

Annex 19 – Poverty and Female Headed Households in Panama: Summary of Findings¹

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1. It is commonly believed that households headed by females tend to be poorer or more vulnerable than those headed by males, due to potential discrimination (in wages or employment opportunities for example) and a general absence of support.² As such, female-headed households (FHH) are viewed as deserving of special policy attention, via targeted interventions. This paper seeks to empirically examine the extent to which FHH are over-represented among the poor³ population in Panama using data from the Living Standards Measurement Survey (LSMS, 1997).

DEFINITIONS OF HOUSEHOLD HEADSHIP

2. **Self-Reported Definition of Headship.** One well-known problem with headship analysis is the fact that the typical survey definition of household headship (i.e., self-reported headship without any clear *a priori* definition) was created for the purposes of survey implementation and not for analytical purposes. That is to say, the main purpose of the typical survey definition of headship is to account for all household members and to avoid double counting during survey interviews by assigning a reference person (the “household head”) against whom all the relationships among household members are identified.

3. While this self-reported definition is useful for survey purposes, problems could arise when such a definition is applied for analytical purposes. Generally, different *uses* of the concept of household headship require different *definitions* of headship altogether. Alternative operational definitions of household headship typically include definitions based on household demographics and those based on economic contributions (Figure A19.1).

4. **Demographic Definitions of Headship.** A common alternative definition, typically used in analysis of census data, classifies households without an adult male as “potentially female-headed” (cases G, H, and I in Figure A19.1). Because of the potential heterogeneity among the self-reported FHH, a common practice is to distinguish between *de facto* and *de jure* FHHs. *De facto* FHHs are those where the self-declared male head is absent for a large proportion, usually at least half, of the time (cases D, E, F in Figure A19.1). *De jure* FHHs are those where the self-reported female head does not have any legal or common-law union male partner (cases G, H, and I in Figure A19.1). Often, *de facto* FHHs may be supported by the male partners who are migrant workers but still play a role in decision making and in income contribution (cases D and F). On the other hand, *de jure* FHHs are headed by widows, by unmarried women, or by those who are separated or divorced.

5. **Economic Definitions of Headship.** One main reason why FHHs are claimed to be worthy of special policy attention is that such households are at greater economic disadvantage due to a “triple burden:” (1) the “head” of FHHs is often a single income earner (rather than one of two earners); (2) the income earner being female faces various potential disadvantages in the labor market and in other productive activities (such as access to credit); and (3) the time pressure on the female head is acute due to the dual responsibilities of earning income and maintaining the household (e.g., child care). This view has led to a dissatisfaction with the demographic definitions of female headship. There are a number of alternative economic definitions of headship depending on the various ways of measuring economic contribution to the household. One approach is to use measures of incomes earned by individual

¹This is a summary version of the findings of this study with select Tables and Figures. A full version of the paper is available upon request, either from Nobu Fuwa at fuwa@midori.h.chiba-u.ac.jp or from Kathy Lindert at KLINDERT@WORLDBANK.ORG

²It is important to note that, since female headship analysis primarily focuses on the household level, rather than the individual level, it cannot be viewed as a proxy for analyzing the living conditions of poorwomen or as providing complete treatment of “gender and poverty” issues (which largely consist of intra-household and individual-level issues).

³For a discussion of poverty lines and the classification of poor or non-poor, see Annex 2 of the Poverty Assessment.

members; examples include: (i) the “cash head” or “major earner,” where the household head is defined as the largest cash income earner (contributing 50% or more of household earnings); and (ii) the “major income contributor,” where the female head contributes 50% or more of income from all sources (including non labor income). Another approach is to measure the contribution to household maintenance by the hours of labor time devoted by individual members (“working head”).

6. **Shares of FHHs in Panama by Alternative Definitions.** Table A19.1 presents data from the LSMS to demonstrate the extent to which different definitions of FHHs identify sets of households as female headed:

- **Self-reported FHHs** represent roughly one quarter (24%) of all households, with a higher share in urban areas.
- Of these, *de jure* FHHs (no male partner) account for 84% of all self-reported FHHs nationwide, with a higher share in urban areas and a very low share in indigenous areas. There are very few *de facto* FHHs (male partner exists but is absent).
- With respect to pure demographic definitions, nationwide, about 20% of all households have no adult male (i.e., there is no working age male present in the household). As a subset of these, 80% of these (16% of all households) are “**potential female-headed**,” defined as those FHHs where there is no working age male *and* there is at least one working age female member.
- Using the “**working head**” economic definition of headship, where the head is the member who contributed more than 50% of total hours worked by all members, yields a figure of 16% of all households nationwide being headed by “working female heads.”

POVERTY AND HOUSEHOLD HEADSHIP

7. The extent to which FHHs are over- (or under-) represented among the poor for the above definitions of headship was examined using a number of different techniques:

- Head-count poverty ratios using per capita consumption as a measure of welfare (and for the definition of the poverty line), see Table A19.2;⁴
- Head-count poverty ratios using a consumption measure of welfare that takes into account adult equivalence scales (since household consumption may be spread across household members unevenly, with, for example, children consuming less than adults);
- Head-count poverty ratios using a consumption measure of welfare that takes into account economies of scale in consumption (whereby the cost of additional household members is smaller than that of the first member);
- Alternative poverty measures such as the poverty gap and poverty severity indices (FGT measures of poverty) (Table A19.3);
- Stochastic dominance tests to examine whether or not the share of FHHs in poverty is higher (or lower) than the share of MHHs in poverty regardless of the level of the poverty line that is used; and
- Multi-variate analysis of poverty (Table A19.4).

8. The results of this analysis can be summarized as follows:⁵

- **Overall, female-headed households are not more poor.** FHHs are not systematically over-represented among the poor in Panama. This conclusion holds *regardless* of the definition of

⁴ See Annex 2 of the Poverty Assessment.

⁵ Detailed results are available upon request in the full draft of this paper, either from Nobu Fuwa afuwa@midori.h.chiba-u.ac.jp or from Kathy Lindert at KLINDERT@WORLDBANK.ORG

headship that is used (self-reported, demographic, economic) or the technique for measuring poverty that is adopted. Generally, the evidence supporting the poverty of FHHs tends to be much weaker when the economic “working head” definition of headship is used rather than with self-reported definitions. Indeed, in many respects, “working” FHHs are found to be consistently better off than “working” MHHs.

- **Some sub-groups of female-headed households are more poor.** In urban areas, the poverty rate among FHHs with unmarried partners (*unida*) is significantly higher than that of MHHs with unmarried partners, although such households represent a very minor share (2% of all households). In indigenous areas, self-reported FHHs headed by divorced women and widows appear to be particularly more disadvantaged than similar households headed by males. Again, these represent a very small share of the total population. In general, the evidence of higher poverty among FHHs appears to be weakest in rural areas.
- **FHH should not be used as a criterion for designing poverty targeted policy interventions** given the lack of a systematic relationship between female headship and poverty.

CHARACTERISTICS OF FEMALE HEADED HOUSEHOLDS

9. The characteristics of female household heads and their households also shed light on their living standards and the potential inter-generational transmission of vulnerability (Tables A19.5-14). An analysis of these characteristics using data from the LSMS reveals the following patterns:

- **Household Size and Dependency.** FHHs tend to be smaller and have fewer children, except those with male partners. The only exception is reported female household heads with unmarried partners (*unidas*) who tend to have higher fertility. Correlations between female headship and the dependency ratio, however, do not appear generally strong, except for some sub-categories of self-reported FHHs in urban areas (which tend to have higher dependency ratios). Multi-variate analysis indicates that most of the observed association between female headship and lower poverty is largely due to the smaller household size of FHHs rather than female headship *per se*: once household size (and other characteristics) are controlled for, female headship has no independent association with per capita household consumption (positive or negative).
- **Dependence on Transfer Income.** FHHs (mainly those without male partners) tend to depend more heavily on transfer income than MHHs, especially in urban areas, indicating the potential of their vulnerability. In indigenous areas, however, dependence on transfers is uniformly high regardless of the gender of the household head.
- **Age of Household Head.** Female heads are generally older than male heads, except for married female heads and “working” female heads.
- **Education of Household Head.** Self-reported female heads tend to have lower levels of education, especially in indigenous areas (there are some exceptions among sub-groups). Generally, “working” female heads are better educated than heads in other households. Some (but not all) categories of female heads may face “double day” duty: self-reported FHHs without male partners tend to work significantly fewer labor hours in economic activities than other heads, while this is not the case with the “working” female heads. This appears consistent with the possibility that household maintenance activities are indeed a binding constraint on their labor supply in economic activities.
- **Education of Children in FHHs.** One way of inferring the potential likelihood of inter-generational transmission of disadvantages is the association between female headship and school enrollment of children in FHHs. At the primary school level, there is a positive correlation between female headship and school enrollment, though this effect is weaker when other factors are taken into account. This correlation suggests that older children (commonly girls) are not being used as substitutes for working women’s time in terms of covering household responsibilities.

- **Triple burden of FHHs?** As discussed above, there is a common belief that FHHs are at a greater economic disadvantage due to the triple burden of (1) potential labor market discrimination against women, (2) dual responsibilities of income generation and household maintenance, and (3) the role of the female head as the single earner (rather than joint). With respect to the first “burden,” labor-market analysis⁶ of the LSMS does not find that women face discrimination in terms of wages but potentially face limited employment opportunities. Women also tend to have higher educational endowments than men, though there are some exceptions (such as self-reported heads, as discussed above). Regarding the second time “burden” on female heads of income generation *and* household maintenance, there is some evidence that household responsibilities are indeed the binding constraint on female labor force participation (see above). The third “burden” (the possibly higher dependency burden) appears least compelling among FHHs in Panama. FHHs have fewer children and smaller total household size and dependency ratios are commonly lower among FHHs. Furthermore, the cases *positive* bivariate correlation between female headship and *lower* poverty disappear once household size is accounted for in the context of multi-variate regression. This suggests that many sub-categories of self-reported FHHs are indeed *better off* than MHHs *despite* the female heads’ possibly lower earnings capacities and the “double day” time burden on female heads because their dependency burden is often *lower* than that of MHHs (in contrast with the “triple burden” view).

CONCLUSIONS

10. Female-headed households are not systematically poorer than male-headed households in Panama. In fact, FHHs defined in terms of economic definitions of headship are found to be generally better off than non-female headed households. At the same time, however, disadvantages of some categories of FHHs are largely an urban phenomena. In particular, FHHs with unmarried partners are particularly disadvantaged, though the number of such households is small. These households register higher rates of poverty, lower levels of the heads’ education, higher dependency ratios, longer working hours of the female head, and lower school enrollment ratios of children, particularly girls. Another disadvantaged group of FHHs is those headed by widows in indigenous areas. There is little indication of over-representation of FHHs among the poor in rural areas. Female headship should not be used as an indicator for targeting anti-poverty programs, at least in these areas.

⁶ See Annex 11 of the Poverty Assessment.

Figure A19.1 - Alternative Definitions of Household Headship

		<i>Demographic</i>			
		adult male and adult female Present	only adult female currently present		only adult male currently present
			male partner temporarily absent ¹	no male partner ²	
<i>economic contribution</i>	male main(sole) contributor	A	D	G	J
	female main(sole) contributor	B	E	H	K
	both male and female contribute	C	F	I	L

¹. This category includes households where the female 'head' has a steady partner (legal husband or common union partner) who are temporarily absent due to temporary labor migration or other mainly occupational reasons (military, seaman, track driver, etc.).

². This category includes female 'head' who is single (never married), divorced/separated, or widowed.

Table A19.1 - Shares of Female Headed Households by Alternative Definitions

	Nationwide	urban	rural	indigenous
Total household	100.00%	100.00%	100.00%	100.00%
A) Self-Reported Female Headed	23.68%	28.62%	17.07%	14.97%
A)-1. Reported <i>de jure</i> FHH	19.89%	24.34%	14.40%	8.27%
A)-1.a. Reported <i>de jure</i> FHH: divorce/sepa	7.30%	9.15%	4.81%	4.18%
A)-1.b. Reported <i>de jure</i> FHH: widow only	5.89%	6.21%	5.88%	2.06%
A)-1.c. Reported <i>de jure</i> FHH: single only	6.70%	8.98%	3.72%	2.03%
A)-2. Reported <i>de facto</i> FHH	1.78%	1.93%	1.27%	3.99%
A)-3. Reported FHH: <i>unida</i> only	2.34%	2.60%	1.69%	4.38%
A)-4. Reported FHH: <i>casada</i> only	1.45%	1.68%	0.97%	2.33%
B) Potential FHH	12.77%	15.79%	8.72%	7.40%
C) No Adult Male	20.33%	21.88%	19.44%	8.19%
D) Female working head	16.44%	20.98%	10.30%	8.87%
E) Core FHH [C+D]	7.51%	10.03%	4.12%	3.11%

Table A19.2 - Head-count Poverty Ratios of Female Headed Households by Alternative Headship Definitions

(Per capita household consumption: no economies of scale, no adult equivalence adjustment)

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 Reported female headed	0.202	0.298	-5.651	0.103	0.100	0.156	0.383	0.485	-3.332	0.907	0.908	-0.010
2 Reported dejure	0.182	0.299	-7.283	0.087	0.106	-1.33	0.377	0.483	-3.460	0.936	0.905	0.625
3 Reported defacto	0.256	0.276	-0.388	0.131	0.101	0.619	0.345	0.469	-1.525	0.785	0.913	-1.108
4 Reported fhh: unida	0.385*	0.273	2.154	0.258*	0.097	2.721	0.510	0.467	0.428	0.948	0.906	0.805
5 Reported fhh: casada	0.180	0.277	-2.150	0.093	0.102	-0.179	0.251	0.470	-2.438	0.730	0.912	-1.235
6 Reported fhh: div/sepa	0.188	0.282	-4.125	0.092	0.102	-0.513	0.382	0.472	-1.732	1.000*	0.904	4.109
7 Reported fhh: widow	0.191	0.281	-3.605	0.071	0.103	-1.398	0.352	0.475	-2.786	1.000*	0.906	4.082
8 Reported fhh: single	0.166	0.283	-4.555	0.093	0.102	0.377	0.408	0.470	-1.078	0.739	0.911	-1.026
9 Potential fhh	0.160	0.292	-7.065	0.071	0.107	-2.163	0.346	0.479	-3.345	0.782	0.918	-1.819
10 No adult male	0.167	0.303	-8.257	0.061	0.113	-3.281	0.321	0.503	-6.098	0.803	0.917	-1.651
11 Female working head	0.141	0.301	-8.846	0.069	0.110	-2.327	0.301	0.487	-5.163	0.799	0.918	-1.821
12 Core fhh	0.113	0.288	-8.208	0.062	0.106	-2.310	0.256	0.477	-4.068	0.655	0.916	-2.220

Table A19.3 - Alternative Poverty Measures of Female Headed Households by Alternative Headship Definitions
Nation wide

	Head Count		Poverty Gap*		P2**		P Sen***	
	FHH	nonFHH	FHH	nonFHH	FHH	nonFHH	FHH	nonFHH
1 reported female headed	0.202	0.298	0.073	0.123	0.039	0.069	0.102	0.166
2 reported dejure	0.182	0.299	0.064	0.123	0.033	0.069	0.089	0.166
3 reported defacto	0.256	0.276	<u>0.112</u>	0.111	<u>0.065</u>	0.062	0.149	0.151
4 reported fhh: unida	0.385	0.273	0.154	0.110	0.084	0.062	0.207	0.149
5 reported fhh: casada	0.180	0.277	0.079	0.112	0.043	0.062	0.101	0.151
6 reported fhh: div/sepa	0.188	0.282	0.069	0.114	0.038	0.064	0.097	0.155
7 reported fhh: widow	0.191	0.281	0.067	0.114	0.036	0.064	0.094	0.154
8 reported fhh: single	0.166	0.283	0.055	0.115	0.026	0.065	0.076	0.156
9 potential fhh	0.160	0.292	0.059	0.119	0.031	0.067	0.081	0.161
10 no adult male	0.167	0.303	0.061	0.124	0.031	0.070	0.083	0.168
11 female working head	0.141	0.302	0.046	0.124	0.022	0.070	0.064	0.168
12 core fhh	0.113	0.288	0.035	0.117	0.017	0.066	0.049	0.159

POV5.LOG

Urban areas

	Head Count		Poverty Gap*		P2**		P Sen***	
	FHH	nonFHH	FHH	nonFHH	FHH	nonFHH	FHH	NonFH H
1 reported female headed	0.103	0.101	0.028	0.023	0.012	0.008	0.040	0.033
2 reported dejure	0.087	0.106	0.022	0.025	0.009	0.009	0.032	0.036
3 reported defacto	0.131	0.101	0.037	0.024	0.013	0.009	0.047	0.035
4 reported fhh: unida	0.258	0.097	0.084	0.023	0.036	0.009	0.111	0.033
5 reported fhh: casada	0.093	0.102	<u>0.029</u>	0.025	<u>0.010</u>	0.009	0.033	0.035
6 reported fhh: div/sepa	0.093	0.102	<u>0.029</u>	0.025	<u>0.010</u>	0.009	0.033	0.035
7 reported fhh: widow	0.071	0.103	0.019	0.025	0.007	0.009	0.025	0.035
8 reported fhh: single	0.093	0.102	0.026	0.025	0.011	0.009	0.037	0.035
9 potential fhh	0.071	0.107	0.019	0.026	0.008	0.010	0.027	0.036
10 no adult male	0.061	0.113	0.016	0.027	0.007	0.010	0.024	0.038
11 female working head	0.069	0.110	0.015	0.027	0.005	0.010	0.021	0.039
12 core fhh	0.062	0.106	0.011	0.026	0.004	0.010	0.017	0.037

Table A19.3 (continued)

Rural areas

	Head Count		Poverty Gap*		P2**		P Sen***	
	FHH	nonFHH	FHH	nonFHH	FHH	nonFHH	FHH	nonFHH
1 reported female headed	0.383	0.485	0.132	0.195	0.065	0.104	0.182	0.259
2 reported dejure	0.377	0.483	0.132	0.193	0.066	0.103	0.181	0.257
3 reported defacto	0.345	0.469	0.129	0.185	0.067	0.098	0.174	0.247
4 reported fhh: unida	0.510	0.467	0.161	0.185	0.076	0.098	0.224	0.246
5 reported fhh: casada	0.251	0.470	0.094	0.185	0.043	0.098	0.116	0.247
6 reported fhh: div/sepa	0.382	0.472	0.141	0.186	0.069	0.099	0.187	0.249
7 reported fhh: widow	0.352	0.475	0.119	0.188	0.061	0.099	0.168	0.251
8 reported fhh: single	0.408	0.470	0.140	0.186	0.068	0.098	0.191	0.248
9 potential fhh	0.346	0.479	0.127	0.190	0.062	0.100	0.169	0.253
10 no adult male	0.321	0.503	0.115	0.201	0.057	0.107	0.156	0.267
11 female working head	0.301	0.487	0.098	0.194	0.045	0.103	0.134	0.259
12 core fhh	0.256	0.477	0.092	0.188	0.043	0.100	0.120	0.251

POV5.LOG

Indigenous areas

	Head Count		Poverty Gap*		P2**		P Sen***	
	FHH	nonFHH	FHH	NonFHH	FHH	nonFHH	FHH	NonFH H
1 reported female headed	0.907	0.908	<u>0.616</u>	0.604	<u>0.448</u>	0.438	0.703	0.703
2 reported dejure	0.936	0.905	0.635	0.603	0.466	0.437	0.732	0.700
3 reported defacto	0.785	0.913	0.526	0.609	0.375	0.442	0.592	0.707
4 reported fhh: unida	0.948	0.905	0.648	0.604	0.464	0.439	0.726	0.702
5 reported fhh: casada	0.730	0.912	0.486	0.608	0.351	0.442	0.545	0.706
6 reported fhh: div/sepa	1.000	0.904	0.706	0.601	0.542	0.435	0.808	0.698
7 reported fhh: widow	1.000	0.906	0.704	0.604	0.532	0.438	0.806	0.700
8 reported fhh: single	0.739	0.911	0.419	0.609	0.242	0.444	0.451	0.707
9 potential fhh	0.782	0.918	0.495	0.614	0.353	0.447	0.588	0.712
10 no adult male	0.803	0.917	0.503	0.615	0.354	0.447	0.598	0.712
11 female working head	0.799	0.918	0.470	0.619	0.314	0.452	0.566	0.715
12 core fhh	0.655	0.916	0.378	0.613	0.274	0.445	0.482	0.710

*poverty gap (P1), P2, and P Sen are defined, respectively, as: $P1 = \frac{1}{N} \sum_{i=1}^N \left(1 - \frac{x_i}{z}\right) I(x_i \leq z)$, $P2 = \frac{1}{N} \sum_{i=1}^N \left(1 - \frac{x_i}{z}\right)^2 I(x_i \leq z)$, and $Psen = P0\gamma^p + P1(1 - \gamma^p)$,

where x_i is the per capita household expenditures for household i , z is the amount of per capita household expenditure at the poverty line, ' $I(x_i \leq z)$ ' takes the value 1 if $x_i \leq z$ holds and 0 otherwise, $P0$ is the headcount poverty ratio, and γ^p is the Gini coefficient of inequality among the poor.

Table A19.4 - Estimated coefficients on female headship dummy in the per capita household expenditure determination regression*
(t statistics in parentheses)

Headship category	<i>Nationwide</i>		<i>Urban only</i>		<i>Rural only</i>		<i>Indigenous only</i>	
	Without household size	With household size	Without household size	With household size	Without household size	With household size	Without household size	With household size
reported FHH	0.0668 (2.54)	-0.1019 (-4.03)	-0.0120 (-1.24)	-0.1719 (-6.10)	0.1038 (2.33)	-0.0566(-1.32)	0.0403 (0.37)	-0.1165 (-1.10)
reported dejure	0.0926 (3.27)	-0.1082 (-3.94)	0.0077 (0.24)	-0.1835 (-6.09)	0.1222 (2.53)	-0.0701(-1.50)	0.0353 (0.27)	-0.1523 (-1.19)
reported defacto	0.1047 (1.50)	-0.0091 (-0.14)	0.1858 (2.26)	0.1009 (1.34)	0.0444 (0.36)	-0.0809(-0.69)	0.1841 (0.97)	0.0231 (0.12)
reported fhh: unida	-0.0604 (-1.004)	-0.0449 (-0.80)	-0.1395 (-2.03)	-0.1104 (-1.75)	0.0005 (0.01)	0.0219 (0.21)	0.0729 (0.44)	0.0421 (0.27)
reported fhh: casada	-0.0122 (-0.15)	-0.0075 (-0.80)	0.0674 (0.75)	0.0929 (1.13)	-0.0004 (-0.03)	-0.0120(-0.09)	-0.0844 (-0.33)	-0.1590 (-0.66)
reported fhh: div/sepa	0.0582 (1.54)	-0.0593 (-1.67)	-0.0438 (-1.08)	-0.1472 (-3.94)	0.1455 (2.14)	0.0180 (0.28)	-0.1106 (-0.65)	-0.2099 (-1.30)
reported fhh: widow	0.1036 (2.32)	-0.0448 (-1.07)	0.0808 (1.52)	-0.0420 (-0.86)	0.1031 (1.55)	-0.0662(-1.05)	0.1527 (0.63)	-0.1765 (-0.77)
reported fhh: single	0.0375 (0.92)	-0.1052 (-2.73)	0.0103 (0.24)	-0.1230 (-3.09)	-0.0139 (-0.18)	-0.1008(-1.41)	0.5415 (2.14)	0.1266 (0.51)
potential fhh	0.2202 (6.52)	-0.0438 (-1.32)	0.1970 (5.11)	-0.0567 (-1.51)	0.1730 (3.10)	-0.0484(-0.89)	0.4044 (2.60)	-0.0287 (-0.18)
no adult male	0.3046 (9.35)	-0.1105 (-3.17)	0.2911 (7.59)	-0.0926 (-2.29)	0.2850 (5.58)	-0.1165(-2.14)	0.4350 (2.85)	-0.0069 (-0.04)
female working head	0.3320 (4.68)	0.0214 (0.79)	0.0548 (1.72)	-0.0483 (-1.62)	0.1617 (3.20)	0.0537 (1.14)	0.3158 (2.46)	0.1776 (1.47)
core fhh	0.2340 (5.46)	-0.0604 (-1.46)	0.1687 (3.67)	-0.0876 (-1.97)	0.2442 (3.11)	-0.0275(-0.32)	0.4708 (2.08)	-0.1071 (-0.48)

^{hbreg3.log}

*Dependent variable is: logarithm of per capita household expenditure; control variables, in addition to female headship dummy, included are: age of household head and its squared, years of schooling of household head, agricultural land owned, logarithm of household size, share of household members by sex and age groups (female 0-4, male 0-4, female 5-9, male 5-9, female 10-14, male 10-14, female 15-54, male 15-54 and female 54-), and regional dummies. More detailed regression results are found in Appendix Table 3.

Table A19.5 - Age of Household Head by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	52.20	47.56	7.99	50.90	47.09	5.17	56.18	48.69	8.37	47.08	43.86	1.89
2 reported dejure	53.62	47.43	9.85	51.91	46.98	6.22	58.39	48.55	10.70	50.10	43.82	1.95
3 reported defacto	43.26	48.76	-3.05	42.16	48.30	-2.39	47.13	50.00	-1.20	40.00	44.52	-2.05
4 reported fhh: unida	41.30	48.84	-5.76	40.67	48.38	-4.55	42.03	50.10	-3.11	43.70	44.37	-0.37
5 reported fhh: casada	50.38	48.64	0.95	52.08	48.11	1.62	48.11	49.98	-0.67	42.73	44.38	-0.52
6 reported fhh: div/sepa	50.44	48.52	2.36	49.83	48.01	1.80	52.31	49.85	1.73	49.71	44.11	2.03
7 reported fhh: widow	65.89	47.59	20.94	65.76	47.01	15.51	66.36	48.94	14.27	60.12	44.01	2.24
8 reported fhh: single	46.30	48.83	-2.45	44.45	48.54	-3.40	53.64	49.82	2.20	40.76	44.42	-0.75
9 potential fhh	52.26	48.14	4.29	50.30	47.78	2.13	57.77	49.22	6.31	52.55	43.69	2.92
10 no adult male	59.83	45.81	17.57	56.67	45.80	9.87	65.63	46.18	23.55	55.28	43.37	3.29
11 female working head	38.95	40.33	-2.40	38.91	39.48	-0.79	39.36	42.13	-2.30	36.32	35.29	0.42
12 core fhh	38.61	40.22	-2.19	38.26	39.49	-1.39	39.99	41.93	-1.09	37.68	35.30	0.53

NOINC.LOG

Table A19.6 - Literacy Rate of Female Household Head by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.890	0.896	-0.54	0.965	0.971	-0.75	0.770	0.832	-2.30	0.181	0.603	-8.15
2 reported dejure	0.892	0.895	-0.19	0.968	0.969	-0.23	0.751	0.834	-2.81	0.098	0.580	-9.01
3 reported defacto	0.870	0.895	-0.67	0.949	0.969	-0.68	0.821	0.891	1.19	0.341	0.548	-1.79
4 reported fhh: unida	0.856	0.895	-1.24	0.932	0.970	-1.31	0.877	0.821	1.06	0.234	0.554	-2.79
5 reported fhh: casada	0.904	0.894	0.26	0.977	0.969	0.33	0.866	1.821	0.44	0.378	1.544	-1.23
6 reported fhh: div/sepa	0.889	0.895	-0.28	0.954	0.971	-1.01	0.788	0.823	-0.79	0.067	0.561	-7.33
7 reported fhh: widow	0.847	0.897	-2.42	0.963	0.969	-0.47	0.692	0.830	-3.30	0.00	0.552	-13.39
8 reported fhh: single	0.936	0.891	3.41	0.985	0.967	2.00	0.796	0.823	-0.59	0.261	0.546	-1.79
9 potential fhh	0.913	0.891	1.85	0.971	0.969	0.33	0.808	0.823	-0.43	0.355	0.555	-2.00
10 no adult male	0.863	0.902	-3.36	0.963	0.971	-0.93	0.716	0.847	-5.44	0.321	0.560	-2.61
11 female working head	0.960	0.904	6.10	0.981	0.975	0.78	0.937	0.841	4.11	0.565	0.629	-0.82
12 core fhh	0.947	0.890	4.26	0.976	0.968	0.75	0.876	0.819	1.22	0.516	0.541	-0.17

NOINC.LOG

Table A19.7 - Total Years of Schooling of Household Head by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	8.119	7.846	1.27	9.623	10.162	-2.16	4.842	5.342	-2.11	2.114	3.260	-1.54
2 reported dejure	8.224	7.832	1.67	9.852	10.058	-0.77	4.454	5.391	-3.58	0.838	3.292	-5.03
3 reported defacto	7.656	7.915	-0.55	8.617	10.034	-2.56	6.470	5.241	1.73	5.016	3.007	1.01
4 reported fhh: unida	7.172	7.928	-1.87	7.952	10.061	-4.45	6.865	5.229	2.23	2.448	3.117	-0.63
5 reported fhh: casada	8.189	7.906	0.55	8.851	10.027	-1.89	7.052	5.239	2.17	6.027	3.017	1.31
6 reported fhh: div/sepa	8.369	7.874	1.49	9.933	10.015	-0.22	4.570	5.291	-1.89	0.401	3.206	-6.05
7 reported fhh: widow	6.304	8.012	-5.01	8.114	10.133	-4.50	3.595	5.360	-5.37	0.000	3.153	-8.79
8 reported fhh: single	9.756	7.778	5.59	10.971	9.911	2.72	5.662	5.241	0.93	2.593	3.098	-0.32
9 potential fhh	8.913	7.763	4.71	10.362	9.940	1.56	5.414	5.241	0.47	3.485	3.056	0.30
10 no adult male	7.535	8.007	-2.08	9.635	10.112	-1.73	4.091	5.538	-6.49	3.147	3.082	0.05
11 female working head	10.279	8.152	10.32	11.026	10.313	3.02	8.461	5.718	8.32	5.064	3.793	1.31
12 core fhh	10.426	8.347	6.53	11.077	10.395	1.94	8.308	5.903	3.99	6.738	3.915	1.43

NOINC.LOG

Table A19.8 - Hours of Work of Household Heads by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	34.15	44.19	-9.67	33.44	45.37	-7.35	31.25	43.91	-7.75	26.68	34.10	-1.20
2 reported dejure	33.49	43.88	-9.68	34.98	44.96	-7.36	30.00	43.73	-7.88	27.30	33.99	-1.37
3 reported defacto	28.94	42.04	-4.96	26.99	42.83	-4.59	34.27	41.85	-1.77	27.10	33.70	-0.95
4 reported fhh: unida	38.08	41.91	-1.56	39.06	42.62	-1.13	39.62	41.79	-0.46	26.06	33.78	-1.47
5 reported fhh: casada	36.84	41.89	-1.45	36.60	42.63	-1.38	35.06	41.82	-1.13	44.95	33.16	0.71
6 reported fhh: div/sepa	34.75	42.37	-4.45	36.33	43.15	-3.54	31.27	42.28	-3.12	23.67	33.86	-1.70
7 reported fhh: widow	30.56	42.52	-6.86	32.41	43.20	-4.50	27.53	42.34	-6.11	30.23	33.51	-0.28
8 reported fhh: single	34.68	42.33	-4.67	35.37	43.23	-3.81	32.27	42.12	-4.43	31.82	33.47	-0.23
9 potential fhh	30.08	43.53	-11.64	30.83	44.72	-9.51	28.23	43.04	-7.42	27.67	33.90	-1.59
10 no adult male	23.29	46.54	-25.64	23.82	47.77	-18.93	22.18	46.47	-19.26	26.56	34.05	-2.14
11 female working head	43.64	41.46	2.37	43.20	42.35	0.78	45.36	41.33	2.18	40.42	32.76	1.25
12 core fhh	39.26	42.02	-2.56	40.07	42.80	-2.19	36.88	41.96	-1.95	31.96	33.49	-0.31

NOINC.LOG

Table A19.9 - Number of Children of Female Headed Households by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	1.03	1.46	-7.97	0.97	1.20	-3.42	1.02	1.56	-6.11	2.37	3.53	-3.74
2 reported dejure	0.92	1.47	-10.18	0.89	1.21	-4.85	1.57	0.88	-8.29	2.47	3.44	-1.95
3 reported defacto	1.48	1.36	0.68	1.44	1.13	1.53	1.41	1.47	-0.17	1.86	3.42	-3.00
4 reported fhh: unida	1.90	1.35	3.28	1.65	1.12	2.73	2.19	1.46	2.11	2.80	3.39	-1.36
5 reported fhh: casada	1.09	1.37	-1.82	1.06	1.13	-0.43	1.16	1.47	-1.00	1.19	3.41	-3.81
6 reported fhh: div/sepa	1.14	1.38	-2.82	1.09	1.14	-0.49	1.17	1.48	-2.80	2.51	3.40	-1.72
7 reported fhh: widow	0.70	1.40	-9.18	0.64	1.17	-5.18	0.66	1.52	-8.58	3.56	3.36	0.14
8 reported fhh: single	0.87	1.40	-5.83	0.87	1.16	-2.69	0.85	1.49	-4.71	1.30	3.40	-3.29
9 potential fhh	1.05	1.41	-5.21	0.99	1.16	-2.05	1.13	1.50	-3.05	1.92	3.47	-3.86
10 no adult male	0.70	1.53	-14.80	0.73	1.25	-7.34	0.59	1.68	-11.97	1.84	3.50	-4.56
11 female working head	1.13	1.41	-4.80	1.02	1.16	-2.17	1.30	1.49	-1.70	2.70	3.42	-2.12
12 core fhh	1.01	1.39	-4.34	0.95	1.15	-2.02	1.18	1.48	-1.93	1.60	3.42	-3.39

NOINC.LOG

Table A19.10 - Household size of Female Headed Households by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	3.61	4.38	-8.57	3.55	4.20	-5.43	3.54	4.29	-6.44	5.52	7.03	-2.96
2 reported dejure	3.41	4.39	-11.47	3.38	4.22	-7.59	3.33	4.30	-7.92	5.46	6.91	-2.24
3 reported defacto	3.95	4.20	-0.93	3.94	4.02	-0.19	3.67	4.17	-1.16	4.66	6.89	-2.78
4 reported fhh: unida	4.92	4.18	2.75	4.62	4.00	2.05	5.23	4.14	1.75	6.26	6.83	-0.81
5 reported fhh: casada	4.22	4.20	0.07	3.38	4.01	0.98	3.75	4.16	-1.35	4.32	6.86	-2.62
6 reported fhh: div/sepa	3.72	4.24	-4.20	3.67	4.05	-2.52	3.63	4.19	-2.73	5.96	6.84	-1.61
7 reported fhh: widow	3.25	4.26	-7.08	3.29	4.06	-4.03	3.02	4.23	-6.24	7.00	6.80	0.11
8 reported fhh: single	3.20	4.27	-7.23	3.15	4.10	-5.27	3.43	4.19	-3.60	2.86	6.89	-4.87
9 potential fhh	3.18	4.35	-12.77	3.11	4.18	-9.23	3.29	4.24	-6.59	3.97	7.03	-5.69
10 no adult male	2.54	4.62	-26.28	2.65	4.40	-17.66	2.29	4.61	-17.78	3.85	7.07	-6.64
11 female working head	3.68	4.30	-7.22	3.54	4.14	-5.82	3.87	4.19	-2.00	5.84	6.90	-1.73
12 core fhh	3.07	4.29	-10.221	3.02	4.12	-7.72	3.27	4.20	-4.750	4.08	6.92	-5.466

NOINC.LOG

Table A19.11 - Dependency Ratio of Female Headed Households by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.484	0.548	-2.12	0.479	0.450	0.78	0.465	0.606	-2.94	0.784	1.116	-3.26
2 reported dejure	0.443	0.555	-3.47	0.448	0.461	-0.32	0.398	0.613	-4.75	0.899	1.082	-1.04
3 reported defacto	0.845	0.527	2.67	0.848	0.450	2.78	0.927	0.578	1.24	0.622	1.085	-2.69
4 reported fhh: unida	0.834	0.525	3.36	0.806	0.449	3.05	0.900	0.577	1.76	0.835	1.077	-1.62
5 reported fhh: casada	0.479	0.533	-0.59	0.417	0.459	-0.55	0.707	0.581	0.43	0.281	1.085	-6.89
6 reported fhh: div/sepa	0.594	0.528	1.18	0.586	0.445	1.95	0.575	0.583	-0.11	0.975	1.071	-0.40
7 reported fhh: widow	0.249	0.550	-9.70	0.207	0.475	-7.89	0.289	0.600	-5.35	0.904	1.070	-0.42
8 reported fhh: single	0.450	0.539	-1.71	0.474	0.456	0.27	0.342	0.591	-4.26	0.739	1.074	-1.10
9 potential fhh	0.647	0.516	2.88	0.636	0.425	3.73	0.654	0.575	0.99	0.891	1.081	-1.21
10 no adult male	0.437	0.557	-3.45	0.471	0.454	0.37	0.354	0.637	-5.62	0.855	1.086	-1.68
11 female working head	0.534	0.532	0.04	0.501	0.446	1.55	0.594	0.581	0.21	0.922	1.081	-1.91
12 core fhh	0.634	0.524	2.06	0.605	0.442	2.72	0.711	0.577	1.15	0.980	1.069	-0.31

NOINC.LOG

Table A19.12 - Dependence on Transfer Income of Female Headed Households by Alternative Headship Definitions

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.124	0.076	5.81	0.104	0.047	7.10	0.152	0.087	3.67	0.363	0.303	0.91
2 reported dejure	0.121	0.079	4.59	0.104	0.050	5.76	0.157	0.088	3.33	0.266	0.316	-0.84
3 reported defacto	0.191	0.086	3.78	0.150	0.061	3.43	0.181	0.097	1.64	0.463	0.306	1.56
4 reported fhh: unida	0.146	0.086	2.87	0.129	0.061	3.06	0.082	0.098	-0.56	0.467	0.305	1.26
5 reported fhh: casada	0.133	0.087	1.63	0.068	0.063	0.28	0.192	0.097	1.58	0.514	0.307	2.38
6 reported fhh: div/sepa	0.102	0.086	1.25	0.086	0.061	1.76	0.129	0.096	1.62	0.265	0.314	-0.68
7 reported fhh: widow	0.140	0.084	3.39	0.116	0.059	4.30	0.172	0.093	2.10	0.303	0.312	-0.08
8 reported fhh: single	0.126	0.085	2.57	0.113	0.058	3.37	0.169	0.095	1.62	0.231	0.313	-0.77
9 potential fhh	0.121	0.083	3.66	0.110	0.054	4.74	0.136	0.094	1.89	0.278	0.315	-0.50
10 no adult male	0.135	0.075	6.35	0.113	0.049	6.18	0.164	0.082	4.69	0.315	0.311	0.04
11 female working head	0.086	0.088	-0.18	0.079	0.059	2.90	0.088	0.099	-0.87	0.291	0.314	-0.24
12 core fhh	0.102	0.086	1.48	0.100	0.059	3.41	0.100	0.098	0.13	0.211	0.315	-1.47

NOINC.LOG

Table A19.13 - School Enrollment Ratios of Children by Alternative Headship Definitions: Primary school age (Boys age 6-12)

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.981	0.946	3.43	0.985	0.975	0.70	1.000	0.942	6.00	0.884	0.839	0.78
2 reported dejure	0.982	0.948	3.15	0.986	0.975	0.73	1.000	0.944	5.95	0.829	0.846	-0.25
3 reported defacto	0.957	0.953	0.14	0.956	0.978	-0.51	1.000	0.948	5.92	0.890	0.843	0.40
4 reported fhh: unida	0.969	0.952	0.72	0.969	0.978	-0.26	1.000	0.947	5.94	0.923	0.840	0.92
5 reported fhh: casada	1.000	0.952	7.37	1.000	0.977	2.73	1.000	0.948	5.93	1.000	0.843	4.66
6 reported fhh: div/sepa	0.970	0.951	1.01	0.971	0.978	-0.32	1.000	0.947	5.92	0.896	0.843	0.62
7 reported fhh: widow	0.979	0.952	1.68	1.000	0.977	2.73	1.000	0.947	5.95	0.500	0.849	-1.48
8 reported fhh: single	1.000	0.950	7.40	1.000	0.976	2.74	1.000	0.947	5.91	1.000	0.843	4.60
9 potential fhh	0.975	0.950	1.97	0.990	0.976	1.02	0.976	0.946	1.27	0.71	0.849	-0.66
10 no adult male	0.977	0.949	2.23	0.990	0.975	1.06	0.979	0.945	1.70	0.789	0.848	-0.54
11 female working head	0.979	0.948	2.75	0.983	0.976	0.50	0.979	0.945	2.04	0.914	0.839	1.05
12 core fhh	0.978	0.951	1.77	0.984	0.977	0.35	1.000	0.946	5.94	0.700	0.848	-0.80

NOINC.LOG

(Girls age 6-12)

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.971	0.960	0.95	0.983	0.992	-0.80	0.963	0.950	0.56	0.863	0.856	0.13
2 reported dejure	0.974	0.960	1.27	0.991	0.989	0.33	0.962	0.951	0.41	0.761	0.864	-1.33
3 reported defacto	0.938	0.962	-0.53	0.935	0.991	-0.89	0.908	0.952	-0.54	1.000	0.854	5.00
4 reported fhh: unida	0.942	0.962	-0.59	0.923	0.992	-1.29	0.959	0.952	0.19	1.000	0.852	5.01
5 reported fhh: casada	1.000	0.961	7.94	1.000	0.990	2.61	1.000	0.952	5.67	1.000	0.856	5.01
6 reported fhh: div/sepa	0.986	0.960	2.19	1.000	0.989	2.60	1.000	0.949	5.72	0.703	0.862	-1.04
7 reported fhh: widow	0.939	0.963	-0.69	1.000	0.989	2.60	0.898	0.954	-0.78	0.750	0.860	-0.61
8 reported fhh: single	0.982	0.961	1.65	0.978	0.991	-0.94	1.000	0.951	5.69	1.000	0.856	4.94
9 potential fhh	0.975	0.960	0.96	0.977	0.992	-0.81	0.979	0.949	1.22	0.891	0.856	0.35
10 no adult male	0.975	0.960	1.07	0.978	0.992	-0.80	0.980	0.949	1.37	0.891	0.856	0.35
11 female working head	0.980	0.959	2.38	0.984	0.991	-0.76	0.991	0.948	3.07	0.871	0.856	0.22
12 core fhh	0.980	0.961	1.34	0.974	0.991	-0.96	1.000	0.950	5.63	1.000	0.856	4.99

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Table A19.14 - School Enrollment Ratios of Children by Alternative Headship Definitions: Secondary school age (Boys age 13-18)

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.730	0.676	1.64	0.857	0.854	0.10	0.471	0.530	-0.84	0.401	0.435	-0.26
2 reported dejure	0.728	0.679	1.37	0.867	0.852	0.40	0.440	0.532	-1.34	0.336	0.439	-0.72
3 reported defacto	0.780	0.685	1.04	0.864	0.855	0.10	0.534	0.521	0.05	0.222	0.434	-1.11
4 reported fhh: unida	0.665	0.688	-0.30	0.713	0.861	-1.54	0.598	0.519	0.60	0.543	0.427	0.48
5 reported fhh: casada	0.874	0.684	2.92	1.000	0.852	8.93	0.545	0.521	0.12	0.444	0.431	0.04
6 reported fhh: div/sepa	0.725	0.684	0.85	0.853	0.856	-0.05	0.513	0.522	-0.08	0.336	0.437	-0.68
7 reported fhh: widow	0.759	0.684	0.17	0.933	0.851	1.75	0.276	0.527	-1.91	0.500	0.430	0.20
8 reported fhh: single	0.708	0.686	0.39	0.857	0.835	-0.37	0.424	0.524	-0.91	0.000	0.433	-9.03
9 potential fhh	0.825	0.682	2.40	0.919	0.852	1.17	0.548	0.520	0.18	1.000	0.417	11.84
10 no adult male	0.833	0.680	2.78	0.921	0.852	1.23	0.640	0.516	1.07	1.000	0.413	11.64
11 female working head	0.853	0.658	6.44	0.894	0.846	1.41	0.790	0.491	5.15	0.579	0.419	1.24
12 core fhh	0.931	0.682	4.80	1.000	0.851	8.90	0.727	0.518	1.20	1.000	0.424	11.71

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(Girls age 13-18)

	Nation wide			Urban			Rural			Indigenous		
	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.	FHH	nonFHH	t stat.
1 reported female headed	0.730	0.728	0.04	0.800	0.850	-1.30	0.660	0.650	0.18	0.337	0.332	0.04
2 reported dejure	0.749	0.724	0.77	0.827	0.840	-0.33	0.648	0.652	-0.08	0.207	0.348	-0.23
3 reported defacto	0.535	0.732	-1.67	0.495	0.841	-2.11	0.630	0.652	-0.12	0.500	0.325	0.60
4 reported fhh: unida	0.663	0.731	-0.78	0.669	0.842	-1.68	0.804	0.648	0.85	0.354	0.332	0.12
5 reported fhh: casada	0.561	0.730	-1.13	0.502	0.839	-1.33	0.506	0.653	-0.63	0.737	0.320	1.62
6 reported fhh: div/sepa	0.704	0.731	-0.51	0.774	0.843	-1.07	0.654	0.651	0.03	0.115	0.345	-1.86
7 reported fhh: widow	0.721	0.729	-0.13	0.805	0.838	-0.40	0.686	0.650	0.34	0.167	0.339	-1.23
8 reported fhh: single	0.827	0.722	2.42	0.895	0.830	1.61	0.590	0.654	-0.49	0.611	0.329	0.86
9 potential fhh	0.834	0.710	3.78	0.901	0.821	2.44	0.682	0.648	0.47	0.500	0.326	0.76
10 no adult male	0.836	0.709	3.97	0.904	0.820	2.62	0.690	0.646	0.61	0.500	0.326	0.76
11 female working head	0.809	0.710	3.18	0.901	0.816	2.65	0.641	0.653	-0.18	0.314	0.335	-0.14
12 core fhh	0.852	0.716	3.71	0.913	0.825	2.48	0.676	0.650	0.28	0.440	0.331	0.36

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