Worldwide household patterns of young couples in multilevel perspective[1]

Jeroen J.A. Spijker[2] and Albert Esteve
Centre d'Estudis Demogràfics, Spain

Paper to be presented at the International Conference on Marriage Patterns, Household Formation and Economic Development, Utrecht, The Netherlands, 7-10 October 2010.

Abstract

While young couples in western societies generally form a new household, in developing societies new unions are often incorporated into existing households. However, there is a growing tendency in the nuclearization of households as intergenerational coresidence is undermined by growing wage labor opportunities that provide incentives for rural-urban migration and because small nuclear families adapt better to urban societies characterized by high geographic and social mobility. The objective of this paper is therefore to jointly study for a selection of low- to middle-income countries the socioeconomic and demographic conditions of women aged 15-34 and their partners in relation to their household patterns with particular interest going out to the comparison of nuclear and extended households. The analysis will mainly rely on data from the Integrated Public Use of Microdata Series International database (https://international.ipums.org/international/) from which census samples for the last two or latest available census rounds for 22 countries have been extracted. Results showed that women being of older age (within the 15-34 range), having attained at least primary school education, being of similar or slightly younger age than the male partner, being employed, a mother and not living in a rural area were all associated with living in a nuclear household. However, as these factors explain only a small part of the overall variation in the household arrangements of young couples, there are a likely number of demographic, family composition and time factors that may be behind the overall slow transition towards the nuclear family. Although they could not be tested using census micro data in a direct manner, we will attempt to do so in an indirect way in the future.

Introduction

In the past there was the tendency to equate societal models with universal models of the family (Elder, 1965; Josephson & Burack, 1998). In the case of contemporary western social sciences, the prevailing model is the nuclear family model whose members impart the same ideals of democracy and freedom believed to be at the base of liberal political and economic systems. A large part of the contemporary scientific literature written from a micro-level perspective exemplifies this point by the application of economic metaphors to the family sphere: freedom, rational choice, marriage markets, maximization of wellbeing, costs, benefits, etc (e.g., Becker, 1991). In this sense, we do not explicitly question the explanatory capacity of these concepts applied to the study of advanced capitalist societies, but rather to draw attention to their possible overextension into other areas of study. Generalizing this family model to the analysis of other societies increases the chances of falling into evolutionary stances that act to distort an appropriate understanding of the phenomenon. Just as it makes no sense to speak of better or worse or more elaborate or simpler family systems, nor is it true that all societies necessarily undergo the same transitional phases (Thornton, 2001). In light of what has been learned of the First and Second Demographic Transitions (Notestein, 1945; Lesthaeghe, 1983; Van de Kaa, 1988), which constitute two of the greatest contributions of Demography to the social sciences, family demographers must exercise a certain caution in interpreting phenomena in unfamiliar sociocultural contexts.

The demystification of certain evolutionary premises, still perceptible behind some discourses, requires a broad temporal and comparative vision that simultaneously combines micro and macro level perspectives. A brief run through the historical and anthropological literature sheds light on the great plasticity of familial systems in the variegated cultures of which we have knowledge (Coontz, 2000). This flexibility arises in the majority of cases from the necessities of adaptation to diverse environmental, biological, geographical economic, political and social pressures (Fox, 1967). Although the processes of capitalist and industrialist expansion have in great measure fortified the nuclear family in certain contexts and regions, these should not necessarily be assumed as the central transformative agents in all cases. In the past, for example, as a result of high mortality rates and second marriages, step-families were much more numerous than we today suppose (Segalen, 1981; Coontz, 2005).

From a global perspective, family formation patterns are not the automatic product of individual decisions, but rather fall among the broader set of socio-cultural practices linked to various family and gender systems characterizing regions or countries. In general terms, family systems define what it means to be united by blood, descent or marriage; who should live with whom in the various stages of the life cycle; the social, economic and sexual rights and obligations of individuals according to positions in the family; and the division of labor among those connected by links of kinship (Mason, 2001). Similarly, gender systems define male and female roles and their corresponding rights and obligations (Ridgeway & Smith-Lovin, 1999). Given that all family systems are found to be organized

around gender, and that all gender systems delimit the family and parental roles of men and women, both systems are closely interdependent.

Family and gender systems are articulated within the institutional structures characteristic of each society. Their nature, operation and transformation depend on the same factors, and they drive society as a whole. One factor that stands out is the influence of specific social modernization processes, which have occurred or is still taking place with greater or lesser intensity in many low-to-middle income countries. For instance, some of the most significant supranational transformations associated directly with the family and the role of women, that started in the West in the mid-1960s and involves both macro and micro levels factors, include: a) the massive incorporation of women into formal education systems, b) high rates of female participation in labor markets, c) and the increasing autonomy of women over sexual and reproductive decisions (Oppenheimer, 1994; Beck & Beck-Gernsheim, 1995). In this study, we are particularly interested in the influence of education and labour force participation on the household structure of young couples.

The influence of economic development on household structure

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). 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. It was argued that small nuclear families were best adapted to urban societies characterized by high geographic and social mobility (e.g. Burgess 1960). By the 1960s family change processes were taking place in most places of the world, which led some researchers to consider that nuclear families would ultimately become the majority even if substantial differences in family systems are maintained (e.g. Goode 1963).

Since then, academic literature generally supposed intergenerational co-residence to be a feature of traditional agricultural societies that declines in importance as a society industrialises, experiences economic expansion or high migration flows. Ruggles and Heggeness (2008), however, concluded that despite the trade-off between the costs and benefits of coresidence for each generation and the general consensus by others that intergenerational coresidence is declining in most countries as a result of economic development, no clear trend in intergenerational coresidence was observed for 15 low- and middle-income countries over the last three decades of the 20th century. It would appear, therefore, that the cultural indelibility of traditional family systems remain resilient to change - an argument that was also provided for the stability in the age at entry into formal marriages or consensual unions in Latin America by Fussel and Palloni (2004) despite the significant declines in fertility and increases in female education and labour force participation.

One factor that plays an important role in the dynamics of traditional family forms and ensuing household compositions is how wealth, property, and power are distributed. For instance, in the case

of patrilineal joint-family and stem-family systems these are concentrated in the hands of older-generation men (Le Play 1884; Ruggles 1994). As a result, the younger generation is dependent on the older one, relying on elders for housing, employment, and the prospect of eventual inheritance (Ruggles and Heggeness 2008). However, as populations age and household structures simplify in developing countries, this hierarchical structure changes whilst elderly coresident parents become more dependent on their children for both economic support and care.

As expressed by Ruggles and Heggeness (2008), 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 (but see also Coontz, 2000), since the alternatives to familial employment would become more attractive. At the same time, however, the rise of wage labour 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 (Ruggles and Heggeness 2008, p. 255). Indeed, in Taiwan, a country that underwent a period of continuing rapid social, economic, and demographic change, coresidence of a married couple with the husband's parents continues to be an important aspect of family life despite Taiwan's industrialization and convergence to a Western model of consumption and slight increase in the prevalence of nuclear (but including non-married relatives or non-relatives that weren't parents of one of the couple) households (Weinstein et al. 1990). However, the decline in extended households only appeared to be caused by a decline in joint-stem (both vertical and horizontal linkages) and joint (vertical) households as the proportion of stem households (those containing parent(s) or grandparent(s) of the husband or wife), remained the same throughout the period studied (36% in 1965 and 35% in 1985). More recently, though, married couples were more likely to begin married life on their own or to separate quicker from the parents' household. Taken from the opposite perspective, in 1985 about 80% of the husband's parents was still living with a child. The authors concluded that there seems to be a high probability of continuing declines in co-residence as the norms for co-residence are gradually eroding, fertility levels remain below replacement, universal health insurance permits more independent living among the elderly, and wives are better educated. A counter effect will be the increase in very old persons.

Similarly, in a study on household structure and child educational outcomes in Bangladesh where extended families are the norm, Edlund and Rahman (2005) state that children from nuclear families perform substantially better at school than those from extended families. This is because fathers are more likely to be around when the child reaches adulthood who is therefore better positioned to benefit from investments made in the child's human capital than the head of an extended household (i.e. usually the grandfather). This is a relevant research outcome for our study as education is usually completed upon forming a union, especially in lower income countries.

4

How demographic factors influences household structures

In the past, some historians suggested that the distinctive feature of Western European and American history was the early and long-standing predominance of nuclear families. Indeed, later research demonstrated that there had indeed been a decline of extended families (Coontz 2000). However, the explanation given was that as lives were shorter in the past, comparatively few families had had enough living members to potentially reside as a multigenerational household, but the ones that did represented a high proportion of all such potential arrangements. By contrast, at present a larger number of coresident extended families would embody just a tiny fraction of potential multigenerational households. For the same token, the privacy that is greatly valued by nuclear families today is fairly recent as in the earlier days it was quite common for servants, borders, lodgers to move freely in and out of the household and for more distant family members to visit (Ruggles 1994; Coontz 2000).

Currently, almost all countries in the world are faced with an ageing population due to declining fertility and mortality levels. Although demographic ageing is still at a (very) early stage in developing countries, the number of elderly dependents is also set to increase while the proportion of working-age adults that are able to provide support will level off or even reduce. This means that younger cohorts (who progressively have fewer siblings) have increasing chances to live with (longer surviving) parents. According to Ruggles and Heggeness (2008) this may cause two types of outcomes: if the parent has a farm and the coresident child will inherit, fewer siblings means less competition, but in case the elderly parent is destitute and needs to move in with a child for care, fewer siblings mean increased responsibility. This would imply that current demographic changes in developing countries are substantially increasing the potential for intergenerational coresidence.

To return to the study by Weinstein et al. (1990), apart from economic factors, changes in family structure in Taiwan were also accompanied by fertility decline as fewer or no sons mean less opportunities for the continuation of the patrilocal tradition. In turn, a couple's co-residence status also reinforces demographic behaviour: age at marriage was highest and actual and preferred fertility lowest among those who always lived in nuclear households as a couple (i.e. also compared to those who moved from an extended to a nuclear household).

The effect of the internationalisation of norms and values on family formation

Changes in the household structure also depend on worldwide supranational processes. Since the 1960s in the US and many countries of Western and Northern Europe and about a decade later in the rest of Europe, shifts in values related to family life and children weakened the 'traditional' family, understood as the nuclear family, an institution that caused interrelated changes in partnership behaviour, family formation and fertility. These changes became characteristic of what later became known as the second demographic transition (SDT) an idea postulated by Van de Kaa (1988; 2004) that describes a substantial and unprecedented progress in cohabitation, the postponement of both the timing of marriage and children bearing, childlessness, lone parenthood, having children outside

marriage, having fewer children, the parallel retreat from marriage and from traditional norms of sexual restraint, as well as the increase in divorce (see also Lesthaeghe and Surkyn, 2006). In particular, the growing search for individual status that has caused a shift from family orientation towards an emphasis on the individual have made people from many societies move away at different speeds from traditional behavioural patterns and types of living arrangements (Van de Kaa, 1987; Keilman, 1987).

While progress in literacy and wealth made the first demographic transition possible, increases in female education, female labour force participation and unemployment, economy uncertainty and technological innovation contributed to the SDT. It was the much improved and highly efficient methods of contraception that played a catalytic role, as did improvements in medical technology and communication. By no longer being constrained by material anxieties and social control, the individual has become more concerned with their higher-order needs centered on self-actualization, individual autonomy and recognition (Lesthaeghe and Surkyn, 2006), thus making 'alternative' forms of family and relationship formation more practical, feasible and eventually socially acceptable (Coleman, 2005). Intimate partnerships and sexuality, but also the relationships between parents and their children, have moved away from the realm of normative control and institutional regulation, giving rise to the new ideal of reflexive 'pure relationships' based on mutual consent and the recognition of individual autonomy (Giddens, 1992).

Conversely, early marriage emerges as a common feature of those societies in which third parties (family, religion, social groups, state) exert some influence on individual's martial decisions, i.e. when and with whom to marry. As observed by Jones (2010), the wider age gap in South Asian countries reflects parent-arranged marriage and patriarchal family structures, which typically lead to young age at marriage for females.

Despite such global changes, the multiplicity in cultural contexts, societal and economic developments and differences in the timing of such developments has meant that inter- and intra-regional differences in household formation patterns and characteristics of young couples persist. To briefly offer an example, while in the most modernized countries, young couples are more likely start a new household, in more traditional contexts it is expected that one of the couple (almost always the women) moves in the household of the parents-in-law (e.g. in much of China and Japan until the early 1900s, and currently still common in a large parts of India and the Arab world; Burguière *et al.* 1996).

However, little is yet known as to how the internationalisation of norms and values is changing family formation patterns in developing countries. According to Coontz (2000), while many young people in industrialized countries delay cohabitation/marriage and parenthood until the mid-to-late twenties (although they are likely to leave their parental home), children are still considered insurance for parents' old age and an important contribution to family savings in low-income countries.

As extended education becomes the primary route to finding a job that provides a livable wage, one spin-off of the rise in the age of economic and educational independence has been de emergence of a youth culture that crosses geographic borders, as well as some racial, class, and gender boundaries

6

(Coontz 2000). One consequence of this has been that young adults no longer see it as normative to enter and settle into long-term adult roles, but instead associate it with a period of frequent change in and exploration of possible life directions in love, work, and worldviews (see also Arnett 2000).

Study objectives

While households are formed, changed and dissolved in many ways that are conditioned by crucial life course events of its members (birth, leaving home, union formation, union dissolution, death) this paper will mainly focus on residence patterns of young couples aged 15-39.

Among the factors that were identified as being important in the timing of family formation, we confer special emphasis to the aggregate and individual measures of education. The power of the dimension of education originates in its efficiency as a principle of differentiation within social structures (Bourdieu, 2006). In this way, diverse reports note the significant global progress made in the area of education. Despite differences in the rhythm and intensity of educational change, there has been a relative increase in levels of schooling, visible both in developed and developing countries (Buchmann & Hannum, 2001). However, there are still considerable inequalities in many regions related to access to education (Lloyd, Kaufman, & Hewett, 2000; Kravdal, 2002; UNESCO, 2007). The consequences of these changes for union formation have not been systematically studied, nor their implications in the timing, composition and residential structure of couples. As the world has become more global economically and culturally, changing norms and values related to union formation are also slowly taking place in developing countries. Also in the developed world large differences remain in the timing of union formation and the change therein. For this reason a selection of both developed and developing countries will be analysed over a time span of several decades.

Data and methodology

For our analysis we will use the Integrated Public Use of Microdata Series (IPUMS) International database (https://international.ipums.org/international/), the most complete database of global census microdata available today (44 countries, 77 million households, 279 million individual records for the period 1960-2007). It allows multilevel analysis to assess demographic and socioeconomic characteristics and trends of household patterns of young couples at two levels: individual and national. Using logistic regression modelling we will measure the country effects on couple's household formation, observe variability levels between countries and assess how much of the total variation in household structure can be attributed to differences between individuals or countries.

Our primary interest lies in the changing household pattern of young couples in low- to middle income countries. Individual registers were therefore initially selected on the basis of four criteria: 1) the person is in a relationship (married or consensual); 2) the couple lives in the same household; 3) the age of both partners is known; and 4) the female partner is between 15 and 34 years old. In

addition, registers with missing values for one or more of the independent variables that was analysed in the study were deleted. This varied between 0,4% of the pre-selected cases in the China 1982 sample to 38,7% in the South Africa 1996 sample (mean 9,3%, st. dev. 8,7%). Data consistency was checked by comparing the household structure of couples where the female partner is aged between 15-34 according to the initial and final sample. Results revealed few differences (a maximum of 2,9% more nuclear households headed by the husband and 2.1% less extended households headed by parents of the husband in the case of, respectively, the South Africa 2007 and 1996 samples).

Our second sample selection criterion was that data were available on each of the analysed independent variables, which left us with 35 samples from 23 countries (12 and 8 from Africa; 9 and 8 from Asia and 14 and 7 from Latin America), equating to more than 6 million couples (see Table 1).

TABLE 1 Characteristics of census samples included in the analysis

Country/year	Original sample density#	Women aged 15-34 & in union*	Country/year	Original sample density#	Women aged 15-34 & in union*
Africa		*1256128*	Palestine 1997		22775
Ghana 2000		96680	Pakistan 1973		102963
Guinea 1996		64102	Phillipines 1990		386914
Kenya 1989		53799			
Mali 1987		67930	*Latin America*		*2410154*
Mali 1998		76644	Bolivia 1992		33584
Rwanda 2002		51187	Bolivia 2001		39967
South Africa 1996		99044	Brazil 1991		706417
South Africa 2007		24090	Brazil 2000		757295
Uganda 1991		123014	Chile 1992		93582
Uganda 2002		170661	Chile 2002		85228
Tanzania 1988		161416	Ecuador 1990		64113
Tanzania 2002		267561	Ecuador 2001		74642
			Panama 1990		15557
Asia		*2994907*	Panama 2000		19808
Cambodia 1998		85327	Peru 1993		115710
China 1982		819590	Peru 2007		159174
China 1990		1202344	Venezuela 1990		103756
Iraq 1997		126715	Venezuela 2001		141321
Malaysia 1980		12433			
Nepal, 2001		235847	*Total*		*6661189*

Maximum sample that the Minnesota Population Center (2010) has available on their website.

The analyses will be based on co-residing heterosexual couples[3] and inter-generational co-residence will be examined from the young-cohort perspective, whereby the female partner is aged 15-34. This female perspective to the study is opted for because it enables a better analysis of union

---

[3] The IPUMS variable SPLOC (Spouse's location in household, where SPLOC $\neq 0$) was used to identify couples. These include both married and non-married couples as well as those who did not specifically declare themselves as "cohabiting" or "married" but stated their relationship to the household head as "spouse".

formation in general and marital age hypergamy in particular. For instance, if couples whereby the male partners was aged 15-34 were to be chosen, many women would have been excluded from the analysis as a large proportion of men in low income countries don't marry until their early thirties or marry with women much younger than themselves.

For each individual we will identify whether or not they live in a nuclear or extended family using information regarding the status of each individual at the time of the census with respect to union status, spousal characteristics, and inter-generational co-residence. Descriptive analyses will first be performed on the census samples before embarking on the logistic regression of extended households against nuclear households on a selected number of characteristics.

The descriptive and multivariate analyses includes four socioeconomic variables that were identified in the introduction as influencing family and household formation. The highest completed level of education of both spouses served as an indicator of socioeconomic status and earning potential. Female employment status was also includes as it is an indicator of female economic status as well as extra financial resources for the household. Male employment status was not considered due to a lack of inter-country variability as in about one-third of the census samples the employment rate was 100% and in just one-third less than 0,98. Instead, male employment sector (agriculture vs. other) was used as both an indicator of traditional vs. non traditional forms of living and urbanization. Lastly, female headship was included as another variable of women's status. For the descriptive analysis, other heads of household are also distinguished (i.e. husband, parent, parent-in-law, other) but as the latter three categories are only possible in extended households they could not be used for the multivariate analysis.

The analyses also include several demographic variables, the most obvious one being the age of the female partner that serves as an indicator of union entry. One should be reminded that censuses do not disclose information on the date of or age at union entry. However, it does capture, say, 16 year-old women who are married or in a consensual union. If we can subsequently observe differences in the characteristics of these women by household type, i.e., according to country, time periods, educational groups, etc., we are still able to identify risk factors (no negative connotation intended) associated with young women living in an extended household. Age-squared is also included because an observed association be not be linear but decline with age. In addition, the possible effect of spousal age differences is also tested as an indicator of traditional marriage customs, which are thus hypothesized as being larger in extended households. Couples will be classified into several categories: hypogamous (wife older than husband), homogamous (wife between 2 years older and younger than husband) and hypergamous (wife 3-7, 8-12, 13-17, 18-22 and 23+ years younger than husband). Finally, if the women has (had) children is also considered as a lack of children may be an indicator of personal and economic independence.

The last variables that will be considered is time and country in order to ascertain if time changes have taken place in the propensity to live in extended households and to control for country-specific factors that the earlier mentioned factors don't capture.

To sum up, the following hypotheses have been constructed to test the assumed links between individual, spouse's and couple's socioeconomic and demographic characteristics and contextual factors and the type of household women live in:

1. The younger the female spouse the more likely that she lives in an extended household.
2. Extreme age hypergamy is also associated with living in an extended household.
3. Having completed at least primary school increases the chance to live in a nuclear household.
4. Being active in the workforce increases the chance to live in a nuclear household.
5. Having (had) children increases the chance to live in an extended household.
6. Literature generally supposes that extended families is a feature of traditional agricultural societies that declines in importance as a society industrialize and urbanize. We therefore hypothesise that agricultural employment is positively associated with young couples living in extended households.
7. Using the argument that nuclear families will ultimately become the majority we predict that time is negatively associated with extended households.
8. After considering all previously tested variables, the propensity to live in extended households still varies internationally, whereby especially African couples are likely to live in extended households.

Finally, it is important to emphasize that all measures are based on the current status of individuals at the time when the census was conducted as they are a source of information on prevalence and not incidence. However, despite the limitation of offering little biographical information, we strongly believe that the value of the international comparability remains high. Before showing the results of the multivariate analyses, an overview of country-specific characteristics of the two household categories and the explanatory variables is provided and briefly described below.

Results

In most, though not all, non-western countries included in our sample the majority of young couples live in nuclear households, i.e. households containing the couple with or without own children. This is especially the case in the Latin American countries Bolivia, Brazil and Ecuador, as well as in the Philippines, Rwanda and South Africa, where the proportion is above 70%. Conversely, in the remaining African countries analysed in the sample except for Uganda as well as in Iraq, more than half of the couples live in extended households (Table 2).

In terms of who is considered the head of the household (at least during the day of the census), in all countries analysed it is the male partner in the vast majority of households, irrespective of household type without any clear macro-geographical pattern as both low and high proportions are observed in all three continents. Meanwhile, female headship rates ranged between 0,04% in Pakistan

(although this was in 1973) and 9,9% in Chile (2002) of all households (Table 2 and last column of first page of Table 3). On the other hand, in the Asian countries, with the exception of Cambodia and the Philippines, many couples have as head of household one of the parents of the male partner (usually the father), varying between 11% in Malaysia and 33% in Iraq of all couples, while in none of the other countries this proportion reaches more than 8%. Few households have one of the parents of the female spouse as head (maximum of 9,3% in Cambodia), although it appears most common in Latin America. The country-specific pattern of living with parents or parents-in-law is comparable to the one described for the headship rates, although often with substantially higher proportions, especially with respect of the households where the parents of the male partner reside, thus indicating that usually in these households one of the couple is the head of the household rather than one of the older generation.

In terms of the characteristics of the independent variables (Table 3) that will be used later on to explain the country and time differences in the propensity for couples to reside in a nuclear household, we observe that within the age range of 15-34 years, those countries known to have a young population structure have a larger proportion of women among the youngest two five-year age groups, although it also depends on cultural factors that affect the age of marriage for women. For instance, in recent decades Ghana has witnessed the proliferation of economic and political roles for educated women outside the home, a development that has enabled many to include an element of choice in the decision making process on family life (Gyima et al. 2005). This may partly explain why just 6,7% of women in union are aged 15-19 compared to 19,1% in Mali around the same year. Certain is that age hypogamy, i.e. where the female partner is significantly older (here taken as at least 3 years older) than the male partner is rare in all countries analysed, although least prevalent in Africa (between 0,3% and 3,7%) and most likely in Latin America (between 4,2% and 7,2%). On the other hand, age homogamy showed very large international variation, just 3,5% of couples in Guinea but between 30,0% and 42,5% in all Latin American samples. Only in China is homogamy more common (59,1% in the 1990 sample). In terms of hypergamy, this is most widespread in Africa and least in Latin America and the Asian countries where the Islam is not the most dominant religion. Nevertheless, only in Africa there are countries where more than a quarter of unions consist of the male partner being 13 or even 18 years older than the female partner (especially in Guinea and Mali).

Striking similarity is observed among all countries with respect to the proportion of in-union women who have had children, especially considering that no age distinction was made in the table and censuses don't capture information on the duration of the union. Proportions range from 80,4% in Pakistan (1973) and 98,7% in Peru's 1993 sample.

Regarding the educational attainment of couples, we can observe that progress in the educational expansion of both men and women is still required in many of the low-income countries. For instance, even in 1998, 95,5% of 15-34 year old in-union women in Mali had not completed primary school education (and 89,7% of the men; results not shown). In comparison, this was just 15,3% among South African women several years earlier (and 6,5% in 2007). In most other African countries as well as

11

several Asian countries (particularly Cambodia and Nepal) proportions are also high, while in Latin America, Brazil is worst situated with just over 40% of women without having completed primary school. If we would consider the educational differences between the partners, we can comment that educational homogamy is most common, comprising about 60-70% of couples in most of the countries and even more where school attainment is lowest. Between hypogamy and hypergamy, the latter is generally more common, especially in Africa (with the exception of South Africa) and Asia (except in the Philippines).

Finally, a few words about the two employment-related variables, female employment and the proportion of the male partners who work in agriculture. Whereas female employment is generally high to very high in Africa and parts of Asia (between about 40% and 90%), it is lower in Latin America and the Philippines (20%-40%) and lowest in predominantly Muslim counties in Asia (5-7% in Pakistan, Palestine and Iraq). Regarding the proportion of male partners who work in agriculture, we observe that this is most common in Africa, reaching 83% in Mali and Rwanda and least common in South Africa and Palestine (8%) and between about one-seventh and a third of Latin American men employed in this sector.

Nuclear vs. extended households

After sketching the household, demographic and socioeconomic characteristics of the samples, our next goal is to see whether such factors are indeed associated with the probability of couples living in a nuclear household. As we are particularly interested in age and educational patterns, we first produced cross-tabulations of the proportion of partnered women out of all households who live in nuclear households according to spousal age and educational differences by country (Table 4). We observe that differences are far larger between countries than between the categories within countries. With respect to spousal age differences, moderate variations in the proportion of women living in nuclear households are observed in Iraq, Nepal, Pakistan and the African countries except South Africa and Rwanda. For most countries, it is generally either hypogamy or extreme age hypergamy (18+ years) that is associated with a lower preference of living in a nuclear family than in an extended one, although in some Asian (China, Malaysia, Nepal) and Latin American (Brazil, Panama) countries the association is positively linear: the highest proportions of couples living in nuclear households are found in those where the male partner is 18+ years older. Few differences are observed regarding the propensity to live in nuclear households in relation to spousal educational differences. The only observation that could perhaps be made is that homogamic couples are slightly more likely to live in a nuclear household than hypergamic or hypogamic couples.

Table 4, however, does not tell us anything about the relative importance of each age and education category in relation to the two household types, as it only showed the proportion of all households who lived in nuclear households according to each age- and education category (with the remaining proportion being equal to those living in extended households). Figure 1 therefore shows for a selection of countries the distribution of spousal age- and educational differences for both nuclear

12

and extended households (see completed paper for the other countries' results). The most typical spousal differences in age is a 3-7 year older male spouse, although age homogamy (between -2 and +2 years) was most common in Cambodia, China and Bolivia and about equally common as the earlier mentioned category in most other Latin American countries and in Rwanda. In Guinea and Mali it was most common for men to be 8-12 years older. Few differences are discerned between nuclear and extended households, except for most African countries where extreme hypergamic couples are much more common among extended families, while in several Asian countries homogamic couples are more common in extended families and slight hypergamic couples in nuclear families. With respect to spousal educational differences, in most countries 60%-70% of couples are homogamous despite country differences in educational attainment. There are only slight more homogamous couples in nuclear families than in extended families where there are a slightly higher proportion of hypergamous couples.

Looking briefly at other variables, in nuclear households the proportion of 15-34 year old women who have children is somewhat higher than for those who live in extended households (90% vs. 85%). They are also slightly more likely to be the head of the household, although overall proportions remain very low and only reaches above 10% in Chile. In 29 of the 35 census samples, in union women who live in a nuclear household are more likely to have less than primary school than those living in extended households. In most samples, their husbands work in the primary sector while in less than half of the countries she is more likely to be employed.

Regression analysis

While descriptive statistics can provide a general idea of the type of factors that may play an importance part in determining household systems, most are interrelated and may confound the association between one factor and the outcome. For instance, extreme age hypergamy could be more associated with women living in extended households because they tend to be younger. In order to estimate the independent effect of each explanatory variable we therefore need to control for the other variables. To do so, logistic regression was employed whereby odds to live in an extended household were calculated (with the reciprocal being nuclear households). As shown in Table 5 and described below, these vary according to the individual's, partner's, couples' and contextual characteristics. Bivariate and partial model results are also provided to determine if there are variables that are affected by the inclusion of others. Beforehand, correlation coefficients between all variable were calculated, and although all were significant due to the large sample size, the highest association was only 0,65 (between each partner's educational attainment).

Results show that the odds for a young married/in union women from a low- to middle income country to live in an extended household reduces by age, although the speed of reduction decreases slightly as one gets older. Being the head of the household is also associated with a reduction of this odd, as well as having (had) children. The relationship with education is somewhat more complicated: having completed primary school produces a lower odd for living in an extended household compared

to either not having completed primary school or attaining at least secondary school, but this association only became apparent after controlling for all other variables (including time) except country. Possible reasons for this change in the direction of the association is because the prevalence to live in extended households was highest in countries where few attained at least secondary school, but who did generally lived in an extended household. Controlling for the country-specific size of each educational group is what changed the association. A similar situation was found for the educational level of the male partner. In terms of employment, labour force participation is lower among those who live in extended households. With respect to the occupation of the husband[4], couples where the husband worked in agriculture, fisheries or forestry were more likely to live in extended households, but only after controlling for the wife's characteristics. One marriage homogamy indicator was chosen, namely age. Again here, results here partially confirmed expectations as the association is u-shaped. Odds for couples to live in an extended household are highest when the male partner is at least 18 years older than the wife and are equally lowest for the 3-7 and 8-12 age difference groups, rather than when both couples have about the same age, with again high odds when the wife is older. Perhaps one reason why the lowest odds are found when the male partner is slightly or moderately older is because these age differences are the cultural norm in most of the studied countries, while high age differences, an indicator of arranged marriages, may imply a lack of choice (i.e. bargaining power) for young women to the type of household they want to be living in[5]. Note also that the bivariate odds declined after controlling for the other variables, meaning that they account for part of the stronger one-to-one association. Interestingly, the age of the female partner did not confound the association much, while the country-specific fixed effects did.

Lastly, two contextual variables were introduced: time and country of residence. As was mentioned in the introduction, and as our result confirmed, over the last decades nuclear households have become more common as countries develop. Nevertheless, large country differences remain: for instance, compared to the reference category Bolivia, the odds for young adult women to live in an extended household range from less than 0,6 in Brazil, Philippines and South Africa to 5,5 in Guinea with most other African countries and Nepal and Iraq also observing high odds.

---

[4] As almost all men work, the employment sector was considered, i.e. primary vs. other, which, at the same time, functions as a proxy for urbanisation.
[5] A cross-tabulation of the two household types according to age-difference and categories of coresidence confirmed that women who are older or of similar age than their husbands are most likely to live with parents or parents in law if they themselves are young and to live in a nuclear household if they are older. Conversely, if her husband is much older, more than half live either in a polygamous or other extended household. However, this figure only marginally declines as she gets older.

TABLE 2 Household structure of women aged 15-34 living with male partner.

Country/year	Nuclear		Extended					Total	
	Head of household		Head of Household						
	Wife	Husband	Wife	Husband	Her parents	His parents	Other	%	N
Africa									
Ghana 2000	2,2	36,0	3,0	44,3	2,9	6,0	5,6	100,0	96680
Guinea 1996	0,1	22,0	0,1	66,5	0,3	6,3	4,8	100,0	64102
Kenya 1989	1,8	60,3	0,9	30,6	0,3	4,8	1,4	100,0	53799
Mali 1987	0,2	43,7	0,1	54,6	0,1	0,4	1,0	100,0	67930
Mali 1998	0,1	49,2	0,0	49,4	0,1	0,5	0,7	100,0	76644
Rwanda 2002	0,2	73,4	0,1	25,4	0,2	0,6	0,1	100,0	51187
South Africa 1996	4,5	71,9	1,3	17,4	1,1	2,7	1,2	100,0	99043
South Africa 2007	4,8	69,5	1,4	16,3	1,6	4,9	1,4	100,0	24090
Uganda 1991	0,6	50,2	0,4	40,7	0,2	5,5	2,4	100,0	123015
Uganda 2002	0,3	66,8	0,2	30,1	0,3	1,6	0,8	100,0	170661
Tanzania 1988	2,8	43,9	2,2	39,9	1,0	5,1	5,1	100,0	161417
Tanzania 2002	3,4	55,6	1,7	32,7	0,6	3,3	2,6	100,0	267561
Asia									
Cambodia 1998	3,0	61,4	1,1	19,5	9,3	3,6	1,9	100,0	85327
China 1982	1,6	61,4	0,2	15,8	1,0	19,2	0,8	100,0	819590
China 1990	2,3	62,6	0,3	12,4	1,2	20,6	0,7	100,0	1202344
Iraq 1997	0,1	44,2	0,0	18,5	1,0	33,1	3,0	100,0	126715
Malaysia 1980	0,8	56,4	0,4	24,3	4,4	11,1	2,6	100,0	12433
Nepal, 2001	1,8	49,4	0,4	16,4	0,0	31,6	0,5	100,0	235847
Palestine 1997	0,0	68,9	0,0	13,1	0,3	16,4	1,3	100,0	22775
Pakistan 1973	0,0	54,5	0,0	18,1	0,7	24,3	2,4	100,0	102963
Phillipines 1990	0,1	74,8	0,0	14,1	4,9	5,0	1,0	100,0	386914
Latin America									
Bolivia 1992	0,5	70,1	0,3	21,2	2,4	3,6	1,9	100,0	33584
Bolivia 2001	3,1	63,1	1,3	20,1	4,0	5,7	2,5	100,0	39967
Brazil 1991	0,6	78,8	0,2	12,5	3,3	3,6	1,0	100,0	706416
Brazil 2000	3,2	78,4	0,6	8,8	3,7	4,4	0,9	100,0	757294
Chile 1992	2,9	66,8	0,8	15,2	6,8	5,7	1,8	100,0	93582
Chile 2002	7,9	63,7	1,9	12,2	7,2	5,6	1,4	100,0	85228
Ecuador 1990	0,9	69,3	0,4	19,3	3,7	4,8	1,7	100,0	64113
Ecuador 2001	2,8	63,4	1,2	19,0	5,1	6,5	1,9	100,0	74642
Panama 1990	0,5	61,9	0,4	21,3	5,5	7,4	3,0	100,0	15557
Panama 2000	1,0	64,6	0,4	16,6	6,7	8,0	2,7	100,0	19808
Peru 1993	0,7	62,0	0,4	22,5	5,7	6,2	2,6	100,0	115710
Peru 2007	3,7	60,5	1,8	17,1	7,3	7,2	2,4	100,0	159174
Venezuela 1990	0,7	63,9	0,5	21,8	5,5	5,7	1,8	100,0	103755
Venezuela 2001	3,3	63,1	1,4	17,4	6,0	6,9	1,9	100,0	141321

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations.

TABLE 3 Independent variables included in the analysis. Percentages pertain to women aged 15-34 living with male partner.

Country/year	Age				Age difference with male partner						Lives with		Has (had) children	Is head
	15-19	20-24	25-29	30-34	Hypogamy (up to -3 yrs)	Homogamy (-2 to 2 yrs)	Hypergamy 3-7	8-12	13-17	18+	Parents	Parents-in-law		
Africa														
Ghana 2000	6,7	24,1	36,1	33,1	3,2	15,1	34,5	22,4	11,3	13,5	3,2	9,4	86,6	5,2
Guinea 1996	18,6	24,7	32,2	24,6	0,6	3,5	15,7	26,6	20,3	33,4	0,3	16,4	88,6	0,2
Kenya 1989	9,9	31,0	34,4	24,7	0,9	12,6	42,5	24,4	9,0	10,7	0,3	8,0	91,7	2,6
Mali 1987	16,2	27,7	31,1	25,0	0,3	3,9	22,1	30,5	18,8	24,4	0,1	10,0	90,5	0,3
Mali 1998	19,1	27,5	28,2	25,2	0,3	4,1	23,5	31,6	18,6	21,9	0,1	9,7	86,9	0,2
Rwanda 2002	7,1	33,1	33,9	25,9	3,7	32,6	36,3	15,8	5,9	5,7	0,2	1,0	87,6	0,3
South Africa 1996	2,5	19,3	36,9	41,4	2,7	31,9	42,8	14,8	4,8	3,1	1,2	4,9	86,2	5,7
South Africa 2007	2,6	19,3	34,4	43,7	2,3	28,6	41,9	17,4	6,1	3,7	2,5	6,5	82,0	6,2
Uganda 1991	18,7	32,1	28,9	20,3	1,5	18,1	42,8	21,0	7,8	8,8	0,3	8,3	86,0	1,0
Uganda 2002	14,1	32,8	30,4	22,8	1,8	20,9	43,6	20,4	7,2	6,1	0,3	1,6	91,3	0,4
Tanzania 1988	13,9	30,0	33,0	23,0	1,3	13,9	37,6	24,7	10,2	12,4	1,2	9,0	86,5	4,9
Tanzania 2002	10,6	31,4	32,4	25,6	1,3	17,8	42,1	22,7	8,1	8,0	0,7	7,0	89,2	5,1
Asia														
Cambodia 1998	7,2	22,1	36,1	34,5	6,6	46,3	35,2	8,9	1,9	1,1	9,8	7,7	88,7	4,1
China 1982	2,5	19,3	43,4	34,8	2,9	53,3	36,4	6,3	0,9	0,2	1,2	32,8	87,9	1,8
China 1990	2,1	28,0	38,2	31,7	3,1	59,1	31,8	4,9	0,8	0,3	1,4	30,9	88,7	2,5
Iraq 1997	9,4	25,5	34,6	30,4	5,7	26,6	36,1	21,3	6,6	3,5	1,0	43,2	87,4	0,1
Malaysia 1980	4,8	24,0	37,6	33,6	1,9	26,0	45,8	18,7	4,7	2,8	4,7	20,2	89,4	1,2
Nepal, 2001	10,8	28,8	31,7	28,7	1,2	34,5	47,7	12,3	2,8	1,5	0,4	42,6	80,4	2,2
Palestine 1997	12,3	30,1	30,4	27,3	1,8	24,3	45,7	22,4	4,6	1,2	0,3	24,0	85,7	0,1
Pakistan 1973	10,2	25,1	33,9	30,8	1,6	21,9	49,6	17,3	5,3	4,3	2,4	34,9	80,4	0,0
Phillipines 1990	6,2	24,3	34,7	34,8	5,1	41,4	37,4	10,9	3,1	2,2	4,9	7,7	88,8	0,1
Latin America														
Bolivia 1992	6,3	26,0	34,8	32,9	5,0	42,5	34,8	11,7	3,3	2,7	2,5	7,9	95,0	0,8
Bolivia 2001	7,8	27,7	32,6	31,9	5,8	40,5	34,5	12,2	4,0	3,0	4,4	9,9	92,5	4,4
Brazil 1991	8,8	25,0	33,7	32,6	5,9	31,7	40,2	14,6	4,4	3,3	5,0	5,4	85,3	0,7
Brazil 2000	9,3	25,0	32,0	33,7	6,2	31,0	38,8	15,2	5,1	3,7	3,8	6,6	83,3	3,8
Chile 1992	4,1	21,0	36,3	38,6	6,4	39,1	37,1	11,8	3,3	2,4	7,0	9,1	92,0	3,7
Chile 2002	3,8	18,1	34,7	43,4	6,2	38,1	37,0	12,9	3,6	2,3	9,0	7,0	89,6	9,9
Ecuador 1990	8,9	26,1	33,3	31,7	4,6	34,6	37,2	15,0	4,5	4,1	3,7	8,2	90,5	1,3
Ecuador 2001	9,9	27,3	31,4	31,4	5,3	34,9	37,2	14,1	4,6	4,0	5,3	9,4	91,4	4,0
Panama 1990	9,1	25,6	33,4	31,9	5,7	30,0	36,3	17,0	6,3	4,7	7,4	9,8	89,9	0,9
Panama 2000	9,0	23,8	32,9	34,2	6,8	31,0	35,6	15,8	6,2	4,6	8,6	10,1	87,6	1,5
Peru 1993	5,6	24,5	34,4	35,5	4,2	35,5	38,0	14,8	4,3	3,3	5,7	11,0	98,7	1,1
Peru 2007	7,3	24,4	33,0	35,3	5,0	35,9	36,8	14,3	4,5	3,5	7,7	10,9	90,0	5,5
Venezuela 1990	7,7	24,2	33,7	34,4	7,2	31,2	36,4	15,1	5,6	4,5	5,9	9,8	89,6	1,3
Venezuela 2001	8,0	24,3	32,5	35,2	7,1	32,4	34,5	15,2	6,1	4,8	6,5	10,5	88,0	4,6

TABLE 3 Continued.

Country/year	Highest educational attainment			Educational diff. with male partner			Employed	Male partner works in agriculture	Total sample
	< primary	Primary	Secondary/ university	Homogamy	Wife> husband	Husband> wife			
Africa									
Ghana 2000	62,2	31,3	6,5	64,9	8,1	26,9	77,6	56,9	**96680**
Guinea 1996	95,4	3,9	0,7	86,6	1,4	12,0	70,9	68,8	**64102**
Kenya 1989	46,9	51,9	1,2	71,0	8,7	20,3	70,6	42,3	**53799**
Mali 1987	92,8	6,5	0,7	88,1	3,4	8,5	51,7	83,0	**67930**
Mali 1998	95,5	4,1	0,4	90,1	1,7	8,2	39,6	80,7	**76644**
Rwanda 2002	70,4	27,5	2,1	66,0	15,7	18,3	90,9	83,2	**51187**
South Africa 1996	15,3	50,2	34,5	68,1	16,1	15,8	41,5	11,7	**99044**
South Africa 2007	6,5	40,2	53,3	68,4	16,4	15,2	46,3	7,9	**24091**
Uganda 1991	69,7	29,8	0,5	63,1	7,2	29,7	66,3	68,5	**123014**
Uganda 2002	58,9	37,5	3,6	60,6	9,1	30,2	64,7	63,4	**170661**
Tanzania 1988	52,1	46,3	1,6	67,9	12,8	19,3	87,8	73,9	**161415**
Tanzania 2002	32,8	63,2	4,1	66,9	11,8	21,3	76,8	69,4	**267561**
Asia									
Cambodia 1998	75,8	22,7	1,5	69,2	5,5	25,3	78,7	74,6	**85327**
China 1982	41,3	52,7	6,0	56,4	4,8	38,8	87,6	75,3	**819590**
China 1990	25,8	60,9	13,3	64,5	7,8	27,7	90,4	69,4	**1202344**
Iraq 1997	42,1	43,7	14,1	57,8	8,2	34,1	7,2	21,5	**126715**
Malaysia 1980	36,0	61,5	2,5	68,4	8,8	22,8	31,7	32,5	**12433**
Nepal, 2001	73,6	14,3	12,1	64,0	3,1	33,0	55,6	55,3	**235847**
Palestine 1997	11,9	60,0	28,1	57,0	16,8	26,1	4,9	8,2	**22775**
Pakistan 1973	92,7	6,0	1,2	74,2	1,3	24,5	4,6	54,5	**102963**
Phillipines 1990	19,4	42,1	38,5	65,3	18,3	16,4	25,6	50,3	**386915**
Latin America									
Bolivia 1992	41,2	42,3	16,6	59,9	9,6	30,6	41,4	35,1	**33584**
Bolivia 2001	31,3	42,5	26,2	60,9	10,0	29,1	40,0	28,5	**39967**
Brazil 1991	54,8	25,9	19,2	67,2	17,1	15,7	30,1	24,3	**706416**
Brazil 2000	42,5	32,1	25,3	60,2	22,5	17,4	40,4	19,6	**757295**
Chile 1992	11,6	54,1	34,3	61,5	19,7	18,8	19,8	18,6	**93582**
Chile 2002	6,9	46,8	46,3	64,3	17,6	18,0	30,7	14,3	**85228**
Ecuador 1990	28,4	48,8	22,8	66,9	13,8	19,3	23,0	32,2	**64113**
Ecuador 2001	23,4	49,0	27,6	64,9	16,6	18,5	29,2	31,5	**74642**
Panama 1990	18,8	49,2	32,0	62,5	17,4	20,1	23,2	31,5	**15557**
Panama 2000	14,1	48,7	37,2	62,7	17,4	19,9	29,1	24,0	**19808**
Peru 1993	38,8	26,6	34,7	63,0	9,7	27,3	22,3	37,0	**115710**
Peru 2007	19,8	28,7	51,5	64,6	11,8	23,5	34,1	31,6	**159174**
Venezuela 1990	23,1	64,4	12,5	67,7	15,3	17,0	25,9	13,6	**103756**
Venezuela 2001	14,3	67,8	17,9	70,3	17,0	12,7	29,0	12,2	**141321**

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations.

TABLE 4 Women aged 15-34 who live with partner in a nuclear household as a proportion of all households* according to spouse differences in age and education

| Country/year	Age difference with male partner						Educational difference with male partner			% of women in nuclear household
	Hypogamy (up to -3 yrs)	Homogamy (-2 to 2 yrs)	Hypergamy				Hypogamy (F>M)	Homogamy (F=M)	Hypergamy (F<M)	
			3-7 yrs	8-12 yrs	13-17 yrs	18+ yrs				
Africa										
Ghana 2000	17,0	39,4	43,3	40,3	37,4	26,4	34,3	36,5	43,8	**38,2**
Guinea 1996	9,3	24,3	28,2	25,6	21,9	16,4	22,7	22,1	21,3	**22,1**
Kenya 1989	49,9	61,9	63,9	64,0	60,3	53,5	63,0	62,2	61,3	**62,1**
Mali 1987	41,4	55,2	55,1	49,4	40,1	27,8	37,7	44,1	43,3	**43,8**
Mali 1998	41,0	63,5	60,6	54,4	45,5	30,4	44,2	49,9	43,7	**49,3**
Rwanda 2002	72,2	76,2	73,6	71,5	71,9	67,7	71,7	74,8	70,9	**73,6**
South Africa 1996	75,0	76,4	76,6	76,5	76,7	73,6	75,1	76,9	75,7	**76,4**
South Africa 2007	76,6	74,6	73,5	76,0	74,2	72,3	74,1	74,7	72,7	**74,3**
Uganda 1991	39,7	52,1	53,4	50,9	46,6	40,3	47,7	51,5	49,9	**50,8**
Uganda 2002	55,2	67,5	68,3	67,1	66,2	62,1	66,9	67,6	66,3	**67,1**
Tanzania 1988	22,5	47,3	50,0	48,5	43,8	36,9	42,0	47,7	46,0	**46,7**
Tanzania 2002	38,5	61,3	61,6	58,4	56,3	49,0	56,1	60,0	57,9	**59,1**
Asia										
Cambodia 1998	63,8	66,8	62,9	59,7	61,1	61,9	58,6	66,2	60,9	**64,4**
China 1982	53,0	61,9	64,6	65,3	65,8	71,3	61,1	64,3	61,1	**62,9**
China 1990	53,7	64,1	67,3	65,9	61,5	63,9	68,1	64,2	65,7	**64,9**
Iraq 1997	29,3	41,0	45,4	49,7	49,1	40,4	45,1	45,1	42,7	**44,3**
Malaysia 1980	56,1	51,6	57,3	61,9	60,7	69,2	59,4	57,2	56,1	**57,2**
Nepal, 2001	32,5	43,2	53,5	61,3	64,0	67,2	47,3	53,8	46,3	**51,2**
Palestine 1997	63,9	68,0	69,6	69,8	68,4	59,1	68,9	69,8	67,1	**69,0**
Pakistan 1973	13,2	46,0	58,8	57,4	54,8	50,9	50,5	57,6	45,4	**54,5**
Phillipines 1990	70,1	74,1	76,3	75,5	75,4	74,4	77,6	73,5	77,6	**74,9**
Latin America										
Bolivia 1992	68,3	72,0	70,4	69,4	70,3	63,7	69,5	70,4	71,6	**70,7**
Bolivia 2001	63,2	66,7	66,5	67,1	65,8	60,6	63,8	65,4	68,9	**66,3**
Brazil 1991	75,1	78,3	80,1	80,4	80,4	81,8	77,6	80,1	78,0	**79,4**
Brazil 2000	78,7	80,6	82,1	83,0	83,3	81,7	80,4	82,2	81,0	**81,6**
Chile 1992	65,2	69,0	70,8	71,0	70,9	67,5	69,6	69,2	71,3	**69,7**
Chile 2002	65,4	71,0	72,5	74,6	73,4	66,5	71,0	72,1	70,8	**71,7**
Ecuador 1990	57,0	70,1	72,0	71,6	68,2	65,4	68,9	70,5	69,6	**70,1**
Ecuador 2001	57,3	65,8	67,6	67,8	66,5	64,0	64,9	67,0	65,0	**66,3**
Panama 1990	51,3	59,7	63,9	64,8	65,4	68,1	65,4	62,6	59,2	**62,4**
Panama 2000	61,0	64,2	66,3	67,4	67,4	67,6	67,1	65,9	63,5	**65,6**
Peru 1993	55,8	62,4	63,6	63,9	62,4	60,6	60,9	62,6	63,8	**62,7**
Peru 2007	54,9	63,9	65,6	66,0	64,7	57,7	64,4	62,9	67,7	**64,2**
Venezuela 1990	59,4	62,9	65,9	66,4	67,6	64,9	63,8	64,6	65,3	**64,6**
Venezuela 2001	61,5	64,1	66,6	69,6	71,7	70,6	65,8	66,5	66,9	**66,4**

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations. Interpretation note: *i.e divided by women with partner who live in nuclear and extended household*100.

FIGURE 1 Women aged 15-34 who live with partner in a nuclear or extended household according to spouse differences in education. Results from a selection of countries.
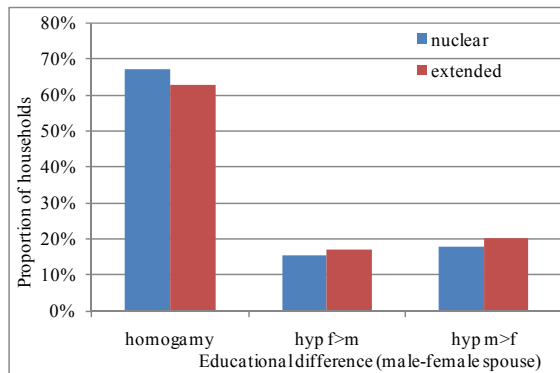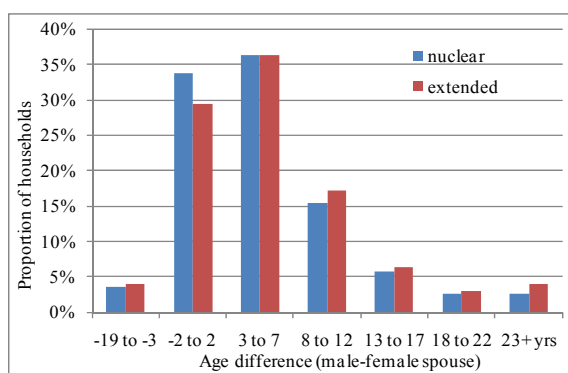
Spousal age differences   *Spousal educational differences*
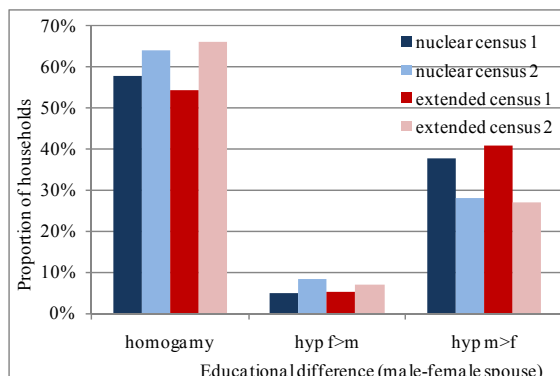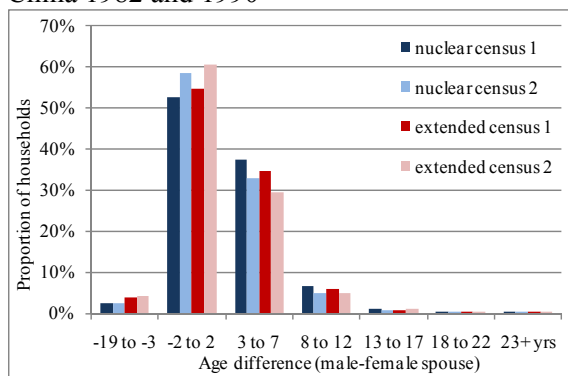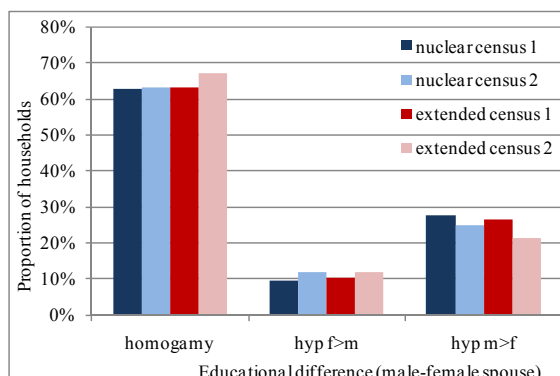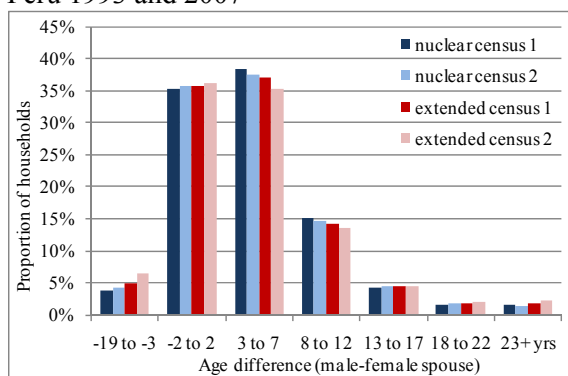
Mali 1987 and 1998
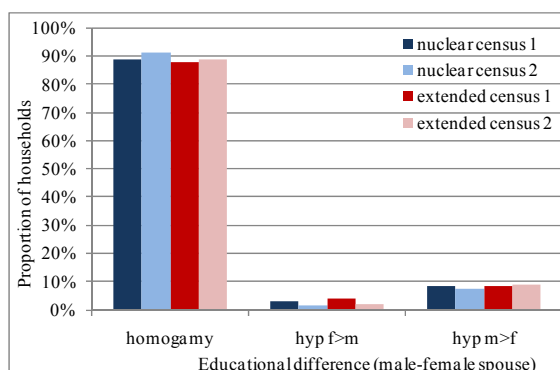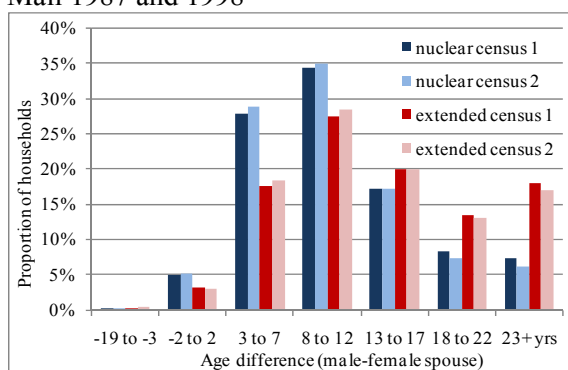
Rwanda 2002

China 1982 and 1990

Peru 1993 and 2007

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations.

TABLE 5 Logistic regressions of couple characteristics on the likelihood (odds ratios) for women to live in an extended household (nuclear household is the remaining category):

Level	Country/year	*Bivariate*	*Model 1*	*Model 2*	*Model 3*	*Model 4*
Female partner	Age	0,951	0,897	0,896	0,904	0,889
	Age squared	0,999	1,001	1,001	1,001	1,001
	Is head of household (vs. no head)	0,808	0,830	0,829	0,825	0,844
	Has children (vs. no children)	0,788	0,866	0,867	0,868	0,862
	Education					
	Less than primary (reference)	1,000	1,000	1,000	1,000	1,000
	Primary	0,946	0,937	0,957	0,963	0,986
	Secondary/University	0,896	0,936	0,893	0,904	1,080
	Is employed (vs. not employed)	0,913	0,910	0,907	0,908	0,961
Male partner	Education					
	Less than primary (reference)	1,000		1,000	1,000	1,000
	Primary	0,942		0,944	0,968	0,979
	Secondary/University	0,951		1,073	1,098	1,120
	Works in agriculture (vs other)	0,928		1,013	1,013	1,062
Couple difference (F-M)	Age					
	Up to -3 years (reference)	1,000			1,000	1,000
	-2 to 2	0,766			0,789	0,921
	3 to 7	0,762			0,745	0,801
	8 to 12	0,876			0,839	0,799
	13-17	1,123			1,069	0,925
	18+ years	1,761			1,637	1,316
Contextual	Year	0,988				0,984
	Country					
	Bolivia (reference)	1,000				1,000
	Brazil	0,378				0,370
	Cambodia	0,860				1,009
	Chile	0,646				0,653
	China	0,879				0,795
	Ecuador	0,726				0,713
	Ghana	2,513				2,879
	Guinea	5,502				5,462
	Iraq	1,957				2,036
	Kenya	0,950				0,879
	Malaysia	1,166				1,005
	Mali	1,787				1,799
	Nepal	1,486				1,688
	Pakistan	1,300				1,020
	Palestine	0,701				0,670
	Panama	0,875				0,819
	Peru	0,896				0,949
	Philippines	0,522				0,468
	Rwanda	0,558				0,667
	South Africa	0,509				0,543
	Tanzania	1,387				1,423
	Uganda	1,085				1,127
	Venezuela	0,820				0,806
	Constant		4,060	4,121	4,420	1,10E+15
	Nagelkerke R-square					0,11
	Number of cases	6637693	6637693			6637693

NOTE: coefficients in italics are not significant. All other coefficients significant at p < .01.
SOURCE: IPUMS-International (Minnesota Population Center 2010).

Summary and discussion

We know that from a global perspective, family formation patterns are not the automatic product of individual decisions, but rather fall among the broader set of socio-cultural practices linked to various and inter-dependent family and gender systems characterizing regions or countries. One may thus form a new household or be obliged to share the household with one's parents or parents-in-law to form a more complex household. Household patterns, are, however, also changing in low-to-middle income countries as economies develop and social modernization processes take place, including the transition towards individualism and an increasing status of women. One resulting consequence has been the diminished role of the extended family, albeit with greater or lesser intensity as considerable inequalities still exist across the world, that directly affects family processes (e.g. postponement of and less universal marriage, decreased resilience of unions) and the role of women.

However, while researchers have identified both macro- and micro-levels factors associated with changing family formation, such as the massive incorporation of women into formal education systems; high rates of female participation in labour markets; and women's increasing autonomy over sexual and reproductive decisions, the consequences of these changes for the household composition of young adult couples have not been systematically studied. While previous studied concentrated on intergenerational co-residence, our study has taken the perspective of young couples' propensity to live in either extended (that includes intergenerational) or nuclear households. Moreover, a wide range of non-western countries were selected rather than the more common strategy of only considering high-income countries.

Census microdata from IPUMS International were employed to analyse for a selection of 23 low- to middle-income countries from Africa, Asia and Latin America the importance of demographic and socioeconomic factors on two opposing living arrangements of young couples, i.e. nuclear and extended households. Female partners are between 15 and 34 years of age and rather than providing in-depth analyses for each country, the main aim was to look at the general effect of each exogenous variable on the household pattern of young couples.

Although a large number of household types could have been identified or constructed from the census data just two were considered, namely nuclear (i.e just the couple and possible offspring) and extended (i.e. also including other family or non-family members). Opting for a dichotomous dependent variable has the advantage of being able to apply logistic regression techniques in order to be able to calculate the effect (i.e. in terms of odds ratios) of potential explanatory variables. In particular, we were interested in the effect of female educational attainment, female economic activity, female household headship rates, fertility, the educational level and employment sector of the male spouse as well as the age of both spouses.

Based on what is known from the literature on the effect of the above variables on household formation, a simple set of hypotheses were constructed. Results showed that as predicted, chances of living in a nuclear family are higher for older women than younger women, although the rate of

21

increase decreases by age. Age homogamy or slight hypergamy also favours living in nuclear households, as well as men and women completing primary level education, though not with additional education. Further research will be needed to disclose reasons for this apparent anomaly. Meanwhile, both employment hypotheses are also confirmed, while the proportion of couples living in extended households also decreased over time. Finally, the variables that contributed the largest part of the variation explained were the fixed country effects (4% when the variable was included and 11% when it was excluded from the model). Indeed, the very low percentage of variation explained by the traditional demographic and socioeconomic variables like age, education and labour force participation signals that we may need to look beyond the classical economic determinants of union formation and incorporate other, more region-bound indicators into the model.

A global discussion on household dynamics with particular emphasis on patrilineal societies

One might have expected a sharper decline in extended families than that we observed on the basis of the hypothetical argument that economic and social 'modernization' might erode the operational significance of the patrilineal principle as it has allowed couples to become more economic independent from the husband's father. However, form our results and from elsewhere it would seem that intergenerational co-residence still predominates, particularly in most of the analysed African and Asian countries. One explanation provided by Greenhalgh (1984) is that extended familial networks remain strongly based on the patrilineal principles of intergenerational obligations regarding the provision by the parents of education, jobs, spouses and for the sons' shares of the family property, in return for the children's contribution to the family economy and support by the sons at old age. Even so, an increase in women's job opportunities and economic importance has led some families to actively cultivate female-linked ties in their search for urban housing and jobs.

There are, however, a number of elementary demographic, family composition and time factors that may be behind the overall slow transition towards the nuclear family that we observed, but which we could not test using census micro data in a direct manner, but which, in future, we well try to do indirectly.

In the context of declining mortality and fertility rates that is causing populations to age, including in developing countries (although still at a much slower rate), there are several ways that these demographic factors may affect household patterns of young couples. Concurrently with the reduction in household size by economic development, however, more young cohorts may need to support their elderly parents as they will progressively have fewer siblings and longer surviving parents than their predecessors. In other words, in societies where old-age support in the form of co-residence is still expected (i.e. especially in much of Africa and South and East Asia), a decline in fertility implies, by definition, a higher probability for surviving children (i.e. especially sons) to live with their parents. This also applies the other way around: increasing old-age survival augments the availability of parents for young couples to co-reside with.

Conversely, in high fertility and patrilocal societies with emphasis on the vertical filial tie, not all sons co-reside with their fathers simply because there is no room for them or because the strain is likely to be particularly pronounced if there are several adult sons or simply due to a desire for independence, especially in the case of young couples. In this case, the solution may be a household partition by which an adult son leaves the extended family to head his own nuclear family (Weinstein et al. 1990; Foster and Rozenzweig, 2002; Edlund and Rahman, 2005). Under this scenario the change in the proportion of nuclear households may simply be a reflection of changing number of surviving sons (due to both fertility and mortality). In the study by Weinstein and colleagues (1990), who used survey data, on the household composition in Taiwan they therefore analysed the living arrangements of husband's parents and married sons by the *availability* of married brothers.

The last demographic factor that influences household typology is migration, as it reduces the likelihood of having a parent available for co-residence. In the case that men migrate in search for work and find a partner in the country or region of destination, they are more likely to be living with the wife's than their own parents, even in patrilineal societies as occurred with the Chinese in Taiwan (Weinstein et al., 1990). Under the assumption that inter-regional and international migration has increased since the 1980s, Our results confirmed this for the majority of countries in our analysis with two census samples as small increases in the proportions of young couples living with the wife's parent(s) can be observed.

What is planned for the future, therefore, is to incorporate macro-level demographic indicators such as the average remaining life expectancy for the elderly (say at age 60) and the total fertility rate for the census years. It would serve as a contextual factor of fertility and elderly mortality levels. Another limitation of using census data is that the full extend of co-residence practices cannot be measured as it only provides information on current, not past, co-residence. We cannot tell from our data if couples had lived with one set of parents before but no longer do so because they have died. Similarly, in the case of the youngest couples, they may be co-residing with one of the parents when he or she becomes a widow or is no longer able to care for themselves. Finally, others (e.g. Weinstein et al 1990) have also used a less restrictive definition of co-residence, separating the economic versus the associative basis of co-residence. According to Weinstein et al. (1990) in the less complete involvement in the household, which is when the pertinent relatives either eat or sleep together but not both, it includes individuals that influence the behaviour of their members that on the strict economic definition (as used in censuses) would be excluded. Such a possibility may have disclosed less obvious changes that are taking place in intergenerational living arrangements that are nevertheless indicators of social change. Finally, while our study opted for the maximum number of countries, the number of countries could be reduced in favour of the inclusion of more explanatory variables, including religion, ethnicity and region of residence as we know that also within-country differences exist in family - and household formation.

5. References

Arnett J. J. (2000). Emerging Adulthood: A Theory of Development From the Late Teens Through the Twenties. *American Psychologist,* 55 (5): 469-480.

Becker, G. S. (1991). *A Treatise on the Family.* Cambridge, Mass.: Harvard University Press.

Beck-Gernsheim, E., Beck, U. (1995). *The Normal Chaos of Love.* Cambridge: Polity Press.

Bourdieu, P. (2006). *La Distinción: Criterio y Bases Sociales del Gusto* (3º ed.). Madrid: Taurus.

Buchmann, C., E. Hannum. (2001). "Education and Stratification in Developing Countries: A Review of Theories and Research," *Annual Review of Sociology*, 27, 77-102.

Burgess, E. W. (1960). "Family Structure and Relationships", in E.W. Burgess (ed), *Aging in Western Societies.* Chicago: University of Chicago Press, pp. 271-298.

Burguière, A. Klapisch-Zuber C., Segalen M., Zonabend F. (1996), *A History of the Family. Volume II. The Impact of Modernity.* Cambridge, MA: The Belknap Press of Harvard University Press.

Coleman, D. (2005), "Facing the 21st century: New developments, continuing problems". In: Macura, M., MacDonald A.L., Haug W. (eds.). *The New Demographic Regime: Population Challenges and Policy Responses.* New York: United Nations, pp. 11–43.

Coontz, S. (2000). Historical Perspectives on Family Studies. *Journal of Marriage and the Family, 62(2), 283-297.*

Coontz, S. (2005). *Marriage, a History: From Obedience to Intimacy, or How Love Conquered Marriage.* New York: Viking.

Edlund, L. and Rahman A. (2005). "Household Structure and Child Outcomes: Nuclear vs. Extended Families – Evidence from Bangladesh". A Colombia University Working Paper.

Elder, G. H., Jr. (1965). Role Relations, Sociocultural Environments, and Autocratic Family Ideology. *Sociometry, 28(2), 173-196.*

Fox, R. (1967). *Kinship and Marriage. An Antropological Perspective.* Middlesex, England: Penguin Books Ltd.

Foster, A., Rosenzweig M. (2002), Household Division, and Rural Economic Growth. *Review of Economic Studies*, 69: 839–869.

Fussell, E., Palloni, A. (2004). Persistent marriage regimes in changing times. *Journal of Marriage and Family, 66(5), 1201-1213.*

Giddens, A. (1992). *Transformation of Intimacy: Sexuality, love & eroticism in modern societies.* Cambridge: Polity Press.

Goode, W. J. (1963). *World revolution and family patterns*. New York: The Free Press of Glencoe.

Greenhalgh S. (1984). Networks and their nodes: urban society on Taiwan, *China Quarterly* 99: 529-552.

Gyima, S.O., Maxim, P., White, J. (2005). Cohort Perspectives on Women's Educational Attainment and the Timing of Parenthood in Ghana. *Journal of Family and Economic Issues, 26(1): 123-142.*

Jones, G.W. *(2010),*Changing marriage patterns in Asia. Asia Research Institute Working Paper Series No. 131.

Josephson, J. J., & Burack, C. (1998). The Political Ideology of the Neo-Traditional Family. *Journal of Political Ideologies, 3(2), 213-231.*

Kravdal, O. (2002). Education and Fertility in Sub-Saharan Africa: Individual and Community Effects. *Demography, 39(2), 233-250.*

Keilman, N. (1987). Recent trends in family and household composition in europe. European Journal of Population, 3 (3-4): 297-325.

Le Play, F. (1884), *L'organisation de la famille selon le vrai modèle signalé par l'histoire de toutes les races et de tous les temps.* 3. Tours: A. Mame.

Lesthaeghe, R. (1983). A Century of Demographic and Cultural Change in Western Europe: An Exploration of Underlying Dimensions. *Population and Development Review, 9(3), 411-435.*

Lesthaeghe, R., Surkyn J. (2006). "When history moves on: The foundations and diffusion of a second demographic transition". Paper presented at the seminar on "Ideational perspectives on international family change", Population Studies Center, Institute for Social Research (ISR), University of Michigan, Ann Arbor.
http://sdt.psc.isr.umich.edu/pubs/online/WhenHistoryMovesOn_final.pdf.

Lloyd, C. B., C. E. Kaufman and P. Hewett, P. 2000. The Spread of Primary Schooling in Sub-Saharan Africa: Implications for Fertility Change. *Population and Development Review,* 26(3), 483-515.

Mason, K. O. (2001). Gender and Family Systems in the Fertility Transition. *Population and Development Review, 27, 160-176.*

Minnesota Population Center (2010). Integrated Public Use Microdata Series, International: Version 6.0 [Machine-readable database]. Minneapolis: University of Minnesota. Available online at http://international.ipums.org, accessed 7/27/2010.

Notestein, F. (1945). "Population: the long view", in T. W. Schultz (Ed.), *Food for the world.* Chicago, Illinois: University of Chicago Press.

Oppenheimer, V. K. (1994). Women's Rising Employment and the Future of the Family in Industrial Societies. *Population and Development Review, 20(2), 293-342.*

Parsons, T. (1949). "The social structure of the family," in R. N. Anshen (ed.), *The Family: Its Function and Destiny.* New York: Harper, pp. 173–201.

Ridgeway, C. L., & Smith-Lovin, L. (1999). The Gender System and Interaction. *Annual Review of Sociology, 25(1),* 191-216.

Ruggles S. (1994). The transformation of American family structure. *American Historical Review 99:103–128.*

Ruggles, S., Heggeness, M. (2008). Intergenerational Coresidence in Developing Countries. *Population and Development Review, 34(2), 253-281.*

Segalen, M. (1981). *Sociologie de la famille.* París: Armand Colin.

Thornton, A. (2001). The Developmental Paradigm, Reading History Sideways, and Family Change. *Demography, 38(4), 449-465.*

United Nations Educational Scientific and Cultural Organization (UNESCO). (2007)*. Global Education Digest*. Montreal, Quebec: UNESCO Institute for Statistics

Van de Kaa, D. (1988). Europe's Second Demographic Transition, *Population Bulletin (Vol. 42).* Washington D.C.: Population Reference Bureau.

Van de Kaa, D.J. (2004), Is the Second Demographic Transition a useful research concept? Questions and answers (eds). *Vienna Yearbook of Population Research 2004.* Vienna: Austrian Academy of Sciences: pp. 4-10.

Van de Kaa, D. J. (1987), Europe's Second Demographic Transition. *Population Bulletin 42 (1).* United Nations Educational Scientific and Cultural Organization (UNESCO). (2007). *Global Education Digest.* Montreal, Quebec: UNESCO Institute for Statistics.

Weinstein, W., Sun, T.-H., Chang, M.-C., R. & Freedman, R. (1990), Household Composition, Extended Kinship, and Reproduction in Taiwan: 1965-1985. *Population Studies, 44,* 217-239.

ANNEX TABLE 1 Women aged 15-34 who live with partner in a nuclear or extended household according to spouse differences in age

	Nuclear household						Extended household					
						Age difference with male partner						
Country/year	Hypogamy (up to -3 yrs)	Homogamy (-2 to 2 yrs)	Hypergamy				Hypogamy (up to -3 yrs)	Homogamy (-2 to 2 yrs)	Hypergamy			
			3-7 yrs	8-12 yrs	13-17 yrs	18+ yrs			3-7 yrs	8-12 yrs	13-17 yrs	18+ yrs
Africa												
Ghana 2000	1,40	15,57	39,07	23,58	11,04	9,34	4,24	14,86	31,65	21,66	11,46	16,13
Guinea 1996	0,25	3,84	20,05	30,93	20,12	24,80	0,68	3,38	14,42	25,40	20,32	35,79
Kenya 1989	0,71	12,54	43,65	25,21	8,71	9,18	1,17	12,63	40,49	23,21	9,40	13,10
Mali 1987	0,26	4,97	27,75	34,36	17,18	15,48	0,29	3,15	17,65	27,51	20,05	31,36
Mali 1998	0,28	5,24	28,90	34,87	17,21	13,51	0,39	2,92	18,29	28,42	20,00	29,99
Rwanda 2002	3,64	33,77	36,28	15,35	5,76	5,20	3,92	29,43	36,35	17,09	6,27	6,93
South Africa 1996	2,66	31,90	42,89	14,81	4,81	2,95	2,87	31,89	42,34	14,75	4,72	3,43
South Africa 2007	2,39	28,70	41,44	17,76	6,11	3,61	2,12	28,26	43,22	16,24	6,16	4,01
Uganda 1991	1,15	18,57	45,03	21,03	7,21	7,02	1,79	17,62	40,44	20,93	8,51	10,71
Uganda 2002	1,50	21,00	44,40	20,35	7,07	5,68	2,49	20,61	42,07	20,38	7,36	7,08
Tanzania 1988	0,61	14,09	40,32	25,65	9,52	9,80	1,83	13,74	35,25	23,80	10,70	14,67
Tanzania 2002	0,86	18,49	43,89	22,43	7,70	6,64	1,98	16,83	39,52	23,08	8,62	9,99
Asia												
Cambodia 1998	6,51	48,00	34,39	8,22	1,81	1,07	6,70	43,23	36,74	10,05	2,09	1,19
China 1982	2,44	52,48	37,37	6,49	0,94	0,28	3,68	54,74	34,71	5,85	0,83	0,19
China 1990	2,58	58,46	32,95	4,97	0,79	0,25	4,11	60,40	29,55	4,76	0,91	0,26
Iraq 1997	3,76	24,66	37,07	23,93	7,35	3,23	7,24	28,23	35,42	19,27	6,06	3,79
Malaysia 1980	1,87	23,51	45,91	20,32	4,95	3,45	1,95	29,39	45,67	16,66	4,28	2,05
Nepal, 2001	0,78	29,08	49,89	14,72	3,55	1,99	1,69	40,10	45,37	9,72	2,09	1,02
Palestine 1997	1,64	23,97	46,11	22,66	4,57	1,06	2,05	25,09	44,72	21,82	4,70	1,63
Pakistan 1973	0,38	18,46	53,50	18,25	5,37	4,04	2,97	26,00	44,86	16,21	5,30	4,67
Phillipines 1990	4,74	40,95	38,14	10,95	3,07	2,16	6,02	42,77	35,38	10,62	3,00	2,22
Latin America												
Bolivia 1992	4,81	43,34	34,66	11,45	3,26	2,47	5,37	40,55	35,17	12,19	3,33	3,39
Bolivia 2001	5,57	40,74	34,63	12,31	3,96	2,78	6,38	39,95	34,22	11,85	4,04	3,56
Brazil 1991	5,54	31,29	40,57	14,75	4,46	3,39	7,04	33,30	38,76	13,82	4,17	2,89
Brazil 2000	5,98	30,57	39,06	15,49	5,16	3,74	7,17	32,72	37,79	14,02	4,59	3,71
Chile 1992	5,95	38,71	37,65	12,01	3,36	2,32	7,30	39,93	35,75	11,28	3,18	2,57
Chile 2002	5,63	37,72	37,42	13,39	3,71	2,14	7,53	38,93	35,89	11,51	3,40	2,73
Ecuador 1990	3,76	34,54	38,20	15,34	4,38	3,79	6,67	34,59	34,92	14,31	4,80	4,71
Ecuador 2001	4,60	34,61	37,96	14,38	4,61	3,84	6,75	35,33	35,68	13,44	4,55	4,24
Panama 1990	4,65	28,68	37,19	17,70	6,61	5,16	7,31	32,08	34,87	15,93	5,79	4,02
Panama 2000	6,34	30,30	35,97	16,21	6,39	4,79	7,73	32,19	34,84	14,98	5,89	4,38
Peru 1993	3,71	35,29	38,45	15,05	4,29	3,20	4,95	35,76	37,11	14,30	4,37	3,50
Peru 2007	4,31	35,71	37,56	14,73	4,53	3,16	6,35	36,12	35,34	13,60	4,44	4,16
Venezuela 1990	6,61	30,41	37,10	15,57	5,83	4,48	8,26	32,75	35,11	14,37	5,09	4,42
Venezuela 2001	6,55	31,22	34,58	15,96	6,63	5,06	8,09	34,59	34,22	13,76	5,16	4,17

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations.

26

ANNEX TABLE 2 Women aged 15-34 who live with partner in a nuclear or extended household according to educational differences and other factors

Country/year	Nuclear household			Extended household			Nucl	Ext	Nucl	Ext	Nucl	Ext	Nucl	Ext
	Educational difference with male partner						1+ children		Wife head		Employed		Employment sector husband	
	F=M	F>M	F<M	F=M	F>M	F<M								
Africa														
Ghana 2000	61,90	7,29	30,81	66,84	8,65	24,51	87,74	85,86	5,77	4,86	78,81	76,79	52,60	59,52
Guinea 1996	86,91	1,44	11,65	86,47	1,38	12,14	89,04	88,42	0,33	0,11	68,89	71,52	65,88	69,66
Kenya 1989	71,14	8,84	20,02	70,74	8,53	20,73	92,83	89,73	2,88	2,26	69,86	71,77	44,05	39,41
Mali 1987	88,70	2,94	8,36	87,67	3,78	8,56	89,05	91,56	0,42	0,17	48,50	54,17	85,12	81,32
Mali 1998	91,18	1,51	7,31	89,01	1,85	9,13	85,58	88,26	0,22	0,09	39,15	40,02	81,62	79,86
Rwanda 2002	67,05	15,33	17,62	62,95	16,87	20,17	87,50	87,85	0,25	0,33	93,77	82,86	89,48	65,58
South Africa 1996	68,53	15,80	15,67	66,77	16,94	16,29	85,78	87,68	5,85	5,39	41,43	41,87	12,42	9,47
South Africa 2007	68,79	16,32	14,89	67,32	16,53	16,14	81,93	82,38	6,48	5,39	46,37	45,91	8,21	7,08
Uganda 1991	64,05	6,73	29,22	62,15	7,61	30,24	88,55	83,35	1,12	0,86	66,70	65,85	70,46	66,42
Uganda 2002	61,05	9,12	29,83	59,80	9,21	30,99	91,89	90,10	0,42	0,47	65,21	63,59	65,51	58,98
Tanzania 1988	69,50	11,49	19,01	66,59	13,88	19,53	88,23	84,93	5,91	4,07	87,37	88,10	74,74	73,22
Tanzania 2002	67,95	11,19	20,86	65,50	12,65	21,85	90,46	87,31	5,80	4,05	77,73	75,49	71,89	65,92
Asia														
Cambodia 1998	71,12	4,98	23,90	65,82	6,36	27,82	93,04	80,92	4,61	3,21	80,03	76,21	78,91	66,85
China 1982	57,65	4,70	37,65	54,21	5,09	40,70	93,80	77,82	2,48	0,58	86,13	90,21	73,44	78,44
China 1990	63,82	8,18	28,00	65,87	7,09	27,04	94,00	78,84	3,47	0,78	89,71	91,75	67,65	72,70
Iraq 1997	58,82	8,31	32,87	56,93	8,05	35,02	94,18	81,99	0,18	0,04	8,09	6,57	16,53	25,51
Malaysia 1980	68,51	9,16	22,33	68,32	8,36	23,32	91,77	86,25	1,35	0,98	30,35	33,41	37,06	26,31
Nepal, 2001	67,32	2,82	29,86	60,49	3,29	36,22	88,79	71,55	3,53	0,73	55,09	56,14	50,92	59,83
Palestine 1997	57,75	16,81	25,45	55,48	16,87	27,65	89,64	77,06	0,07	0,04	5,50	3,48	7,86	8,98
Pakistan 1973	78,41	1,17	20,42	69,22	1,37	29,41	89,02	70,07	0,07	0,01	4,62	4,48	54,60	54,39
Phillipines 1990	64,04	19,02	16,94	69,04	16,35	14,61	91,60	80,52	0,08	0,20	22,97	33,40	54,47	37,72
Latin America														
Bolivia 1992	59,65	9,39	30,96	60,47	9,94	29,59	95,67	93,28	0,76	1,04	40,49	43,64	37,14	30,18
Bolivia 2001	60,13	9,60	30,27	62,44	10,71	26,85	93,34	90,93	4,69	3,85	38,95	41,92	29,34	26,87
Brazil 1991	67,82	16,74	15,44	64,71	18,60	16,69	86,25	81,62	0,72	0,84	29,00	34,24	25,27	20,43
Brazil 2000	60,61	22,13	17,26	58,12	23,91	17,97	84,31	78,80	3,91	3,08	40,54	39,77	19,91	18,39
Chile 1992	61,04	19,69	19,27	62,40	19,77	17,83	93,04	89,51	4,16	2,74	17,96	23,99	19,22	17,30
Chile 2002	64,70	17,46	17,84	63,39	18,04	18,58	89,65	89,51	11,08	6,80	30,59	31,10	15,04	12,56
Ecuador 1990	67,33	13,52	19,15	66,03	14,34	19,62	91,72	87,64	1,25	1,25	21,73	25,97	33,06	30,09
Ecuador 2001	65,65	16,24	18,12	63,53	17,27	19,20	92,53	89,13	4,27	3,46	28,98	29,60	32,42	29,77
Panama 1990	62,71	18,21	19,08	62,18	15,96	21,86	91,02	87,93	0,76	1,01	22,39	24,56	32,26	30,22
Panama 2000	62,90	17,83	19,27	62,18	16,68	21,13	89,16	84,48	1,58	1,22	29,20	28,89	23,32	25,32
Peru 1993	62,88	9,41	27,70	63,31	10,18	26,51	98,98	98,28	1,17	1,03	20,62	25,22	41,43	29,47
Peru 2007	63,29	11,88	24,83	66,99	11,79	21,22	90,56	88,95	5,77	4,94	32,83	36,28	35,78	24,01
Venezuela 1990	67,67	15,11	17,22	67,63	15,68	16,70	90,90	87,25	1,13	1,52	24,98	27,48	13,88	13,19
Venezuela 2001	70,41	16,83	12,77	70,23	17,31	12,46	90,11	83,75	4,90	4,06	29,07	28,90	12,78	10,97

Source: IPUMS-International (Minnesota Population Center 2010). Own calculations.