Intergenerational Coresidence in Developing Countries

STEVEN RUGGLES
MISTY HEGGENESS

A SIZABLE LITERATURE suggests that coresidence of elderly persons with their children is on the decline in most developing countries. These studies draw on a long tradition of theories that postulate an inverse association between household complexity and economic development. Our analysis of this topic uses new data and measures to assess changes in intergenerational coresidence in 15 developing countries.

We have three main objectives. First, we measure trends in intergenerational coresidence in developing countries from the perspective of both the younger generation and the older generation. Second, we assess trends in intergenerational coresidence by household headship patterns. Finally, we conduct multivariate analyses to control for changes in population composition and to assess the relationship between intergenerational coresidence and economic development.

The results indicate no clear trends in intergenerational coresidence over the past several decades. Some countries experienced modest increases in coresidence; other countries had modest declines. Even more intriguing, when we focus on intergenerational families headed by the older generation—the family configuration most closely associated with traditional stem-family and joint-family systems—we find significant *increases* in all but two of the countries examined. This suggests that traditional family forms are stable or increasing across much of the developing world. Moreover, multivariate analyses reveal that key measures of economic development are positively associated with intergenerational families headed by the older generation.

Theories of coresidence and development

In the second half of the nineteenth century, Frédéric Le Play proposed that economic development was contributing to a decline of intergenerational coresidence. Traditionally, Le Play argued, generations had been bound to-

gether by property. The younger generation remained in the ancestral home, providing labor as the family patriarch grew old and eventually inheriting the farm. With commercial and industrial growth in the nineteenth century, fewer families had property to hand down. As a consequence, Le Play contended, more and more of the elderly began to reside separately from their children (Le Play 1884: 3–28).

The idea that economic development is associated with simplification of the household and independent residence of the elderly became widely accepted in the twentieth century. Mid-twentieth-century sociological literature highlighted the connection between industrialization and nuclear-family structure (e.g., Parsons 1949; Nimkoff 1962). Intergenerational coresidence was said to be undermined by growing wage labor opportunities, which provided incentives for the younger generation to leave the farm and move to urban areas. Moreover, many theorists argued that small nuclear families were best adapted to urban societies characterized by high geographic and social mobility (Wirth 1938; Parsons and Bales 1955; Burgess 1960).

By the 1960s, theorists began to argue that the processes of family change were occurring worldwide. Goode (1963), the most prominent advocate of this convergence theory, argued that although there is considerable variation in family systems across different societies, eventually the nuclear family will predominate worldwide.

> Wherever the economic system expands through industrialization, family patterns change. Extended kinship ties weaken, lineage patterns dissolve, and a trend toward some form of the conjugal system generally begins to appear—that is, the nuclear family becomes a more independent kinship unit. (Goode 1963: 6)

Most of the literature on this issue during the past four decades assumes that intergenerational coresidence is common in traditional agricultural societies and diminishes with industrialization, migration, and economic expansion (e.g., Burch 1967; Blumberg and Winch 1972; Cowgill 1986; Martin 1989; De Vos 1990; Mason 1992; McDonald 1993; Aykan and Wolf 2000; Bongaarts and Zimmer 2002). Not all of these authors see themselves as followers of the tradition that runs from Le Play to Goode. In many instances, analysts stress the importance of persistent cultural norms and focus on the costs and benefits of coresidence for each generation (e.g., Knodel and Chayovan 1997). Nevertheless, there is general consensus that intergenerational coresidence is declining in most countries as a result of economic development. A minority of theorists, however, stress the cultural indelibility of family systems and suggest that traditional family forms are fundamental cultural structures that remain resilient to change (Huntington 1996; Therborn 2004; Kamo and Zhou 1994).

The patrilineal joint-family and stem-family systems described by Le Play and subsequent theorists assume that wealth, property, and power are concentrated in the hands of older-generation men (Le Play 1884; Gold-

schmidt and Kunkel 1971; Berkner 1972; Mason 1992; Ruggles 1994). In such traditional families, the younger generation is dependent on the older generation, relying on elders for housing, employment, and the prospect of eventual inheritance. Much of the literature on living arrangements of the elderly in developing countries, by contrast, is motivated by concern about maintaining old-age support as populations age and household structure simplifies (e.g., Mason 1992; Chan 1997; Chen 1996; Knodel and Chayovan 1997; Natividad and Cruz 1997; Hermalin 2002). Many researchers implicitly or explicitly assume that elderly coresident parents in developing countries are typically dependent on their children for both economic support and care (e.g., Bongaarts and Zimmer 2002; Clay and Vander Haar 1993; Knodel and Debavalya 1997; cf. Schröder-Butterfill 2004).

Identifying which generation is dependent has theoretical implications for the impact of economic development on the frequency of intergenerational coresidence. In particular, if the younger generation profits from expanded economic opportunities, we would expect a reduced frequency of coresidence in traditional patriarchal multigenerational families, since the alternatives to familial employment would become more attractive. At the same time, however, the rise of wage labor could contribute to an increase of landless elderly with no means of support, and the rising income of younger-generation wage earners could actually increase their capacity to take in destitute parents. Thus, all things being equal, one would expect rising economic opportunity for the young to discourage traditional patriarchal coresidence, but perhaps to encourage coresidence associated with old-age support.

Demographic change and intergenerational coresidence

Many studies of intergenerational relations in the developing world are motivated by the implications of demographic change for old-age dependency ratios (Martin and Kinsella 1994; Zimmer and Kwong 2003; Knodel and Chayovan 1997; Chan 1997). Declining fertility and mortality is leading to aging of the population in almost every country of the world. An older population means that most countries will see growing numbers of elderly dependents with stagnant or even declining numbers of working-age adults available to provide support.

The implications of demographic change for intergenerational coresidence are not, however, confined to dependency ratios. Demographers have frequently observed that changing demographic conditions have a direct effect on the availability of kin for intergenerational coresidence (e.g., Levy 1965; Burch 1967; Kobrin 1976; Ruggles 1994; Uhlenberg 1996; Schoeni 1998). The effects of demographic change differ greatly depending on the perspective of the observer. In particular, the effect of declining fertility and mortality

on intergenerational coresidence is different for the younger generation and the older generation.

For the younger generation, ongoing demographic changes *increase* the opportunities to reside with parents. Mortality decline increases the chances that an adult will have a surviving parent. Fertility decline, however, is even more relevant. A smaller group of adult children for each elderly parent increases the chances that any particular child will coreside with a parent. If the parent has a farm and the coresident child will inherit, fewer siblings mean less competition. If the elderly parent is destitute and needs to move in with a child for care, fewer siblings mean increased responsibility. Ruggles (1994) estimates that the number of surviving parents per 100 adults aged 40–44 years increased fourfold in the United States between 1880 and 1980. The same kinds of demographic changes that took place in the United States during that century are now taking place in many developing countries. Thus, from the perspective of the younger generation, current demographic changes in developing countries are substantially increasing the potential for intergenerational coresidence.

The impact of demographic change on the potential for coresidence is the opposite for the older generation. Fertility decline means that the elderly have fewer children with whom they can reside. Mortality decline increases the survival of children to adulthood, but this effect is generally small relative to the drop in births. All things being equal, one would expect that a drop in the number of available children would reduce the potential for coresidence, but there is some evidence that the impact is relatively small. In populations where coresidence of the elderly is the norm, it appears to be relatively insensitive to additional numbers of surviving children (Knodel et al. 2000; Smith 1986; Ruggles 1994; see also Elman and Uhlenberg 1995).

In sum, if the propensity to coreside remained constant, we would expect declines in fertility and mortality to lead to a substantial rise in the proportion of adults residing with parents. Such demographic change could also lead to a decline in the proportion of elderly persons residing with their children, but we would expect this effect to be comparatively small.

Empirical findings of past research

Intergenerational coresidence has declined dramatically in every Western industrial country for which we have historical and contemporary data (e.g., Alter, Cliggett, and Urbiel 1996; Andorka 1995; Dillon 1997; Guinnane 1996; Fauve-Chamoux 1996; Pampel 1992; Wall 1995; Ruggles 2007; Tomassini et al. 2004; United Nations 2005). There is also clear evidence of decline in coresidence in Japan, Korea, and Taiwan, the three most developed East Asian countries (Martin 1990; Hirosima 1997; Hermalin, Ofstedal, and Chang 1992; De Vos and Lee 1993; Knodel and Debavalya 1997; Chattopadhyay and Marsh 1999; Yang 1999).

For less developed countries, however, direct evidence of change in residence patterns is scarce. Most studies of intergenerational coresidence in developing countries examine a single point in time, sometimes inferring chronological change indirectly by comparing countries at different levels of economic development (e.g., Bongaarts 2001; Bongaarts and Zimmer 2002). Some studies of developing Asian countries have suggested that there has so far been little change in coresidence (Logan, Bian, and Bian 1998; Palloni 2001; Knodel and Ofstedal 2002). The most comprehensive analysis is the United Nations' *Living Arrangements of Older Persons Around the World* (2005). Based on analysis of data from 33 developing countries in Africa, Asia, and Latin America, the study concludes:

> Considering the whole group of countries, there is a trend towards independent forms of living arrangements—alone or with spouse only—at the expense of co-residential forms of arrangements, especially those with children and other relatives. (United Nations 2005: 49)

This result, however, could be an artifact of fertility decline. The United Nations analysis uses an age threshold of 60 years, and the measure of residence with children has no age control. Husbands tend to be a few years older than their wives in most countries, so when husbands reach the age of 60, their wives are in their 50s. In populations with minimal fertility limitation, women typically bear their last child around age 40 or higher. In such populations a substantial proportion of persons aged 60 or older still have a minor child present in the household. As women begin to limit their fertility, their age at the birth of their last child declines (Knodel 1977). Accordingly, the proportion of elderly persons who have minor children will also decrease. This effect is often compounded by a declining age gap between husbands and wives, which also reduces the frequency of elderly men who have minor children (Lloyd 2005: 447). Thus, the findings of the United Nations study may reflect, in part, the effects of the dramatic declines in fertility and the reduction in the age gap between husbands and wives that have taken place in most of the developing world.

Data and measures of coresidence

Many comparative studies of changes in intergenerational coresidence in developing countries—including the aforementioned United Nations study—are primarily based on data from the Demographic and Health Surveys (DHS). The DHS samples are the most broadly comparable sources available for analysis of living arrangements; in all, 200 surveys have been undertaken in 75 developing countries. There are two major problems with these data, however. First, the chronological coverage is limited; in most countries, the available surveys span less than a decade. Second, sample sizes are limited, especially for the earlier DHS samples; the surveys taken before the mid-1990s

usually have between 3,000 and 9,000 cases altogether, and they often have just 150 to 300 respondents aged 65 or older.

To adequately assess change in the living arrangements of the elderly in the developing world, we need large samples spanning several decades for multiple diverse countries. We thus turn to census microdata compiled by the IPUMS-International project (Minnesota Population Center 2007). IPUMS-International preserves individual-level census data from around the world and makes harmonized samples of these data available to researchers. At present, IPUMS-International has samples of 80 censuses from 26 countries taken between 1960 and 2002, providing information on over 200 million individuals. Over the next five years, the database is expected roughly to double.

We focused on developing countries—defined as low- and middle-income economies in the World Bank (2007) classification—with at least two available census years. These restrictions left us with data from 42 censuses of 15 countries, as described in Table 1.[1] The samples are large, with most covering 10 percent of the population. In general, methodology and question wording are comparable from census to census. One key difference is that many censuses employ a de facto enumeration rule, which includes in each household only those persons present on census day, while others adopt a de jure standard, which counts all persons at their usual residence. One might expect the de facto rule to produce lower estimates of coresidence; such enumerations can miss members of the younger generation temporarily absent for work or at school. Conversely, de jure enumerations sometimes count kin as coresident when they are merely visiting. We expect that the net effect of variation in the enumeration rule is small.

The 15 developing countries with available census microdata are not representative of the developing world as a whole. We have data for eight Latin American countries, four African countries, and just two Asian countries. Most of the world's population resides in Asia, and intergenerational coresidence is particularly high in that region. Accordingly, we cannot generalize about trends and differentials in the developing world as a whole; our results apply only to the 15 countries for which we have data.

Our measures of intergenerational coresidence, summarized in Table 2, are modeled on those used by Ruggles (2007). They are significantly more restrictive than the measures used in most other studies of intergenerational coresidence in developing countries. Most of these studies assess the percent of persons aged 60 or older residing with a child. As noted above, we are concerned that this measure risks conflating changes in fertility patterns with changes in residence decisions. In many cases, persons in their early 60s in populations that do not deliberately limit fertility may have children who are still too young to leave home. Accordingly, we focus on persons aged 65 or older, since the great majority of their children would be old enough to leave home. In addition, we consider households intergenerational only if the younger generation is aged 18 or older.

TABLE 1 Characteristics of census samples included in the analysis

Country/year	Sample density (%)	Enumeration rule	Persons aged 30–39	Persons aged 65+	Total sample size
Argentina					
1970	2.0	de facto	62,422	32,621	466,892
1980	10.0	de facto	353,482	218,139	2,667,714
1991	10.0	de facto	549,177	365,790	4,143,727
2001	10.0	de facto	459,256	358,683	3,626,103
Brazil					
1970	5.0	de jure and de facto	571,315	158,348	4,953,759
1980	5.0	de jure and de facto	691,936	236,252	5,870,467
1991	5.8	de jure	1,191,778	409,356	8,522,740
2000	6.0	de jure	1,508,425	591,795	10,136,022
Chile					
1970	10.0	de facto	103,604	45,020	890,481
1982	10.0	de facto	144,801	66,260	1,133,062
1992	10.0	de facto	206,929	87,830	1,335,055
2002	10.0	de facto	244,461	122,205	1,513,914
Colombia					
1973	10.0	de facto	209,064	62,450	1,988,831
1985	10.0	de jure	338,947	103,471	2,643,125
1993	10.0	de jure	478,487	144,743	3,213,657
Costa Rica					
1973	10.0	de jure	19,085	6,590	186,762
1984	10.0	de jure	29,818	10,762	241,220
2000	10.0	de jure	58,764	21,466	381,500
Ecuador					
1974	10.0	unknown	67,648	24,792	648,678
1982	10.0	de facto	89,030	32,163	806,834
1990	10.0	de facto	123,065	42,048	966,234
Kenya					
1989	5.0	de facto	103,942	35,110	1,074,098
1999	5.0	de facto	154,531	46,550	1,407,547
Mexico					
1970	1.0	de jure	50,873	17,596	483,405
1990	10.0	de jure	999,754	338,870	8,118,242
2000	10.6	de jure	1,420,390	504,434	10,099,182
Philippines					
1990	10.0	de jure	764,923	204,270	6,013,913
1995	10.0	de jure	918,505	240,974	6,864,758
2000	10.0	de jure	1,011,769	284,488	7,417,810
Romania					
1992	10.0	de jure	323,267	250,384	2,238,578
2002	10.0	de jure	308,332	303,307	2,137,967

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TABLE 1 (continued)

Country/year	Sample density (%)	Enumeration rule	Persons aged 30–39	Persons aged 65+	Total sample size
Rwanda					
1991	10.0	de facto	87,177	23,301	742,918
2002	10.0	de facto	85,598	24,164	843,392
South Africa					
1996	10.0	de facto	510,791	173,096	3,621,164
2001	10.0	de facto	533,605	184,481	3,725,655
Uganda					
1991	10.0	de facto	152,434	52,622	1,548,460
2002	10.0	de facto	260,698	77,470	2,497,449
Venezuela					
1971	10.0	unknown	122,213	34,383	1,158,527
1981	10.0	de jure	170,531	50,678	1,441,266
1990	10.0	de jure	252,202	72,206	1,803,953
Vietnam					
1989	5.0	de jure	324,428	126,644	2,626,985
1999	3.0	de jure	358,445	137,539	2,368,167

SOURCE: IPUMS-International (Minnesota Population Center 2007).

We also measure intergenerational coresidence from the perspective of the younger generation. Many investigators have observed that coresidence is determined as much (or more) by the younger generation as by the older generation (Aquilino 1990; Crimmins and Ingegneri 1990; Kotlikoff and Morris 1990; Ward et al. 1992; Choi 2003; Ruggles 2007; VanWey and Cebulko 2007; cf. Moehling 1995). We define the younger generation as adult children aged 30 to 39 because those ages are beyond the usual ages of leaving home in all countries and yet are young enough that, given the prevailing mortality conditions, at least half of such persons in every country would still have a surviving parent with whom they could potentially reside (Uhlenberg 1996).

We subdivide intergenerational families into two categories, depending on which generation heads the household. As noted above, under the traditional model of stem and joint families first described by Le Play, the older generation—especially men—typically retains power and authority until advanced ages, usually through control over property. Many recent investigators, however, regard intergenerational coresidence chiefly as a means of old-age support and assume that parents move into their children's households, often helping with childcare and housework in exchange for economic support. We believe that headship patterns may help us to distinguish between these two types of households.

Census enumeration instructions suggest that household headship is intended as an indicator of authority within the family. The census instructions do not, for the most part, give a precise definition of headship, but 33 of the

TABLE 2 Definitions of intergenerational coresidence measures

Older-generation intergenerational	Persons aged 65 or older residing with at least one own child aged 18 or older
Younger-generation intergenerational	Persons aged 30 to 39 residing with at least one own parent
Younger-head families	Intergenerational families headed by the younger generation
Older-head families	Intergenerational families headed by the older generation

censuses we used provide some guidance to enumerators; these instructions are reproduced in Appendix A. The instructions generally assume that every household has a head and that there is little ambiguity about that person's identity. They typically ask respondents to identify the person "recognized" as head or the person "responsible." Sometimes the instructions explicitly identify the head as the person with the most authority or the main decisionmaker. When there is doubt about who should be considered head, the instructions sometimes suggest other criteria, such as economic contribution or age.

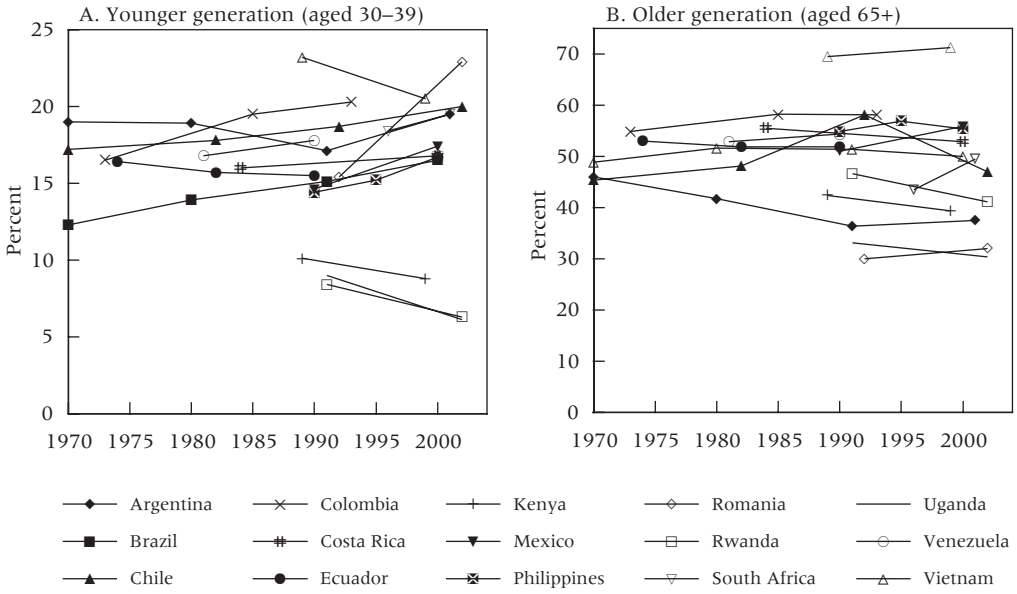
It is likely that the meaning of headship varies across countries. In some countries, perhaps, age is the most important determinant of headship; in others, gender or economic power might be more important. Moreover, headship could be affected by which person responds to the census taker. Even within countries, a range of factors may influence which generation is labeled the household head.

Despite these caveats, we postulate that headship is often correlated with authority within the household (cf. Smith 1992; Ruggles and Brower 2003). Accordingly, we divide intergenerational families into two types: older-head families are defined as those headed by the older generation, and younger-head families are those headed by the younger generation. We do not mean to imply that headship is a definitive indicator of authority or dependence; we do believe, however, that in older-head families the older generation typically retains more authority than they do in younger-head families. Moreover, we hypothesize that older-head families are often stem or joint families, whereas younger-head families are more often formed when a destitute or infirm elderly parent moves into an adult child's household for support.

Trends in intergenerational coresidence

Figure 1 shows the overall trends in coresidence in 15 countries for the younger and older generations. Panel A shows the percent of the younger generation—persons aged 30 to 39—residing with at least one parent, and Panel B shows the percent of the older generation—aged 65 and older—residing with at least one child aged 18 or older. The graphs give a visual summary

FIGURE 1 Percent of persons residing in intergenerational families by generation: 15 developing countries, 1970–2002



SOURCE: IPUMS-International (Minnesota Population Center 2007).

of the entire group of countries; for trends in specific countries, the data are reproduced in tabular form in Appendix B.

In ten of the 15 countries, the percent of the younger generation residing with their parents is on the rise. The exceptions to this pattern are three African countries (Kenya, Rwanda, and Uganda), along with Ecuador and Vietnam. As described earlier, in countries with declining fertility and mortality there would be increased opportunity for the younger generation to reside with parents; therefore, other things equal, the demographic changes in most developing countries during the past four decades would tend to favor residence with parents.

When we turn to the living arrangements of the older generation, it is difficult to distinguish clear trends. In six countries (Colombia, Mexico, Romania, South Africa, Venezuela, and Vietnam), intergenerational coresidence of the older generation is increasing, and in four countries (Argentina, Kenya, Rwanda, and Uganda), it is declining. The remaining countries have seen small fluctuations but no clear trend in coresidence of the aged.

The period from the 1970s to the 2000s saw substantial demographic change and economic development across much of the developing world. Because, as previously explained, the living arrangements of the older generation are less sensitive to changing demographic conditions than are those of the younger generation, we believe Panel B provides the best measure of trends in residential preferences during this period. Given the rapid pace

of economic development in many developing countries, the predominant theories of family change predict declining coresidence by the older generation. Of the four countries that did see a decline in coresidence, however, two (Rwanda and Kenya) actually had a decline in GDP per capita, and a third, Argentina, had great economic instability and no net per capita economic growth for most of the period examined. Thus, the data on overall trends in family composition provide no evidence to support the theory of a decline in intergenerational coresidence linked to economic development.

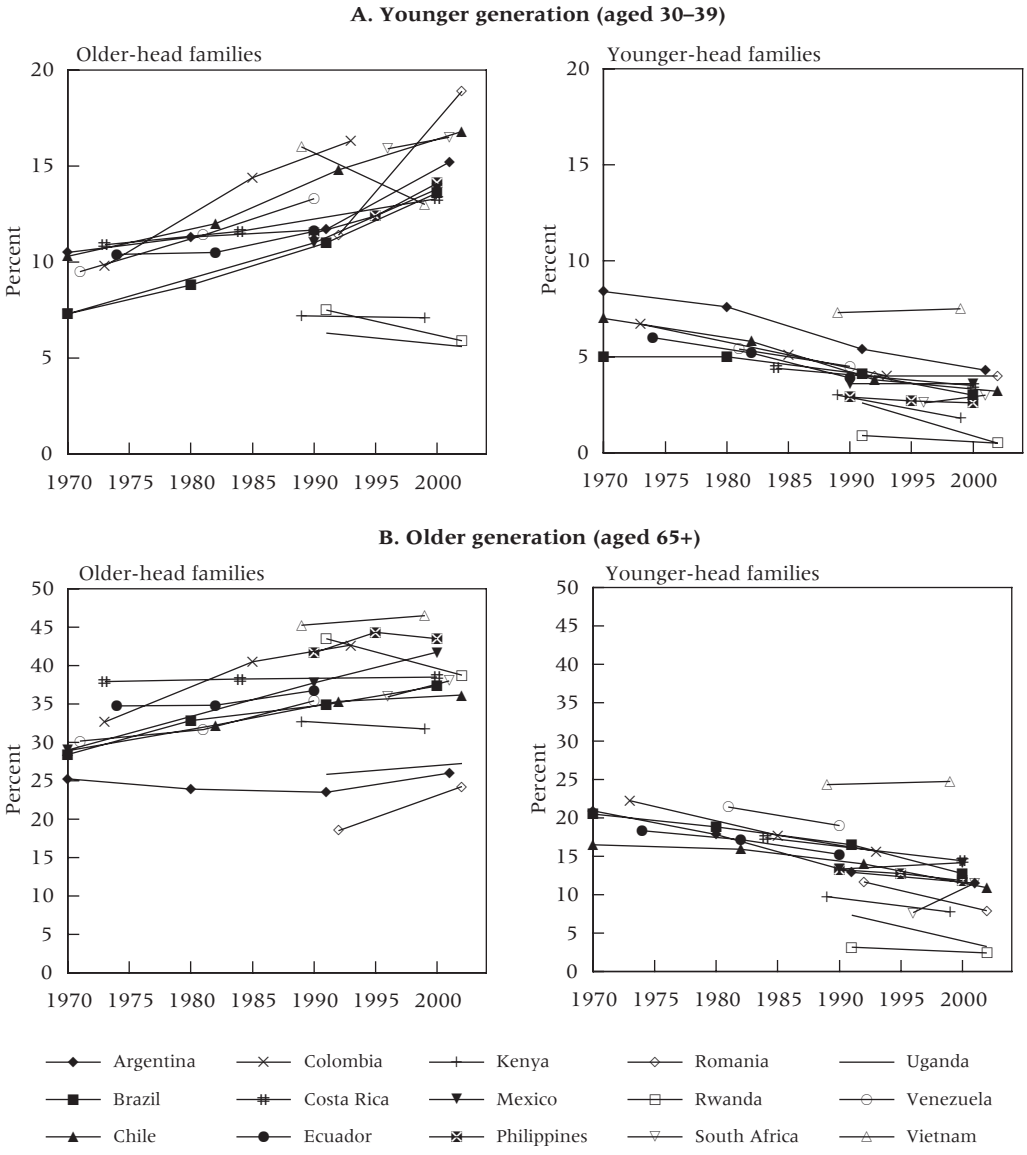
Figure 2 divides intergenerational families into two categories. Older-head families are defined as those in which the household is headed by the older generation, and younger-head families are those in which it is headed by the younger generation. When we assess the trend from the perspective of the younger generation (Panel A), the percent of older-head families is rising in 11 countries and declining in four (Kenya, Rwanda, Uganda, and Vietnam). Measured from the perspective of the older generation (Panel B), there are only two (Kenya and Rwanda) of the 15 countries in which older-head intergenerational coresidence is declining.

The trends are just the opposite for the younger-head families. In every country, younger-head families are less common than older-head families, and the differential is growing. Among the younger generation (Panel A), the frequency of younger-head families is increasing in South Africa and flat in Mexico but declining in every other country. Measured from the perspective of the older generation (Panel B), younger-head intergenerational coresidence is going down in 12 countries and increasing in Mexico, South Africa, and Vietnam.

With a few exceptions—especially in Africa—we can broadly generalize about trends in intergenerational coresidence. Intergenerational families headed by the older generation—the form of coresidence we associate with traditional stem-family and joint-family systems—are becoming more common in most of the developing countries examined. Intergenerational families headed by the younger generation—the configuration we hypothesize is most likely to signal old-age support—are, with a few exceptions, on the decline. These trends are precisely the opposite of what one would expect if economic development undermines traditional family forms and creates a new need for old-age support.

Recent scholarship on intergenerational coresidence in developing countries has highlighted the roles of gender and marital status. In particular, researchers stress that the status and authority of the older generation within the family are contingent on gender and, for women, on the survival of their spouse (e.g., Knodel and Ofstedal 2002; Yount 2005). Despite the clear importance of gender, however, the same basic trends in coresidence are found among elders of both sexes. We conducted additional analyses (not shown) and found that the rise in intergenerational coresidence of the elderly was broadly similar for unmarried men, unmarried women, and married couples.

FIGURE 2 Percent of persons residing in intergenerational families by generation and headship configuration: 15 developing countries, 1970–2002



SOURCE: IPUMS-International (Minnesota Population Center 2007).

Multivariate analysis

To describe the relationships between individual-level characteristics, indicators of economic development, and trends in intergenerational coresidence, we turn to a fixed-effects multinomial logit regression.[2] We estimate models of intergenerational coresidence for both the younger and the older generation,

since the needs and resources of both generations can determine coresidence (Ruggles 2007). We use a model that compares younger-head coresidence and older-head coresidence with non-intergenerational families (any other family type). We do not have sufficient information consistently available in the censuses to develop formal causal models of coresidence. Rather, our goal is to summarize and describe broad trends and differentials across 13 countries, using the regression to control for variations in basic demographic characteristics and economic development indicators.

Table 3 describes the independent variables included in the analysis. We divide the censuses into four decades; because some countries hold their decennial censuses in the year before the decade change, we divide the decades as 1969–78, 1979–88, and so on. Country-level fixed-effects variables allow us to control for variations across decades in the availability of census information. The Philippines and Rwanda censuses lack key variables needed for the analysis, so we excluded those countries.[3] We include basic demographic characteristics—sex, age, and marital status—to control for the effects of compositional change.

The analysis includes two socioeconomic variables: educational attainment and employment status. Educational attainment is included as an indicator of socioeconomic status and earning potential. Employment status is an indicator of resources. We do not include employment status for the aged population; those with the most resources are among the most likely to retire, and this makes employment of the elderly difficult to interpret.

We include three country-level measures of economic and demographic conditions: gross domestic product (GDP) per capita in 2000 US dollars, life expectancy at birth, and percent of the population living in an urban area.[4] The available data on urban residence are highly problematic. Urban residence is sometimes based on a population threshold, ranging from 1,000 persons in Venezuela to 5,000 persons in Uganda. In other instances, urban places are distinguished by unspecified indicators of urban character (Philippines) or availability of urban services (Chile), or they are "administratively determined" according to unspecified criteria (Rwanda). In Ecuador, urban places are defined simply as the capitals of provinces or cantons. Because of the wide variation in definitions, we are uneasy about comparing urban residence across countries. Urbanization is so theoretically important, however, that we felt we should not ignore it. Accordingly, we have included in the models the percent of the population identified by each country as urban, as reported to the United Nations.[5]

The results are presented in the form of odds ratios. Table 4 presents results for the younger generation, and Table 5 shows the older generation. In each table, the dependent variable is family type where family type is defined as living in a younger-head intergenerational family, older-head intergenerational family, or any other family type. In all regressions, living in any other family type is the excluded category.[6]

TABLE 3 Independent variables included in the analysis

	Ages 30–39		Ages 65 +	
Variable	**Mean**	**SD**	**Mean**	**SD**
Decade				
1969–78	0.07	0.26	0.06	0.24
1979–88	0.18	0.39	0.17	0.38
1989–98	0.46	0.50	0.44	0.50
1999–2005	0.39	0.49	0.42	0.49
Country				
Argentina	0.11	0.31	0.17	0.38
Brazil	0.30	0.46	0.25	0.44
Chile	0.05	0.23	0.06	0.24
Colombia	0.08	0.27	0.06	0.23
Costa Rica	0.01	0.08	0.01	0.08
Ecuador	0.02	0.14	0.02	0.13
Kenya	0.02	0.14	0.01	0.12
Mexico	0.18	0.38	0.16	0.37
Romania	0.05	0.21	0.10	0.30
South Africa	0.08	0.27	0.07	0.25
Uganda	0.03	0.17	0.02	0.15
Venezuela	0.03	0.17	0.02	0.15
Vietnam	0.05	0.23	0.04	0.21
Sex (male)	0.49	0.50	0.44	0.50
Age (years)	34.23	2.89	73.11	6.83
Marital status				
Single, never married	0.16	0.37	0.08	0.27
Married	0.78	0.41	0.53	0.50
Separated/divorced	0.04	0.19	0.03	0.18
Widowed	0.01	0.12	0.35	0.48
Education				
Less than primary	0.34	0.47	0.68	0.47
Primary, not secondary	0.36	0.48	0.21	0.41
Secondary or university	0.28	0.45	0.09	0.28
Employment status				
Employed	0.58	0.49	0.17	0.38
Unemployed	0.05	0.22	0.01	0.10
Not in labor force	0.25	0.43	0.70	0.46
Economic development indicators by decade and country				
Percent of population urban	63.64	18.70	65.71	18.84
GDP per capita (thousands of US 2000 dollars)	3.10	2.07	3.41	2.20
Life expectancy at birth(years)	66.67	7.69	67.57	7.28

NOTE: All variables except age and economic development indicators are dichotomous indicator (dummy) variables. For example, 7 percent of our entire sample comes from census data gathered in 1969–78. All measures are based on the pooled sample of 13 countries used in the regression analysis.
SOURCE: IPUMS-International (Minnesota Population Center 2007).

The characteristics of persons residing in younger-head families differ substantially from those of persons living in older-head families. For example, as shown in Table 4, models 1 and 2, younger-generation residence in younger-head intergenerational families is associated with being female, older, and never married. By contrast, residing in older-head intergenerational families is associated with being male, younger, and never married. As one would expect, members of the younger generation who head intergenerational families tend to be employed, whereas members of the younger generation living in households headed by the parent tend to be unemployed or out of the labor force.

The impact of education on coresidence is more complex. In models 1 and 2, intergenerational coresidence is positively associated with education, but the effect is considerably stronger for older-head coresidence than for younger-head coresidence. If education is a proxy for economic resources, one might expect to find a stronger effect on younger-head coresidence, since the members of the younger generation with the most resources would be best positioned to support dependent elderly parents. The influence of education, however, may not be so straightforward. Although education of the younger generation is doubtless correlated with economic resources, it may reflect the resources of the elderly parents as much as those of the younger generation. Parents who could afford to send their children to secondary school probably had substantial economic security. Such parents might also be likely to support dependent children later in life. In this light, the strong positive correlation of education with older-head coresidence may make sense.

The three country-level measures of economic development have mixed effects on the coresidence of the younger generation with parents. The percent living in an urban area has little effect on younger-head coresidence, but encourages older-head coresidence. It could affect coresidence in two distinct ways. If the younger generation is attracted to jobs in the city and moves off the farm, this could directly reduce intergenerational coresidence. Moreover, compared with rural farmers, fewer urban elderly parents can offer occupational succession to their children. Conversely, however, the rapid growth of cities has led to widespread housing shortages throughout the developing world, which may contribute to coresidence.

The other country-level measures—GDP per capita and life expectancy at birth—are inversely associated with younger-head families and positively associated with older-head families. These relationships directly contradict our expectations that economic development would discourage coresidence in traditional patriarchal families but could create new needs and resources for old-age support.[7]

In the models that do not control for economic development (i.e., the two left-hand columns of Table 4), the regressions suggest trends in coresidence similar to those shown in Figures 1 and 2: younger-head intergen-

TABLE 4 Multinomial logit regressions of intergenerational coresidence on selected characteristics (odds ratios): Persons aged 30–39 (younger generation)

	Regression 1		Regression 2	
	Younger head vs. non-intergenerational	Older head vs. non-intergenerational	Younger head vs. non-intergenerational	Older head vs. non-intergenerational
Decade				
1970 (reference)	1.00	1.00	1.00	1.00
1980	1.07	1.52	1.27	1.09
1990	0.76	1.55	*0.97*	0.92
2000	0.65	1.40	0.90	0.70
Country				
Argentina	1.65	0.90	1.79	0.79
Brazil	1.22	1.13	0.94	1.83
Chile	1.31	1.28	1.22	1.44
Colombia	1.36	1.39	*1.02*	2.75
Costa Rica	0.89	1.23	0.75	3.34
Ecuador	1.31	1.25	0.88	3.80
Kenya	0.72	0.79	0.30	6.14
Mexico	1.20	1.65	1.11	2.42
Romania	1.30	1.81	0.89	5.81
South Africa	0.96	0.66	0.49	2.46
Uganda	0.43	0.65	0.15	9.04
Venezuela (reference)	1.00	1.00	1.00	1.00
Vietnam	2.63	3.54	1.38	30.06
Sex (male)	0.94	1.35	0.94	1.35
Age	1.16	0.96	1.16	0.96
Age squared	1.00	1.00	1.00	1.00
Marital status				
Never married (reference)	1.00	1.00	1.00	1.00
Married	0.82	0.03	0.82	0.03
Separated/divorced	0.88	0.39	0.88	0.39
Widowed	0.92	0.19	0.92	0.19
Education				
Less than primary (reference)	1.00	1.00	1.00	1.00
Primary, not secondary	1.21	1.20	1.22	1.19
Secondary/university	1.21	1.44	1.21	1.44
Employment status				
Unemployed (reference)	1.00	1.00	1.00	1.00
Employed	1.18	0.61	1.19	0.61
Not in labor force	1.04	0.83	1.05	0.83
Percent of population urban			1.00	1.03
GDP per capita			0.95	1.07
Life expectancy			0.98	1.01
Nagelkerke R-square	0.326	0.326	0.326	0.326
Number of cases	13,320,688	13,320,688	13,320,688	13,320,688

NOTE: Italicized coefficients are not significant. All other coefficients significant at $p < .01$.
SOURCE: IPUMS-International (Minnesota Population Center 2007).

TABLE 5 Multinomial logit regressions of intergenerational coresidence on selected characteristics (odds ratios): Persons aged 65 or older (older generation)

	Regression 3		Regression 4	
	Younger head vs. non-intergenerational	Older head vs. non-intergenerational	Younger head vs. non-intergenerational	Older head vs. non-intergenerational
Decade				
1970 (reference)	1.00	1.00	1.00	1.00
1980	1.20	1.26	1.26	1.24
1990	0.88	1.32	0.92	1.30
2000	0.77	1.56	0.82	1.53
Country				
Argentina	0.67	0.47	0.68	0.45
Brazil	0.95	0.75	0.90	0.80
Chile	0.82	0.83	0.82	0.87
Colombia	1.24	1.24	1.24	1.34
Costa Rica	0.86	*0.97*	1.10	*0.96*
Ecuador	1.07	0.96	1.15	*1.02*
Kenya	0.54	0.52	0.50	0.56
Mexico	0.96	0.88	1.03	0.87
Romania	0.41	0.31	0.46	0.33
South Africa	0.60	0.80	0.50	0.85
Uganda	0.19	0.38	0.17	0.41
Venezuela (reference)	1.00	1.00	1.00	1.00
Vietnam	2.42	1.37	3.02	1.43
Sex (male)	0.57	1.22	0.57	1.22
Age	1.08	0.83	1.08	0.83
Age squared	1.00	1.00	1.00	1.00
Marital status				
Never married (reference)	1.00	1.00	1.00	1.00
Married	1.06	7.19	1.07	7.19
Separated/divorced	4.21	3.33	4.22	3.33
Widowed	5.73	6.83	5.73	6.84
Education				
Less than primary (reference)	1.00	1.00	1.00	1.00
Primary, not secondary	0.83	0.86	0.83	0.86
Secondary/university	0.47	0.61	0.47	0.61
Percent of population urban			1.01	1.00
GDP per capita			0.98	1.03
Life expectancy			0.98	1.00
Nagelkerke R-square	0.240	0.240	0.240	0.240
Number of cases	5,409,113	5,409,113	5,409,113	5,409,113

NOTE: Italicized coefficients are not significant. All other coefficients significant at $p < .01$.
SOURCE: IPUMS-International (Minnesota Population Center 2007).

erational families have declined, at least since the 1980s, and older-head families increased until 1990 and then declined in 2000. When we control for economic development, however, there is a clear pattern of decline from decade to decade in both measures of coresidence since the 1980s compared to all other family types.

The results for the older generation are given in Table 5. For the older generation, residence in a family headed by an adult child is strongly associated with being female, older, and divorced, separated, or widowed. Residence in an intergenerational family headed by the older generation is most often found among elderly parents who are male, younger, and married or widowed. Educational attainment of the older generation is inversely associated with both categories of intergenerational coresidence. Once again, however, it may be an oversimplification to assume that the educational results mean that coresidence arises from economic need. Educated elders may be more integrated into the urban wage-based economy, which could mean that they have accumulated savings that allow them to live independently. At the same time, however, they may lack the landholdings that form the basis of traditional stem- and joint-family coresidence.

Among the older generation, the percent living in an urban area is modestly associated with younger-head coresidence and has no effect on older-head coresidence. The other measures of coresidence show the same patterns as among the younger generation: GDP per capita and life expectancy are inversely associated with younger-head coresidence and positively associated with older-head coresidence.

Trends in coresidence are best measured from the perspective of the older generation; as explained above, coresidence of the younger generation is highly sensitive to declines in fertility and mortality. When we control for changes in the composition of the population and the three measures of economic development, the chronological trends are essentially consistent with the basic descriptive statistics presented in Figure 2: younger-head coresidence has been declining since the 1980s, and older-head coresidence has been rising since the 1970s.

Discussion

Census data for the 15 developing countries examined yield several unexpected results. We observe no general decline in intergenerational coresidence. Most of the 15 countries show an increase in intergenerational coresidence or no clear trend. Four of the 15 countries show declining coresidence of elderly parents with adult children, but these are not countries with substantial economic development over the period studied. When we turn to the configuration of intergenerational coresidence, the results are even more surprising. Families in which the older generation is the household head are

much more common than are families headed by the younger generation in every country examined. Such a configuration is consistent with traditional patriarchal forms in which the older generation retains authority. Contrary to expectations, these older-head intergenerational families are becoming *more* common in most of the 15 countries. Younger-head families—the configuration one would expect if intergenerational coresidence were motivated by a need for old-age support—are on the decline in most of the countries. The shift from younger-head to older-head families appears most rapid in those countries with the most rapid economic growth.

Our multivariate analyses reinforce the conclusion that economic development is positively associated with older-head intergenerational coresidence. GDP per capita and life expectancy are strongly associated with residence in an older-head intergenerational family, but inversely associated with residence in a younger-head family. A third measure of development, percent living in an urban area, is positively related to older-head coresidence among the younger generation.

These results should be interpreted cautiously. We examined only two countries in Asia, which not only is the most populous part of the world but also has the highest levels of intergenerational coresidence. We examined only four countries in Africa, three of which are located in the same part of sub-Saharan East Africa and probably are not representative of the continent as a whole. Despite these caveats, the rise of older-head intergenerational coresidence and the decline of younger-head coresidence are so widespread across the countries we examined that we suspect these trends are occurring through much of the rest of the developing world.

Why is older-head intergenerational coresidence increasing in developing countries, and why is it strongly associated with economic growth? Part of the answer lies with housing shortages. The population of the countries examined has more than doubled since the 1960s, and new housing construction has not kept pace with demand. Even when older parents can no longer provide the prospect of agricultural inheritance, they often can offer a place for adult children to live. In many developing countries, there appears to be a significant positive relationship between intergenerational coresidence and the proportion of the population living in an urban area, despite the greater importance of agricultural inheritance in rural areas (Martin 1989; Logan, Bian, and Bian 1998; De Vos and Lee 1993; Chamratrithirong, Morgan, and Rindfuss 1998; Andrade and De Vos 2002). As shown in Table 4, the percent living in an urban area is clearly associated with persons in their 30s residing in a household headed by their parents, and housing shortages probably contribute to this circumstance.

Other changes related to economic development may also encourage coresidence. With rising female labor-force participation in many countries, the demand for services that can be provided by elders—such as grandchild

care and housework—may be on the rise in some areas (e.g., Morgan and Hirosima 1983; Chamratrithirong, Morgan, and Rindfuss 1988; Hirschman and Minh 2002; Sasaki 2002; for contrasting evidence, see Logan, Bian, and Bian 1998). Some developing countries have seen unstable or declining employment prospects for young people despite significant economic growth, and some have introduced pension programs for the aged; both of these factors may encourage the younger generation to remain in their parental homes after reaching adulthood (Keller 2004; Camarano 2002; De Vos and Andrade 2005; Duryea, Jaramillo, and Pagés 2003)

More broadly, it is possible that rising incomes—especially among the older generation—have allowed more people to achieve their preferred family structure. Goode (1963: 17) observed that "the lower strata in most societies live in small households." Under the classic patriarchal model, stem and joint families are based on agricultural inheritance; if the older generation lacks sufficient land to support the next generation, it may be impossible for the younger generation to stay in the household. Historical studies of preindustrial Western families have found that intergenerational coresidence was strongly positively associated with economic resources (e.g., Berkner 1972; Ruggles 2003). Some investigations of less developed countries have also found that intergenerational coresidence is most common among property owners and other elderly parents with comparatively high socioeconomic status (Martin 1989; Chan and DaVanzo 1996; Agree 1993). Thus, intergenerational coresidence may be preferred by both generations, but may not be feasible for economic reasons (Milagros et al. 1995). The strong positive association between economic development and intergenerational coresidence therefore makes sense: with rising incomes, more people may be able to achieve their preferred family form.

This interpretation suggests that the ideal family form may not have changed greatly but that economic growth has increased the opportunities for intergenerational coresidence. This does not mean, however, that family ideals are indelible; we have seen dramatic declines in coresidence in every Western country, and there is strong evidence of a similar change in the most developed countries of East Asia. The positive relationship we find between coresidence and development may eventually reverse, and the world may converge toward a conjugal family system as Goode predicted. As yet, however, there is little sign that such convergence is taking place.

Appendix A Census instructions on household headship

Argentina

1970	The head of the census household is the person recognized as such by the rest of the members of the household. To locate the head of the household, it is necessary that you find out who is the person [recognized] as such by the members of this household...even if existing in this household is a person who is older or has the same economic responsibility. Six students live in a census household—register as the head whoever is recognized as such. In the collective households..., [it's] the person with the greatest hierarchy.
1980	Each private dwelling should necessarily have a head, who is the person recognized as such by the rest of the members of the household. In the case of a group of nonrelated persons someone should be recognized as head by the rest of the group. In the case of absence, the head of the household will not be enumerated in this household, another member should occupy their place (spouse, oldest child, sibling, etc.). The relationship of the rest of the members will be established with respect to the substitute.

Brazil

1970	Head—the person responsible for the household.
1980	Head—person (man or woman) responsible for the household or family.
1991/2000	Mark the box corresponding to the relationship existing between each person and the person responsible for the household.

Chile

1960	...the person recognized as the head of the family.
1982	Each private household must necessarily have a head, who is the person recognized as such by the other members of the household. In the case of a group of unrelated people, who lodge and eat together, someone should be recognized by the group as the head. In a case where, because of absence, the head is not to be enumerated in that household, another member should take their place (wife, oldest son, brother, etc.).

Colombia

1985	Head. It is a person recognized as such by members of the dwelling, by reason of authority, age, or economic role. The head of the dwelling can be a man or a woman, married or single. In each dwelling a head must exist.
1993	Head of household: It is a person recognized by the rest of the members of the household. It is generally a father or mother or the principal economic support of the household. If persons who form a census household do not recognize anyone as head (for example, groups of students or workers who form a common household), choose any of them, who is older than 18 years, as head of the household.

Costa Rica

1984	The head is the person considered as such by the rest of the members of the household, who is generally the one who supports the largest part of the economic resources of the household and has the most responsibility in making of decisions there. In nonfamily groups whose members do not have any family relationship, the head will be the person who has the most authority, who carries out the administration, the one who has lived there the longest, or the oldest. If the person lives alone, that person is the head. Before enumerating the head in the first two columns (first population form), find out who is the person considered as such. You should not accept as head a person who is not a resident in the household,

/...

Costa Rica (continued)

even if they are the economic support of it and are being enumerated with the members of this household. Also do not write down as heads persons under 15 years of age.

2000 The head (gender emphasized) is the person considered as such by the rest of the members of the home or who contributes the largest part of the economic resources of the home, or, in the last instance, is the oldest. In nonfamily groups the head can be one who has the most authority, the oldest person, the person who has resided in the dwelling the longest, or the one who administers the place. For all cases, the head should be a usual resident older than 15 years.

Ecuador

1982 ...in the case of collective dwellings, eliminate the first column corresponding to the head of household, using a vertical line.

2001 ...if the dwelling is collective,...remember that in these dwellings there is no male or female head of household, and therefore there is no kinship relationship.

Kenya

1989 ...where several persons who are not related by blood or marriage constitute a household, as in the case of urban areas, code one of them as "head" (code 1) and the rest as "non-relatives" (code 8).

1999 There are several persons who are not related by blood or marriage but constitute a household, mostly in urban areas. Without telling them code one of them as "head" (code 1) and the rest as "non-relative" (code 8)...Sometimes it might happen that members of the household are away and cannot be reached even after three visits, and the most responsible person you meet is a house help or any other such person employed by the household. You must probe to establish the most senior member who will have spent the census night in the household. This person must be made the household head.

Mexico

1970 Write the first and last name of the head of family, who can be a man or a woman...

1990 Remember that the head of household or group is a person who normally lives in the dwelling, and is known as the head of household by the members of the family or group.

2000 ...there should only be one head of family and that this person can be a man or a woman...

Philippines

1990 You begin to ascertain the members of the household by asking the respondent: "Who is the head of this household?" Write the name of this person on the first line.

1995/2000 Begin by asking the respondent: "Who is the head of this household?" Write the name of this person on the first line.

Romania

1992/2002 A person who has left the household for a long period of time...to work, study, or for other reasons..., is generally not considered to be the head of the household... When a person lives alone and is not included in any household, record this person as a code 01—the head of the household, because it is considered as forming a one-person household.

/...

South Africa	
1996	It depends upon respondents to nominate the head of the household and no guidelines were provided on the questionnaire as to who this should be. The interviewer's instructions defined head of household as "a male or a female who assumes responsibility for the household."
2001	The head was defined as the main decisionmaker, or the person who owned or rented the dwelling, or the person who was the main breadwinner, or chosen by the household. The head could be either male or female. If two people were equal decisionmakers, or in a household of totally unrelated persons, the older or oldest could be named as the household head.
Uganda	
1991	...where several persons who are not related are living in a household, name one as head and describe the rest as "other."
2002	Ask, "who is the head of this household?"
Venezuela	
1971	Head of household: write down head for the person considered as such by the members of the household for reasons of relationship, age, authority, or respect.
1981	Head of household: a member of the household, man or woman, whom the other members of the household consider to be the head. This may be for reasons of dependence, relationship, age, authority, or respect. If no member of the household is considered the head, then choose the oldest...In the case of a dwelling made up entirely of persons not related to each other, the person considered to be the "head" is written down as such and the other residents are considered "non-relatives."
1990	A member of the household, man or woman, whom the other members of the household consider the head. This may be for reasons of dependence, relationship, age, authority, or respect. If no member of the household is considered the head, then choose the oldest.
Vietnam	
1989	Household head is the person who represents a household and all of household members recognize that person as a head of household...Household head or the person who is in charge of answering the census is recorded in line 1 of the household roster...Before filling out name of household head, the interviewer should check if the person who is in the line for "name of household head" is in the enumeration coverage. If that person is not in the enumeration coverage (already moved to other place, policeman, in army, etc.), the oldest person in the household can be considered as a household head.
1999	Head of household is the person who represents the household and all other household members recognize. If a household has all children, their father and mother are policemen or in army (they are enumerated separately), household head is the oldest child. Students who live in dormitory or rent an apartment are enumerated as a single household unit. Head of household is the person who is so recognized by other members in the apartment. Other members would have "other" relationship with the head.

SOURCE: IPUMS-International (Minnesota Population Center 2007).

Appendix B Percent of persons residing in intergenerational families, by generation and headship

	Younger generation (30–39)			Older generation (65+)		
Country/year	All inter-generational	Younger head	Older head	All inter-generational	Younger head	Older head
Argentina						
1970	19.0	8.4	10.5	46.0	20.9	25.2
1980	18.9	7.6	11.3	41.7	17.8	23.9
1991	17.1	5.4	11.7	36.4	12.9	23.5
2001	19.5	4.3	15.2	37.5	11.5	26.0
Brazil						
1970	12.3	5.0	7.3	48.9	20.5	28.4
1980	13.9	5.0	8.8	51.6	18.8	32.8
1991	15.1	4.1	11.0	51.4	16.5	34.9
2000	16.5	3.0	13.6	50.0	12.7	37.3
Chile						
1970	17.2	7.0	10.3	45.4	16.5	28.9
1982	17.8	5.8	12.0	48.1	15.9	32.2
1992	18.7	3.8	14.8	58.1	14.0	35.3
2002	20.0	3.2	16.8	47.0	10.9	36.1
Colombia						
1973	16.5	6.7	9.8	54.8	22.2	32.6
1985	19.5	5.1	14.4	58.2	17.7	40.5
1993	20.3	4.0	16.3	58.1	15.6	42.6
Costa Rica						
1973	n/a	n/a	10.9	n/a	n/a	37.9
1984	16.0	4.4	11.6	55.5	17.4	38.2
2000	16.8	3.5	13.3	52.9	14.4	38.5
Ecuador						
1974	16.4	6.0	10.4	53.0	18.3	34.7
1982	15.7	5.2	10.5	51.9	17.1	34.8
1990	15.5	3.9	11.6	51.9	15.2	36.7
Kenya						
1989	10.1	3.0	7.2	42.4	9.7	32.7
1999	8.8	1.8	7.1	39.3	7.7	31.7
Mexico						
1970	n/a	n/a	7.3	n/a	n/a	29.0
1990	14.6	3.6	11.0	51.0	13.3	37.7
2000	17.4	3.6	13.8	55.8	14.1	41.7
Philippines						
1990	14.4	2.9	11.5	54.8	13.2	41.6
1995	15.2	2.7	12.4	56.9	12.7	44.3
2000	16.7	2.6	14.1	55.3	11.8	43.5
Romania						
1992	15.4	4.0	11.4	30.0	11.6	18.5
2002	22.9	4.0	18.9	32.0	7.9	24.2
Rwanda						
1991	8.4	0.9	7.5	46.6	3.1	43.5
2002	6.3	0.5	5.9	41.1	2.4	38.7
South Africa						
1996	18.4	2.6	15.9	43.5	7.6	35.9
2001	19.5	3.0	16.5	49.5	11.5	38.0
Uganda						
1991	9.0	2.6	6.3	33.1	7.3	25.8
2002	6.1	0.5	5.6	30.4	3.2	27.2

/...

Appendix B (continued)

Country/year	Younger generation (30–39)			Older generation (65+)		
	All inter-generational	Younger head	Older head	All inter-generational	Younger head	Older head
Venezuela						
1971	n/a	n/a	9.5	n/a	n/a	30.1
1981	16.8	5.4	11.4	52.9	21.4	31.6
1990	17.8	4.5	13.3	54.3	19.0	35.4
Vietnam						
1989	23.2	7.3	16.0	69.5	24.3	45.2
1999	20.5	7.5	13.0	71.2	24.7	46.5

"n/a" signifies the data are not available because parent of the head of household was not specifically identified in the data.
SOURCE: IPUMS-International (Minnesota Population Center 2007).

Notes

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1 The 2001 census of Ecuador was excluded from the analysis because of a problem with the family relationship variable. Even though IPUMS-International contains data from 1960 to the present, most of the 1960 datasets from developing countries do not contain household information, only person-level information, making it impossible to include the 1960 round of census data in our analysis.

2 Because our analyses include independent variables measured at the country level, we also tested generalized estimating equation (GEE) models. GEE models are an extension of generalized linear models that account for within-group correlations (Hardin and Hilbe 2003). We fit population-average GEE models accounting for clustering by country and found that the results did not materially differ from the multinomial logit regression results presented in Tables 4 and 5. We also carried out appropriate tests for interaction among the independent variables, and found nothing that affected the patterns described in the text.

3 The Philippines asked about educational attainment only in 1990, and Rwanda did not ask about educational attainment until 2002.

4 The country-level measures of economic development are taken from World Bank (2007) and United Nations, various years.

5 The Minnesota Population Center intends to develop measures of urbanization that are more internationally comparable. When that work is complete, we will be able to compare intergenerational coresidence in urban and rural areas across countries.

6 The following is an example of how to interpret the coefficients in Table 4. An individual is 6 percent less likely to be male than female if from the younger generation and living in a household headed by the younger generation compared to an individual living in any other family type, holding all else constant. Similarly, holding all else constant, an individual is 35 percent more likely to be male than female if from the younger generation and living in a household headed by the older

generation compared to living in any other family type.

7 Because life expectancy has a direct impact on the survival of parents, one would expect, other things equal, that it would be positively associated with coresidence, so the inverse relationship of life expectancy to younger-head coresidence is especially striking.

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