

ESTIMACIÓN DE CIFRAS Y NIVEL DE POBREZA DE MUJERES
CABEZA DE HOGAR Y DE FAMILIA

Estimating numbers and poverty status of female household and family heads

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Abstract

Historical studies of single females and mothers are mostly based on heads of household only, because family-level information concerning complex households was unavailable and they were, therefore, rendered statistically invisible. This is still the case with modern surveys like the household income and expenditure survey, as income and resource data are only provided at household level. By categorising headship rates by sex, age and marital status, this paper presents a methodology for estimating – in addition to heads of household – the numbers of single females and mothers among members of complex or multigenerational households. Such situations were frequent in the past and continue to be so in developing countries and among migrants. Young couples may also be in such living arrangements, mostly in times of crises and tight housing markets.

Resumen

A lo largo de la historia, los estudios sobre mujeres y madres solteras se han basado por lo general solamente en las cabezas de hogar, pues faltaba la información en el ámbito familiar sobre hogares complejos, y esto los hacía estadísticamente invisibles. Esta situación sigue sucediendo en las encuestas modernas, como la encuesta de ingresos y egresos de los hogares (HIES), ya que solo se obtuvieron datos sobre ingresos y recursos a nivel del hogar. El presente trabajo categoriza las tasas de jefatura según el sexo, la edad, el estado civil y así ofrece una metodología para estimar, además de las cabezas de familia, la cantidad de mujeres y madres solteras entre los miembros de hogares complejos o multigeneracionales. Estas situaciones ocurrían con frecuencia en el pasado y aún se presentan en países en desarrollo y entre los migrantes. Las parejas jóvenes también se pueden

The data analysis shows that access to independent dwellings and to household headship is strongly related to income and employment, and the associated selection leads to significant biases in estimates of the socio-economic status of households or families, in favour of mostly better-off families. The poorest households are made up of those who live independently because no other option is open to them. Little option is open to those with little or no resources, either, and thus they live in complex households where their poverty risk cannot be estimated, and where they may have little influence on the education, health and work of themselves and their children.

Key words

Female household heads, Poverty estimates, Youth in poverty, living arrangements.

encontrar en tales situaciones de vivienda, sobre todo en tiempos de crisis o con un mercado inmobiliario limitado.

El análisis de los datos muestra que el acceso a una vivienda independiente y a la jefatura de familia está estrechamente relacionado con el nivel de ingresos y el empleo, y la selección asociada conduce a sesgos importantes en la estimación de la situación socioeconómica de un hogar o familia, lo que favorece a las familias acomodadas. Los hogares más pobres son aquellos que viven de manera independiente porque no tienen otra opción. Quienes cuentan con pocos recursos tienen muy pocas oportunidades, y esto hace que vivan en hogares complejos en los que no se puede medir su riesgo de pobreza y no tengan oportunidades de educación, salud y empleo para sí mismos ni para sus hijos.

Palabras clave

mujeres cabeza de hogar, estimaciones de pobreza, jóvenes en situación de pobreza, situación de vivienda.

Historical and contemporary research on socioeconomic characteristics and poverty status of lone females and mothers are mostly based on census and survey data on household heads. In modern Western societies, most households consist of nuclear families. But, in the past, and still now in non-Western countries, complex and multigenerational households represented up to 20% and sometimes more of all households. Such households include widows, divorced and single mothers that are invisible in household heads data although they represent large proportions of these populations and many of them have children.

The historical classification of households¹, based on available information in ancient censuses – and also modern surveys like HIES (Household Income and Expenditures Survey) – do not enable us to capture lone females who are family heads and not household heads. Scholars are well aware of this data gap, and some have extensively worked on household structures, however mostly in a life course approach².

This paper presents a methodology using headship rates by marital status to estimate numbers of married, widowed and divorced females and males who are not household heads, showing the ‘invisible part of the iceberg’. We use a modern survey of a developing country, because it provides more data than ancient censuses and include large proportions of complex households. However, the method can be replicated with ancient censuses that provide household and individual information.

After a brief background section and literature review, the paper will present major socio-demographic characteristics of female household heads and lone females and mothers: living arrangements and employment status in relation with headship. Then, it will show evidence of selection resulting in biased estimates of economic status based on the distribution of household heads by income and dependency ratios. Finally, various profiles of lone female headed households will emerge. However, we cannot estimate the income and poverty status of family heads or the extent of biases, because such data are only available at household level.

1. Laslett P., Introduction, in Laslett P., R. Wall (Eds.), *Household and Family in Past Time*, Cambridge University Press, Cambridge, 1972, 1-89; Hammel E.A. and Laslett P., “Comparing household structure over time and across cultures”, *Comparative Studies in Society and History*, num. 16, 1974, 73-110.

2. Kok J., K. Mandemakers. *Household typologies revisited from an individual perspective: The Netherlands 1850-1940*, 34th Social Science History Conference, Long Beach, CA, USA, 2009.

1.- Background and data

It is often assumed, based on contemporary “Western” residence patterns, that divorced and widowed women, as well as most single mothers, are heads of households, but developing countries data show that they often stay with parents or with other relatives. This was also the case in Europe in the past. Divorced and single mothers were less frequent than now, but there were more widows. Widows often staid with their children, most single mothers staid with their parents and divorced women returned with them or moved to live with married sisters, distant relatives or unrelated people. Thus, residence patterns were more varied in the past than now – and they are still so in developing countries and to some extent in migrant populations –. Therefore, multigenerational and complex households (consisting of several families or including isolated or non related persons) were more frequent. However, female headed households were not uncommon: widows without children or whose children emigrated, divorced women and single mothers rejected by their families or who did not want to stay with them, etc. Some resided independently because they could afford it or because they preferred this way of life, others because they had no other option. In developed countries nowadays, such situations tend to be considered as delays or reversals of the transition to adulthood, a stage of the life cycle that shows different timing across cultures and times, and is also affected by economic booms and busts.

According to the definitions of families used by modern censuses, lone females and mothers living in complex households are enumerated respectively as isolated people or heads of families (see Annex). But, in ancient censuses, there is usually no family level information, only household and individual levels. Therefore, family heads that are not household heads are not captured and classifications of households from historic data: nominal rolls and later population censuses³ do not enable us to know the types of families (for instance, couples, lone males or females with children) living in complex households. Several scholars have used ancient population files to describe complex households more precisely. Some focussed specifically on the main families in households⁴. Others mostly worked on life course changes in complex households based on individual events: births, marriage, deaths and migration⁵. But, no methodology has been developed to capture lone females and mothers who are family heads and not household heads in household datasets. This problem is still seen in modern surveys like HIES where families are not an operational unit: income and expenditures are measured at the household level, not at the individual or family level and the socio-economic situation of divorced and widowed females, lone mothers, and also of young married people who do not have independent dwelling is unknown.

3. Laslett P, Introduction, *loc. Cit.*

4. Wall R., J. Robin, P. Laslett, *Family Forms in Historic Europe*, Cambridge, 1983.

5. Kok J., K. Mandemakers. *Household typologies...*, *op.cit.*; Kok J., “Principles and prospects of the life course paradigm”, *Annales de Démographie Historique*, num 1, 2007, 203-230; K. Mandemakers, “Building life course datasets from population registers by the Historical Sample of the Netherlands (HSN)”, *History and Computing*, num. 14, 2006, 87-108.

Thus, historical and most recent survey-based studies of female heads consider only household heads, maybe because most interest was and still is about power and authority. Let us reference, among countless number of publications: Abbott and Narsey⁶ in the case of Fiji 2003 HIES, and Nagata⁷ who concentrates on how it happened that women be listed as household heads and what it meant sociologically in relation to commercial household business.

Whenever it is not possible to totally overcome the lack of family level data, it is possible to know more about lone females and mothers than what is readily available from household data. Using both household and individual data of ancient censuses or surveys, it is possible to know the numbers of lone females and mothers, their position in the household and some of their socio-demographic characteristics. We can also show evidence of selection processes, cross-tabulating economic status by income quintiles and dependency ratios (see Annex and table 4). We do this with data of Fiji 2003 HIES, because it includes large proportions of complex households and abundant socioeconomic information. However, economic status is only available at household level in HIES.

We now briefly present Fiji's population as regards family and residence patterns that relate to our topic. Fiji includes indigenous Fijian and so-called Indo-fijians¹. Comparing results by ethnic group will show that our approach can translate different situations in relation with cultures.

In traditional Fijian villages, houses of extended families were built in lines, but residence was mostly nuclear. However, the influence of extended family chiefs was very strong given the proximity of houses. Divorce was possible but pre-marital sexual relations were banned. Despite Christianisation, sexual permissiveness increased with colonization and Westernization. However, missions built on the power of chiefs to develop a strong public opinion that blames publicly showing rules breaking. Thus, pre-marital births sometimes result in stigma on individuals and their extended families. Rural-urban migration is a way to partly escape traditional rules. Divorced and single mothers who can afford it, move to towns to live with relatives, sometimes leaving their children in villages – if parents agree – to be able to work. However, the Fijian population is still mainly rural.

Indians migrated to Fiji as contract workers on sugar cane plantations in colonial times. Traditional Indian culture denies sexual permissiveness, mostly for women. Young single, widowed and divorced women are not allowed to stay without an adult male relative at home. Married females are expected to stay at home taking care of children.

At the end of their contracts, many Indian families moved to towns to work in business and retail sectors, with limited change as regards traditional rules. In the latest two or three decades, single females gained some autonomy through education and work. However, married females have still low labour force participation rates in the cash sector (excluding

6. Abbott D., *Analysis of the 2002/03 Household Income and Expenditure Survey, Estimation of Basic Needs Poverty Lines and Incidence of Poverty in Fiji*, Suva, 2006; Narsey W., *Report on the 2002-2003 Household Income and Expenditure Survey*, Suva, 2006.

7. Nagata M.-L., "Female Headed Households in Early Modern Kyoto, Japan" (in this issue).

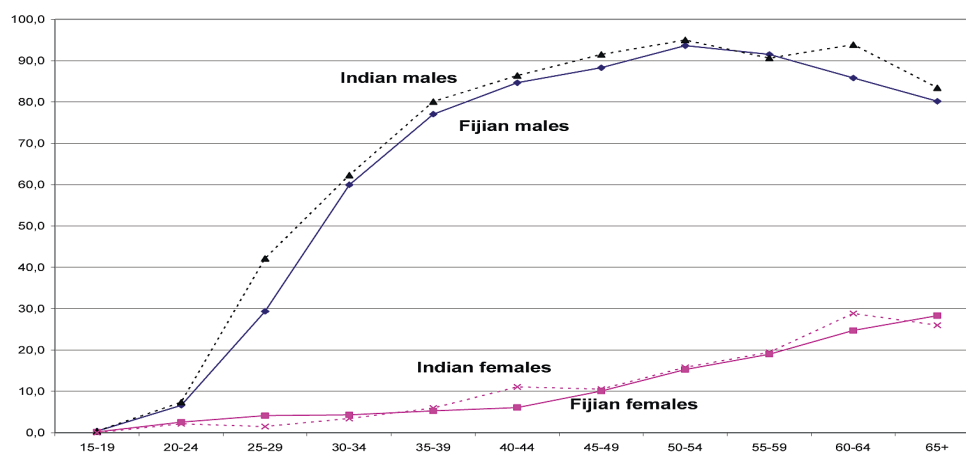
subsistence agriculture and family helpers). Indo-fijians who remain in rural areas are landless seasonal workers in sugar cane industry and among the poorest population with Fijian subsistence growers.

Indo-fijians started to reduce their fertility from the 1970s, well before Fijians. In the early 2000s, Fijian fertility (TFR) was still above 3 while Indo-fijians' TFR was only 1.8.

2.- Headship rates by marital status provide more information

The usual approach to gender analysis of headship is to calculate headship rates by age and sex (see Annex section 2). It shows that women are much less frequently household heads than males (figure 1) because most often husbands report as household heads. The proportion of female heads at young ages is small, representing those who accessed headship: mostly lone females, lone mothers and secondarily divorced women. Headship rates increase with age for women, because the numbers of divorced and widowed women increase and some of them become household heads. But we do not know how many widow(er)s or divorced people are isolated people or heads of secondary families inside households. Differences by ethnic group seem to be small from this indicator, which is rather surprising given different Fijian and Indian cultures as regards women's autonomy. Headship rates by marital status can answer these questions and reveal more of the situation of females.

FIGURE 1: Headship rates (percent) by sex and age



Source: author's calculations from Fiji 2003 HIES

About half of widows and divorced females are not household heads

Comparing the numbers of divorced females who are household heads and all divorced females reveals immediately the extent of knowledge gaps resulting of household data alone. The Fiji 2003 HIES recorded 1,049 divorced female household heads and 2,403 divorced females altogether. Thus, an analysis of socioeconomic characteristics of divorced females based on household heads would miss more than half of the population. The proportions are not much different for widows and are always higher for females than for males (table 1).

TABLE 1: Proportion (%) of widows and divorcees who are not household heads, by sex and ethnic group, Fiji 2003 HIES

	Widows	Widowers	Divorced females	Divorced males
Fijians	47,6	39,8	56,3	54,9
Indians	45,2	23,7	47,6	42,4

Source: author's calculations from Fiji 2003 HIES

Headship rates by sex, age and marital status provide more information on levels of headship for females – and also young married couples. It appears again that only a fraction (45%) of the 25-34 years old urban divorced Fijian females are household heads (table 2 and figure 2). This is still more so in rural areas, with only 13% and 34% of divorced females respectively in the 25-34 years and 35-59 years age groups being heads of households. However, more divorced females are heads at older ages.

TABLE 2: Proportion (%) of married^{II}, widowed and divorced (including separated) people who are heads of households (including spouse of head for married), by sex, age, ethnicity and residence, Fiji 2003 HIES

	males			Females		
Fijians	married	widowed	divorced	Married	widowed	divorced
Urban						
15-24	26.1	-	-	38.9	-	-
25-34	67.2	-	-	76.7	-	45.1
35-59	93.7	92.9	59.6	94.5	74.3	73.3
60+	96.8	61.4	100.0	93.6	42.3	59.2
Rural						
15-24	32.3	-	-	53.9	-	-
25-34	67.3	-	42.9	76.7	78.1	13.2
35-59	92.7	69.3	40.1	94.5	57.1	33.8
60+	98.6	58.7	100.0	99.6	46.6	66.7
Indians						
Urban						
15-24	44.9	-	-	53.7	-	62.5
25-34	81.6	55.6	65.7	83.3	44.4	74.1
35-59	96.0	96.4	74.1	94.7	65.1	69.2
60+	99.3	73.0	-	96.4	41.9	86.6
Rural						
15-24	22.0	-	-	39.9	-	-
25-34	56.1	-	-	65.2	56.6	-
35-59	87.7	89.1	45.5	91.2	68.2	33.3
60+	98.4	69.8	100.0	98.2	45.6	-

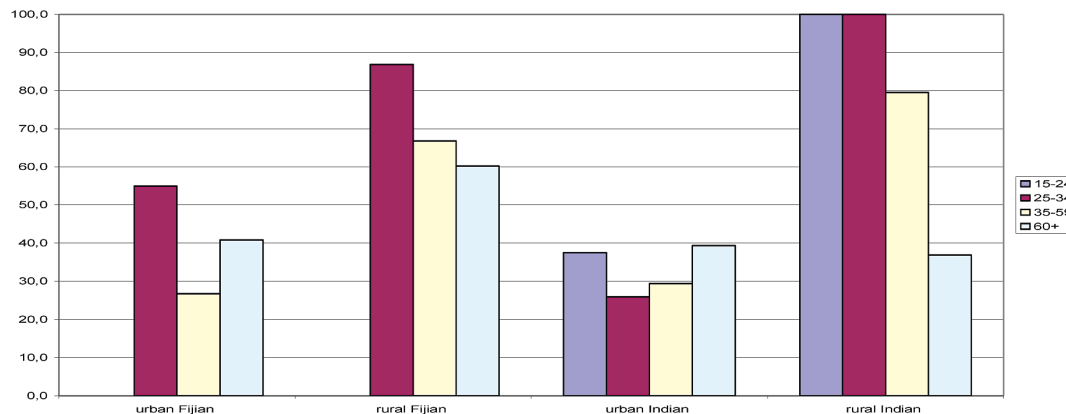
Source: author's calculations from Fiji 2003 HIES

On the contrary, young Fijian widows are more often household heads than older ones in both urban and rural areas (table 2). The reason is that young widows have or can find jobs while older widows usually do not work and have low resources; therefore, they tend to move and stay with their children.

The situation is rather different for Indo-fijian females. Young urban divorcees are more often household heads than Fijians, because they are more urban and employed. But this is not the case in rural areas, due to a more traditional attitude of being reluctant to see lone females living without an adult male at home. – Note that the survey did not record many divorcees among Indo-fijian rural women, either due to low divorce rates or because they migrated to towns to find a job and have more freedom. – The same cultural context applies to some extent for young widows, with rural Indo-fijian females being less often heads than Fijians: 57% against 78% at 25-34 years. – We cannot provide the same indicators for single mothers because of the difficulties to capture them from the available information (see Annex section 2)⁸.

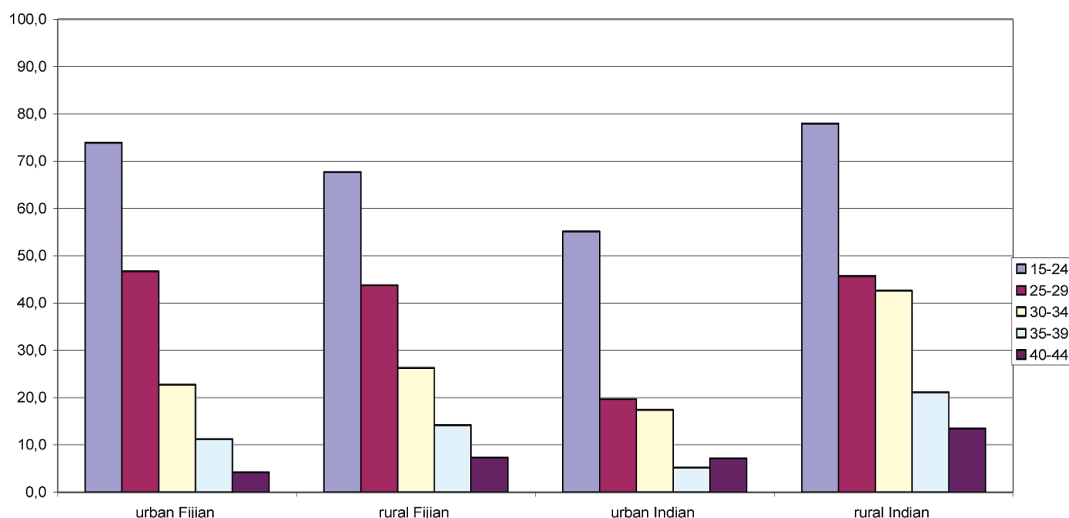
Finally, it is mostly surprising to see that only between 22% and 45% – according to age, ethnic origin and residence – of young (15-24 years old) married males are household heads^{III}, meaning that a minority of young couples have independent dwelling. Others live mostly with their parents or in-laws^{IV}. At 25-34 years, one Fijian married male out of three is not yet household heads, however some stay with their elderly parents to care for them. Rural married Indo-fijians show the most delayed access to headship, with only 56% of the 25-34 years olds being household heads, because most rural Indo-fijians are agricultural workers on seasonal or part-time work and cannot afford own dwelling.

FIGURE 2A: Proportion (percent) of separated and divorced females who are not heads of household, by age, ethnicity and residence, Fiji 2003 HIES



8. For national/cultural contexts regarding widows and lone single women, see Hufton Olwen, “Women without men : widows and spinsters in Britain and France in the eighteenth century”, *Journal of Family History*, 9(4), 1984, 355-376.

FIGURE 2B: Proportion (percent) of married males who are not heads of household, by age, ethnicity and residence



Source: author's calculations from Fiji 2003 HIES

Urban divorcees tend to live with distant relatives or unrelated people

The living arrangements^v of divorced women reveal social and cultural aspects related with broken unions. Apart from being household heads, living with parents ('child of household head') is the case of most young Fijian divorced females in rural areas and almost all Indo-fijians (table 3). It is less frequent in urban areas where about 25% of young Fijian divorcees reside with distant relatives and another 13% with unrelated people, maybe to avoid conflicts with parents. These are the most frequent situations for divorced urban Fijians, notwithstanding that some rural divorcees may have moved to live with relatives in towns to look for jobs. In rural areas, 20% reside with distant relatives, but there are little opportunities to stay with unrelated people in villages. At age 45 years and above, rural Fijian divorcees mostly live with their adult children who report as head of household (they are 'parent of household head'), or with distant relatives. In urban areas, residing with distant relatives or with unrelated people is more common than residing with adult children from 35 years old for both Fijians and Indo-fijians.

TABLE 3: Living arrangements of separated and divorced females by relation to household heads (percent), Fiji 2003 HIES

	Heads	child	parent	other relative	not related	Total
Fijians, urban						
15-24	0,0	100,0	0,0	0,0	0,0	100,0
25-34	45,1	16,4	0,0	25,0	13,5	100,0
35-44	67,1	19,8	0,0	13,1	0,0	100,0
45-54	59,0	0,0	10,7	21,4	9,0	100,0
55-64	90,8	0,0	9,2	0,0	0,0	100,0
65+	0,0	0,0	0,0	100,0	0,0	100,0
rural						
15-24	0,0	100,0	0,0	0,0	0,0	100,0
25-34	13,2	67,5	0,0	19,3	0,0	100,0
35-44	33,2	52,7	0,0	14,1	0,0	100,0
45-54	39,8	17,8	36,7	5,8	0,0	100,0
55-64	35,9	0,0	23,9	40,2	0,0	100,0
65+						
Indo-fijians, urban						
15-24	62,5	37,5	0,0	0,0	0,0	100,0
25-34	74,1	16,7	0,0	9,3	0,0	100,0
35-44	70,6	6,6	4,6	9,1	9,1	100,0
45-54	60,7	0,0	13,5	15,6	10,2	100,0
55-64	100,0	0,0	0,0	0,0	0,0	100,0
65+	80,9	0,0	19,1	0,0	0,0	100,0
rural						
15-24	0,0	100,0	0,0	0,0	0,0	100,0
25-34	0,0	100,0	0,0	0,0	0,0	100,0
35-44	22,7	70,9	0,0	0,0	6,5	100,0
45-54	63,2	36,8	0,0	0,0	0,0	100,0
55-64	0,0	0,0	0,0	0,0	0,0	0,0
65+	0,0	0,0	0,0	100,0	0,0	100,0

Source: author's calculation from Fiji, 2003 HIES

Altogether, only a fraction – and, at most ages in rural areas, a minority – of divorced females are household heads and this is certainly the result of selection effects.

3.- Strong resources-based selection of heads

Headship is related with the socio-economic status of people as you need to be able to afford independent dwelling to be household head. Thus, a selection based on income and access to jobs most probably occurs. – Shortages on the housing market can also be a cause of low access to headship, but this could only be revealed by other data. – Due to limited space, we shall only consider employment status that is generally available from censuses and surveys, but full or part-time employment, occupation and also educational level could be of interest.

Household heads, both females and males, Fijians and Indo-fijians, have the highest employment rates (figure 3). At young ages, most female heads are employed because they are mostly single and have no children. But, rates decline rapidly with age because they become mothers and have to take care of young children; some live on social benefits or help from relatives or non-resident friends. Rates increase again at older ages when children go to school and no longer need constant care. Employment rates remain high for Indo-fijian females until 30-34 years because many single urban females work and live independently from their family often co-residing with other women in the same situation. Most of them avoid becoming mothers in the frame of strict rules regarding sexual behaviour or thanks to more frequent contraception than Fijians. Rates are much lower from age 35 years old when female household heads consist mostly in divorced with children.

The large gap between employment rates of heads and of 'all non married females'^{vi} at young ages - and at older ages for Fijians - implies that women who are not heads have very low employment rates. Thus, it is clear that there is a selection of heads based on employment. Married females show the lowest rates because many of them stay home caring for children. This is mostly the case for Indo-fijian 'spouses of household heads' that have much lower employment rates than Fijians, with 25% at 25-49 years against between 35% and 40% for the latter. This is related with males' preferring that wives stay at home; it is also a sign of higher social status for a man to be able to support the family on its own income. Compared to spouses, Indo-fijian non-married females have much higher employment rates, almost as high as Fijians in the same situation.

There is also a large gap between Fijian male heads and all males below 35 years old. The gap is smaller for Indo-fijians who are mostly urban and benefit from their higher qualification to work in private services. Thus, employment is also strongly associated with being household heads for young males.

FIGURE 3A: Employment rates in the cash sector (percent) by position in the household, Fijians, Fiji 2003 HIES

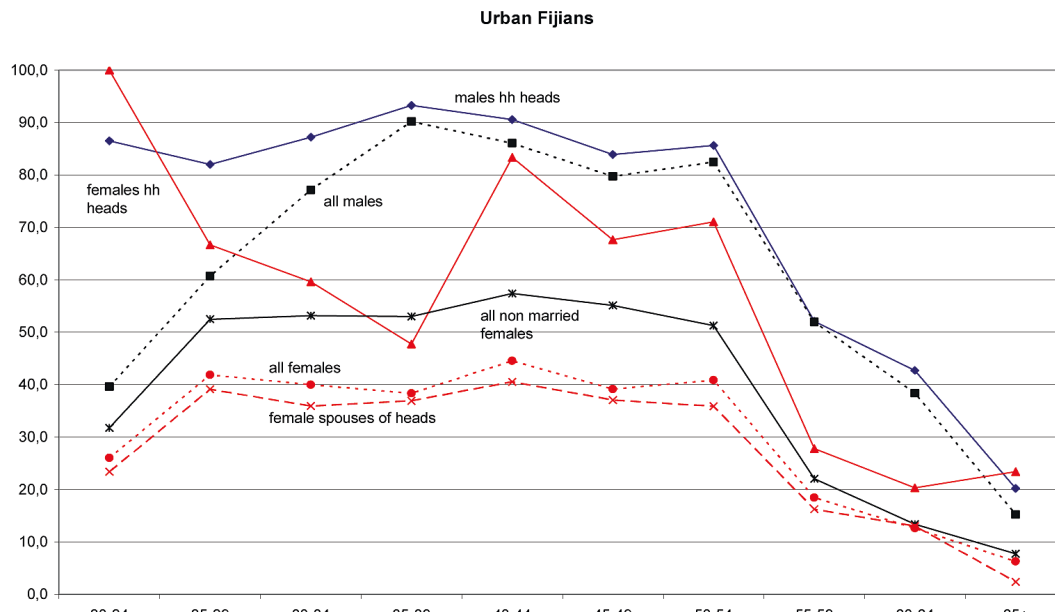
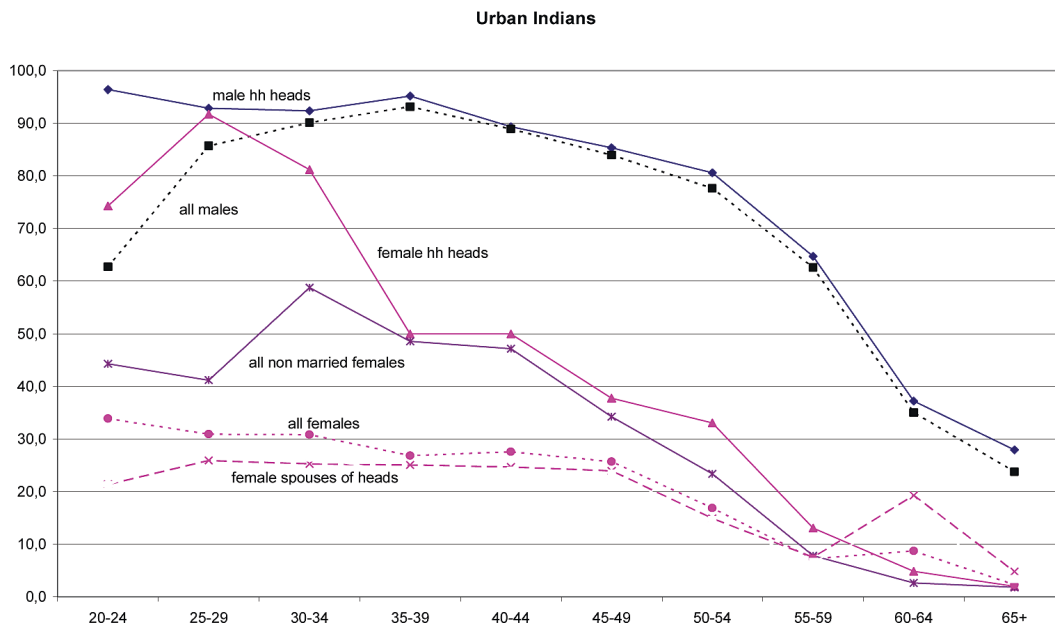


FIGURE 3B: Employment rates in the cash sector (percent) by position in the household, Indo-fijians, Fiji 2003 HIES



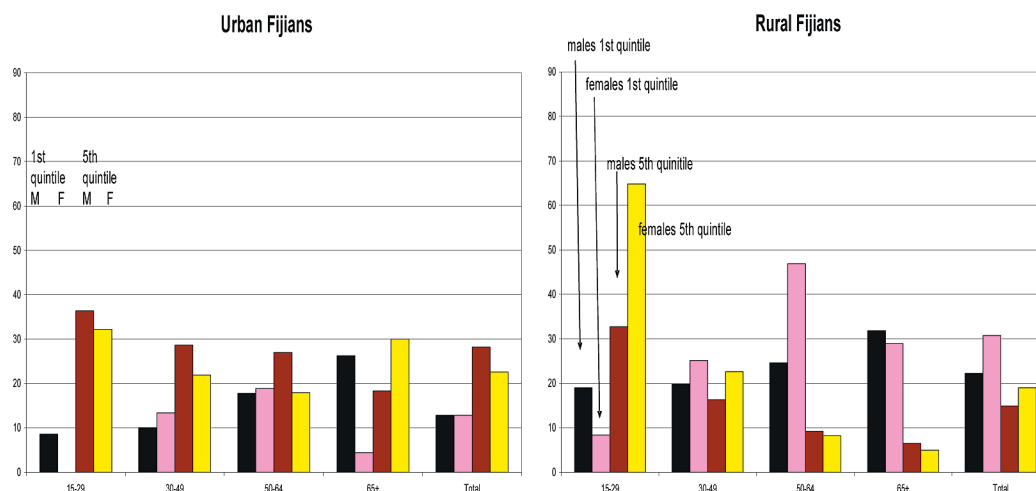
Source: author's calculations from Fiji 2003 HIES

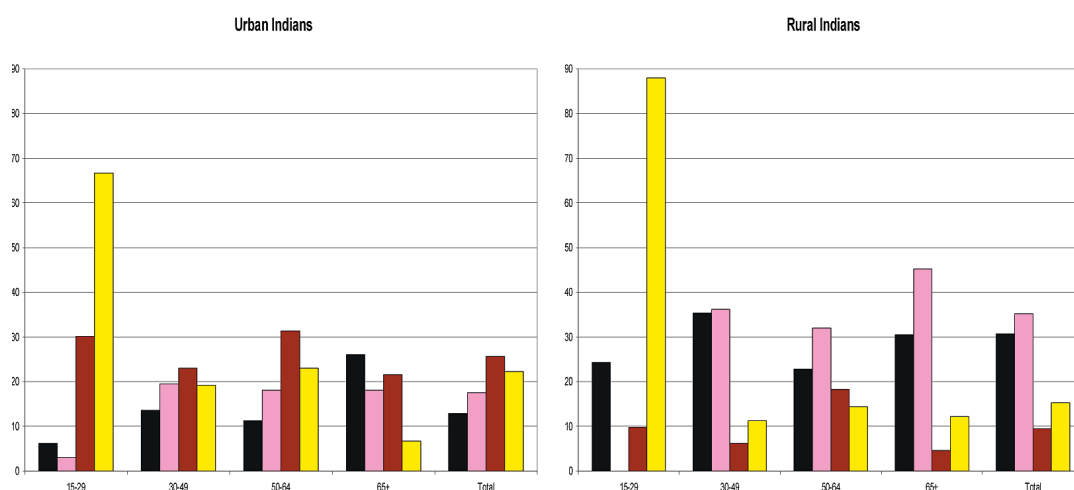
Biased estimates of income based on household heads

HIES data do not provide income and other resources at the individual or family level. Thus, we have no information on income and poverty status of lone females and mothers included in complex or multigenerational households. However, we know the income of female and young male headed households. Although they are only a fraction of female and young family heads, this information is interesting and raises important questions.

The income distribution of young male and female headed households contrasts strongly with that of other households. Young adults (below 30 years old) headed households are much less often in the lowest (first) income quintile and much more often in the highest (fifth) quintile than other households, including those in the central working ages (30-49 years) (figure 4). This is still more the case for females, most of them being in the highest quintile, except for urban Fijians. Thus, while young people and females have usually lower wages than middle-aged adults, there is a clear and important selection of young and female household heads based on income and related with higher access to jobs (see above).

FIGURE 4: Distribution (%) of households by lowest and highest income quintiles, by sex, age, ethnicity and residence of head, Fiji 2003 HIES





Source: author's calculations from Fiji 2003 HIES

At ages 30-49 years, the rather small difference between the proportions of male and female headed urban households in the highest quintile and the advantage of female heads in rural areas, for both Fijians and Indo-fijians, are also most probably an effect of employment- and income-based selections, mostly in rural areas where only about 30% of divorced females of these ages are heads (table 2). The higher proportion of elderly heads in the highest quintile for urban Fijian females (at these ages mostly widows) than for males is also related with the fact that mostly widows with pensions, including from their late husbands' entitlement, can afford to live independently.

Household profiles also translate strong selection effects

Household dependency ratios translate the load in children and elderly supported by working age adults (see Annex, section 3) and are usually related with economic status.

As usually, households with the lowest incomes (1st and 2nd quintiles) have the highest dependency ratios and income increases when dependency ratios decline for both Fijians and Indo-fijians (table 4) – with lower dependency for the latter due to lower fertility –. Household heads below 30 years old in the 5th quintile have surprisingly low dependency ratios, translating another type of selection linked with the timing of fertility: it is easier to afford independent dwelling when you delay births.

The most striking feature is that young female headed households in the highest quintile show extremely low dependency ratios (18% for Fijians and 14% for Indo-fijians – on average less than one out of five has a child). The reason is that many of these households consist in lone females or in several females living together, they are usually employed in the formal sector and rarely have children – such patterns have also been seen in historical Europe (Hufton, 1984). In rural areas, single female heads are often urban migrants working

in administration and living in small apartments in ‘government quarters’. On the opposite, young female headed households in the two lowest quintiles show very high dependency ratios (above 100% and sometimes close to 200%), showing that they have one or two children on average. Despite low resources, they have chosen or had no other option than living independently. Lone mother heads in their 40s have already adult children who work, hence they have lower dependency ratios and they can also benefit from their income.

TABLE 4: Demographic dependency ratios of households by income quintile, sex and age of heads, Fiji 2003 HIES

	Fijians					Indians				
Income quintile	1	2	3	4	5	1	2	3	4	5
Males										
15-29	85,7	74,2	73,9	60,7	43,9	60,9	62,6	42,5	31,1	20,0
30-49	91,2	88,9	80,2	77,4	63,8	60,0	57,3	48,5	43,0	43,3
50-64	44,9	42,5	41,2	34,5	29,1	25,0	26,7	21,9	14,1	11,4
65+	104,9	100,8	101,0	97,4	92,2	93,8	88,8	101,0	101,1	186,2
Females										
15-29	105,7	197,8	43,4	60,9	18,1	100,0	164,6	63,3	51,0	14,1
30-49	71,7	47,7	39,6	41,8	54,6	39,8	35,3	22,5	28,8	32,1
50-64	55,9	30,6	56,0	34,1	17,2	41,1	29,6	24,1	23,2	8,4
65+	118,3	92,1	82,8	99,8	122,2	73,1	71,3	73,3	55,3	123,0

Source: author’s calculation from Fiji, 2003 HIES

Thus, the income distribution of households in relation with their dependency ratios shows various profiles of female and youth headed households as regards the number and age of their children and their residence patterns in the case of females or youth living alone or with unrelated people. They are a selected population representing a minority of lone females and mothers at younger and older ages and of young couples. We can easily imagine that the situation of the hidden part of these populations is not as rosy as it appears from these data.

Household data on the economic situation of females and young adults are actually misleading for policy makers, as they translate the situation of the better-offs. But, large parts, and sometime a majority of these populations are invisible in census and survey data. We see clearly from the high dependency ratios of female heads in the lowest quintile that they are exposed to high poverty risks. Moreover, many of those who are not household heads and live with parents, other relatives or unrelated people, probably have very little or no re-

sources. They also have limited decision on their lives and those of their children as regards education, health and work, being eventually subjected to the people they stay with.

Conclusion

Historical data and modern surveys provide information on economic status at household level only and they ignore the situation of lone females and mothers, and also young couples, who live in complex households and are not household heads. However, headship rates by marital status enable us to estimate the numbers of widow(er)s, divorcees and young married people in such situations. In Fiji 2003 HIES, they represent often more than one lone adult female or mother out of two. This is mostly the case at young and older ages and in rural areas, because unemployment affects mostly youth and females, elderly often have no pension and low resources, and rural areas do not offer many cash employment opportunities, mostly for females. It is also possible to know some of their 'choice' as regards staying with parents, other relatives or unrelated people.

Accessing independent dwelling and household headship is dependent on income and strongly related with employment: household heads have the highest employment rates for both males and females. Such strong income-based selection results in biased estimates of the economic status and poverty risk of lone females, mothers and young couples, distorting distributions towards higher quintiles because mostly lone employed females without children can live independently and be household heads. On the opposite, lone female headed households in the lowest quintiles have very high dependency ratios, consistent with one or two children on average. Despite low income, they prefer living on their own or have no other option due to family or other reasons. They are often living in poverty with their children. Moreover, we do not know the economic situation of those who are not household heads. Many of them may have little or no own resources and limited decision in the household for themselves and their children.

Methodological Annex

1 - Definitions and data

The usual definitions of household and family in modern censuses and surveys are:

- household: all people living in a dwelling, including unrelated people,
- family: at least two people related by blood or union ties:
 - a couple with or without own children (child of at least one of the spouses/partners or adopted child)
 - a lone adult with his/her own or adopted child(ren)
- household/family head : person reporting as head of household/family – in some countries, when married or cohabiting females report as ‘head’, their spouse/partners are recoded as ‘head’.

Data

The main information presented in this paper is based on the variables: sex, age, marital status and relation to household head. These variables are available in censuses, including some 19th century censuses. If not directly available, the marital status of household heads can be processed from most IPUMs data files. The only variable specific to surveys used in this paper is income – that is however available in most US censuses –. Other information, like household equipments can be used instead of – or together with – income. The variable ‘relation to household head’ is used to show the various living arrangements of widowed, divorced or separated females who are not household heads and can be linked with their individual socio-economic characteristics.

Additional variables can be constructed: numbers of children and elderly – defined by age (see below) –, and numbers of active, or preferably employed, people. They can be used to calculate demographic and economic dependency ratios (see section 3).

2.- Indicators and methodology

Indicator 1: Headship rates by sex and age:

Headship rates are the ratio of household heads to total population, by sex and age.

$$HR_{1} = H_{a,s} / P_{a,s}$$

where HR = headship rate; H = household heads; P = population.

This is the most frequently used headship rate but it cannot answer the question: what is the number of divorcees, widows, single mothers and married females and males who are not household heads.

Indicator 2: Headship rates by marital status

$$HR2 = H_{a,s,m} / P_{a,s,m}$$

where m = marital status.

Headship rates by sex, age and marital status show the proportion of single, married, divorced and widowed women who are household heads. The difference between these rates and 1 is the proportion of men and women who are not household heads whenever they could be expected to be so: single, divorced and widowed females or mothers, and young couples.

Methodology

The usually available information limits our knowledge of lone females and mothers. The variable 'marital status' enables us to capture easily divorced and widowed females. But it is more difficult to capture single mothers. In censuses and surveys without family level information, relations between household members are limited to relations with household heads^{VII}. Thus, in multigenerational households, all children of sons and daughters of the heads are 'grand-children' of the household heads. For instance, if there is a married daughter or son and a single daughter living with her/his parents, it is not possible to match 'grand children' with their mothers and we cannot know if the married daughter or daughter-in-law and the single daughter have children and how many. We could only capture a single mother if there were only one single daughter of fertile age in the household, and be sure that there is no child(ren) of a non-resident daughter/son of the household head, but there is no way to check the latter condition. Thus, unless data at family level include 'relation to family head' or individual level data provide the number of children for females, it is neither possible to capture single mothers nor know the number of children of each female in the household. Cross-tabulations of position in the household and marital status can only tell us if there are divorced or widowed daughters^{VIII} of heads in complex households. However, given various assumptions, some IPUMs data files include inferred variables relating to different family units inside the household. This is mainly available from 1910 for US censuses and from the 1960s for a few other countries.

3.- Dependency ratios

The demographic dependency ratio is the ratio of children under 15 years old and elderly 65 years old and above to the adult population:

$$\text{Demographic dependency ratio} = (P_{0-14} + P_{65+}) / P_{15-64}$$

NB: the demographic dependency ratio is sometimes calculated with ages below 20 years and above 60 years.

The economic dependency ratio is the ratio of the non-gainfully employed population to the gainfully employed population.

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- I. although interbreeding is unfrequent.
 - II. In Fiji censuses and surveys, cohabiting people are coded as 'married'.
 - III. For married people, spouse of heads have been considered as heads.
 - IV. Headship rates by age of married females are higher than for males, because their husbands are on average older and headship rates increase with age until late adult ages.
 - V. using the variable 'relation to household head'
 - VI. We present 'all non married females' because rates are hectic due to small numbers of employed females who are not heads.
 - VII. Family level records include relation to family heads. However, this variable is often derived from the information on 'relation to household head' and is more or less reliable, as several assumptions have to be done in complex households.
 - VIII. Or mothers ('parent of head'), in the case where an adult child reports as household head. In such case, if she has no other child, she is not considered as a family, but as 'unrelated' household member.