PATTERNS OF AGING IN THAILAND
AND COTE D'IVOIRE

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ABSTRACT

This paper is broadly concerned with the living standards of older

people in two contrasting developing countries, Cote d'Ivoire and Thailand.

We use a series of household surveys from these two countries to present

evidence on factors affecting the living standards of the elderly: living

arrangements, labor force participation, illness, urbanization, income and

consumption. One of the issues we examine is whether life-cycle patterns of

income and consumption can be detected in the data. The fact that few of the

elderly live alone makes it difficult to accurately measure the welfare

levels of the elderly, or to make statements about the life-cycle patterns of

income and consumption of individuals. We find that labor force

participation and individual income patterns follow the standard life-cycle

hump shapes in both countries, but that average living standards within

households are quite flat over the life-cycle. The data presented suggest

that changes in family composition and living arrangements of the elderly are

likely to be more important sources of old-age insurance than asset

accumulation.

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0 Introduction

This paper presents and discusses some facts about older people in two contrasting developing countries, Côte d'Ivoire and Thailand. We shall be concerned with standard questions in the aging literature, namely demographic structure, living arrangements, urbanization, illness, labor force behavior, and economic status. In this paper, we shall go little beyond the presentation of data from a series of household surveys from the two countries. Although recent years have seen an increased attention in the demographic and sociological literatures to questions of aging in LDC's, data are still relatively scarce, particularly for Africa, and we see our current task as providing stylized facts to help focus further discussion.

There are two research issues that provide the structure for our discussion; household saving behavior, and, more broadly, the economics of aging in countries with low living standards but with rapidly expanding shares of old people in the population.

Research on savings behavior in the United States, Japan, and Western Europe has been dominated by permanent income and life-cycle models since their introduction in the 1950's. There has been a good deal less work on household saving behavior in LDC's, and much of the work that has been done has simply transferred the analytical framework from the more to the less developed context. It is not clear that this is the best way of proceeding. While it makes sense to work with the same basic ideas, that saving can smooth consumption over time, and that assets provide a measure of insurance against an uncertain future, there are important differences in environment and in mechanisms, so that the same aims may be achieved in very different ways. A much larger share of the population in developing countries is engaged in agriculture, where incomes are very variable, and there are many poor people close to subsistence, so that consumption insurance may be of the greatest importance.

Household size is typically larger in poorer countries. Extended families, or even simply large households, may play many of the roles that are performed by asset markets in more developed economies, so that, for example, wealthy older men may acquire additional young wives as an alternative to an annuity. At the same time, the internal organization of the family and its living arrangements are intimately tied to patterns of inheritance, so that the means of transferring assets from one generation to the next will themselves vary with household structure. Age composition within very large households may not vary very much over time, so that main motive for saving becomes the protection of living standards from short-term covariate risk, and has little to do with

transferring resources between generations or between widely separated time periods. One of the issues we examine in this paper is the extent to which there are clearly defined economic and demographic characteristics of households that vary systematically with the ages of their members, particularly characteristics that are likely to provide motives for saving.

A number of broader issues have been raised in the literature on aging in LDC's, and these also play a role in shaping our discussion. The dominant *demographic* fact for LDC's is the effect of the demographic transition on raising the fraction of old people in the population. In Thailand, where the demographic transition is largely complete, the share of over 60's in the population, which was 6.2% and 5.7% in 1960 and 1985 respectively, is expected to rise to 11.9% in 2020, United Nations (1986), figures which are repeated in much of South, South East, and East Asia, as well as in Latin America. United Nations (1987) lists 3.8, 3.5, 5.1 and 4.3 as the percentages aged 65 and over for these four regions in 1980, whereas the estimated figures for 2000 are 4.8, 4.6, 7.8 and 5.2, rising in 2025 to 8.2, 8.3, 13.3, and 8.3. In Africa, where by contrast, there has been little decline in the rate of population growth, the percentages aged 65 and over are 3.1, 3.0, and 3.9 in 1980, 2000, and 2025. The two countries discussed in this paper are good examples of these two contrasting cases.

It is also important to note that life-expectancy for older people in LDC's is high, and although not as high as in Japan or the United States, the difference is much smaller than the corresponding differences at birth. Life expectancy at birth in North America is 72.4 years for men, and 80.1 years for women, and at age 60, men can expect to live for 17.8 years and women for 21.8 years. In South Asia and Africa, respectively, life expectancy at birth is 59.4 and 54.1 for men, and 60.2 and 57.4 for women, while at age 60, the figures are 15.1 and 14.3 for men, and 16.3 and 15.9 for women, see Treas and Logue (1986) for these and other figures. Since women live longer than men, higher life-expectancy for all tends to exaggerate the predominance of women over men in the population, so that the ratio of males to females tends to decline with the level of development. In the more developed countries in 1980, there were 62 males per 100 females aged 65 and over, compared with 82 per 100 in Thailand and 80 per 100 in China, and in parts of South Asia where there is excess mortality among women, there are more men than women in the older age groups, see Martin (1988). Several West African countries also show a predominance of men over women, USAID (1982).

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The growing relative importance of the elderly, particularly in Asia, has led to an increased academic and policy debate mirroring much of the earlier debate in more developed economies. Two excellent reviews are provided by Treas and Logue (1986), and for Asia, Martin (1988). One of the dominant themes of this debate is the contrast between the status of the elderly in more and less developed countries. There are extreme idealized versions of both types of societies. To some, the extended family provides insurance for old-age, unemployment, and sickness, as well as an environment in which the elderly are an integrated, useful and respected part of their families. This is seen as a stark contrast to the "Western" treatment of the old, whereby they are unproductive, isolated, and institutionalized, with social insurance providing only a poor substitute for family insurance. Cowgill (1974, 1986, Chapter 8) sees the victimization of the elderly as a natural concomitant of development, with education, urbanization, and technical change as "processes that strip the old of claims to respect, power, and independence," Treas and Logue (1986, p.666). To others, the security of the extended family is a romanticized myth that appeals mostly to those who have long escaped the grinding poverty, poor health conditions, and low life-expectancy with which it is typically associated. One person's isolation is someone else's individual freedom. It is perhaps not surprising that Asian policy makers, faced with the prospect of rapidly increasing absolute and relative numbers of old people, view Western systems pensions, social security, and public geriatric care with a mixture of envy and alarm.

These "big" questions of the effect of development on the status of the elderly are not sufficiently well posed to be amenable to serious empirical evaluation. Nevertheless, good work has been done on more specific issues, particularly on the living arrangements of the elderly. Martin (1989) reviews a number of studies of Asian populations which suggest that the proportion of the elderly living with their children, although still high (typically between 70% and 80%) is declining over time, with a corresponding increase in the numbers living alone, a pattern that is consistent with a move towards living arrangements such as those in the U.S., where only 15 percent of the elderly live with their children.

The rest of the paper is organized as follows. Section 1 is concerned with *individuals*, and reviews demographic characteristics and living arrangements for elderly people in Côte d'Ivoire and Thailand. It also presents data on urbanization, on health, on labor force participation and hours worked, and, to the extent possible, on levels of living.

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Section 2 is concerned with *households*, and looks for "life-cycle" type patterns in household size, income, and consumption patterns in relation to the ages of household members. Section 3 summarizes and concludes.

1. Individual characteristics and age

1.1 Sample data and population characteristics

The data presented in this paper come from two series of household surveys from Côte d'Ivoire and Thailand. Côte d'Ivoire is listed by the World Bank (1989) in the lower middle-income division of its middle-income category, with *per capita* GNP in 1987 of $740, which grew at an annual average *per capita* growth rate of 1.0% from 1965-87. Its population in 1987 is estimated as 11.1 million, and grew at an annual rate of 4.2% during both 1965-80 and 1980-87. The crude birth rate per thousand was 52 in 1965 and 51 in 1987, while life expectancy at birth in 1987 was 52 years. Thailand has a similar GNP of $850, but has had much faster growth, averaging 3.9% from 1965-87. If these figures can be taken seriously, the average Thai was 280% richer in 1987 than in 1960, as opposed to an increase of only 30% for Ivorians over the same period. Whatever the precise magnitude, young Thais are now very much better off than were their parents, either in terms of lifetime resources, or in terms of income at the same age, and this is much less true for young Ivorians. There were 53.6 million Thais in 1987, with a life expectancy at birth of 64 years. The population growth rate was 2.9% from 1965-80, 2.0% from 1980-87, and is projected to be 1.5% from 1987- 2000; the crude birth rate per thousand fell from 41 to 25 between 1965 and 1987.

The Ivorian surveys are the Living Standards Surveys of 1985 and 1986, collected by the Department of Statistics of Côte d'Ivoire with the technical and analytical support of the World Bank. The survey design is described in Ainsworth and Muñoz (1986), and is a non-traditional one, carried out on a simple random sample of 1600 households in each of the two years, with 800 households common to both surveys. Although the number of households is small compared with traditional designs, there are around 14,000 individuals in each of the two surveys. The emphasis is less on large sample size than on the collection of comprehensive data for each household, so that interlinkages between different economic and activities can be studied. The Thai surveys are the two Socioeconomic Surveys of the Whole Kingdom, collected by the National Statistical Office in the two years 1981 and 1986. These surveys are more like the traditional household

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income and expenditure surveys, they have sample sizes in excess of 12,000, they have no panel element, and there is less detailed information about many of the activities covered in the Living Standards Surveys. Even so, for the purposes of this paper, the two sets of surveys provide roughly equivalent information.

There are earlier household surveys for Thailand which could be used to examine the same issues over a longer time period. However, after the 1975 survey, the definition of the household was changed so as to exclude sub-unit households so that, for example, in 1975 a married son and his wife living with parents would have been included as part of the parents' household, but not in later surveys. As a result, it is not possible to make consistent comparisons about living arrangements over the two types of survey. This seemingly technical issue points to a deeper problem in the measurement of household structure in Thailand and, indeed, in developing countries in general. To quote Cowgill (1986, p.70),

> "In Thailand, however, the term *household* is somewhat elusive and ambiguous. The climate is semi-tropical, and a great portion of one's life is spent out-of-doors. To a very great extent, this includes cooking, eating, and visiting. Thus the physical structure of the home is little more than a bedroom situated within a compound, while the cooking, eating, bathing, visiting, and even much of the working takes place in the compound rather than in the physical structure of the home. Hence when we say that the young married couple lives with the parents of one of them, the young couple usually sleeps in a separate structure within the parental compound. This usually involves common cooking and eating facilities, but this too is flexible, especially since eating is more of an individual matter and less often a scheduled group activity. Western definitions of household membership are not easily applied in this type of society."

These issues must be constantly borne in mind when interpreting the figures given below. In particular, the "new" treatment of the household in the Thai surveys is likely to *overstate* the degree to which people live either alone or in small groups, and to *understate* household size. By contrast, the Ivorian survey used a more inclusive concept of the household, and tended to include subunits if they lived in the same compound. As a result, household size in the surveys is larger than household size in the 1975 Ivorian census, and the biases may be in the opposite direction from those in Thailand.

Figures 1 and 2 show the age pyramids and sex ratios for Bangkok and for rural Thailand in 1981 and 1986, while Figure 3 provides the same information for Côte d'Ivoire. For most of the paper, we shall follow this practice of showing data for Bangkok and for rural Thailand, rather than for the more conventional urban-rural split. Bangkok contains nearly 70% of Thailand's urban population, and while the survey also collects data on other urban and semi-urban (sanitary district) data, these seem sufficiently different from Bangkok to merit separate treatment. In order to avoid a three, or possibly four way split

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for each table, we compromise with two. For the same reason, and when it is not misleading to do so, we shall normally present data from the 1986 Ivorian survey. On balance, the data from the second year are probably of somewhat higher quality.

There are a number of problems with the Ivorian data that are apparent from the figures, although none are particularly serious for older people. There is very pronounced peaking at five year age intervals, particularly in 1985, and particularly among females. Such effects are not uncommon among uneducated populations, see for example Ewbank (1981, pp. 66-68) and are typically correlated with low education and low incomes; the 1975 Ivorian Census shows similar effects, see Ahonzo, Barrere, and Kopylov (1984, p.9). In 1986, interviewers placed less reliance on reported figures, and acquired more supporting information, and the problem is considerably reduced. Even so, it is wise not to make much of the precise age estimates, and to work instead with five or ten year age brackets. More serious is an apparent undercount of prime age males; in 1986 the sex ratios (males per 100 females) in the age groups 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, and 50-54, are, respectively, 85.1, 74.2, 83.2, 65.3, 60.7, 78.9. and 77.6, with between 600 and 200 people in each sex-age cell, see Figures 3b and 3d. Neither we nor the World Bank currently have any explanation for these results. Again, there are similar, although not identical problems with the 1975 Census, and other demographic surveys, as well as with census data in other African countries. Ahonzo, Barrere and Kopylov (1984, Chapter 5), find similar patterns in surveys carried out in the early sixties, as well as in the 1975 Census once the predominantly young, male non-Ivorian immigrants (22% of the population) are removed. Although the Living Standards Surveys include non-nationals, there are only 14% in the two surveys in 1985 and 1986. Since it is the same age group missing in data ten years apart, and since there is no large-scale emigration from Côte d'Ivoire, the problems must come from measurement errors, possibly in connection with the many prime-age males in the cities, where they are hard to count or survey. Respondents may also exaggerate their ages, and it is possible that men do so more often or by more than do women. The figures for the fractions of old people appear to be consistent with those from the Census, again see Ahonzo *et al* (1984), and USAID (1982); note that once again differential overreporting of age by men may account for at least part of the apparent excess of older men.

Tables 1.A and 1.B show the fractions of people, by sex and urbanization, who are aged over 55 in both Thailand and Côte d'Ivoire. We have chosen the young cutoff age

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of 55 because, particularly in a young, rapidly growing population such as that in Côte d'Ivoire, there are relatively few old people. In the 1985 Ivorian sample as a whole, there are 994 individuals aged 55 or over out of 13,271 people in all, or 7.5% (in 1986, 1,046 out of 12,896, or 8.1%). For Thailand, the urban sector is relatively oversampled, so that when the appropriate weights are applied, the survey shows fractions 55 and over of 9.9 in 1981; weights for the 1986 survey are not currently available. National Economic and Social Development Board (1985) gives a lower figure of 7.83% over 55 in 1980. This publication notes a tendency for Thai survey data to underestimate the numbers of children under the age of 10 and this may explain some of the discrepancy. The two estimates for Côte d'Ivoire, which are only one year apart, provide some cross check on reliability, although remember that half of the households are common to both surveys.

In rural areas of both countries, the age distributions of older men are very similar, with around 10% of men older than 54 in both cases. The Ivorian survey shows (absolutely) more men than women in all the age categories over 54, whereas Thailand shows the common pattern of more women than men, see Figures 1b, 1d, 2b, 2d, 3b and 3d. In Thailand, the proportions of elderly are increasing over time (except for males in Bangkok), as is to be expected given the continuing decline in fertility. The major difference between the two halves of the Table lies in the relative youth of the urban sector in Côte d'Ivoire. Only 4% of the urban population is aged 55 or over, as opposed to 10% in Thailand, and the much higher level of urbanization in Côte d'Ivoire (42% opposed to 27%) is what reconciles the similarity between the rural sectors with the overall lower fraction of elderly in Côte d'Ivoire. Of course, both fractions are still much lower than those for the more developed countries of the world; in the U.S., 21.3% of the population is aged 55 or over in 1985, United Nations (1985), while for developed countries as a whole there were 15.8% of the population 60 years or over in 1985.

The urbanization figures are given in Table 2 for the elderly and for the population as a whole. In Côte d'Ivoire, the urban population grew by 8.7% per annum from 1965-80, as opposed to 4.2% for the total population, World Bank (1988), and we see the picture that would be expected if it is largely the younger people who move to the cities; most (three-quarters of) old people live in the countryside, as opposed to only sixty percent of the population as a whole. The towns are predominantly young; there are relatively few old people in Côte d'Ivoire in any case, and a relatively small proportion are urbanized. For Thailand, the picture is different; the distribution of elderly across rural and urban

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regions is virtually identical to the distribution of all people across regions. For example, in 1981, 17.5% of people older than 54 were urbanized, as opposed to 17.8% for the population as a whole. However, these numbers mask the fact that that the fraction of older people urbanized exceeds the fraction of children urbanized (14.9%), and is less than the fraction of people aged 15-54 who are urbanized (20.9%). Thus, cities in Thailand have a slightly heavier concentration of younger adults than older adults. The difference between the fraction of older and younger adults who are urbanized is so small because there is relatively slow growth of urban areas in Thailand, and because there are fairly high rates of migration by the elderly to urban areas other than Bangkok. The growth of the urban population in Thailand averages 4.6% a year bewteen 1965 and 1980, as opposed to a 2.6% annual growth rate for the population as a whole, World Bank, (1988). Migrants to Bangkok tend to be young: only 2.6% of migrants to Bangkok in 1982 were aged 65 or older, National Statistical Office, (1983). However, migration rates of older people to urban areas other than Bangkok have been quite high, with rates for those 65 and older exceeding rates for those aged 30-49, World Bank (1979).

The Ivorian data also provide information on nationality of people sampled. Côte d'Ivoire has been one of the more successful West African economies, and has attracted many migrants from its neighbors, particularly Burkina Faso, Mali, and Guinea. Of the two samples, 13.9% in 1985 and 13.1% in 1986 are non-Ivorian, divided in the ratios 4:2:1:1 among the three countries listed and other Africans. As one might expect if many of these migrants are young, the proportions among those 55 and over are lower, 7.6% and 6.8%.

1.2 Living arrangements

Tables 3.A and 3.B tabulate marital status for those aged 55 and over. For women, the modal status at ages 55-59 is married, and at 70 and over, it is widowed, with the weight shifting from one category to the other as we move from the younger to the older women. These patterns are similar in the two countries. The modal status for men is married in all of these elderly age categories. In Côte d'Ivoire, where a quarter of men have more than one wife, 83% of men aged 70 and over have at least one spouse. Of the 543 men in Table 3.B, 492 are household heads, and for them we have data on numbers and ages of wives. Of these 449 have one or more wives in the household, 59% have one wife, 26% have two, 11% have three, and 4% have four or more. The average age of these

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449 men is 64, that of the first wife 51, the second wife 44, and the third wife 40. It is difficult to become a widower in Côte d'Ivoire, and even among those aged 70 or more, there are only 12% in this category, compared with 26% in rural Thailand.

For Ivorian men, there is a strong association between wealth, especially cash wealth, age, and the number of wives. Hecht (1982) describes how, in the 1920's, which were the early years of cocoa and coffee production in Côte d'Ivoire, the cash from the new crops, which were farmed by lineages, not families, was used to provide bridewealth for the acquisition for the lineage of new wives, and thus ultimately new labor. By the 1980's, the old lineage system had largely broken down and been replaced by one of small-scale peasant farming, with alienable land and wage labor, but the use of the surplus to acquire additional wives remains. Indeed, the acquisition of additional young wives for wealthy Ivorians is a standard way of purchasing old age security. The occurrence of polygyny rises with age until remarkably late in life, see Ahonzo *et al* (1984, Table 5.8). Only ten percent of men aged 25-29 have more than one wife, and the proportion rises with age until it reaches nearly a third for 65-74 year olds. Indeed, 13% of men aged 70-74 have three or more wives.

The effects of polygyny on living arrangements also appear in Tables 4.A and 4.B. Over 80% of Ivorian males in the table live in households with at least one spouse, as compared with only 60% of men aged 70 or more in Thailand. Elderly women, by contrast, are increasingly widowed, and live with their children or with others. About half of these "others" are brothers who take their sisters into the household, the rest are women living with a head of household who is more distantly related, perhaps a niece or nephew. Very few of the elderly, either men or women, live alone in Côte d'Ivoire; in the 1986 (1985) sample there are only 22 (17) people over 54 who live by themselves. Indeed, there are very few couples; less than 5% of the elderly live in households with only two members. Households are large in Côte d'Ivoire, averaging 8.1 persons in 1986, and neither the elderly (nor anyone else) are likely to live in small households; only 1% of the people in the survey live in households with less than three members.

The situation in Thailand is different, although the caveat about the definition of the Thai household must be kept in mind. Household size is smaller, with 4.2 and 4.6 persons per household in Bangkok and rural regions in 1981, and 3.6 and 4.5 per Bangkok and rural household in 1986. There are correspondingly more older people who live alone or with their spouses. Among elderly women in rural Thailand in 1981, 5.6% to 14% lived

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alone, and a substantial fraction among the younger elderly lived together with a spouse but with no other family members. The numbers for 1986 do not reveal an increase in the tendency to live alone or with a spouse only. In fact, the fraction of rural females living alone decreased substantially between the two survey periods for all age groups. Older individuals who do not live alone or with a spouse only almost always live with adult children. The fraction of older people living with "others only" is small for all but Bangkok females. Of women who do live with "others only," the age of the household head is typically quite low, indicating that these women may live with adult grandchildren. The "Western" view of the elderly living either alone, alone with spouse, or with their children, is perhaps closer to the truth in Thailand than it is in Côte d'Ivoire. The larger, more complex families in West Africa allow a wide range of possible living arrangements, especially for the large fraction of widows.

1.3 Education, labor supply, and health status

The data on education are not comparable between the two countries, but nevertheless Tables 5.A and 5.B show similar patterns across ages and sexes in both Thailand and Côte d'Ivoire. By any measure, educational standards are much higher in Thailand, and even among rural women, over 90% of the 20-39 age group have had a least one year of school, whereas only 37% of Ivorian women in the same age group have ever been to school. But even in Thailand, very few individuals have ever completed elementary school (seven years of education), and in the rural villages, less than one percent of men or women over 40 have done so. In Côte d'Ivoire, none of the sample women aged sixty or over can read a newspaper, or do a simple written calculation, and only a negligible fraction of women over 50 have ever been to school. But apart from the differences in levels, the patterns are the same; men have more education than women, and young people have much more education than their elders. Conventional concerns about education separating the generations are clearly relevant in these sorts of situations. Three quarters of Ivorian males and more than a half of Ivorian females between 15 and 19 can read a newspaper, something that be accomplished by about half of their fathers, and perhaps a quarter of their mothers, and almost none of their grandparents. One might legitimately wonder if the experience and wisdom of older farmers, real though it is, may not be offset by their inability to read the label on a bag of seeds or fertilizer. Experience may be more valuable than education in a stationary environment, but much

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growth in LDC's has come from exploiting new crops, and new techniques of growing them; indeed, there appear to be large gains to greater use of fertilizer and insecticide in coffee and cocoa production in Côte d'Ivoire, gains that have so far gone almost entirely unexploited, see Deaton and Benjamin (1988).

Labor force participation and hours worked show the standard life- cycle patterns in both countries. In rural areas in Thailand, almost all prime-age males and females participate in (mostly agricultural) work, though substantial fractions of time are spent idle according to the dictates of the agricultural calendar. Participation rates are lower for women than for men in Bangkok, and fall off very rapidly among the elderly. Among those who continue to work, hours and weeks remain high. This contrasts with behavior in the rural sector, where hours and weeks decline along with participation among the elderly, perhaps because of the physical demands of agricultural work.

Participation rates in Côte d'Ivoire are surprisingly low, especially among males in the 20-39 age group. Note that these figures, although covering a broad range of activities, relate to the last seven days, so that those farmers who did nothing in the past week would be counted as non-participants. Furthermore, the traditional allocation of tasks among many West African groups is for women to undertake food growing and trading activities, leaving men free for hunting, fishing, and fighting. Cocoa and coffee farming are, however, legitimate activities for men, and are undertaken by a large fraction of Ivorian households. Participation rates among older workers remain relatively high into the their late sixties, only falling off among the oldest group. Among older participants, weeks worked declines hardly at all, although both days and hours per day fall with age, which is exactly the pattern that might be expected in a predominantly agricultural economy. Note that the hours, days, and weeks figures for Côte d'Ivoire relate only to the activity defined as the main job over the last seven days. Many individuals have second jobs, and there are a large number of small family enterprises, many run by women.

Table 7 presents information on the health of the respondents in the Ivorian survey. These are self-reported figures, and the investigators have no means of checking the reliability of these reports. Although all respondents were weighed and measured, such measurements are of relatively little value in determining health status, except for children. Except for those under 30, more than a quarter of all respondents in each age group report some sickness or injury in the last four weeks, with the fraction rising to well

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over a half among the older groups. For those aged 55 or over, 6 to 13 days a month are days of illness, and these illnesses are sufficiently severe to cause a suspension of normal activities in 3 to 10 days. Women show more illness than men until about 40 years of age, but subsequently show less, considerably less in some of the older age groups. Somewhat less than a half of all illnesses lead to a medical consultation, or the purchase of medicine, and the figures suggest that, among the elderly, a smaller fraction of illnesses in females are severe, or are treated as such. Comparable data from the Thai survey are not available.

1.4 Levels of living

Although much of the concern about the elderly is a concern about living standards, it is remarkably difficult to measure their consumption or income levels, even in more developed countries, and the difficulties are much greater in poor countries. In the U.S., where many old people live alone or with their spouses, their household income and expenditure levels can give some idea of living standards in relation to the rest of the population. Indeed, work on the status of the low-income elderly in more developed countries, e.g. Coder, Smeeding, and Torrey (1990), effectively define the population of interest to be this group, typically female, one-person families and married couples, groups that together covered 91% of the U.S. population aged 65 and over in 1982, see Cowgill (1986, p.29).

In Thailand, and even more so in Côte d'Ivoire, the vast majority of the elderly live with other people, children, spouses, and other relations, and very few live alone. Household surveys collect data on household levels of living, not on those of the individuals within them. Disentangling who gets what within the household is difficult, even for "private" goods like food, and attempts to do so require costly and intrusive techniques of observation. For public goods, such as housing, entertainment, and many services, individual consumption levels are not even well defined. In contrast to consumption, many income flows can be assigned to individual members of the household, although only with great difficulty in farm households, although such assignment, even when possible, tells us only a limited amount about the distribution of welfare within the household, which is our main concern. There is a belief in much of the development literature that individuals who bring money into the household receive better

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treatment than those who do not, but there is little credible evidence to support the contention.

This problems of isolating the living standards of the elderly is conceptually the same as that of isolating the living standards of children, a topic on which there exists a large and venerable literature. However, as argued in Pollak and Wales (1979) and elaborated in Deaton and Muellbauer (1986), much of this literature sets out by assuming what it wants to measure, and, even after more than a century of research, no generally acceptable methodology has been derived that would support the isolation of children's living standards from household level data. One possible avenue, suggested in Deaton, Thomas, and Ruiz-Castillo (1989), is to identify a set of goods that are not consumed by adults, for example children's goods, and, on the grounds that additional adults exert negative income effects, but no substitution effects on such goods, measure the "cost" of old people versus that of younger adults by calculating their relative (negative) effects on the consumption of child goods. However, it is difficult to isolate commodities that are only consumed by children, especially in less developed countries where children consume little beyond food, shelter, and clothing. Moreover, (unreported) experiments with the Spanish data used in Deaton, Thomas, and Ruiz-Castillo, did not lead to sensible estimates.

If these problems of measuring living standards are taken seriously, it is unclear that it possible for most LDC's to make statements about, for example, the fraction of old people living in poverty, let alone to address broad topics like the effect of development on the status of the old. Even so, something can be said, and we report some fragmentary but relevant evidence.

The simplest procedure is to assume that everyone in each household is treated equally, and to impute to each person the *per capita* or per adult equivalent total expenditure or income for the household in which they reside. If the assumption is correct, the procedure yields the right answer. If it is false, as it almost certainly is, then the calculations are still informative. If old people live predominantly in households with low average living standards, we are more likely to be concerned about their welfare than would otherwise be the case. Of course, it may be that it is the children or younger people in such households that we should worry about, not their likely powerful elders.

Table 8 shows the relevant calculations for Côte d'Ivoire in 1986. In computing adult equivalents, children under 5 have been assigned a weight of 0.25, and those from

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5 to 14, a weight of 0.45. These numbers are essentially arbitrary, but they are relatively low in the light of the considerations discussed in Deaton and Muellbauer (1986), and it is better to make some such assumptions than to work with either total or *per capita* household expenditure. As the age of the individual increases, the average number of household members with which he or she resides decreases, from 12 at age 0 to 9 at age 70, but rises to around 10 for the oldest ages. The economic measures, income, consumption, and income and consumption per equivalent all have the same general shape, rising to their maxima for the 30-34 year age group and falling steadily thereafter. Among the oldest people, household total income and expenditures in the households in which they live are little more than a half the levels in the peak years, and the per equivalent measures are less than a half of the peaks. If consumption per equivalent is taken as a representative measure, the average for those 55 and over is 79% of the average for all individuals.

Older Ivorians live in households that have less income and consumption than the national average. However, old people live mostly in rural areas, and the much better-off urban residents are typically young. Moreover, the rural-urban difference is likely overstated by the fact that no allowance is made for price differences between rural and urban areas, and because urban residents typically pay rent, or have rents imputed for them, something that cannot be done for rural residents. Table 9 repeats the information for rural areas only. Now the relationship between living standards and age has essentially disappeared; while total consumption and income fall with age, at least until the late sixties, adult equivalents fall at much the same rate, so that there is little or no relationship between age and the per equivalent measures.

Tables 10 and 11 show income and expenditure by the age of the individual for Bangkok and rural areas in 1981. Unlike Côte d'Ivoire, the number of adult equivalents per household does not vary with age. However, family income and expenditure do not vary greatly with age either. There is a small peak in income in the 50-54 age range for males in both Bangkok and rural regions; in Bangkok, this peak in income is offset by a corresponding peak in the number of adult equivalents. Overall, income and expenditure, as well as income and expenditure per adult equivalent, are very flat across age groups. The average consumption per adult equivalent of those 55 and over is 100.3% of the average for all individuals in Bangkok, and 109% for rural regions. On average, older Thais in both Bangkok and rural regions do not live in poorer households.

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Unlike the Ivorian surveys, the Thai surveys provide a good deal of information on individual income levels and the sources of individual income. If the allocation of consumption to members within a household depends on the amount of income members bring to the household (and again, it is not known if this is true), then the patterns of individual income with age provide evidence on standards of living over the life-cycle. Information on the distribution of income between pensions, annuities, and property income, as opposed to remittances and gifts, provides evidence on the extent to which older individuals rely on asset markets for old-age support.

It is possible to disaggregate individual income into that derived from wages, farming and self-employment (called business income), property, transfers (remittances, pensions and annuities), and other sources. The measures of profits from farming and self-employment are problematic in that they do not exclude the value of free family labor used, and are usually "assigned" to the household head "or to the operator of the enterprise if he could be identified." For most family businesses, it is not clear that the profits from the business should be assigned to any one person. In what follows, no adjustments were made for these problems.

Table 12 provides information on individual income and the distribution of income for males and females in Bangkok and rural regions. Unlike the household income figures discussed above, there is a clear pattern of individual income over the life-cycle. For both rural and Bangkok males, income levels peak in the 50-59 age range and then decline rapidly. Female income levels in are flatter over the 30-60 age range but then also decline. These results are consistent with the declines in labor force participation for both males and females after the age of 60, and much of the declining income levels of older individuals can be accounted for by the increasing fraction of those who earn no income at all.

As is to be expected, the share of income from wages and business declines for older people, although the share of income from farming and self-employment remains quite high for men (49% and 79% for Bangkok and rural men aged 60-69). This reflects the fact that the oldest man in the household is usually the head of the household and would typically have all family business income assigned to him.

The share of income derived from transfers (including pensions, annuities, and remittances) increases dramatically with age for both men and women in Bangkok and rural regions. Transfers account for a large share of individual income, particularly for

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women. These transfers consist mainly of remittances, presumably from family members or friends in other households. Although transfers cannot be divided up between remittances and pensions and annuities at the individual level, they can be disaggregated at the household level. Of all households that receive transfers, 93% of those in Bangkok receive no pensions or annuities, and 97% of rural households receive no pensions or annuities. The share of income from property (including interest, dividends, and rents) increases with age but, like pensions and annuities, is quite small, reaching only 10-12% of income for both Bangkok and rural residents in the 70+ age group. Thus, sources of old-age income that are standard in developed countries have only a very small role in Thailand.

Table 13 tabulates income by source for rural males and females who live alone or with a spouse only, and for those who live with at least one person who is not a spouse. Older people living with others are less likely to earn any income at all. However, the shares of income from different sources are not too dissimilar for those in different living arrangements. The fraction of total family income derived from goods received free does vary with living arrangements. For example, for rural females aged 60-69, goods received free accounts for 18% of family income for those alone or with a spouse only, and only 5% of family income for those living with others. For females living alone or with a spouse only, free goods and transfers make up a significant share of their income.

2 Household life-cycles

In this section we move our focus away from individuals and towards households, and how they change with the ages of their members. Households in LDC's are typically larger than those in more developed countries, particularly so here for Côte d'Ivoire, so that, with several generations living together, the life-cycle patterns of the household as an aggregate may be much attenuated compared with the patterns observed in the West. Households with between ten and twenty members are not uncommon in Côte d'Ivoire, and in the limit, it is possible to imagine a state of affairs in which each household's demographic composition is a miniature version of that of the country as a whole, and the life-cycles of the individuals within the household offset are subsumed into a stationary structure for the household.

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In fact, such is far from being the case in Côte d'Ivoire. Table 14.B shows the breakdown of household heads by age and sex. If household composition were stationary, and the oldest male was always designated as the household head, there would be no heads outside this category. In reality, 42% of household heads are under the age of 55, and only 19% are men over the age of 70. Only five percent of households contain one or more married sons of the head, and less than one percent have two or more. Similarly, it is rare for married brothers to live together; only three percent of male headed households contain a married brother. These households seem to conform well to what Cowgill (1986, p.62) describes as the common pattern among polygynous households; "a man, his several wives, their (unmarried) children," and possibly "some additional consanguines, such as unmarried or widowed sisters of the husband, and perhaps his aged parents." New households are set up by married sons, so that, while there is a clear bias towards older heads and there are more heads in older groups than their share of the population would warrant, there are many households headed by younger men.

The economic status of the household is also clearly related to the age of its head, as shown in Table 15. These data are presented for both years; they are probably a good deal less reliable, particularly for assets, than previous data, so that one year cannot be safely taken as representative for both. The figures show that older heads preside over bigger households, but that both household income and household total expenditure reach a peak among households headed by 30-34 year-olds, and then steadily decline. The pattern, if it is there, is a good deal less obvious in the rural areas. As was the case for patterns in the individual data, the hump in household incomes and expenditures is exaggerated by pooling older, poorer, rural individuals with younger, richer, urban ones. Since household size and the number of equivalents increase with the age of the head, deflation by either measure produces a pattern in which household living standards decline with the age of the head, so that the hump is moved to the extreme left of the age distribution.

The hump-shaped pattern, in which incomes and consumption shapes are closely matched, is one with a peak that occurs much earlier in the head's age distribution than is the case in many LDC's, particularly those in Asia, see Deaton (1990) for evidence on Thailand, Korea, Indonesia, and Hong Kong, the first of which we return to below. These cross-country patterns are important because, as pointed out by Carroll and Summers (1989), if tastes are common across countries, then the rapidly growing countries are those

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where young people are relatively much richer than their parents and grandparents, so that age consumption profiles should peak earliest in the most rapidly growing economies. But Côte d'Ivoire is a very slow-growing economy relative to Thailand and the other Asian countries listed above, and this slow growth is accompanied by the earliest peak in household consumption. As Carroll and Summers emphasize, these results make it difficult to believe that life-cycle saving is responsible for the cross-country correlation between growth and savings that exists in the data. Instead, the obvious alternative is that consumption tracks income over the life-cycle, a hypothesis that is fully consistent with the data in Table 15.

Saving itself is as often negative as positive, and shows no clear pattern with age. The measurement of income for poor, largely illiterate, self-employed farmers in LDC's is an undertaking fraught with difficulty, and little weight should be attached to the magnitude of these figures. However, analysis of the micro data from Côte d'Ivoire provides evidence that farmers undertake short-run saving to smooth their consumption relative to their noisy incomes, and this evidence is also consistent with the earlier results on farmers' saving behavior in Thailand in Paxson (1989).

The asset figures are likely to be almost as unreliable as the savings data, and there is a still unresolved question as to why the (largely self reported) figures for agricultural assets are so much lower in 1986 than in 1985. The data in the upper panels suggest that, over the country as a whole, asset levels continue to increase with the age of the household head, but some of this is an aggregation effect; in the rural panel, agricultural assets are more or less equally distributed across age groups, something that would follow from a process in which land is closely tied to household formation. Note that, at least until recent years, land has not been particularly scarce in Côte d'Ivoire (nor in Thailand), and, given permission from the lineage owning the land, new cocoa and coffee farms could be established by clearing virgin forest, with ownership gradually established by use. Even today, fathers would typically assume responsibility for providing their sons with land, and if uncultivated land is no longer available within the lineage boundaries, the acquisition or use of land elsewhere will be arranged, preferably close by, but sometimes at some considerable distance. See again Hecht (1982) for a description of the evolution of land markets in response to increasing scarcities, first of labor, and later of land.

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Table 16 presents regressions of income, consumption, and the asset variables on household demographic structure, and on dummies for the five main urbanization and agroclimatic zones in the country. These results should not be interpreted as structural equations, but as an alternative and more informative description of the relationship between head's age and these economic variables. High income and consumption levels are associated with the presence of prime age males and females; in itself evidence of consumption tracking income. The presence or absence of individuals aged 55 and over seems to contribute little to household income or consumption levels. Asset levels, however, are positively associated with the presence of older men, (but not older women) particularly those aged from 55 to 64. This is certainly consistent with a steady accumulation of assets by the male head, passing on to sons at or before death. Women aged 25-34 also attract a very large positive coefficient in the agricultural assets equation. Since daughters would not normally inherit land, there is no obvious explanation for this result, although it could conceivably reflect the propensity of older wealthy men to marry young second or thrid wives. There is no evidence of an association between business assets and women, although many small business in Côte d'Ivoire are owned by women.

Thai households (as defined by the Socioeconomic Surveys) are much smaller than those in Côte d'Ivoire. Using 1981 data, approximately 50% of rural households have four members or less, and households of ten or more members are rare. Households in Thailand are also likely to have younger household heads. Sixty-three percent of rural household heads and 69% of urban household heads are younger than 55, see Table 14.A. The size of households also varies with the age of the household head. The first column of Table 17 shows that the number of household members first increases and then decreases as the household head ages. These numbers are consistent with the "Western" pattern of children marrying and setting up their own households, which grow as children are added, and then shrink as children move out. Cowgill (1986, pp.69-70) describes the Thai system as a "residual stem family" system, in which young married couples often live with one set of parents but only until a younger sibling marries and takes their place. The last child married, often the last daughter married, stays with the parents until the parents die, and then inherits the land. This would explain why households with very old house-hold heads have, on average, four members rather than one or two.

These patterns of household formation may make life-cycle models of household consumption more relevant for Thailand than Côte d'Ivoire. With smaller households it

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is less likely that household members span a broad range of ages, and the age of the household head should be a good indicator of where a household is in its life-cycle. Given the fairly rapid growth in Thailand, one might expect to see younger (richer) households both earning and consuming more than older households.

The results in Table 17 indicate that income and consumption do follow a hump-shaped pattern similar to that seen in Côte d'Ivoire but with a much later peak in both income and consumption. Household income reaches its highest level in the 60-64 age category for Bangkok, and in the 50-54 age category for rural areas. Consumption tracks income closely, and saving also appears to follow a similar pattern, with those in the highest income groups saving most, although the pattern for saving is less pronounced. These patterns are consistent with the age patterns of individual income shown in Table 12, and are also consistent with the patterns of household size shown in Table 17. Household heads in their 40's and 50's have the largest households, and it is likely that the children in these households are old enough to contribute substantially to household income.

Although total household income and consumption are both strongly related to the age of the head of the household, income and consumption after adjusting for the number of adult equivalents are not. Since family size and the number of adult equivalents follows the *same* hump-shaped pattern as income and consumption, adjustment for family size results in extremely flat income and consumption profiles that appear to have no relation to the age of the household head.

The absence of any difference in income and consumption per equivalent adult between young and old households is puzzling, especially in a rapidly growing country such as Thailand. One possible explanation is that households in Thailand may be much more complex than the data suggest. As discussed earlier, a small "household" may actually be part of a larger group of several related households in a single compound, and there may be significant transfers between such households. The fact that older people "living alone" receive a large fraction of their incomes in the form of free goods (most of which are food) suggests this might be so. If each household, as measured by the survey data, is actually part of a network of closely linked households containing people in different generations, then it becomes quite unclear whether one ought to expect individual households to operate in ways predicted by life-cycle models. One can imagine a situation in which household formation is itself the mechanism that is used to smooth

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consumption (and income) across individuals in different generations: individuals may be "allocated" across households so as to maintain roughly equal consumption levels across all family members within a group of households. Much more detailed data on links between households would have to be collected to determine whether or not this is so.

4. Conclusions

We have presented a considerable mass of evidence, most of it not well structured by any theoretical concerns. This is perhaps inevitable given the current state of the subject; aging in developing countries is an issue that looks like it might be important, but concern is still unfocussed on any particular set of economic research questions, or even outstanding policy issues. There are many large and attractively wooly creatures at loose in the forest: the role of development and the status of the aged, the relationship between marriage patterns, polygamy, living arrangements, and the treatment of the elderly, and what policy steps, if any, should be considered by those Asian countries that are facing rapidly rising shares of elderly inhabitants. But we are very far, not only from answers, but even from a well-defined set of topics that economists could usefully think about.

Even so, we feel that we have learned something by looking at these data and by writing this paper, and it is perhaps useful to conclude by summarizing some of what is known, and what might usefully be learned:

1. Questions of the economic status of the old in LDC's are not answerable and have to be rethought. In more developed countries, where perhaps nine tenths of the elderly live by themselves or with elderly spouses, household surveys can tell us a great deal about their living standards. In LDC's, to a greater or lesser degree, older people do not live by themselves, and until a method can be found for measuring intrahousehold allocations, we have no method of assigning welfare levels to them, or indeed to other members of the households in which they live.

2. More work needs to be done on the question of whether the source of income, i.e. who earns it, affects what individual members of the household receive. This cannot be done directly, but if the earnings of the elderly are spent differently from other household income, the fact should be detectable from consumption data. Data such as those from Thailand show considerable variation in source of income with age, although the patterns are quite different from those in the Unites States or Western Europe.

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3. In the U.S. and other developed countries, where many elderly people live alone, there has been concern about the possible abandonment of the old. However, such cases seem to be rare, most old people live alone because they want to do so, and frequency of contact with children is generally high, see Mancini and Blieszner (1989) for a review. In Côte d'Ivoire, under current living conditions, abandonment would seem to be an unlikely event, because very few old people live alone. There are perhaps more grounds for concern in Thailand, but the population at risk is still small, and is probably overstated by the survey results quoted here. However, there is evidence from elsewhere that suggests that these results should not be generalized to all poor countries. In many areas of India, living arrangements for newly-weds are strictly patrilocal, so that, after marriage, women are effectively cut off from their parents' family. In turn, they will be looked after in old age by their sons, their daughters having themselves moved to their husbands families. In consequence, women who fail to produce sons, or fail to produce surviving sons, are likely to fall into destitution as widows. Drèze (1988) provides evidence on this problem, and highlights it as an outstanding issue for social security and poverty policy in India.

4. The living arrangements of the elderly will vary from place to place according to marriage arrangements, agroclimatic conditions, and the availability of labor and land. The position of Indian widows has already been cited. In Côte d'Ivoire, living patterns have been changing in response to the increasing scarcity of land, since sons, who previously were guaranteed land nearby, now are often required to set up households at considerable distances. The shortage of land itself reflects a great deal of immigration to the cocoa and coffee areas, an immigration that responded to original *labor* shortage, and that contributed to the destruction of the original lineage system of cocoa and coffee production. One may also wonder whether the pattern of inheritance in Northern Thailand, whereby as a result of the residual stem family system, the youngest daughter typically inherits the land, will continue unmodified into an era where land is increasingly scarce.

5. Individual participation and earnings patterns show the standard life-cycle hump shapes in Côte d'Ivoire and Thailand, and presumably do so more widely. However, households act so as to make average living standards within households much less variable over the life-cycle than are the individual patterns. The degree to which this happens in the data is different between the two countries, and depends on how house-

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hold size is measured. Even so, sharing resources between household members is presumably one of the main economic functions of the household. What needs a great deal more research is the extent to which household size and composition itself adapts to facilitate sharing, and to guarantee the best possible living standards to its members. In both Thailand and Côte d'Ivoire, there is a great deal of migration, on both a seasonal and non-seasonal basis. In Thailand, the process of household formation is explicitly tied to the pressure on resources within the compound, so that the departure of a previously married child on the marriage of a younger sibling is as much a matter of economics as of immutable custom. In the panel households in Côte d'Ivoire, there are major differences in membership between 1985 and 1986, and while there is undoubtedly some measurement error, careful attempts were made to link household members from one year to the next, and there is certainly a great deal of movement. Fosterage of children, often children not closely related, is a widespread phenomenon in West Africa, see Ainsworth (1989), and provides a mechanism, not only for education, training and apprenticeship, but also for sharing economic burdens between members of the same lineage. There has been a good deal of emphasis on the role of risk sharing in determining patterns of marriage and migration, see for example, Rosenzweig (1989). But there is scope for more modeling here, particularly for a simple unifying theory that explains how potential household members decide how to form household groups given the economic opportunities available to them.

6. There are a number of interactions between urbanization and age distributions. Migration tends to lead to young cities and an older countryside, as is the case in Côte d'Ivoire, but much urban growth in LDC's comes from reproductive behavior, as well as from migration. The fall in fertility in the demographic transition often begins first in the cities, so that cities are likely to age more rapidly than more rural areas. The balances between these forces will produce different age distributions in different countries, for example, younger cities in Africa, and older cities in Asia, and these have a number of repercussions for policy, for example in the provision of services, as well as in the likely effectiveness of older people as a political force.

7. Many LDC's are in a state of transition, not only demographic, but also educational. In both countries examined here, there are very large differences between the educational attainments of the different generations. The *consequences* of these differences are much less clear, and we do not wish to subscribe to the view that they always and

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everywhere undermine the status of the old. Nevertheless, models that provide a theoretical framework for the role of the elderly would do well to bear these facts in mind.

8. The life-cycle model of saving and capital accumulation, which has brought so many insights in developed countries, cannot be applied without modification to economies where the functions of households are different. Asset accumulation for old age, with a large share of the capital stock being accounted for (or not accounted for) by life-cycle saving, is not likely to be a very useful model for savings in LDC's. Households can and do provide old-age insurance without an obvious need to accumulate and decumulate assets. Our data do not suggest any run down of assets with the age of the household head. Of course, as in more developed economies, heads have a range of other motives for keeping control of assets for as long as possible.

9. As in developed countries, there is a pronounced household life-cycle, with a hump shaped income, peaking much earlier in Côte d'Ivoire than in Thailand. However, we doubt that there is much long-term consumption smoothing associated with these humps, and tend to attach more importance to saving as a means of smoothing consumption over short-term fluctuations in income that are typically associated with agricultural activities. Indeed, it is possible that variations in household structure contribute more to long-term smoothing than do variations in assets.

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TABLE 1.A

AGE DISTRIBUTION BY SEX: 55 AND OVER
THAILAND 1981 AND 1986

| | BANGKOK | | | | RURAL | | | |
| | FEMALES | | MALES | | FEMALES | | MALES | |
AGE:	1981	1986	1981	1986	1981	1986	1981	1986
55-59	3.2	3.5	3.5	3.0	3.3	3.8	3.0	3.4
60-64	2.3	2.3	2.1	2.2	2.5	2.6	2.1	2.5
65-69	1.6	2.1	2.0	1.3	1.8	1.9	1.5	1.8
70-74	1.1	1.0	1.0	1.3	1.4	1.7	1.3	1.5
75-79	0.5	0.7	0.7	0.5	0.8	1.3	0.6	0.6
80+	0.8	0.8	0.2	0.8	1.0	1.0	0.4	0.8
>=55	9.5	10.5	9.5	9.1	10.7	12.5	9.0	10.6
OBS	3399	2209	3028	1879	11941	10260	11359	9862

TABLE 1.B

AGE DISTRIBUTION BY SEX: 55 AND OVER
COTE D'IVOIRE 1985 AND 1986

| | URBAN | | | | RURAL | | | |
| | FEMALES | | MALES | | FEMALES | | MALES | |
AGE:	1985	1986	1985	1986	1985	1986	1985	1986
55-59	1.5	1.8	1.9	2.0	2.7	3.0	3.6	2.9
60-64	1.1	1.3	1.5	1.5	2.1	2.7	2.3	3.1
65-69	0.7	0.8	0.5	0.6	1.7	1.7	2.2	2.5
70-74	0.3	0.3	0.6	0.5	0.9	1.1	1.3	1.4
75+	0.4	0.5	0.3	0.4	1.4	1.3	1.3	1.5
>=55	3.9	4.7	4.8	5.0	8.9	9.7	10.6	11.4
OBS	2842	2805	2678	2662	4014	3846	3737	3583

Notes: Figures are percentages of the relevant group, so that, in Thailand in 1981, 3.2% of all women in Bangkok were aged 55-59. OBS is the total number of observations for all ages in the sample, so that, e.g., there are 3144 females in the urban Ivorian sample in 1985. Note that the Ivorian sample is a simple random sample, so that the sasmple numbers can be used toestimate the fraction urbanised. This is not true for the Thai survey, see Table 2 below. The Thai results exclude urban non-Bankok and the suburban "sanitary districts" sector.

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TABLE 2

URBANIZATION AND THE ELDERLY
COTE D'IVOIRE AND THAILAND

Percentages of people living in:

Côte d'Ivoire	1985	1986	Thailand	1981
Aged 55 or over:				
Urban	24.3	25.3	Urban	17.5
			Semi-urban	10.3
Rural	75.7	74.7	Rural	72.2
All ages:				
Urban	41.6	42.4	Urban	17.8
			Semi-urban	9.0
Rural	58.4	57.6	Rural	73.2

TABLE 3.A

MARITAL STATUS OF THE ELDERLY
THAILAND 1981

RURAL FEMALES   BANGKOK FEMALES

AGE:	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL
55-59	1.8	63.9	29.6	4.8	396	2.8	73.2	15.7	8.3	108
60-64	2.0	57.6	37.3	3.1	295	3.9	39.7	48.7	7.7	78
65-69	1.8	43.6	51.8	2.7	220	1.8	49.1	43.6	5.5	55
70+	2.2	21.4	74.5	1.9	364	3.7	9.8	79.3	7.3	82

RURAL MALES   BANGKOK MALES

AGE:	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL
55-59	2.3	86.3	8.4	2.9	344	0.0	87.6	6.7	5.7	105
60-64	0.4	83.8	13.7	2.1	234	1.6	89.1	17.5	0.0	63
65-69	0.6	84.3	13.4	1.7	172	3.3	80.0	13.3	3.3	60
70+	0.8	71.9	25.8	1.5	267	0.0	60.7	36.1	3.3	61

TABLE 3.B

MARITAL STATUS OF THE ELDERLY
COTE D'IVOIRE 1986

FEMALES   MALES

AGE:	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL	NEVER MARRIED	MARRIED	WIDOWED	DIVOR-CED	TOTAL
55-59	0.6	65.0	25.8	8.6	163	1.9	90.5	5.1	2.6	157
60-64	0.0	54.4	39.1	6.5	138	2.0	91.5	2.0	4.6	153
65-69	0.0	41.9	55.8	2.3	86	0.9	85.9	11.3	1.9	106
70+	0.9	15.5	81.9	1.7	116	0.0	82.7	11.8	5.5	127

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TABLE 4A

LIVING ARRANGEMENTS OF THE ELDERLY
THAILAND, 1981 AND 1986

BANGKOK FEMALES / RURAL FEMALES

	BANGKOK 1981				BANGKOK 1986				RURAL 1981				RURAL 1986			
	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+
ALONE	3.8	7.9	7.3	9.8	9.0	8.0	10.9	1.8	5.6	13.2	12.3	13.7	3.4	5.6	9.0	7.6
SPOUSE	5.7	9.2	5.5	2.4	3.9	6.0	10.9	0.0	12.2	12.9	13.2	6.9	11.2	16.7	12.5	7.1
KIDS	18.9	31.6	32.7	24.4	37.2	36.0	34.8	31.6	23.9	22.7	28.8	22.5	23.6	24.1	28.5	25.1
OTHERS	8.5	11.8	9.1	22.0	6.4	16.0	13.0	14.0	5.3	3.4	9.6	14.8	3.1	3.0	4.5	11.1
SPOUSE+KIDS	49.1	22.4	25.5	4.9	33.3	26.0	21.7	5.3	42.6	38.0	23.7	7.7	49.9	41.5	29.0	10.9
SPOUSE+OTHERS	1.9	2.6	1.8	0.0	1.3	0.0	0.0	5.3	2.5	2.4	1.4	2.8	2.1	0.4	4.0	2.1
KIDS+OTHERS	3.8	13.2	9.1	36.6	5.1	2.0	6.5	42.1	3.1	4.8	7.8	28.3	2.9	5.2	7.5	29.6
SPOUSE+KIDS+OTHERS	8.5	1.3	9.1	0.0	3.9	6.0	2.2	0.0	4.8	2.7	3.2	3.3	3.9	3.7	5.0	6.4
SUBTOTALS:																
WITH SPOUSE:	65.1	35.5	41.8	7.3	42.3	38.0	34.8	10.5	62.2	55.9	41.6	20.6	67.0	62.2	50.5	26.5
WITH KIDS:	80.2	68.4	76.4	65.9	79.5	70.0	65.2	79.0	74.4	68.1	63.5	61.8	80.3	74.4	70.0	72.0
NUMBERS	106	76	55	82	78	50	46	57	394	295	219	364	385	270	200	422

BANGKOK MALES / RURAL MALES

	BANGKOK 1981				BANGKOK 1986				RURAL 1981				RURAL 1986			
	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+
ALONE	5.7	7.9	5.0	4.9	3.5	7.3	4.2	10.2	5.3	5.1	2.3	4.2	2.1	2.0	3.9	3.9
SPOUSE	9.5	9.5	8.3	13.1	8.8	14.6	8.3	12.2	14.9	15.4	21.4	23.6	15.0	19.4	22.4	18.4
KIDS	6.7	9.5	11.7	19.7	3.5	14.6	0.0	14.3	7.3	8.1	11.6	12.6	6.3	6.9	11.2	14.5
OTHERS	1.9	1.6	5.0	3.3	1.8	0.0	4.3	6.1	2.0	3.0	1.7	2.7	1.2	2.0	1.7	3.2
SPOUSE+KIDS	61.0	55.6	55.0	36.1	66.7	48.8	75.0	30.6	61.5	58.1	52.6	35.7	64.9	59.5	48.0	39.4
SPOUSE+OTHERS	2.9	4.8	6.7	1.6	7.0	2.4	4.3	4.1	2.9	2.6	1.2	4.6	3.3	3.6	3.9	4.3
KIDS+OTHERS	1.9	1.6	0.0	16.4	1.8	0.0	0.0	20.4	0.3	2.6	2.3	10.3	0.3	0.4	0.6	6.7
SPOUSE+KIDS+OTHERS	10.5	9.5	8.3	4.9	7.0	12.2	4.3	2.0	5.8	5.1	6.9	6.5	6.9	6.1	8.4	9.6
SUBTOTALS:																
WITH SPOUSE:	83.8	79.4	78.3	55.7	89.5	78.1	91.7	49.0	85.1	81.2	82.1	70.3	90.1	88.7	82.7	71.6
WITH KIDS:	80.0	76.2	75.0	77.1	79.0	75.6	79.2	67.4	74.9	73.9	73.4	65.0	78.4	72.9	68.2	70.2
NUMBERS	105	63	60	61	57	41	24	49	343	234	173	263	333	247	179	282

Note: "Alone" means living alone, "Spouse" means living with a spouse only, "kids" means living with children only, etc.
"Children" can include sons- or daughters-in-law, and step-children. Only people aged 15 and over were included in household member counts, and servants were excluded. For some observation, it is not possible to determine the relationships between all people in the household. For example, an older person who is an "other relative" of the household head could potentially be the parent of another person in the household (who would also be coded as an "other relative" of the head.) In this case, the older person would be coded as living with "others only." Thus, the fraction ofpeople living with others only is likely to be overstated and the fraction living with children understated.

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TABLE 4.B
LIVING ARRANGEMENTS OF THE ELDERLY
COTE D'IVOIRE, 1986

| | FEMALES | | | | MALES | | | |
	55-59	60-64	65-69	70+	55-59	60-64	65-69	70+
ALONE	0.6	0.7	2.3	0.0	2.5	2.6	2.8	5.5
SPOUSE	4.2	0.7	0.0	0.9	1.9	4.6	1.9	3.1
KIDS	2.5	2.9	0.0	0.9	1.3	0.7	0.9	0.8
OTHERS	15.3	16.7	26.7	21.6	3.8	4.6	7.5	6.3
SPOUSE+KIDS	3.7	2.2	4.7	0.9	17.2	14.4	18.9	11.0
SPOUSE+OTHERS	20.2	23.9	16.3	5.2	3.8	11.1	6.6	10.2
KIDS+OTHERS	22.1	27.5	31.4	62.1	3.8	1.3	5.7	6.2
SPOUSE+KIDS+OTHERS	31.2	25.4	18.6	8.6	65.6	60.8	55.7	56.6
SUBTOTALS:								
WITH SPOUSE	59.5	52.1	39.5	15.5	88.5	90.8	83.0	81.1
WITH KIDS	59.5	58.0	54.7	72.4	87.8	77.1	81.1	82.6
NUMBERS	163	138	86	116	157	153	106	127

Note: Spouse means living alone with spouse and no others, kids with children and no others, and so on. Children are defined as biological children of the reference elderly person, living in the same household, so that a woman living with her spouse and the spouse's children who are not her own would be classed under "spouse and others," which is different from the treatment in Thailand.

TABLE 5.A
EDUCATIONAL ATTAINMENT BY AGE, SEX AND LOCATION
THAILAND 1981

| | BANGKOK | | | | | | RURAL | | | | | |
| | FEMALES | | | MALES | | | FEMALES | | | MALES | | |
AGE	SCH	ELEM	SEC	SCH	ELEM	SEC	SCH	ELEM	SEC	SCH	ELEM	SEC
20-39	.96	.29	.17	.99	.38	.22	.91	.02	.02	.96	.04	.03
40-49	.77	.05	.04	.89	.14	.10	.84	.00	.00	.90	.01	.01
50-59	.58	.04	.02	.67	.09	.05	.65	.01	.00	.85	.01	.01
60-69	.27	.00	.00	.40	.03	.02	.32	.00	.00	.63	.01	.01
70+	.13	.01	.01	.36	.07	.03	.06	.00	.00	.47	.00	.00

Notes: SCH means that the respondent had completed at least one grade higher than kindergarten. ELEM means that the respondent had completed elementary school. SEC means that the respondent had completed high school or a technical/vocational school.

TABLE 5.B
EDUCATIONAL ATTAINMENT BY AGE AND SEX
COTE D'IVOIRE 1986

| | FEMALES | | | | MALES | | | |
AGE	YEARS	ARITH	READ	SCH?	YEARS	ARITH	READ	SCH?
20-39	2.60	0.35	0.32	0.37	5.94	0.70	0.66	0.68
40-49	0.28	0.04	0.03	0.04	2.36	0.37	0.32	0.32
50-59	0.05	0.01	0.01	0.01	0.96	0.19	0.17	0.18
60-69	0.05	0.00	0.00	0.01	0.49	0.11	0.09	0.09
70+	0.00	0.00	0.00	0.00	0.29	0.06	0.05	0.04

Notes: YEARS is years of school completed, ARITH is fraction of people who can do written calculations, READ is the fraction who can read a newspaper, SCH? is the fraction who are attending or who have ever attended a school.

Tables, page 4

LABOR FORCE PARTICIPATION AND WORK HOURS, BY AGE CATEGORY
THAILAND, 1981

BANGKOK

AGE	OBS	FEMALES LFP	WEEKS	HOURS	WEEKS IDLE	OBS	MALES LFP	WEEKS	HOURS	WEEKS IDLE
15-19	460	.37	43.3	51.6	2.1	365	.32	48.4	45.7	6.9
20-39	1338	.67	48.3	49.3	1.2	1131	.85	50.2	49.4	1.8
40-54	437	.57	49.7	52.7	0.0	375	.97	51.4	50.4	0.7
55-59	108	.45	50.2	52.2	0.0	105	.87	51.1	51.5	0.0
60-64	78	.32	51.5	53.0	0.0	63	.67	51.4	55.7	1.7
65-69	55	.16	51.3	62.2	0.0	60	.53	49.3	53.8	0.0
70-99	82	.06	52.0	58.8	0.0	61	.23	52.0	53.7	1.1

RURAL

AGE	OBS	LFP	WEEKS	HOURS	WEEKS IDLE	OBS	LFP	WEEKS	HOURS	WEEKS IDLE
15-19	1304	.86	46.0	57.3	4.2	1270	.89	47.6	58.1	5.7
20-39	3295	.94	45.3	57.8	3.3	2927	.99	50.6	61.4	5.0
40-54	1569	.93	45.4	57.1	2.9	1493	.99	50.8	61.9	4.3
55-59	396	.80	44.7	54.2	3.8	344	.96	50.9	60.0	5.4
60-64	295	.62	44.2	52.0	2.0	234	.88	49.9	55.6	4.3
65-69	220	.47	42.3	48.6	3.2	173	.77	47.2	53.9	4.2
70-99	365	.24	41.3	41.0	3.0	267	.46	46.7	49.5	4.1

Notes: Labor force participation was defined as spending at least one week in the last year employed, self-employed (on or off farm), or working as free family labor. Average weeks in the labor force includes weeks unemployed. Weeks unemployed (called "weeks idle" in the table) consists mainly of weeks spent waiting for the agricultural season or "because no work was available." "Hours" is the individual's reported hours/week when working.

TABLE 6.B
LABOR FORCE PARTICIPATION AND WORK HOURS, BY AGE CATEGORY
COTE D'IVOIRE 1986

AGE	N	FEMALES LFP	WEEKS	DAYS	HOURS	N	MALES LFP	WEEKS	DAYS	HOURS
15-19	690	.41	45.2	4.92	6.70	707	.43	44.0	5.12	7.60
20-39	1643	.59	45.5	5.09	6.84	1281	.66	44.7	5.43	8.02
40-54	792	.76	47.0	5.16	6.90	566	.86	47.0	5.37	8.10
55-59	163	.69	46.7	4.81	6.53	157	.73	49.4	4.90	7.56
60-64	138	.62	46.4	4.72	6.40	153	.71	45.9	5.06	7.55
65-69	86	.63	46.0	4.93	6.59	106	.63	47.2	4.72	6.61
70+	116	.22	44.5	4.52	5.72	127	.40	45.5	4.53	6.25

Notes: These relate to household members. For a person to be a non-participant, he or she must answer "no" to the following three questions, "During the past 7 days have you worked for someone who is not a member of your household, e.g. an employer, a firm, the Government, or some other person outside your household?" "During the past 7 days, have you worked in a field or garden belonging to yourself or your household or have you raised livestock?" "During the past 7 days, have you worked in a trade, industry, business, enterprise or profession belonging to yourself or your household? For example, as an independent merchant or fisherman, lawyer, doctor, or other self-employed activity?" WEEKS are number of weeks last 12 months in main job only, DAYS is days worked in the last 7 days, and hours hours per day in the last week, again in the main job.

TABLE 7

HEALTH AND SICKNESS BY SEX AND AGE

COTE D'IVOIRE, 1986

AGES	FEMALES					MALES				
	ILL	DAYS1	DAYS2	CON	MED	ILL	DAYS1	DAYS2	CON	MED
15-19	.16	1.5	0.7	.51	.58	.12	1.0	0.4	.45	.56
20-24	.21	2.0	1.0	.59	.61	.17	1.6	1.0	.51	.54
25-29	.27	2.4	1.6	.49	.60	.20	2.1	1.3	.57	.63
30-34	.27	3.3	1.6	.59	.61	.30	2.7	1.2	.52	.62
35-39	.34	4.8	2.8	.48	.55	.32	3.5	1.6	.58	.69
40-44	.36	4.7	2.1	.40	.53	.36	3.5	1.8	.50	.59
45-49	.40	5.4	2.7	.45	.50	.42	5.5	2.5	.41	.58
50-54	.36	5.2	2.2	.47	.54	.47	6.2	3.1	.43	.62
55-59	.40	6.2	2.9	.35	.45	.45	6.2	4.0	.47	.57
60-64	.41	7.2	3.7	.30	.43	.52	7.6	4.4	.41	.47
65-69	.37	5.2	3.4	.25	.38	.57	11.8	6.9	.45	.58
70-74	.50	9.8	6.0	.28	.60	.67	11.2	7.6	.26	.40
75+	.59	12.0	7.9	.10	.36	.66	13.0	9.6	.38	.48

Notes: These are self-reported figures for all household members. ILL is the
fraction of respondents who, during the last 4 weeks, experienced an illness
or injury, "for example, a cough, a cold, diarrhea, an injury due to an acci-
dent, or any other illness." DAYS1 is the number of days in the last four
weeks during which the respondent suffered from the illness or injury,
counting in zero days for those not sick. DAYS2 is the number of days the
illness prevented the respondent from carrying on his or her usual activities.
CON is the fraction of persons reporting an illness, who consulted "a doctor,
nurse, pharmacist, healer, midwife, or other health practitioner." MED is the
corresponding fraction of cases where the respondent bought medicine.

TABLE 8
AVERAGE HOUSEHOLD CHARACTERISTICS
BY AGE OF HOUSEHOLD MEMBERS
COTE D'IVOIRE 1986

	nmems	nae	y	cnd	ype	cndpe	number
0-4	11.7	7.6	1760	1748	267	264	2176
5-9	12.0	7.9	1779	1878	248	262	2140
10-14	11.8	7.9	1995	2011	278	278	1841
15-19	12.0	8.7	2232	2264	294	295	1395
20-24	11.3	8.3	2127	2111	296	296	1021
25-29	10.7	7.6	2239	2080	366	341	763
30-34	10.1	7.0	2262	2143	385	387	608
35-39	10.4	7.1	1839	1890	313	325	528
40-44	10.4	7.2	1610	1661	258	252	489
45-49	10.5	7.4	1642	1780	239	270	423
50-54	10.2	7.4	1356	1407	211	220	443
55-59	9.3	6.9	1391	1534	224	243	320
60-64	9.4	6.8	1815	1468	340	220	288
65-69	8.9	6.6	1049	1135	169	185	190
70-74	9.8	7.2	1262	1378	191	246	113
75-79	10.5	7.7	1653	1540	227	224	64
80+	9.8	7.5	1397	1348	175	178	66
All	11.2	7.7	1884	1895	278	279	12868

FEMALES AGED 55 AND OVER

	nmems	nae	y	cnd	ype	cndpe	number
55-59	9.5	7.2	1382	1570	209	234	163
60-64	9.9	7.2	1991	1560	362	228	136
65-69	9.2	6.8	1047	1177	164	187	85
70-74	11.9	8.4	1379	1498	159	179	50
75-79	10.8	7.8	1744	1723	196	227	28
80+	10.0	7.8	1234	1239	159	165	38
All	11.4	7.8	1877	1898	273	273	6636

MALES AGED 55 AND OVER

	nmems	nae	y	cnd	ype	cndpe	number
55-59	9.1	6.6	1400	1497	240	252	157
60-64	8.9	6.5	1657	1386	322	214	152
65-69	8.7	6.3	1050	1100	172	183	105
70-74	8.1	6.2	1170	1283	216	298	63
75-79	10.3	7.5	1583	1398	252	221	36
80+	9.6	7.3	1617	1496	198	196	28
All	11.1	7.7	1890	1892	285	285	6232

Notes: These are calculated on an *individual* basis, i.e. each individual in the sample is assigned the number of household members, household income, or household income per equivalent, and then averages are calculated conditional on individual age. nmems is number of household members. nae is number of adult equivalents, where children aged 0-4 are counted as 0.25, aged 5-14 as 0.45, and 15 and over as 1. y is household income. cnd is household consumption excluding purchases of durables, and ype and cndpe are the corresponding figures per equivalent adult. number is the number of persons over which the means are calculated. Money amounts are in CFA '000 per annum (about $3.)

TABLE 9

AVERAGE HOUSEHOLD CHARACTERISTICS
BY AGE OF HOUSEHOLD MEMBERS
RURAL COTE D' IVOIRE 1986

	nmems	nae	y	cnd	ype	cndpe	number
0-4	11.8	7.6	1307	1310	179	181	1327
5-9	11.8	7.7	1263	1384	167	185	1245
10-14	11.6	7.7	1334	1400	173	183	1039
15-19	12.3	8.7	1472	1471	170	168	690
20-24	11.2	7.9	1345	1300	180	169	471
25-29	11.5	7.9	1318	1349	194	200	354
30-34	10.6	7.3	1293	1301	187	190	300
35-39	10.7	7.2	1272	1319	184	195	310
40-44	10.2	7.0	1108	1175	165	174	305
45-49	10.3	7.2	1124	1243	165	185	272
50-54	9.7	7.0	1013	1088	156	169	320
55-59	8.9	6.6	1006	1130	166	185	218
60-64	9.2	6.6	1082	1158	163	172	211
65-69	8.2	6.1	842	945	148	170	151
70-74	9.0	6.6	1086	1190	186	245	92
75-79	9.0	6.7	1004	1132	150	182	49
80+	9.5	7.3	1280	1138	165	153	55
All	11.2	7.6	1262	1313	173	181	7409

Notes: y is household income. cnd is household consumption excluding pur-
chases of durables, and ype and cndpe are the corresponding figures per
equivalent adult. number is the number of persons over which the means are
calculated. Money amounts are in CFA '000 per annum (about $3.) For other
notes, see Table 8.

TABLE 10

AVERAGE HOUSEHOLD CHARACTERISTICS
BY AGE OF HOUSEHOLD MEMBERS
BANGKOK, 1981

	nmems	nae	y	cnd	ype	cndpe	number
0-4	5.0	3.4	7141	5693	2173	1729	565
5-9	6.0	4.3	8031	6600	1949	1615	515
10-14	6.5	4.8	7945	6760	1754	1500	629
15-19	6.2	5.5	9044	7540	1678	1423	825
20-24	5.4	4.9	9152	7185	1962	1574	816
25-29	4.7	4.1	8518	6260	2229	1680	783
30-34	4.6	3.7	8496	6121	2527	1800	546
35-39	5.1	3.9	7947	6240	2208	1752	324
40-44	5.4	4.3	8209	6671	2176	1759	317
45-49	5.7	4.9	9057	7159	2059	1574	252
50-54	5.5	5.0	9971	8051	2092	1697	243
55-59	5.1	4.8	9467	7135	2111	1591	213
60-64	4.8	4.4	9682	6781	2238	1662	141
65-69	5.3	4.6	7659	6354	1778	1518	115
70-74	5.4	4.6	8596	7733	1958	1842	69
75-79	4.6	4.3	7026	5872	1929	1596	39
80+	5.3	4.7	8515	7151	2031	1719	35
ALL	5.5	4.5	8513	6739	2043	1624	6427

FEMALES

	nmems	nae	y	cnd	ype	cndpe	number
55-59	4.9	4.6	8334	6679	1905	1504	108
60-64	4.6	4.2	9196	6195	2220	1655	78
65-69	5.2	4.4	7856	6662	1908	1674	55
70-74	5.4	4.6	7757	7587	1795	1784	39
75-79	4.1	3.6	5307	4861	1632	1544	17
80+	4.9	4.5	8517	7127	2157	1840	26
ALL	5.5	4.5	8486	6772	2010	1616	3399

MALES

	nmems	nae	y	cnd	ype	cndpe	number
55-59	5.3	4.9	10633	7604	2324	1680	105
60-64	5.0	4.6	10284	7506	2261	1671	63
65-69	5.3	4.8	7478	6072	1660	1376	60
70-74	5.3	4.6	9685	7924	2170	1916	30
75-79	5.1	4.8	8355	6653	2159	1637	22
80+	6.4	5.2	8510	7220	1665	1369	9
ALL	5.4	4.5	8544	6702	2080	1634	3028

Notes: Money amounts are baht per month. Variables are defined in Tables 8
and 9 above.

TABLE 11

AVERAGE HOUSEHOLD CHARACTERISTICS
BY AGE OF HOUSEHOLD MEMBERS
RURAL THAILAND, 1981

	nmems	nae	y	cnd	ype	cndpe	number
0-4	5.5	3.7	2316	2158	673	624	2536
5-9	6.0	4.1	2455	2270	636	582	3328
10-14	6.2	4.5	2789	2530	659	597	3272
15-19	6.1	5.0	3074	2716	643	569	2572
20-24	5.3	4.3	2892	2486	718	619	1880
25-29	4.8	3.6	2545	2234	766	685	1656
30-34	5.1	3.5	2622	2296	784	693	1458
35-39	5.5	3.9	2587	2374	705	640	1225
40-44	5.7	4.3	2828	2612	723	656	1123
45-49	5.6	4.4	2853	2596	696	635	1097
50-54	5.2	4.3	3288	2862	852	772	839
55-59	4.8	4.1	2877	2479	773	665	740
60-64	4.3	3.8	2858	2410	900	720	529
65-69	4.3	3.7	2525	2228	787	707	393
70-74	4.4	3.6	2336	2260	710	685	308
75-79	4.7	3.9	2650	2466	748	678	160
80+	4.9	4.1	2711	2441	724	656	164
ALL	5.6	4.2	2706	2430	703	631	23280

FEMALES

	nmems	nae	y	cnd	ype	cndpe	number
55-59	4.6	3.9	2583	2316	718	646	396
60-64	4.2	3.6	2684	2337	848	743	295
65-69	4.2	3.4	2482	2237	852	784	220
70-74	4.4	3.6	2309	2263	674	662	163
75-79	4.9	4.0	2504	2512	656	664	94
80+	4.9	4.2	2834	2472	769	677	108
ALL	5.5	4.1	2699	2435	708	640	11935

MALES

	nmems	nae	y	cnd	ype	cndpe	number
55-59	5.1	4.3	3215	2666	837	688	344
60-64	4.5	4.0	3077	2501	965	690	234
65-69	4.6	3.9	2580	2216	705	610	173
70-74	4.3	3.6	2367	2256	750	712	145
75-79	4.4	3.8	2857	2399	879	697	66
80+	4.9	4.1	2474	2382	639	616	56
ALL	5.6	4.2	2714	2425	697	621	11345

Notes: Money amounts are baht per month. See Tables 8 and 9 for definitions of variables.

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TABLE 12

DISTRIBUTION OF INCOME, BY AGE, SEX AND LOCATION
THAILAND, 1981

BANGKOK

FEMALES AGE:	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
20-29	870	1177	.54	.75	.09	.01	.11	.04	.18	.05
30-39	468	1733	.62	.61	.25	.01	.06	.07	.24	.05
40-49	299	1648	.58	.39	.37	.04	.14	.07	.23	.05
50-59	245	1764	.58	.25	.35	.03	.32	.05	.23	.04
60-69	133	1523	.47	.05	.31	.06	.56	.03	.19	.07
70+	82	456	.26	.00	.10	.12	.74	.05	.11	.05

MALES

20-29	729	2141	.71	.81	.09	.00	.08	.02	.34	.05
30-39	402	4517	.93	.73	.24	.01	.01	.02	.62	.06
40-49	268	4899	.96	.60	.37	.00	.01	.02	.65	.05
50-59	211	5418	.89	.48	.41	.01	.06	.04	.53	.03
60-69	123	2719	.67	.26	.49	.07	.15	.04	.34	.07
70+	61	1168	.41	.07	.23	.11	.58	.01	.16	.08

RURAL

FEMALES	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
20-29	1893	241	.39	.67	.21	.00	.09	.03	.09	.06
30-39	1400	394	.42	.50	.36	.02	.07	.04	.12	.04
40-49	1134	473	.46	.35	.45	.03	.13	.04	.17	.04
50-59	830	369	.44	.23	.49	.03	.21	.05	.17	.05
60-69	515	384	.46	.10	.42	.07	.38	.03	.16	.08
70+	365	129	.38	.08	.21	.12	.55	.04	.10	.10

MALES

20-29	1643	808	.71	.55	.42	.00	.01	.01	.37	.05
30-39	1283	1591	.94	.27	.69	.00	.01	.02	.66	.04
40-49	1086	2031	.98	.18	.77	.01	.02	.02	.68	.04
50-59	749	2278	.96	.16	.75	.01	.05	.02	.65	.04
60-69	407	1665	.87	.06	.75	.03	.13	.03	.55	.06
70+	267	825	.63	.03	.54	.10	.29	.04	.29	.09

Notes: Individual income includes wages, business income (farm plus self-employment income), property income (interest, dividends, income from roomers and boarders), transfer income (pensions and annuities, remittances from friends and relatives), other income (lotteries, insurance, sales of durable goods.) Family income equals the sum of all member's individual incomes plus the rental value of owner occupied homes, home-produced goods not included in farm income, and goods received free. INC/FAMINC is individual income over family income. FREE/FAMINC is the valueof goods received free as a fraction of family income.

TABLE 13

INCOME COMPOSITION AND LIVING ARRANGEMENTS
THAILAND, 1981

RURAL

FEMALES, LIVING ALONE OR WITH SPOUSE ONLY

AGE:	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
50-59	157	417	.64	.27	.37	.04	.27	.05	.25	.11
60-69	133	394	.69	.11	.35	.09	.43	.03	.28	.18
70+	75	292	.84	.07	.25	.13	.52	.04	.32	.30

FEMALES, LIVING WITH AT LEAST ONE CHILD OR OTHER PERSON

AGE:	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
50-59	669	359	.40	.21	.53	.03	.19	.05	.15	.04
60-69	381	382	.38	.10	.46	.06	.35	.03	.12	.05
70+	289	87	.25	.09	.19	.11	.57	.05	.05	.05

MALES, LIVING ALONE OR WITH SPOUSE ONLY

AGE:	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
50-59	144	1984	.99	.26	.63	.03	.08	.01	.68	.07
60-69	89	1479	.96	.09	.67	.06	.15	.04	.59	.11
70+	73	1038	.96	.05	.47	.15	.31	.03	.50	.18

MALES, LIVING WITH AT LEAST ONE CHILD OR OTHER PERSON

AGE:	OBS	MEAN INDIVIDUAL INCOME	%INC >0	SHARE OF INDIVIDUAL INCOME:					INC/ FAMINC	FREE/ FAMINC
				WAGE	BUS.	PROP	TRANS	OTHER		
50-59	602	2352	.95	.14	.79	.01	.04	.03	.64	.03
60-69	318	1717	.84	.05	.77	.03	.12	.03	.54	.04
70+	190	761	.51	.01	.59	.07	.28	.05	.22	.06

Notes: See Table 12.

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TABLE 14A

AGE AND SEX COMPOSITION OF HOUSEHOLD HEADS
THAILAND, 1981

	BANGKOK				RURAL		
	females	males	all		females	males	all
15-19	1.05	1.31	2.36		0.20	0.42	0.62
20-24	2.16	4.52	6.69		0.52	3.87	4.39
30-34	2.62	11.67	14.30		0.86	9.29	10.15
35-39	2.36	12.33	14.69		0.86	11.08	11.94
40-44	2.30	8.46	10.75		1.08	10.51	11.58
45-49	2.30	8.79	11.08		1.68	10.21	11.88
50-54	2.23	7.34	9.57		2.14	10.29	12.42
55-59	2.82	6.23	9.05		2.00	7.87	9.87
60-64	2.30	5.70	8.00		2.34	6.55	8.89
65-69	2.16	3.54	5.70		1.94	4.51	6.45
70-74	1.25	2.95	4.20		1.78	3.24	5.01
75-79	0.66	1.25	1.90		1.24	2.52	3.75
80+	0.66	1.05	1.70		1.30	1.74	3.04
ALL	24.85	75.15	100.00		17.91	82.09	100.00

TABLE 14B

AGE AND SEX COMPOSITION OF HOUSEHOLD HEADS
COTE D'IVOIRE 1986

	males	females	all
20-24	1.3	0.1	1.4
25-29	1.9	0.1	2.1
30-34	3.5	0.2	3.7
35-39	6.1	0.8	6.9
40-44	8.8	0.9	9.7
45-49	9.2	1.1	10.3
50-54	11.3	0.9	12.1
55-59	10.6	0.8	11.3
60-64	9.4	0.9	10.4
65-69	10.9	1.0	11.9
70-74	10.4	0.5	10.9
75-79	6.6	0.6	7.3
80+	1.8	0.1	1.9
All	91.9	8.1	100.0

TABLE 15

**MEMBERS, INCOME, EXPENDITURE, AND ASSETS BY HEAD'S AGE
COTE D'IVOIRE 1985 AND 1986**

1985

AGE	nmems	nae	y	cnd	s	agass	busass	perass
20-24	3.5	2.7	926	933	-8	911	90	386
25-29	5.3	3.8	1491	1542	-51	560	6148*	804
30-34	7.0	4.8	1937	1916	21	2435	596	910
35-39	7.5	5.0	1885	1880	5	2687	275	656
40-44	8.8	5.9	1610	1832	-222	2632	893	716
45-49	9.7	6.6	1857	1749	107	3666	636	1108
50-54	9.2	6.5	1271	1408	-137	5167	230	796
55-59	9.2	6.7	1496	1377	120	3732	708	1008
60-64	9.7	7.0	1497	1537	-40	5199	737	1314
65-69	9.6	7.0	1470	1415	55	4655	752	1251
70+	8.0	6.1	870	932	-62	6882	155	976

1986

AGE	nmems	nae	y	cnd	s	agass	busass	perass
20-24	4.1	3.0	843	912	-70	1194	27	198
25-29	5.5	4.0	1845	1659	186	613	211	726
30-34	6.7	4.5	2096	2050	46	1055	170	780
35-39	7.9	5.3	2132	2119	13	1173	398	979
40-44	8.4	5.6	1455	1677	-222	1575	296	969
45-49	9.4	6.4	1835	1831	4	1693	602	1326
50-54	9.0	6.3	1298	1340	-41	2187	274	658
55-59	8.7	6.4	1381	1481	-100	2710	523	1367
60-64	8.4	6.2	1700	1391	310	2199	684	1117
65-69	8.1	6.0	994	1041	-47	3275	287	628
70+	8.5	6.4	1224	1277	-53	2568	492	786

RURAL 1986

AGE	nmems	nae	y	cnd	s	agass	busass	perass
20-24	5.5	3.8	1072	602	471	2982	9	101
25-29	6.5	4.4	1223	1088	135	1672	79	211
30-34	7.3	4.9	1185	1022	162	2394	89	187
35-39	8.6	5.6	1089	1100	-11	2334	111	263
40-44	8.6	5.5	831	1033	-201	2855	79	185
45-49	9.0	6.0	1025	1096	-71	2042	57	264
50-54	8.7	6.0	919	963	-44	2699	64	192
55-59	8.1	5.9	851	998	-146	3879	33	235
60-64	7.9	5.7	1116	1123	-6	2364	390	301
65-69	8.0	5.8	842	899	-57	3572	70	319
70+	8.1	6.1	927	1052	-124	2938	41	176

Notes: *nmems* is number of members, *nae*, numbers of adult equivalents, *y* is household income, and *cnd* consumption excluding purchases of durable goods. *s*, for saving, is the difference bewteen *y* and *cnd*. *agass* is the value of agricultural assets, including a farmer estimated figure for the value of agricultural land. *busass* is the value of assets used in family business, and perass is the value of personal assets.

* This figure is dominated by one outlier, a 28 year old head near Aboisso, in the extreme South-East of the country, who reported business assets worth more than CFA700,000 ($2.1 million).

TABLE 16

REGRESSIONS OF INCOME, CONSUMPTION, AND ASSETS
ON HOUSEHOLD COMPOSITION
COTE D'IVOIRE 1986

Variable	income Est	income |t|	consumption Est	consumption |t|	agricultural assets Est	agricultural assets |t|	business assets Est	business assets |t|	personal assets Est	personal assets |t|
CONSTANT	124	(0.7)	259	(2.3)	-603	(1.4)	-378	(2.9)	-791	(3.7)
M0-4	-65	(0.9)	-76	(1.7)	131	(0.8)	40	(0.8)	29	(0.3)
M5-14	67	(1.4)	127	(4.3)	-44	(0.4)	-29	(0.8)	-22	(0.4)
M15-24	214	(3.7)	173	(4.7)	417	(3.0)	195	(4.5)	401	(5.7)
M25-34	394	(4.0)	213	(3.5)	196	(0.8)	64	(0.9)	229	(2.0)
M35-44	257	(1.7)	219	(2.4)	167	(0.5)	59	(0.5)	23	(0.1)
M45-54	157	(1.0)	25	(0.3)	525	(1.4)	193	(1.6)	221	(1.2)
M55-64	302	(1.8)	29	(0.3)	947	(2.3)	375	(3.0)	635	(3.1)
M65-74	24	(0.1)	-19	(0.1)	1475	(3.0)	248	(1.6)	373	(1.5)
M75+	373	(1.2)	124	(0.7)	547	(0.8)	374	(1.7)	430	(1.2)
F0-4	-47	(0.7)	-107	(2.4)	180	(1.1)	-30	(0.6)	15	(0.2)
F5-14	64	(1.3)	90	(2.9)	-40	(0.4)	10	(0.3)	29	(0.5)
F15-24	199	(3.0)	279	(6.8)	164	(1.1)	20	(0.4)	150	(1.9)
F25-34	345	(3.5)	257	(4.1)	1033	(4.4)	75	(1.0)	291	(2.4)
F35-44	43	(0.4)	89	(1.3)	713	(2.7)	26	(0.3)	222	(1.7)
F45-54	-163	(1.4)	4	(0.1)	144	(0.5)	66	(0.8)	-37	(0.3)
F55-64	196	(1.4)	102	(1.2)	408	(1.3)	147	(1.5)	360	(2.2)
F65-74	-144	(0.8)	-62	(0.5)	-257	(0.6)	38	(0.3)	142	(0.6)
F75+	17	(0.1)	-5	(0.0)	-262	(0.4)	-113	(0.6)	101	(0.3)
ABIDJAN	1742	(9.0)	1673	(13.9)	-937	(2.0)	1077	(7.6)	1907	(8.3)
OTHER URB	909	(4.8)	739	(6.2)	-358	(0.8)	405	(2.9)	1266	(5.6)
W.FOREST	34	(0.2)	36	(0.3)	1742	(3.7)	120	(0.8)	38	(0.2)
E.FOREST	186	(1.0)	96	(0.9)	1979	(4.7)	16	(0.1)	-74	(0.3)

Notes: The figures are total income, consumption, and assets, undeflated
by any measure of household size. M is males, F is females, and the ind-
ependent variables are the numbers of people in the relevant age category
in the household. The omitted region is the northern savannah region.

TABLE 17

MEMBERS, INCOME AND EXPENDITURE BY HEAD'S AGE
THAILAND, 1981

BANGKOK

AGE	nmems	nae	y	cnd	s	y/nae	cnd/nae	s/nae
15-19	1.6	1.5	2225	1961	264	1682	1467	215
20-24	2.3	2.0	3736	3285	451	1939	1779	160
25-29	3.1	2.5	6065	4570	1495	2564	1993	571
30-34	3.9	3.0	7239	5348	1891	2724	2002	722
35-39	4.5	3.3	7017	5540	1477	2294	1822	472
40-44	4.8	3.8	7598	6165	1433	2437	1940	497
45-49	5.3	4.4	6951	6245	706	1758	1543	214
50-54	5.3	4.9	9284	7570	1714	2073	1676	397
55-59	4.9	4.6	9831	7114	2716	2289	1670	619
60-64	4.3	4.0	10033	6806	3227	2449	1765	684
65-69	4.8	4.3	6933	5941	991	1832	1588	244
70+	4.0	3.6	6293	6053	240	2128	1991	137

RURAL

AGE	nmems	nae	y.	cnd·	s	y/nae	cnd/nae	s/nae
15-19	2.3	2.0	1459	1295	164	810	760	49
20-24	3.0	2.3	1845	1652	193	923	800	123
25-29	3.7	2.6	1969	1749	220	875	781	94
30-34	4.5	3.0	2381	2090	291	838	735	103
35-39	5.2	3.5	2302	2196	106	714	658	56
40-44	5.5	4.0	2852	2593	259	805	713	92
45-49	5.6	4.3	2762	2439	323	701	624	76
50-54	5.1	4.1	3137	2825	312	861	801	60
55-59	4.8	4.1	2883	2461	422	797	678	119
60-64	4.1	3.5	2826	2310	517	983	750	233
65-69	4.0	3.4	2483	2172	311	843	751	92
70+	3.7	3.1	2095	2010	86	756	711	44

Note: See Table 15 for variable definitions for the first six columns. The last three columns are income, non-durable consumption expenditures, and saving divided by numbers of adult equivalents.

Figure 1a
Age distribution: Bangkok 1981

Figure 1b
Sex ratio: Bangkok 1981

Figure 1c
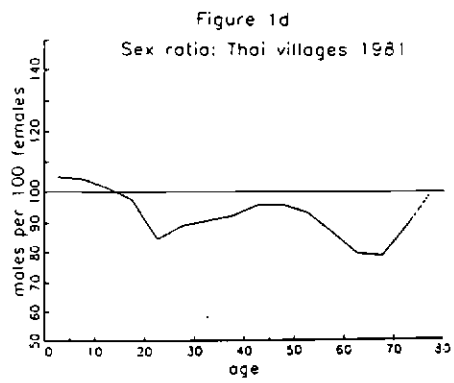Age distribution: Thai villages 1981
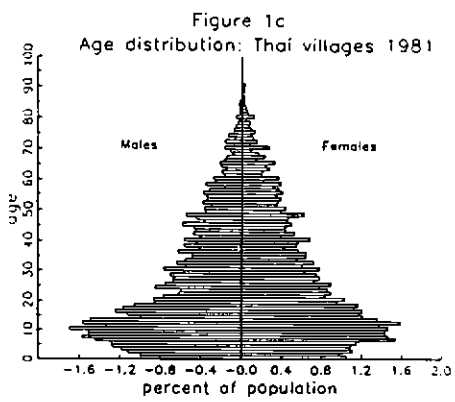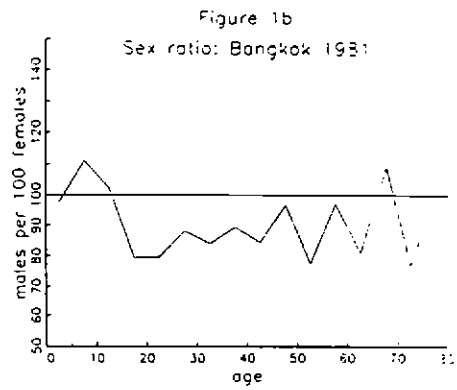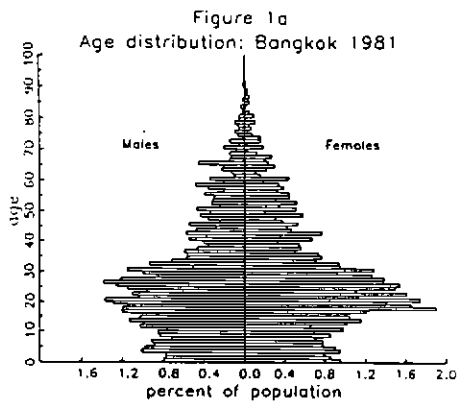

Figure 1d
Sex ratio: Thai villages 1981

Figure 2a
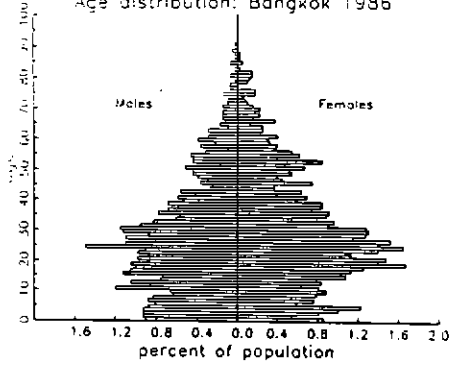Age distribution: Bangkok 1986
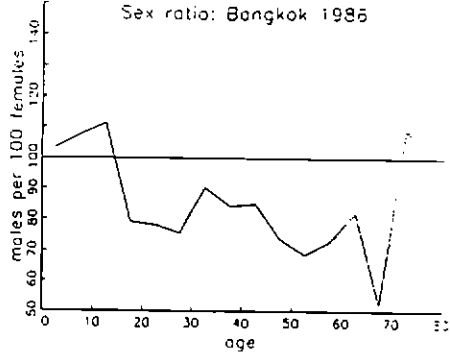

Figure 2b
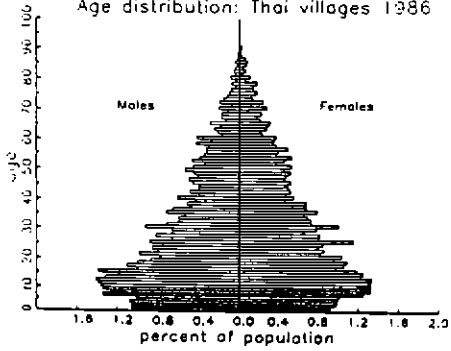Sex ratio: Bangkok 1986

Figure 2c
Age distribution: Thai villages 1986

Figure 2d
Sex ratio: Thai villages 1986

Figure 3a
Age distribution: Cote d'Ivoire 1985

Figure 3b
Sex ratio: Cote d'Ivoire 1955

Figure 3c
Age distribution: Cote d'Ivoire 1986

Figure 3d
Sex ratio: Cote d'Ivoire 1936