring someone else to do so (Knodel et al. 2007). If the government could promote 'elder care leave policies' in employment contracts it might help provide a partial solution to this dilemma. At a minimum, leave for short term elder care when needed in association with acute illness or other short term health problems should be institutionalized. Getting employers to institute policies that permit longer term leaves of absence for eldercare will be more difficult. In addition, more in-depth studies of attitudes towards non-familial personal care arrangements and how to overcome

barriers to their acceptability would be helpful in guiding their likely expansion.

While meeting long term care needs either through family or non-family means, it is important to recognize that in most cases, severe disability that causes the need for long term care generally characterizes only a relatively short period of the full elderly age span (Knodel & Chayovan 2008). One strategy for coping with the need for such care is to lengthen the period during which older persons can function independently. This could be done through strategic health interventions targeting treatable problems that cause disability. A prime example is the government's eye surgery program that has targeted cataracts and has greatly improved vision of older persons (Jenchitr & Pongprayoon 2003).

Also promising for shortening the period when long term care is needed would be efforts to promote modifications in the home physical environment such as installing ramps and hand rails as well as increasing the use of equipment aids to enable mobility and the performance daily living activities. This would not only facilitate independent living but also help prevent accidents. In cases where the expense of such modifications or assistive aids is beyond the family's financial ability, government subsidies may be necessary. Such assistance might pay for itself through savings in health care costs that result.

Considerable progress is being made in the development of assistive technologies including emergency alert systems. Already major advances have been made in technology that enables adult children to monitor their elderly parents' situation and activities from a distance (Taub 2010). In

the US, these technologies are starting to make it possible for elderly people to stay in their homes without a hired or family caregiver rather than move to an assisted-living facility or nursing home. Although such technologies may be impractical for Thailand at this point due to cost and degree of sophistication necessary to implement them, this could change in the future as costs go down and incomes and educational levels in Thailand increase. At a minimum they illustrate that the implications of population ageing for Thailand in the coming decades will play out in a changing context and are unlikely to be accurately assessed simply by extrapolating past trends or based on the current context in which it is taking place.

Given the substantial changes that continue to take place in the economy and broader society in Thailand, an assessment of the implications of any one aspect of that change such as population ageing is necessarily subject to considerable uncertainty. Thus the forgoing analyses serve more to raise issues for consideration than permit clear answers to what the future holds and how to deal with it. Some issues related to ageing are suitably addressed by broad policies and programs that encompass most or even all older persons. Many others will require taking into account the differential needs among various subgroups such as demarcated by age, gender, marital status, education and area of residence. The evidence so far clearly points to greater needs on a variety of fronts that are associated with more advanced age, rural residence and poverty status. Continuing to monitor the situation of older Thais is essential to keep such programs targeted appropriately and help ensure their effectiveness and affordability.

Appendix A



Notes on projecting the educational level of the older population

The 2010 first-quarter Labour Force Survey conducted by The National Statistical Office contained two items concerning education that were recorded for all members of sampled households who were aged 15 or older. The first question provided information on whether or not the person was currently attending school and if so what grade. The second question asked for the highest grade of school completed. Among the 20-24 age group 19% were still attending school but this declines to only 3% of those in the age group 25-29 and 1% of those 30-34.

Note that by 2050, persons age 60 are age 20 in 2010. Thus in order to project the level of education of persons age 60 and above all the way to 2050, the completed education of persons aged 20 and over in 2010 needs to be determined. For the purpose of the projections, the completed educational attainment of persons aged 20 and over in 2010 among those who are no longer in

school is assumed to be the level indicated as the highest grade completed. For those who are still in school, the completed educational level is assumed to be the one that they are currently studying at. It is possible of course that some of these people will continue their education beyond the current level that they are studying. However, given that the highest category of educational attainment used for the projections is secondary education or beyond, attributing the current level as the highest completed level for those who were still in school will likely place them in the correct category even if they eventually continue beyond their current grade. The reason for this is that almost all who are currently still studying at age 20 or older will already be at the secondary level.

Note also for the purpose of the projections, no account is taken of differentials across educational levels with respect to mortality or migration into or out of the population. Thus the current level of attainment assessed as described above remains fixed for each cohort indefinitely into the future.

References

- Bangkok Post. 2010. National retirement scheme set for 2011 launch. Business section 13/04/2010. Bangkok: Bangkok Post.
- Bloom, David, David Canning & Guenther fink. 2009. The graying of the global population and its macroeconomic consequences. Working Paper 47, Program on Global Demography of Aging. Harvard School of public Health.
- Charasdamrong, Prasong. 1992. "The Misery of Those Left Behind," *Bangkok Post*, 10 May 1992.
- Chen, Ya-Mei & Elaine Adams Thompson. 2010. Understanding Factors That Influence Success of Home- and Community-Based Services in Keeping Older Adults in Community Settings. *Journal of Aging and Health*, 22 (3): 267-291.
- East-West Center. 2002. *The Future of Population in Asia*. Honolulu: East-West Center.
- Fujioka, Rika & Sapon Thangphet. 2009. *Decent work for older persons in Thailand*. (ILO Asia working paper series). Bangkok: ILO Regional Office for Asia and Pacific.
- Havanon, Napaporn, John Knodel & Werasit Sittitrai. 1992. The Impact of Family Size on Wealth Accumulation in Rural Thailand. *Population Studies* 46(1):37-51.
- Hermalin, Albert I., Mary B. Ofstedal & Rebecca Tesfai. 2007. Future characteristics of the elderly in developing countries & their implications for policy. *Asian Population Studies* 3(1):5-36.
- Jitapunkul, Suttichai, Jiraporn Kespichayawattana, Napaporn Chayovan & Sasipat Yodpet. 2008. *Age Profile – Health System and Long-tem Care in Thailand*. Bangkok: Ministry of Social development and Human Security.
- Jenchitr, Wataneee & Chalao Pongprayoon. 2003. The national program for the prevention of blindness and eye health promotion and Thailand. *The Journal of Public Health Ophthalmology* 17(1): 6-19.
- Jones, Gavin W. 2008. Fertility decline in Asia: The role of marriage change. *Asia-Pacific Population Journal* 22(2):13-32.
- Jylha, Marja. 2009. What is self-rated health and why does it predict mortality? Towards a unified conceptual model. *Social Science & Medicine* 69:307–316.
- Knodel, John. 1997. "The Closing of the Gender Gap in Schooling: The Case of Thailand," *Comparative Education* 33(1): 61-86,
- Knodel, John & Chanpen Saengtienchai. 2007. Rural Parents with Urban Children: Social and Economic Implications of Migration on the Rural Elderly in Thailand. *Population, Space and Place* 13(3):193-210.
- Knodel, John, Jiraporn Kespichayawattana, Suvinee Wiwatwanich and Chanpen Saengtienchai. 2007. *Migration and Inter-generational Solidarity: Evidence from Rural Thailand*. In UNFPA Country Technical Services Team for East and Southeast Asia, Papers in Population Ageing Series, Number 2. Bangkok: UNFPA.

Knodel, John & Napaporn Chayovan. 2008. *Population Ageing and the Well-Being of Older Persons in Thailand: Past trends, current situation and future challenges. Papers in Population Ageing No. 5*. Bangkok: UNFPA.

Litwak, Eugene & S Kulis. 1987. Technology, Proximity, and Measures of Kin Support. *Journal of Marriage and the Family* 49(3):649-61

Powell, John, Lee Gunn, Pam Lowe, Bart Sheehan, Frances Griffiths & Aileen Clarke. 2010. New networked technologies and carers of people with dementia: an interview study. *Ageing and Society*, Volume 30(6): 1073-1088.

Prachuabmoh, Vipan , Napaporn Chayovan, Malinee Wongsit, Siriwan Siriboon, Busarin Bangkaew, and Chanette Milingtangul. 2008. *The Project on Setting-Up the System for Monitoring and Evaluation of the Second National Plan for Older Persons (2002-2021)*. Bangkok: Thanwa Printing.

Prachuabmoh, Vipan 2009. "Preparation for Old Age and Social Participation of Present and Future Older Persons in Thailand: Gender Difference", Paper presented at the Conference on 'Workshop on Gender and Ageing in Southeast Asia: Contexts, Concerns and Contradictions, February 10-11, 2009, organized by Asia Research Institute, National University of Singapore.

Taub, Eric. 2010. The Technology for Monitoring Elderly. *New York Times* (July 28, 2010)

United Nations (UN). 1956. *The Ageing of Populations & Its Economic & Social Implications*. New York, United Nations.

United Nations. 2002. *Report of the Second World Assembly on Ageing: Madrid, 8-12 April 2002*. United Nations: New York.

Zimmer, Zachary and John Knodel. 2010. Return Migration and the Health of Older Aged Parents: Evidence from Rural Thailand. *Journal of Aging and Health* 21 (forthcoming in 2010).