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Family structure, gender of the household head and child opportunities in Addis Ababa: an analysis from 1994 Ethiopian Census and 2000 Ethiopian DHS data

INTRODUCTION: AIM OF THE RESEARCH AND DATA BASES

In many developing countries, and among those in Ethiopia, gender issue has become an important area of concern in national and sub-national economic development. The concept of gender is essential to our understanding of how development processes affect men and women, girls and boys. Gender is a social construction and codification of differences between the sexes and of social relationships between women and men. As Ethiopia strives to continue its steady rate of development planning, it is becoming increasingly apparent that economic growth, project efficiency and social justice are all calling for a new approach to the development planning which systematically includes women.

In the last period more than any other time, the Ethiopian government seems to exert a great effort to realise the equality of men and women. Ethiopia is taking positive and affirmative actions to facilitate legal grounds for their active involvement of women in various sectors. The most important normative acts are represented by the establishment of Women's Affairs Bureau in the Prime Minister's Office, the incorporation of their issues in the country's policies and programs, the ensuring of their rights in the constitution as well as the ratification of the family law. In spite of this interventions, in the common life women are still considered to be subordinate to their husband and female opportunities are lower than male ones: consequently, one of the most relevant factor of development, education, is mostly reserved to males, and girls receive less education than boys (Ahmed *et al.*, 2001; Dollar and Gatti, 1999).

According to the 1994 Census data, participation to the primary school is 52.3 percent and 3.3 percent, in the urban and rural areas respectively. In general, enrolment is higher for males than for females in almost all ages. The difference between male and female enrolment is found to be more pronounced as age advances, that is, we can observe a "cohort effect". For example in the urban areas, 70.4 percent of boys at age 10 are currently attending school, versus 67.3 percent of girls; at age 15 the rate is 67.4% and 62.6% respectively for males and females, while at age 20 it is about 34% and 24% percent, respectively. If we consider the school attendance of the younger population, we can see that the percentages are always higher among males compared to females whatever the gender of the head of the household may be. In general, Census data, show that female headship does not represent an obstacle to the school attendance, but if we compare young males and females in the same age group, we can observe that – at least in the younger ages in urban Ethiopia – females are in a worse situation when the head of the family is a woman, even if the differences are very small.

Data referring to 2000 DHS reveal some modifications in the gender differences. In the whole country a difference persists, but lower than in the past: 21.8% of males aged 6-10 attend school vs. 19.8% of females in the same age group. Among people living in Addis Ababa, female disadvantage in school attendance is overcome, and more than 70% of children, males and females, attend school (www.measuredhs.com).

The aim of our contribution consists in deepening the socio-cultural conditions of women living in Addis Ababa. To reach this purpose this paper examines the structure and the demographic and socio-economic characteristics of the families of Addis Ababa using data deriving from the 1994 Ethiopian Census and 2000 Ethiopian DHS survey. The temporal lag permits us to verify the eventual changes between the two dates, even

if the different nature of the two sources imply a remarkable caution in the comparison of the results.

FAMILIES BY GENDER OF HOUSEHOLD HEAD

First of all, we want to analyse if there are differences according to the gender of the household head, in terms of household assets and facilities. Then, we are interested to verify changes in the family structure in the examined period (1994-2000). Finally, we intend to explore if the gender of the household head influences child opportunities in terms of schooling and then of human capital formation.

The methodological approach is based on several assumptions. The investigation of households according to the gender of the household head is motivated by three common hypothesis arising from the understanding of the role of household heads and from literature on gender differences in the access to resources. The first two assumptions are that the household head is mainly responsible for the economic well-being of the household and that women, relative to men, are disadvantaged in approaching society's economic resources and opportunities (Locoh, 2003; Marcoux, 1998). Together, these two assumptions imply that although the household head must ensure the economic sustainability of the household irrespective of his or her sex, the means available to do so are not gender neutral, but are unfavourable to women. The third assumption arises from literature that suggests that gender of the household head affects both the manner in which household resources are utilised and distributed within the household, and the manner in which households are networked for exchange of resources with other households. In conclusion, it may be assumed that in developing countries (such as Ethiopia) female-headed households have a larger probability to be sources of socio-economic deprivation. The phenomenon assumes a relevant importance in Ethiopia, and especially in the urban context, where female-headed families are around 35% according both to Census and DHS data. Therefore, this fact implies that a large percentage of children live in a family headed by a woman.

Generally, both in the Census and in the Survey, the proportion of households leaded by a woman increases the older is the age of the head. In fact, in the different age groups the proportions of women classified as "head of the family" are higher starting from 40 years and, after 50 years, become half of the women. The highest percentages are found when the head of the household is in the age group 60 and over, where the percentage of female-headed households is highest (see tables 1 and 2).

Table 1 - *Indicators relating to the heads of the households. Percentages of headship in the age groups by gender; gender distribution of the heads in the age groups, Addis Ababa, Census 1994.*

Age	% of headship in the age group		Number of families*	Gender distribution of the family heads in the age group			
	Males	Females		Males	Females	Total	F/M
10-19	1.2	0.6	5,402	62.0	38.0	100.0	61.3
20-29	17.6	8.6	62,075	64.8	35.2	100.0	54.3
30-39	58.3	25.8	113,281	67.8	32.2	100.0	47.5
40-49	82.7	39.0	104,247	72.8	27.2	100.0	37.4
50-59	87.9	50.6	65,102	66.5	33.5	100.0	50.4
60+	83.3	52.8	58,518	58.7	41.3	100.0	70.4
N. of cases	273,949	134,676	408,625				
Illiterate (percentage)				15.6	44.9	25.3	

* Equal to the number of heads of the families. Source: our tabulation on Census data.

Table 2 - *Indicators relating to the heads of the households. Percentages of headship in the age groups by gender; gender distribution of the heads in the age groups, Addis Ababa, DHS 2000.*

Age	% of headship in the age group		Number of families*	Gender distribution of the family heads in the age group			
	Males	Females		Males	Females	Total	F/M
10-19	1,1	0,5	5	55,1	44,9	100.0	81,5
20-29	20,1	10,3	74	61,6	38,4	100.0	62,4
30-39	63,8	25,7	124	71,2	28,8	100.0	40,5
40-49	80,6	35,4	109	68,9	31,1	100.0	45,0
50-59	92,2	50,0	73	64,7	35,3	100.0	54,6
60+	84,3	50,0	77	55,6	44,4	100.0	80,0
Total 10+	36,3	16,1	462	65,3	34,7	100.0	53,1
N. of cases							
No education, preschool (percentage)				21,2	50,3	31,3	

* Equal to the number of heads of the families. Source: our tabulation on DHS data. Weighted data.

In the more advanced ages, gender ratio (F/M) is over 70% and the values seem to suggest a relative increase between the two dates for the most of the age groups (see figure 1)

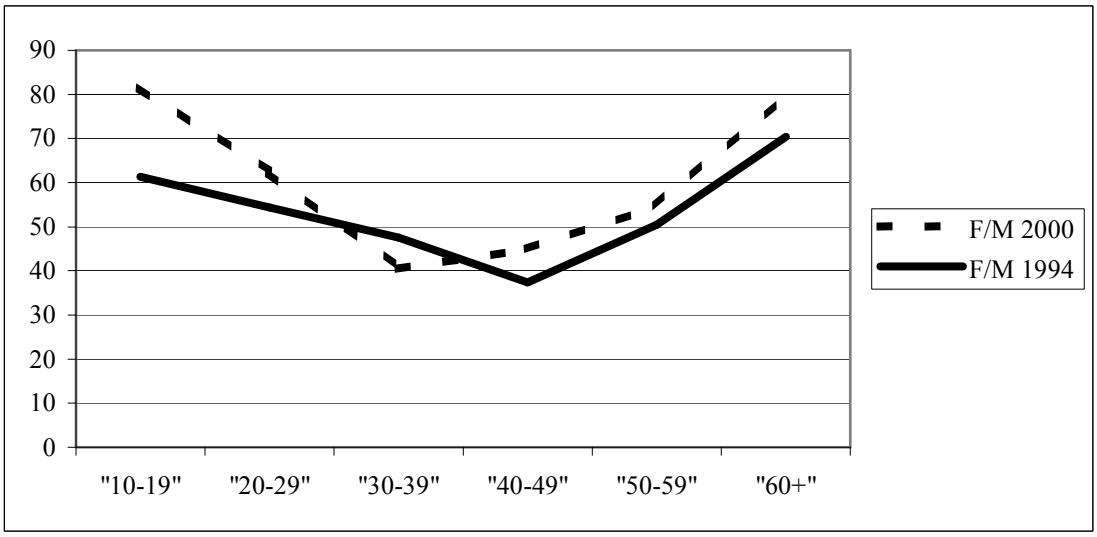

Figure 1 – *Gender difference in the distribution of the family heads by age group*

The trend is due to the different death probability according to sex and to a higher age at marriage for men: the estimated figures in 2000 (deriving from DHS) of median age at marriage are respectively 23.3 for men aged 25-64 and 16.4 for women aged 20-49 (www.measuredhs.com). Probably, migration too may influence the distribution.

When the analysis is carried out considering also the level of education, we can conclude that the lower level that we find in the two surveys in the groups of female heads of the families is in part due to the different age structure, and in part probably related to the low grade of well-being of these families (Rudstein and Johnson, 2004). For example, in the most recent survey the percentage of females heads of the

household with no education or only preschool is more than double in comparison with that presented by males (50.3% vs. 21.2%). The presence of the high educated ones diminish sharply as age increases.

In the first analysis, based on the data of 1994 Census, we have compared the situation of the female-headed households versus the male-headed ones according to some housing characteristics.

Considering the different housing facilities (the availability of drinkable water, toilet, telephone, radio, TV, and so on…), on average female-headed households are less advantaged. We have considered not only assets and housing facilities but also the level of education of the head of the family to build a "deprivation index", as a proxy of the level of poverty[i] (see table 3).

Table 3 – *Families (percentages) according to the gender of HH head and the "deprivation index", Addis Ababa, 1994 Census*

Level of deprivation index	Gender of the HH head		
	Male	Female	Total
Low	8.3	5.3	7.4
Medium	14.3	12.1	13.7
Medium-high	60.5	55.2	59.0
High	16.9	27.4	20.0
Total	100.0	100.0	100.0

Source: our elaboration on 1994 Census data.

The values show the worse situation of the female-headed families in general, and especially when the woman is a single (one person household) or a lone mother. As it appears in other researches, this phenomenon may have negative consequences for children not only in terms of health and wellness, but also in the process of their human capital building (Berhe, 2002).

Nevertheless, including other information, we have verified that, *coeteris paribus*, female-headed families are characterised by a higher presence of housing facilities. For example, considering the presence of telephone, we underline that families headed by a more educated and working woman are more advantaged with respect to those headed by a man (see figure 2).

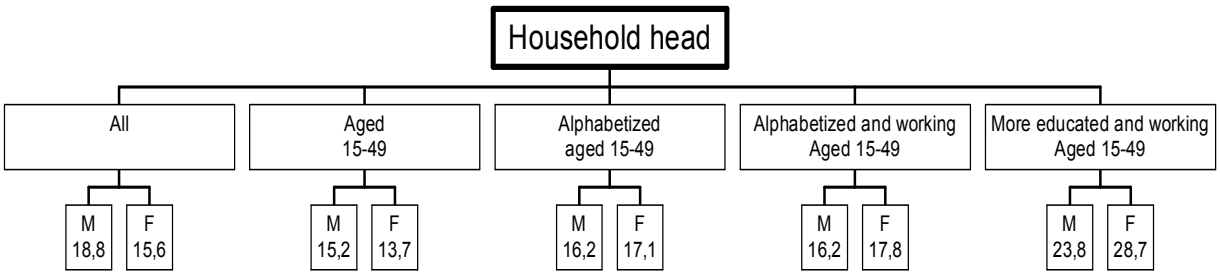

Figure 2 – *An example of the presence of facilities: families according to the presence of the telephone by gender and type of household head, Addis Ababa, 1994 Census.*

In 2000 only 13% of the households leaded by a man does not dispose of a radio vs. 30% of those leaded by a woman; the same percentages for television are respectively

65% and 77%. More frequently, moreover, households leaded by women has a toilet shared with other households (see table 4).

Table 4 – *Percentages of families according to the gender of the household head and to the presence of facilities, Addis Ababa (DHS 2000)*

Facility	Gender of the HH head	
	Male	Female
Radio	86.7	69.7
TV	36.0	23.6
Telephone	24.4	18.8
Toilet not shared	29.7	20.5

Source: our tabulation on DHS data.

To establish a poverty line and to classify the households, the items collected in the 2000 DHS concerning both assets, household facilities and the number of members per sleeping room, have been synthesized in a DHS "wealth index" by a factor analysis procedure (Rudstein and Johnson, 2004). If we use the value of the quintile of the national distribution, both female and male headed families in Addis Ababa would be classified in the upper quintile. So, we have outlined the quintiles considering only the variation of the wealth index in the Capital city. The new distribution shows the disadvantage of female-headed households, more represented in the lower quintiles: 45.2% of these families are among the poorest ones, vs. 37% of those headed by a man. Consequently, the mean value of the wealth index is lower for females heads (see table 5).

The difference is more evident in the distribution of families according to wealth index quintile and education: more educated heads of household reveal higher mean values of the index: globally considered, families show values that present a range variable from 2.45 for the lowest level of education to 4.23 for the highest. On the other side, we have already observed that female households-heads have a lower level of education, and the whole description reveals the more favourable situation for men. If we consider mean values of the wealth index by gender and level of education we wonder that, level of education being equal, women present a higher value of the index; nevertheless, women being overrepresented in the lower educated groups, the whole average is lower (see again table 5).

Table 5 – *Wealth index indicators according to the gender and to the level of education of HH head, Addis Ababa (DHS 2000)*

Level of education of the HH head	Male		Female	
	Mean	Std. dev.	Mean	Std. dev.
No education, pre-school	2.39	1.36	2.49	1.34
Primary	2.53	1.30	2.69	1.34
Secondary	3.17	1.34	3.20	1.25
Higher	4.22	0.95	4.31	0.85
Total	3.03	1.42	2.77	1.37

Source: our tabulation on DHS data.

Census and DHS data have therefore permitted to outline the "forerunners groups" in Addis Ababa, in terms of high education and work conditions of the family-head. To the aim of understand intergenerational relationships, we have moreover tried to verify the

existence of differences in the situation of children (boys and girls) in terms of parents' characteristics, in particular gender and level of education.

FORERUNNERS AND CHILD OPPORTUNITIES

To deepen the relationships between gender of the head of the household and opportunities of the youngest members of the families, we consider school attendance of children aged 10-14 at the two surveys, that in 1994 represent those born at the beginning of the Eighties and in 2000 represent the generations of the second half of the Eighties. Both in 1994 and in 2000, young females result disadvantaged with respect to young males in school enrolment, and this situation is more emphasized in 2000 (table 6).

Table 6 – *Percentages of males and females aged 10-14 who never attended school, according to the gender of the HH head, Addis Ababa, 1994 and 2000.*

	1994 Census			2000 DHS		
	Gender of the HH head			Gender of the HH head		
	All households					
Sex of the child	Male	Female	Total	Male	Female	Total
Male	6.2	5.0	5.9	5.4	6.1	5.6
Female	9.4	9.6	9.4	15.6	16.3	16.3
M+F	7.8	7.5	7.7	10.9	12.2	11.6
	Households with a 25-39 aged head					
Sex of the child	Male	Female	Total	Male	Female	Total
Male	10.8	5.1	8.3	11.2	9.1	9.7
Female	17.2	9.7	14.0	26.7	15.8	25.0
M+F	14.2	7.6	11.3	20.8	13.3	19.0

Source: our tabulation on Census and DHS data.

The percentages of never attended school of girls passed from 9.4 in 1994 to 16.3 in 2000, while the percentages are relatively constant for males. Famine and the HIV/AIDS crisis are considered among the causes of stopping school in order to work to contribute income to the family or to care for a sick parent (Dyenabas Dia, 2003).

If we include in the analysis the gender of the head of the household we find that, considering all the families in Addis Ababa, the percentage of people aged 10-14 that have never been enrolled in school is 10.9 if the head of the household is a male and 12.0 if the head is a female, while in 1994 the percentages are quite similar. If we limit our analysis to families headed by 25-39 aged men, the percentages equal 11.2 for young males and 26.7 for young females (138% higher), that appear even in 2000 strongly discriminated. Differences are less evident when the head of the family is a 25-39 aged woman, but the whole enrolment is much higher: percentages of people aged 10-14 never attended school decline to 9.1 for boys and 15.8 for girls (74% higher).

In conclusion, the female disadvantage persists but it is less evident if the head of the household is more educated. Moreover, differences are lower when the head of the family is a more educated woman.

Belonging to families headed by a woman with a high level of education seems consequently to favour schooling enrolment of the young generations. Nevertheless also in the households with more educated female leaders, where schooling enrolment of young generations is higher, sons show higher education levels with respect to daughters.

This analysis confirms therefore that son opportunities continue to be higher. Even if we include in the analysis the relationship with the head of the family of young people

aged 10-14, opportunities of girls in the chance of attending school are lower. To deep this evidence, we have analysed the situation of children and grandchildren vs. the other young people, that are often represented by orphans living with relatives or even other persons, therefore joined to the head of the family by other kinship relationships.

The problem is assuming an increasing importance. In fact the results deriving from Demographic and Health Surveys of various African countries (World Bank and UNAIDS, 2002) show that orphans frequently have a significantly lower rate of attendance at school than non-orphans do; typically between 20 and 65% lower. Benin, the Central African Republic and Mozambique have the lowest rates of orphan enrolment.

In all the affected countries, impacts of HIV/AIDS are long-term; among the others we can focus our attention on a rising numbers of impoverished orphans and of extended families, that face a severe crisis of resources and "*must do more with less, for their children as well"* (Phiri, 2003).

To come back to our results, one of the main factors of this trend may then depend on the increasing presence in the families of orphan children, due to HIV/AIDS and conflicts. Data referring both to 1994 and 2000 show indeed that among persons aged 10-14 the percentages of those never attending school rise as the relationship to the head of the family is less close. While among sons/daughters or grandchildren those that "never attended school" represent a proportion around 3-4%, for the group of "non relatives" the percentage raises to 45% in1994 and to 63% in 2000.

To deepen this aspect, we have built a logistic regression model run on DHS data, where the dependent variable measures the propensity to (ever) attend school; the explanatory variables are gender of children, gender of the head of the family, economic status of the family synthesized by the wealth index, and the relationship with the head.

The results (reported in Table 7, model 1) show that people aged 10-14 living in a family headed by a parent or a grand-parent have a probability of attending school absolutely higher with respect to those with a different degree of relationship, or not related.

Table 7 – Logistic model of school attendance, people living in Addis Ababa and aged 10-14, 2000 DHS

Variable	*Reference category*	*Beta Coefficients*	*Standard Error*	*P. Value*	*Exp (Beta)*
	Model 1				
Gender of HH	*Female*	.032	.271	.907	1.032
Gender of child	*Female*	.662	.297	.026	1.940
Wealth index	*Medium-high*	-1.064	.274	.000	.345
Relationship to head	*Son/daughter, grandchild*	-3.072	.296	.000	.046
Intercept		3.750	.350		42.504
	Model 2				
Gender of HH	*Female*	.102	.237	.666	1.108
Gender of child	*Female*	1.152	.260	.000	3.163
Wealth index	*Medium-high*	-.532	.226	.019	.588
Intercept		1.822	.223		6.181

School attendance status: never attended=0, attended =1; gender : female=0, male=1; economic status: the 3 higher quintiles of wealth index=0, the 2 lower quintiles=1; relationship: son/daughter or grandchild=0, other=1.

Results confirm also that – all other things being equal – gender discriminates behaviour with respect to school attendance and females have a lower probability to go to school in comparison with their male counterparts. If we exclude the relationship

with the head of the family (table 7, model 2), we see that gender of the child shows a main role in the model of school attendance as the value of odds-ratio confirms (3.2).

CONCLUDING …

A comparison between data deriving from the two sources, 1994 Census and 2000 DHS, shows a global worsening of young people situation in Addis Ababa, in particular as it concerns development in education. In addition to economic decline in the region, as for many other countries in Africa during the 1970s and 1980s (for example, Angola, Liberia, Mozambique, Nigeria, Sierra Leone, Somalia, and Sudan), political instability and internal conflict resulted in fact in marked declines in education and its infrastructure, including a reduction in the depth and breadth of educational development.

The impact of instability and conflict on education was no less relevant in the 1990s for Ethiopia, and for other countries, such as Burundi, Congo, Rwanda, and most recently Côte d'Ivoire.

Because some of the most populous countries in Africa, measured in terms of the size of their adolescent population in 2000, have achieved higher levels of schooling than their smaller neighbours, weighted averages give a more optimistic picture of the trends in schooling than would be the case if each country were given the same weight in the analysis. Among the most populous countries that have participated in the DHS survey program with relatively strong educational performance (Nigeria, South Africa, Tanzania, Kenya, Ghana and Uganda), only Ethiopia, with 20 million 10–24-year-olds, has had relatively poor educational performance (Lloyd and Hewett, 2003).

In this framework, our results show that sons of the most recent generations continue to present higher education levels with respect to daughters, the most disadvantaged by the worsening of socio-economic situation, even if it emerges a larger attention of women to the education of children. As Lloyd and Blanc (1996) underline for sub-Saharan African countries, " … *children living in female-headed households have better school outcomes than children living in male-headed households, when households with similar resources are compared …*".

Also for Addis Ababa, the evidence confirms, in spite of a situation characterized by a general increase of deprivation, the greater potential impact of women on future cohorts development in terms of human capital. Educated people, in fact, have a better chance of breaking out of the cycle of poverty.

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[i] To built the deprivation index, we have considered two aspects of the household: level of education of the head and standard of living. For the second aspect, we have considered both housing facilities (radio, TV, telephone) and housing conditions (construction material of roof and walls, presence and type of sanitation, bathroom, safe water).