Unpacking Household Engel Curves

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A1. An example of Engel's Law with constant individual budget shares

Engel's Law (that the share devoted to food falls as income rises) is typically attributed to consumer preferences. Here we illustrate that it can also arise from how intra-household inequality interacts with heterogeneity in preferences within the household.

Following the literature on non-unitary models, we imagine a two-stage structure. For the purpose of this example, our characterization of the first stage follows Kanbur and Haddad (1994) in assuming that intra-household inequality in spending emerges from Nash model of intra-household bargaining with unequal threat points (reservation incomes if the household breaks apart). We assume that a Nash bargain is struck for sharing household income Y_j (for household j) between two types of people, labelled 1 and 2, with given threat points $T_{1j} > T_{2j}$. The solution for (Y_{1j}, Y_{2j}) maximizes $(Y_{1j} - T_{1j})(Y_{2j} - T_{2j})$ subject to $Y_{1j} + Y_{2j} = Y_j$. Then the share of Y_j going to person 1 is:

$$\delta_{1j} \equiv \frac{Y_{1j}}{Y_j} = 0.5 + \frac{T_{1j} - T_{2j}}{Y_j} > 0.5 \tag{A1}$$

Notice that δ_{1j} falls as Y_j increases. The bargained shares tend toward equality as one expands the total, although the shares will never reach equality, given the inequality in threat points.

In the second stage, each individual allocates their share of total spending across "food" and "non-food" goods. The new observation here is that the inequality that emerges in the first

stage has implications for household Engel curves when there are also differences in preferences within the household. To make the argument stark, let us suppose that each individual has Cobb-Douglas preferences over food and non-food consumption, Y_{ij}^F, Y_{ij}^N respectively for person i (=1,2) in household j, with a weight on (log) food consumption of α_i, which is taken to be constant across households for a given type of person. Consumption choices are constrained by the intra-household allocation of income, as emerges from the first stage of Nash bargaining. Given Cobb-Douglas preferences, the food share is constant, being equated with α_i.

In this model, Engel's Law does not hold at the individual level; the own-income elasticity of demand for food (and non-food) is unity. Nonetheless, the household aggregate food share can vary with household total income as long as preferences and threat points differ between people. Specifically, it is readily verified that the household aggregate food share is:

$$S_j^F = \alpha_1 \delta_{1j} + \alpha_2 \delta_{2j} = \frac{\alpha_1 + \alpha_2}{2} + \frac{(\alpha_1 - \alpha_2)(T_{1j} - T_{2j})}{Y_j} \tag{A2}$$

Only if either preferences are the same ($\alpha_1 = \alpha_2$) or the threat points are the same ($T_{1j} = T_{2j}$) will the household aggregate food share identify the mean of the individual food shares, with Engel's Law failing to hold. A case consistent with Engel's Law is when partner 1, with the higher threat point, also has the stronger preference for food.

Notice that an Engel curve motivated by (A2) is not estimable when the threat points in intra-household bargaining are unobserved, as is typically the case. Instead, the estimable model takes the form:

$$S_j^F = \frac{\alpha_1 + \alpha_2}{2} + \frac{(\alpha_1 - \alpha_2)(\bar{T}_1 - \bar{T}_2)}{Y_j} + \varepsilon_j \tag{A3}$$

Here $\bar{T}_i$ is the mean threat point for type i persons, and $(\alpha_1 - \alpha_2)(\bar{T}_1 - \bar{T}_2)$ becomes a parameter, with the regression error term:

$$\varepsilon_j = \frac{(\alpha_1 - \alpha_2)[(T_{1j} - \bar{T}_1) - (T_{2j} - \bar{T}_2)]}{Y_j} \quad \text{with } E\left(\varepsilon_j \left| \frac{1}{Y_j} \right.\right) = 0 \tag{A4}$$

Thus, OLS applied to (A3) using only household level data will give consistent estimates of the household Engel parameters, although the coefficients (α_1, α_2) for person-types are not identified. However, as Section 2 shows, this unbiasedness property does not hold when we consider the more complex, and more widely used, Working-Leser specification for the Engel curves, allowing non-constant individual budget shares.

A2. Unpacking quadratic household Engel Curves.

The "unpacked" Working-Leser Engel curve for consumption by person i (of type $t(i,j)$) in household j for an assigned private good of type k (=1,..,K) is:

$$S_{ij}^k = \alpha_t^k + \beta_t^k \ln Y_j + \gamma_t^k \ln Y_{ij} + \rho_{1t}^k \ln Y_j ln Y_{ij} + \rho_{2t}^k (\ln Y_j)^2 + \rho_{3t}^k (ln Y_{ij})^2 + \eta_j^k + \varepsilon_{ij}^k$$

$$(i=1,..,n_j; j=1,..,m; t= t(i,j)) \tag{A5}$$

where S_{ij}^k is the share of person i's total expenditure Y_{ij} devoted to good k and (for notational convenience) Y_j is redefined as total household expenditure (not per capita), η_j^k is a household effect and ε_{ij}^k is an innovation error term. To derive the estimable household-level Engel curves we can proceed as before by first eliminating the (unobserved) intra-household values of Y_{ij} by re-writing (A5) as:

$$S_{ij}^k = \alpha_t^k + (\beta_t^k + \gamma_t^k + (\rho_{1t}^k + 2\rho_{3t}^k) ln\delta_{ij}) \ln Y_j + (\rho_{1t}^k + \rho_{2t}^k + \rho_{3t}^k)(ln Y_j)^2 + v_{ij}^k \tag{A6}$$

Here the new error term is:

$$v_{ij}^k \equiv \gamma_t^k \ln \delta_{ij} + \rho_{3t}^k (ln\delta_{ij})^2 + \eta_j^k + \varepsilon_{ij}^k \tag{A7}$$

where $\delta_{ij} \equiv Y_{ij}/Y_j$ is the relative income for person i in household j. Next, on aggregating the budget shares at the household level for good k we have:

$$S_j^k = \sum_{i=1}^n \delta_{ij} S_{ij}^k = \alpha_j^k + (\beta_j^k + \gamma_j^k + \rho_j^k) \ln Y_j + r_j^k (ln Y_j)^2 + v_j^k \tag{A8}$$

Here the household-level Engel-curve parameters are related to the unpacked parameters as follows:

$$\alpha_j^k \equiv \sum_{i=1}^n \delta_{ij} \alpha_t^k; \ \ \beta_j^k + \gamma_j^k \equiv \sum_{i=1}^n \delta_{ij}(\beta_t^k + \gamma_t^k);$$

$$\rho_j^k = \sum_{i=1}^n \delta_{ij}(\rho_{1t}^k + 2\rho_{3t}^k) ln\delta_{ij} = T_{1j}^k$$

$$r_j^k = \sum_{i=1}^n \delta_{ij}(\rho_{1t}^k + \rho_{2t}^k + \rho_{3t}^k) \tag{A9}$$

The error term of the household Engel curve is:

$$v_j^k = \sum_{i=1}^n \delta_{ij} v_{ij}^k = T_{2j}^k + T_{3j}^k + \eta_j^k + \sum_{i=1}^n \delta_{ij}\varepsilon_{ij}^k \tag{A10}$$

where:

$$T_{2j}^k \equiv \sum_{i=1}^n \gamma_t^k \delta_{ij} \ln \delta_{ij} \ and \ T_{3j}^k \equiv \sum_{i=1}^n \rho_{3t}^k \delta_{ij}(\ln \delta_{ij})^2 \tag{A11}$$

A3. Derivation of the key property of the Mundlak estimator

Our estimated model can be written as:

$$y_{ih} = x'_{ih}\beta + z'_h\gamma + \mu_h + \varepsilon_{ih} \quad (i = 1,..,n_h; \; h = 1,..,H) \tag{A12}$$

Where it is assumed that the model includes a constant term, H is the number of households, n_h the number of cells within household h and μ_h is a household specific fixed effect, that is assumed correlated with observable explanatory variables. The Mundlak (1978) estimation strategy amounts to assuming that:

$$\mu_h = \bar{x}'_h b + z'_h c + u_h \; with \; \bar{x}'_h = \frac{1}{n_h}\sum_{i=1}^{n_h} x_{ih} \tag{A13}$$

Then, substituting in the estimated equation, one gets:

$$y_{ih} = x'_{ih}\beta + z'_h(\gamma + c) + \bar{x}'_h b + u_h + \varepsilon_{ih} \tag{A14}$$

It is then easy to show that the OLS estimator of β in this equation is the same as the fixed effect estimator of β in equation (A12). This can be verified as a straightforward application of the Frisch and Waugh (1933) theorem. The estimator of β in equation (A14) can be obtained by first estimating the following two equations:

$$y_{ih} = z'_h a_1 + \bar{x}'_h a_2 + v_h \tag{A15.1}$$

$$x_{ih} = z'_h b_1 + \bar{x}'_h b_2 + w_h \tag{A15.2}$$

Frisch and Waugh (1933) then show that the estimator of β in equation (A14) can be obtained by regressing the OLS residuals of equation (A15.1) on those of equation (A15.2). Following OLS estimation, we have from equation (A15.1):

$$\widehat{y_{ih}} = z'_h \widehat{a_1} + \bar{x}'_h \widehat{a_2} = \overline{\widehat{y_h}}$$

and, since the model includes a constant term, $\bar{y}_h = \overline{\widehat{y_h}}$. Similarly, it follows from the OLS estimation of equation (A15.2) that $\bar{x}_h = \overline{\widehat{x_h}}$. Then, the residuals of equations (A15.1) and (A15.2) are equal respectively to $y_{ih} - \widehat{y_{ih}} = y_{ih} - \bar{y}_h$ and $x_{ih} - \widehat{x_{ih}} = x_{ih} - \bar{x}_h$. Now applying the Frisch-Waugh theorem, it follows that the OLS estimator of β in equation (A14) is identical

to the OLS estimator one gets when regressing $y_{ih} - \bar{y}_h$ on $x_{ih} - \bar{x}_h$, which is nothing else than the fixed effect estimator.

A4. Mundlak estimates for the augmented specification

The following table is similar to Table 2, for an Engel curve specification that includes the following supplementary control variables: age, sex and education of household head; age and education of cell head; number of children less than 10 in household and household structure.

	Food	(Public)	Transport	Clothing	Education	Other
β for head's cell	-0.080	-0.008	-0.025	0.002	0.076	0.036
(s.e.)	(0.041)	(0.022)	(0.026)	(0.021)	(0.013)	(0.032)
β for spouses' cell type	-0.075	-0.009	-0.029	-0.028	0.079	0.061
(s.e.)	(0.051)	(0.027)	(0.032)	(0.027)	(0.017)	(0.041)
β for o. members' cells	-0.024	-0.006	-0.022	-0.051	0.077	0.026
(s.e.)	(0.049)	(0.026)	(0.031)	(0.026)	(0.016)	(0.039)
γ for head's cell	-0.203	-0.036	0.099	0.019	0.018	0.102
(s.e)	(0.016)	(0.009)	(0.010)	(0.008)	(0.005)	(0.013)
γ for spouses' cells	-0.203	-0.037	0.089	0.055	0.022	0.074
(s.e)	(0.021)	(0.011)	(0.013)	(0.011)	(0.007)	(0.017)
γ for o. members's cells	-0.260	-0.035	0.083	0.077	0.025	0.111
(s.e.)	(0.018)	(0.010)	(0.011)	(0.009)	(0.006)	(0.014)
β+γ for head's cell	-0.283	-0.044	0.074	0.021	0.094	0.138
(s.e)	(0.044)	(0.023)	(0.028)	(0.023)	(0.014)	(0.035)
β+γ for spouses' cells	-0.278	-0.046	0.061	0.027	0.101	0.135
(s.e)	(0.045)	(0.024)	(0.028)	(0.024)	(0.015)	(0.036)
β+γ for o. members' cells	-0.284	-0.041	0.061	0.025	0.102	0.136
(s.e)	(0.046)	(0.024)	(0.029)	(0.024)	(0.015)	(0.036)
F stat. spouses vs head diff.	0.181	0.054	4.169	1.401	4.145	0.150
(p-value)	(0.671)	(0.817)	(0.041)	(0.236)	(0.042)	(0.699)
F stat. other vs head diff.	0.005	0.234	2.489	0.430	3.424	0.034
(p-value)	(0.943)	(0.629)	(0.115)	(0.512)	(0.064)	(0.853)
β+γ from hhld level regression	-0.103	0.003	0.052	0.001	0.004	0.044
(s.e.)	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.005)
β+γ from cell level regressions	-0.281	-0.044	0.065	0.025	0.099	0.137
(s.e.)	(0.044)	(0.024)	(0.028)	(0.023)	(0.015)	(0.035)
t stat. hhold vs cell reg. diff.	3.983	1.979	-0.487	-1.020	-6.400	-2.602
(p-value)	(0.000)	(0.048)	(0.626)	(0.308)	(0.000)	(0.009)
Chi2 stat. Hausman test for f.e.	135.844	121.198	99.323	103.602	206.664	87.356
(p-value)	(0.000)	(0.000)	(0.022)	(0.011)	(0.000)	(0.121)
Number of households	1,429	1,429	1,429	1,429	1,429	1,429
Number of cells	3,976	3,976	3,976	3,976	3,976	3,976

Source: PSF survey, authors' calculations.

Note: Other covariates in regressions include urban and regional dummies, together with (log) household size and (log) cell size. Supplementary control variables are: age, age^2, sex and education of household head ; age, age^2 and education of cell head ; number of children less than 10 in household and household structure. Standard errors in parentheses.

The β are the coefficients of total household expenditures in cell level Engel curves, while the γ are the coefficients of own (cell) expenditures.

β+γ from hhld regression is the standard Engel coefficient obtained from regression at the household level, while *β+γ from cell regressions* is the comparable Engel coefficient obtained by consistently aggregating cell level estimates.

A5. Mundlak estimates for the quadratic Engel curves

Coefficients of the Engel curves for each cell type have been omitted from the table but are available from the authors.

	Food	(Public)	Transport	Clothing	Education	Other
Log h'hold exp. from h'hold reg. $(\beta+\gamma+\rho)$	0.482	0.209	-0.452	-0.036	-0.019	-0.183
(s.e.)	(0.119)	(0.063)	(0.073)	(0.058)	(0.045)	(0.090)
Log h'hold exp. from cell reg. $(\beta+\gamma+\rho)$	0.904	0.911	-0.388	-0.882	-0.142	-0.402
(s.e.)	(0.705)	(0.382)	(0.433)	(0.369)	(0.236)	(0.558)
z stat. h'hold vs cell reg. diff.	-0.340	-1.130	-0.070	1.890	0.530	0.190
(p-value)	(0.737)	(0.259)	(0.940)	(0.059)	(0.599)	(0.852)
[log h'hold exp.]² from h'hold reg. (r)	-0.020	-0.007	0.017	0.001	0.001	0.008
(s.e.)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
[log h'hold exp.]² from cell reg. (r)	-0.064	-0.051	-0.008	0.080	0.018	0.026
(s.e.)	(0.038)	(0.020)	(0.023)	(0.020)	(0.013)	(0.030)
z stat. h'hold vs cell reg. diff.	0.680	1.270	0.670	-2.760	-0.950	-0.310
(p-value)	(0.494)	(0.204)	(0.502)	(0.006)	(0.343)	(0.759)
log h'hold exp. $(\beta+\gamma+\rho+2r\ln Y)$ (h'hold reg)	-0.107	0.004	0.047	0.002	0.008	0.047
(s.e.)	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.004)
log h'hold exp. (cell reg) $(\beta+\gamma+\rho+2r\ln Y)$	-0.963	-0.565	-0.634	1.444	0.376	0.343
(s.e.)	(0.646)	(0.349)	(0.397)	(0.338)	(0.216)	(0.511)

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses. $\beta+\gamma+\rho+2r\ln Y$ evaluated at mean points. z-stats are computed using bootstrap simulations with 50 replications. Other covariates in regressions include urbanization and regional dummies, together with (log) household size and (log) cell size.

A6. Mundlak estimates, augmented specification with *β=0*, save education

This table is similar to Table 3, for an Engel curve specification that includes the following supplementary control variables: age, sex and education of household head; age and education of cell head; number of children less than 10 in household and household structure.

	Food	Common	Transport	Clothing	Education	Other goods/services
β for head's cell	0.000	0.000	0.000	0.000	0.076	0.000
(s.e.)	(0.000)	(0.000)	(0.000)	(0.000)	(0.013)	(0.000)
β for spouses' cell type	0.000	0.000	0.000	0.000	0.079	0.000
(s.e.)	(0.000)	(0.000)	(0.000)	(0.000)	(0.017)	(0.000)
β for o. members' cells	0.000	0.000	0.000	0.000	0.077	0.000
(s.e.)	(0.000)	(0.000)	(0.000)	(0.000)	(0.016)	(0.000)
γ for head's cell	-0.217	-0.037	0.099	0.039	0.018	0.098
(s.e)	(0.009)	(0.005)	(0.006)	(0.005)	(0.005)	(0.007)
γ for spouses' cells	-0.213	-0.038	0.086	0.048	0.022	0.093
(s.e)	(0.012)	(0.006)	(0.007)	(0.006)	(0.007)	(0.009)
γ for o. members's cells	-0.230	-0.034	0.086	0.053	0.025	0.100
(s.e.)	(0.012)	(0.006)	(0.008)	(0.006)	(0.006)	(0.010)
β+γ for head's cell	-0.217	-0.037	0.099	0.039	0.094	0.098
(s.e)	(0.009)	(0.005)	(0.006)	(0.005)	(0.014)	(0.007)
β+γ for spouses' cells	-0.213	-0.038	0.086	0.048	0.101	0.093
(s.e)	(0.012)	(0.006)	(0.007)	(0.006)	(0.015)	(0.009)
β+γ for o. members' cells	-0.230	-0.034	0.086	0.053	0.102	0.100
(s.e)	(0.012)	(0.006)	(0.008)	(0.006)	(0.015)	(0.010)
F stat. spouses vs head diff.	0.108	0.056	4.283	3.139	4.145	0.383
(p-value)	(0.742)	(0.813)	(0.039)	(0.076)	(0.042)	(0.536)
F stat. other vs head diff.	1.208	0.204	3.427	5.388	3.424	0.034
(p-value)	(0.272)	(0.652)	(0.064)	(0.020)	(0.064)	(0.854)
F stat. spouses vs other diff.	1.568	0.352	0.005	0.532	0.038	0.419
(p-value)	(0.210)	(0.553)	(0.943)	(0.466)	(0.846)	(0.517)
β+γ from hhld level regression	-0.103	0.003	0.052	0.001	0.004	0.044
(s.e.)	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.005)
β+γ from cell level regressions	-0.218	-0.037	0.091	0.046	0.099	0.096
(s.e.)	(0.009)	(0.005)	(0.006)	(0.005)	(0.015)	(0.007)
t stat. hhold vs cell reg. diff.	10.428	6.760	-5.666	-8.093	-6.403	-6.052
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of households	1,429	1,429	1,429	1,429	1,429	1,429
Number of cells	3,976	3,976	3,976	3,976	3,976	3,976

Source: PSF survey, authors' calculations.

Note: Other covariates in regressions include urban and regional dummies, together with (log) household size and (log) cell size.
Supplementary control variables are: age, age^2, sex and education of household head ; age, age^2 and education of cell head ; number of children less than 10 in household and household structure. Standard errors in parentheses.
The β are the coefficients of total household expenditures in cell level Engel curves, while the γ are the coefficients of own (cell) expenditures. *β+γ from hhld regression* is the standard Engel coefficient obtained from regression at the household level, while *β+γ from cell regressions* is the comparable Engel coefficient obtained by consistently aggregating cell level estimates.

A7. Impact of confounders on log household exp. per capita coefficient

Augmented specification

This table is similar to Table 4, for an Engel curve specification that includes the following supplementary control variables: age, sex and education of household head; age and education of cell head; number of children less than 10 in household and household structure.

	Food	(Public)	Transport	Clothing	Education	Other
β+γ from hhld regression	-0.103	0.003	0.052	0.001	0.004	0.044
No extra covariate	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.005)
(1) γ-weighted Theil only	-0.086	0.004	0.042	-0.002	0.004	0.041
	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.005)
(2) Fixed effect only	-0.215	-0.035	0.103	0.026	0.030	0.103
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
(1) + (2)	-0.204	-0.034	0.097	0.024	0.030	0.100
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
β+γ from cell regression	-0.281	-0.044	0.065	0.025	0.099	0.137
No extra covariate	(0.044)	(0.024)	(0.028)	(0.023)	(0.015)	(0.035)

Source: PSF survey, authors' calculations.

Note: standard errors are between parentheses. Other covariates include (log) household size, and regional and rural/urban dummies. Supplementary control variables are: age, age^2, sex and education of household head ; age, age^2 and education of cell head ; number of children less than 10 in household and household structure. The table shows the values of the log household per capita expenditure coefficient in a household level Engel curve estimation (equation (9)). The first line shows the results obtained when the expenditure for a given class of items is regressed on log household expenditures per capita with controls for log household size and location dummies (as in table 2, line *β+γ from hhld regression*). Lines 2 to 4 show the values of the coefficient when the γ-weighted Theil is added to the regressors (line 2), or the fixed effect (line 3) or both (line 4). The last line displays the values obtained when the coefficient is built by consistently aggregating estimates of the cell level Engel curves following equation (10) (same as table 2, line *β+γ from cell regression)*.

A8. OLS estimates of Engel curves for the augmented specification

This table is similar to table 5, for an Engel curve specification that includes the following supplementary control variables: age, sex and education of household head; age and education of cell head; number of children less than 10 in household and household structure.

	Food	(Public)	Transport	Clothing	Education	Other
β for head's cell	0.142	0.032	-0.068	-0.036	-0.004	-0.066
(s.e.)	(0.014)	(0.008)	(0.009)	(0.008)	(0.005)	(0.011)
β for spouses' cell type	0.051	0.040	-0.017	-0.031	-0.016	-0.026
(s.e.)	(0.016)	(0.009)	(0.010)	(0.008)	(0.005)	(0.013)
β for o. members' cells	0.140	0.042	-0.037	-0.063	-0.014	-0.068
(s.e.)	(0.016)	(0.009)	(0.010)	(0.009)	(0.005)	(0.013)
γ for head's cell	-0.233	-0.029	0.118	0.030	0.004	0.109
(s.e)	(0.012)	(0.006)	(0.007)	(0.006)	(0.004)	(0.009)
γ for spouses' cells	-0.122	-0.038	0.049	0.029	0.022	0.059
(s.e)	(0.016)	(0.009)	(0.010)	(0.008)	(0.005)	(0.013)
γ for o. members's cells	-0.215	-0.033	0.071	0.060	0.017	0.099
(s.e.)	(0.015)	(0.008)	(0.010)	(0.008)	(0.005)	(0.012)
β+γ for head's cell	-0.091	0.003	0.050	-0.005	0.000	0.043
(s.e)	(0.007)	(0.004)	(0.004)	(0.004)	(0.002)	(0.006)
β+γ for spouses' cells	-0.071	0.002	0.032	-0.002	0.006	0.033
(s.e)	(0.007)	(0.004)	(0.004)	(0.004)	(0.002)	(0.006)
β+γ for o. members' cells	-0.075	0.009	0.034	-0.003	0.003	0.032
(s.e)	(0.009)	(0.005)	(0.005)	(0.005)	(0.003)	(0.007)
F stat. spouses vs head diff.	3.988	0.035	8.672	0.399	3.098	1.521
(p-value)	(0.046)	(0.852)	(0.003)	(0.528)	(0.078)	(0.217)
F stat. other vs head diff.	2.062	1.238	5.448	0.173	0.589	1.772
(p-value)	(0.151)	(0.266)	(0.020)	(0.677)	(0.443)	(0.183)
F stat. spouses vs other diff.	0.127	1.604	0.097	0.023	0.651	0.048
(p-value)	(0.721)	(0.205)	(0.755)	(0.880)	(0.420)	(0.827)
β+γ from hhld level regression	-0.103	0.003	0.052	0.001	0.004	0.044
(s.e.)	(0.006)	(0.003)	(0.004)	(0.003)	(0.002)	(0.005)
β+γ from cell level regressions	-0.079	0.004	0.039	-0.003	0.004	0.036
(s.e.)	(0.004)	(0.002)	(0.003)	(0.002)	(0.001)	(0.004)
t stat. hhold vs cell reg. diff.	-3.124	-0.190	2.693	1.000	0.256	1.271
(p-value)	(0.002)	(0.849)	(0.007)	(0.318)	(0.798)	(0.204)
Number of households	1,429	1,429	1,429	1,429	1,429	1,429
Number of cells	3,976	3,976	3,976	3,976	3,976	3,976

Source: PSF survey, authors' calculations.
Note: OLS estimates of Engel curves at the household and cell levels. Standard errors in parentheses. Other covariates in regressions include urbanization and regional dummies, together with (log) household size and (log) cell size. Supplementary control variables are: age, age^2, sex and education of household head ; age, age^2 and education of cell head ; number of children less than 10 in household and household structure.

A9. Regressions for the two confounders, with additional controls

This table is similar to table 6, for specifications that include the following supplementary control variables: age, sex and education of household head; age and education of cell head; number of children less than 10 in household and household structure.

	(1) Food	(2) (Public)	(3) Transport	(4) Clothing	(5) Education	(6) Other
Household effects in cell Engel curves						
Log (total hhold exp.)	0.110***	0.0394***	-0.0478***	-0.0240***	-0.0190***	-0.0582***
	(0.00601)	(0.00334)	(0.00338)	(0.00262)	(0.00159)	(0.00440)
Log (hhold size)	-0.195***	-0.0371***	0.0590***	0.0318***	0.0243***	0.117***
	(0.0119)	(0.00661)	(0.00670)	(0.00519)	(0.00315)	(0.00872)
R^2	0.484	0.702	0.380	0.386	0.235	0.333
Intra-household Theil indices (γ-weighted)						
Log (total hhold exp.)	-0.0114***	-0.00118***	0.00566***	0.00153***	7.39e-05	0.00528***
	(0.00136)	(0.000134)	(0.000712)	(0.000192)	(6.45e-05)	(0.000629)
Log (hhold size)	0.00711***	0.000592**	-0.00418***	-0.000412	0.000209	-0.00332***
	(0.00269)	(0.000266)	(0.00141)	(0.000381)	(0.000128)	(0.00125)
R^2	0.092	0.091	0.092	0.083	0.136	0.092

Source: PSF survey, authors' calculations. Note: N=1,430. Standard errors in parentheses *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Other covariates in regressions include urban and regional dummies. Other covariates in regressions include urbanization and regional dummies, together with (log) household size and (log) cell size. Supplementary control variables are: age, age^2, sex and education of household head ; age, age^2 and education of cell head ; number of children less than 10 in household and household structure.

Appendix B: Detailed regressions

B1 Mundlak estimates of Engel curves.

Table B1. 1: Household level Engel curves estimates

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Log(total hhold exp. per cap.)	-0.103***	0.00291	0.0515***	0.000598	0.00430*	0.0439***
	(0.00634)	(0.00334)	(0.00392)	(0.00308)	(0.00234)	(0.00474)
Log(hhold size)	-0.0696***	0.00240	0.0171**	0.000661	0.0289***	0.0205**
	(0.0127)	(0.00668)	(0.00782)	(0.00615)	(0.00467)	(0.00947)
Nb. cells=2: Head + oth.	-0.0136	0.00801	-0.0123	-0.00882	-0.0106	0.0374**
	(0.0240)	(0.0127)	(0.0148)	(0.0117)	(0.00885)	(0.0180)
Nb. cells>2: Head + (n) spouses	-0.0184	0.00824	0.00471	0.00302	-0.00156	0.00396
	(0.0153)	(0.00808)	(0.00946)	(0.00745)	(0.00565)	(0.0115)
Nb. cells>2: head + (n) spouses + oth.	-0.0370***	-0.00699	0.0113	0.0159**	-0.00886*	0.0257**
	(0.0142)	(0.00747)	(0.00875)	(0.00689)	(0.00523)	(0.0106)
Other types of households	-0.0361	-0.00651	0.0118	-0.000311	-0.00219	0.0333
	(0.0281)	(0.0148)	(0.0173)	(0.0136)	(0.0104)	(0.0210)
Sex of hhold head (1 for male)	0.00108	-0.0109	0.0180	-0.00919	-0.0227**	0.0237
	(0.0242)	(0.0128)	(0.0150)	(0.0118)	(0.00893)	(0.0181)
Hhold head's educ: 1 to 3 years of sch.	0.0204	-0.00854	-0.00255	-0.0111	0.00357	-0.00172
	(0.0217)	(0.0114)	(0.0134)	(0.0105)	(0.00801)	(0.0162)
Hhold head's educ: 4 to 5 years of sch.	-0.0283**	0.0252***	-0.00425	-0.000452	-0.00491	0.0127
	(0.0140)	(0.00737)	(0.00863)	(0.00679)	(0.00516)	(0.0105)
Hhold head's educ: 6 to 9 years of sch.	-0.0256	-0.000201	-0.00696	-0.0102	0.0111*	0.0318***
	(0.0160)	(0.00843)	(0.00987)	(0.00777)	(0.00590)	(0.0120)
Hhold head educ: 10 years of sch. or more	-0.0539***	-0.00369	0.00292	-0.00164	0.0344***	0.0219*
	(0.0160)	(0.00843)	(0.00987)	(0.00777)	(0.00590)	(0.0120)
Hhold head has koranic educ.	-0.00622	-0.000216	-0.00476	-0.00971**	0.00347	0.0174**
	(0.00952)	(0.00502)	(0.00588)	(0.00463)	(0.00351)	(0.00712)
Other urban	-0.0908*	0.0445*	0.0202	0.00412	-0.0268	0.0487
	(0.0470)	(0.0248)	(0.0290)	(0.0228)	(0.0173)	(0.0352)
Rural	-0.0472	0.00608	0.0374	0.00630	-0.0239	0.0213
	(0.0459)	(0.0242)	(0.0284)	(0.0223)	(0.0169)	(0.0344)
Diourbel	0.0712	-0.0870***	0.00742	-0.00455	0.0342*	-0.0213
	(0.0498)	(0.0263)	(0.0307)	(0.0242)	(0.0184)	(0.0372)
Fatick	0.0995**	-0.0462*	-0.0292	-0.0127	0.000868	-0.0122
	(0.0473)	(0.0250)	(0.0292)	(0.0230)	(0.0175)	(0.0354)
Kaolack	0.187***	-0.0759***	-0.0629**	0.00281	0.0132	-0.0638*
	(0.0480)	(0.0253)	(0.0296)	(0.0233)	(0.0177)	(0.0359)
kolda	0.152***	-0.0984***	-0.0283	0.0251	0.0182	-0.0683*
	(0.0485)	(0.0256)	(0.0300)	(0.0236)	(0.0179)	(0.0363)
Louga	0.0760	-0.0557**	-0.0123	-0.000241	0.00654	-0.0142
	(0.0474)	(0.0250)	(0.0293)	(0.0231)	(0.0175)	(0.0355)
Matam	0.146***	-0.0659***	-0.0474	0.00942	0.00702	-0.0495
	(0.0470)	(0.0248)	(0.0290)	(0.0228)	(0.0173)	(0.0351)
Saint-Louis	0.184***	-0.0958***	-0.0256	-0.0244	0.0145	-0.0525
	(0.0481)	(0.0254)	(0.0297)	(0.0234)	(0.0178)	(0.0360)
Tambacounda	0.130***	-0.0779***	0.00570	-0.0165	0.00623	-0.0474
	(0.0489)	(0.0258)	(0.0302)	(0.0238)	(0.0181)	(0.0366)
Thies	0.133***	-0.0493*	-0.0323	-0.00300	0.00820	-0.0565
	(0.0479)	(0.0253)	(0.0296)	(0.0233)	(0.0177)	(0.0359)
Ziguinchor	0.257***	-0.0940***	-0.0681**	-0.0102	5.83e-05	-0.0846**
	(0.0494)	(0.0261)	(0.0305)	(0.0240)	(0.0182)	(0.0370)

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Number of cells in household	0.000714	0.00287	-0.00465	0.00290	-0.00448**	0.00264
	(0.00599)	(0.00316)	(0.00370)	(0.00291)	(0.00221)	(0.00448)
Number of children less than 10 in hh.	0.000326	0.00112	0.00202	-0.000609	-0.00170*	-0.00116
	(0.00260)	(0.00137)	(0.00161)	(0.00126)	(0.000959)	(0.00195)
Household head's age in y.	0.00163	-0.00147	0.000810	-0.000749	-0.000636	0.000418
	(0.00195)	(0.00103)	(0.00120)	(0.000946)	(0.000718)	(0.00146)
(Household head's age)^2	-1.30e-05	1.34e-05	-8.35e-06	6.73e-06	5.92e-06	-4.73e-06
	(1.81e-05)	(9.54e-06)	(1.12e-05)	(8.79e-06)	(6.67e-06)	(1.35e-05)
Constant	1.974***	0.117**	-0.642***	0.0750	-0.0276	-0.496***
	(0.109)	(0.0575)	(0.0673)	(0.0530)	(0.0402)	(0.0815)
Observations	1,429	1,429	1,429	1,429	1,429	1,429
R-squared	0.426	0.180	0.179	0.049	0.136	0.187

Source: PSF survey, authors' calculations.

Note. Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

The reference category for urbanization and region is *Dakar* and for education level, it is *no education*. Household structure is described with the following series of dummies: *Nb. cells=2: Head + oth* equals 1 if the household is composed of 2 cells only, the second cell being headed by someone who isn't the spouse of the head; *Nb. cells>2: Head + (n) spouses* equals one for households composed of more than two cells, all of them being headed either by the household head or by one of his spouse(s)*; Nb. cells>2: head + (n) spouses + oth* equals one for households composed of more than two cells, , that headed by the household head, at least one headed by a spouse of the head and at least one headed by someone not married to the household head. The reference category is the two cells household composed of the household head and his spouse.

Table B1.2: Cell level Engel curves estimates with all covariates

VARIABLES	Food	Common	Transport	Clothing	Education	Other
Cell type: spouse	-0.153	0.00411	0.216*	-0.0758	-0.175***	0.183
	(0.194)	(0.104)	(0.123)	(0.102)	(0.0642)	(0.155)
Cell type: other	-0.0921	0.0563	0.122	-0.0587	-0.158**	0.130
	(0.213)	(0.114)	(0.135)	(0.112)	(0.0704)	(0.170)
Log(total hhold exp. per cap.)	-0.0802**	-0.00805	-0.0252	0.00150	0.0756***	0.0363
	(0.0400)	(0.0213)	(0.0252)	(0.0211)	(0.0132)	(0.0320)
Spouse*log(hhold exp.)	0.00519	-0.000510	-0.00364	-0.0293*	0.00381	0.0245
	(0.0305)	(0.0163)	(0.0193)	(0.0161)	(0.0101)	(0.0244)
Other*log(hhold exp.)	0.0566**	0.00215	0.00329	-0.0530***	0.00158	-0.0106
	(0.0275)	(0.0147)	(0.0174)	(0.0145)	(0.00909)	(0.0220)
Log(total cell exp.)	-0.203***	-0.0362***	0.0991***	0.0192**	0.0185***	0.102***
	(0.0158)	(0.00841)	(0.00995)	(0.00830)	(0.00521)	(0.0126)
Spouse*log(cell exp.)	-0.000789	-0.000769	-0.00969	0.0358**	0.00314	-0.0277
	(0.0297)	(0.0159)	(0.0188)	(0.0157)	(0.00982)	(0.0238)
Other*log(cell exp.)	-0.0575**	0.00116	-0.0161	0.0574***	0.00626	0.00874
	(0.0254)	(0.0135)	(0.0160)	(0.0134)	(0.00838)	(0.0203)
Log(hhold size)	-0.232***	-0.0620**	0.0706**	0.0568*	0.0583***	0.108**
	(0.0556)	(0.0296)	(0.0351)	(0.0293)	(0.0184)	(0.0444)
Spouse*log(hhold size)	-0.0365	0.0171	0.000424	0.0140	0.0131	-0.00820
	(0.0276)	(0.0147)	(0.0174)	(0.0145)	(0.00910)	(0.0220)
Other*log(hhold size)	0.00231	-0.00241	0.00701	0.00999	-0.00880	-0.00809
	(0.0323)	(0.0172)	(0.0204)	(0.0170)	(0.0107)	(0.0258)
Log(cell size)	0.229***	0.0352***	-0.0983***	-0.0283***	-0.00264	-0.135***
	(0.0160)	(0.00854)	(0.0101)	(0.00843)	(0.00529)	(0.0128)
Spouse*log(cell size)	0.0212	-0.0117	0.00981	-0.0471***	-0.00481	0.0327
	(0.0298)	(0.0159)	(0.0188)	(0.0157)	(0.00983)	(0.0238)
Other*log(cell size)	0.0451*	-0.00375	0.0128	-0.0626***	-0.000969	0.00944
	(0.0253)	(0.0135)	(0.0160)	(0.0133)	(0.00836)	(0.0202)
Nb. cells=2: Head + oth.	-0.391**	0.218***	-0.0632	0.0221	0.0298	0.184
	(0.153)	(0.0815)	(0.0964)	(0.0804)	(0.0505)	(0.122)
Nb. cells>2: Head + (n) spouses	-0.248	-0.0668	0.123	0.127	-0.0456	0.110
	(0.166)	(0.0888)	(0.105)	(0.0877)	(0.0550)	(0.133)
Nb. cells>2: head + (n) spouses + oth.	-0.0590**	0.0235	-0.0292	-0.0170	0.0172*	0.0644***
	(0.0292)	(0.0156)	(0.0185)	(0.0154)	(0.00966)	(0.0234)
Other types of households	-0.487***	0.297***	-0.0534	0.00824	0.0231	0.212
	(0.171)	(0.0913)	(0.108)	(0.0902)	(0.0566)	(0.137)
Sex of hhold head (1 for male)	0.0853	-0.0934**	-0.0260	0.0235	0.0251	-0.0146
	(0.0863)	(0.0461)	(0.0545)	(0.0455)	(0.0285)	(0.0690)
Hhold head's educ: 1 to 3 years of sch.	0.168*	-0.0720	0.0204	-0.0232	-0.0126	-0.0810
	(0.0983)	(0.0524)	(0.0620)	(0.0518)	(0.0325)	(0.0785)
Hhold head's educ: 4 to 5 years of sch.	-0.0260	0.126***	0.00140	-0.0524	-0.0328	-0.0159
	(0.0643)	(0.0343)	(0.0406)	(0.0339)	(0.0212)	(0.0514)
Hhold head's educ: 6 to 9 years of sch.	-0.203***	0.0864**	0.0577	0.0165	0.0223	0.0204
	(0.0769)	(0.0410)	(0.0485)	(0.0405)	(0.0254)	(0.0614)
Hhold head educ: 10 years of sch. or more	-1.499***	1.385***	-0.0131	-0.272	0.324**	0.0759
	(0.418)	(0.223)	(0.264)	(0.220)	(0.138)	(0.334)
Hhold head has koranic educ.	-0.806*	1.077***	-0.361	-0.593**	0.0468	0.636*
	(0.460)	(0.246)	(0.290)	(0.242)	(0.152)	(0.368)
Other urban	-0.428	0.436**	-0.102	-0.109	-0.0545	0.258
	(0.326)	(0.174)	(0.206)	(0.172)	(0.108)	(0.261)
Rural	-0.484	0.387**	-0.110	-0.0674	-0.0244	0.298
	(0.324)	(0.173)	(0.204)	(0.170)	(0.107)	(0.258)
Diourbel	0.467	-0.652***	0.131	0.148	0.129	-0.223

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VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.333)	(0.177)	(0.210)	(0.175)	(0.110)	(0.266)
Fatick	0.491	-0.480***	0.138	0.0892	0.0143	-0.253
	(0.327)	(0.174)	(0.206)	(0.172)	(0.108)	(0.261)
Kaolack	0.542*	-0.401**	0.0460	0.0616	0.0141	-0.263
	(0.329)	(0.175)	(0.207)	(0.173)	(0.109)	(0.263)
kolda	0.630*	-0.435**	0.169	-0.000771	0.0153	-0.379
	(0.329)	(0.175)	(0.207)	(0.173)	(0.109)	(0.263)
Louga	0.575*	-0.484***	0.0931	0.0435	0.0239	-0.251
	(0.327)	(0.174)	(0.206)	(0.172)	(0.108)	(0.261)
Matam	0.631*	-0.441**	0.0714	0.0975	0.0141	-0.373
	(0.326)	(0.174)	(0.206)	(0.172)	(0.108)	(0.260)
Saint-Louis	0.673**	-0.476***	0.110	0.0141	0.0973	-0.418
	(0.334)	(0.178)	(0.210)	(0.176)	(0.110)	(0.266)
Tambacounda	0.561*	-0.438**	0.0541	0.0384	0.0270	-0.243
	(0.330)	(0.176)	(0.208)	(0.174)	(0.109)	(0.264)
Thies	0.528	-0.367**	0.0694	0.0484	0.00294	-0.282
	(0.328)	(0.175)	(0.207)	(0.173)	(0.108)	(0.262)
Ziguinchor	0.611*	-0.512***	0.0653	0.103	-0.000836	-0.267
	(0.334)	(0.178)	(0.211)	(0.176)	(0.110)	(0.266)
Cell head's educ: 1 to 3 years of sch.	-0.000562	-0.00245	0.000695	0.0130	-0.00882	-0.00190
	(0.0270)	(0.0144)	(0.0171)	(0.0142)	(0.00893)	(0.0216)
Cell head's educ: 4 to 5 years of sch.	-0.0290	0.00219	0.00710	-0.00569	0.000829	0.0245*
	(0.0182)	(0.00972)	(0.0115)	(0.00960)	(0.00602)	(0.0146)
Cell head's educ: 6 to 9 years of sch.	-0.0271	0.00194	-0.00620	0.0118	-0.00114	0.0207
	(0.0241)	(0.0129)	(0.0152)	(0.0127)	(0.00797)	(0.0193)
Cell head educ: 10 years of sch. or more	-0.00715	-0.168	0.0220	0.0314	0.0990	0.0224
	(0.340)	(0.181)	(0.215)	(0.179)	(0.112)	(0.272)
Cell head has koranic educ.	0.0240	-0.0162	0.0272	-0.00533	0.0152	-0.0449
	(0.257)	(0.137)	(0.162)	(0.135)	(0.0849)	(0.205)
Number of cells in household	0.0142	0.00330	0.00461	-0.0393	-0.0158	0.0330
	(0.0711)	(0.0379)	(0.0449)	(0.0375)	(0.0235)	(0.0568)
Number of children less than 10 in hh.	0.000264	-4.94e-05	0.00569	0.00197	-0.00561*	-0.00226
	(0.0101)	(0.00537)	(0.00635)	(0.00530)	(0.00333)	(0.00804)
Household head's age in y.	-0.0171	0.00845	-0.00731	0.00175	0.00494	0.00932
	(0.0165)	(0.00881)	(0.0104)	(0.00870)	(0.00546)	(0.0132)
(Household head's age)^2	0.000333**	-0.000382***	0.000129	8.26e-05	-5.68e-05	-0.000106
	(0.000150)	(8.01e-05)	(9.48e-05)	(7.91e-05)	(4.96e-05)	(0.000120)
Cell head's age in y.	-0.00198	0.00515	0.000719	-0.00500	0.000198	0.000917
	(0.00748)	(0.00399)	(0.00472)	(0.00394)	(0.00247)	(0.00597)
(Cell head's age)^2	-6.56e-06	1.45e-06	-1.06e-05	3.16e-05***	-2.76e-06	-1.31e-05
	(1.96e-05)	(1.05e-05)	(1.24e-05)	(1.03e-05)	(6.48e-06)	(1.57e-05)
Other*HeadOth	0.0199	-0.000113	-0.00291	-0.00110	-0.00371	-0.0120
	(0.0295)	(0.0157)	(0.0186)	(0.0155)	(0.00974)	(0.0235)
Spouse*HeadnSP	0.0278	-0.00126	-0.0274**	-0.0131	-0.00718	0.0211
	(0.0216)	(0.0115)	(0.0137)	(0.0114)	(0.00715)	(0.0173)
Spouse*HeadnSPOth	0.0197	-0.00210	-0.0100	-0.00868	-0.00645	0.00756
	(0.0217)	(0.0116)	(0.0137)	(0.0115)	(0.00718)	(0.0174)
Other*HeadnSPOth	0.00807	0.0103	0.000430	0.00808	-0.0165	-0.0105
	(0.0384)	(0.0205)	(0.0242)	(0.0202)	(0.0127)	(0.0306)
Other*Otherkinds = o,	-	-	-	-	-	-
Spouse*sexhhead	0.000782	0.0109	-0.0557	0.0235	0.0278	-0.00734
	(0.0951)	(0.0507)	(0.0600)	(0.0501)	(0.0314)	(0.0760)
Other*sexhhead	-0.0270	0.00179	-0.0286	-0.00232	0.0457***	0.0103

VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.0371)	(0.0198)	(0.0234)	(0.0196)	(0.0123)	(0.0297)
Spouse*prim1to3head	0.0120	-0.0184	0.0214	0.00721	0.00535	-0.0275
	(0.0435)	(0.0232)	(0.0275)	(0.0229)	(0.0144)	(0.0348)
Other*prim1to3head	0.0489	-0.0407	0.0471	0.00671	-0.00810	-0.0539
	(0.0505)	(0.0270)	(0.0319)	(0.0266)	(0.0167)	(0.0404)
Spouse*prim4to5head	0.00713	0.00808	-0.00705	0.00972	-0.00349	-0.0144
	(0.0286)	(0.0153)	(0.0180)	(0.0151)	(0.00944)	(0.0228)
Other*prim4to5head	-0.00232	0.00325	0.0140	-0.00791	0.0101	-0.0172
	(0.0331)	(0.0177)	(0.0209)	(0.0174)	(0.0109)	(0.0264)
Spouse*juniorshead	0.00573	0.00243	-0.0158	0.0301	-0.00597	-0.0165
	(0.0356)	(0.0190)	(0.0225)	(0.0188)	(0.0118)	(0.0285)
Other*juniorshead	0.0199	0.00635	-0.0185	0.0177	-0.0250*	-0.000400
	(0.0387)	(0.0206)	(0.0244)	(0.0204)	(0.0128)	(0.0309)
Spouse*hsoroverhead	-0.00103	-0.173	0.0435	0.0354	0.124	-0.0293
	(0.341)	(0.182)	(0.215)	(0.180)	(0.113)	(0.273)
Other*hsoroverhead	0.0301	-0.158	0.0511	0.0466	0.0874	-0.0574
	(0.342)	(0.183)	(0.216)	(0.180)	(0.113)	(0.273)
Spouse*koranichead	0.0345	-0.0156	0.0186	-0.00361	0.0243	-0.0583
	(0.258)	(0.138)	(0.163)	(0.136)	(0.0852)	(0.206)
Other*koranichead	0.0535	-0.0161	0.0199	0.00115	0.0125	-0.0709
	(0.258)	(0.138)	(0.163)	(0.136)	(0.0853)	(0.206)
Spouse*othurb	0.0357	0.00138	-0.0238	-0.00950	-0.00235	-0.00140
	(0.0708)	(0.0377)	(0.0446)	(0.0373)	(0.0234)	(0.0565)
Other*othurb	-0.0224	0.00991	-0.119	0.0291	-0.0112	0.114
	(0.118)	(0.0630)	(0.0746)	(0.0622)	(0.0390)	(0.0944)
Spouse*rural	0.0492	-0.00730	-0.0150	-0.00727	-0.00433	-0.0153
	(0.0687)	(0.0367)	(0.0434)	(0.0362)	(0.0227)	(0.0549)
Other*rural	-0.0231	0.00101	-0.122*	0.0460	-0.0222	0.120
	(0.117)	(0.0624)	(0.0738)	(0.0616)	(0.0387)	(0.0935)
Spouse*diourbel	-0.00199	-0.0279	0.0123	0.0221	-0.0132	0.00874
	(0.0749)	(0.0400)	(0.0473)	(0.0395)	(0.0247)	(0.0598)
Other*diourbel	0.0266	-0.0336	0.108	-0.0191	-0.0388	-0.0428
	(0.124)	(0.0662)	(0.0783)	(0.0654)	(0.0410)	(0.0992)
Spouse*fatick	0.00550	-0.0465	0.0357	0.00158	-0.00972	0.0133
	(0.0710)	(0.0378)	(0.0448)	(0.0374)	(0.0234)	(0.0567)
Other*fatick	0.0101	-0.0408	0.119	-0.0357	0.00648	-0.0592
	(0.118)	(0.0629)	(0.0744)	(0.0621)	(0.0390)	(0.0942)
Spouse*kaolack	-0.000403	-0.0247	0.0238	0.00246	-0.00451	0.00338
	(0.0724)	(0.0386)	(0.0457)	(0.0381)	(0.0239)	(0.0579)
Other*kaolack	0.0278	-0.0353	0.125*	-0.0443	0.0145	-0.0879
	(0.119)	(0.0636)	(0.0753)	(0.0628)	(0.0394)	(0.0953)
Spouse*kolda	0.0152	-0.0425	0.00285	-0.00987	0.0123	0.0221
	(0.0727)	(0.0388)	(0.0459)	(0.0383)	(0.0240)	(0.0581)
Other*kolda	0.0382	-0.0258	0.106	-0.0450	0.00957	-0.0834
	(0.120)	(0.0638)	(0.0755)	(0.0630)	(0.0395)	(0.0956)
Spouse*louga	-0.0254	-0.0169	0.0146	0.0119	-0.0110	0.0267
	(0.0712)	(0.0380)	(0.0449)	(0.0375)	(0.0235)	(0.0569)
Other*louga	0.0266	-0.0223	0.104	-0.0213	0.00753	-0.0943
	(0.119)	(0.0633)	(0.0749)	(0.0625)	(0.0392)	(0.0948)
Spouse*matam	0.00141	-0.0191	0.0364	0.0101	-0.00612	-0.0226
	(0.0706)	(0.0376)	(0.0445)	(0.0372)	(0.0233)	(0.0564)
Other*matam	0.0370	-0.0356	0.117	-0.0406	0.0120	-0.0896
	(0.118)	(0.0629)	(0.0745)	(0.0621)	(0.0390)	(0.0943)
Spouse*saintlouis	0.0441	-0.0265	-0.0107	-0.00564	-0.00401	0.00273

VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.0723)	(0.0385)	(0.0456)	(0.0381)	(0.0239)	(0.0577)
Other*saintlouis	0.0125	-0.0184	0.105	-0.0355	-0.0326	-0.0314
	(0.127)	(0.0678)	(0.0802)	(0.0669)	(0.0420)	(0.102)
Spouse*tamba	0.0142	-0.0302	-0.0274	0.00605	-0.00484	0.0422
	(0.0741)	(0.0395)	(0.0467)	(0.0390)	(0.0245)	(0.0592)
Other*tamba	0.0431	-0.0444	0.0868	-0.0350	0.00418	-0.0547
	(0.121)	(0.0643)	(0.0761)	(0.0635)	(0.0398)	(0.0963)
Spouse*thies	0.00388	-0.0550	0.0159	0.00229	-0.00586	0.0387
	(0.0716)	(0.0382)	(0.0452)	(0.0377)	(0.0236)	(0.0572)
Other*thies	0.0284	-0.0309	0.105	-0.0553	0.000444	-0.0481
	(0.119)	(0.0635)	(0.0751)	(0.0627)	(0.0393)	(0.0951)
Spouse*ziguinchor	-0.0176	-0.0183	0.0206	0.00289	-0.0102	0.0227
	(0.0740)	(0.0395)	(0.0467)	(0.0390)	(0.0245)	(0.0591)
Other*ziguinchor	-0.000473	-0.0194	0.111	-0.0484	0.00401	-0.0464
	(0.120)	(0.0642)	(0.0760)	(0.0634)	(0.0398)	(0.0962)
Spouse*prim1to3cellh	-0.0344	0.0129	0.0189	-0.00270	0.0180	-0.0128
	(0.0383)	(0.0204)	(0.0242)	(0.0202)	(0.0126)	(0.0306)
Other*prim1to3cellh = o,	-	-	-	-	-	-
Spouse*prim4to5cellh	-0.0128	0.00951	0.00498	0.00646	-0.000104	-0.00805
	(0.0273)	(0.0146)	(0.0172)	(0.0144)	(0.00902)	(0.0218)
Other*prim4to5cellh = o,	-	-	-	-	-	-
Spouse*juniorscellh	0.0275	0.00875	-0.0114	-0.00802	0.00221	-0.0190
	(0.0380)	(0.0203)	(0.0240)	(0.0200)	(0.0126)	(0.0304)
Other*juniorscellh = o,	-	-	-	-	-	-
Spouse*hsorovercellh	-0.00235	0.182	-0.0235	-0.0531	-0.0867	-0.0162
	(0.336)	(0.179)	(0.212)	(0.177)	(0.111)	(0.269)
Other*hsorovercellh	-0.0190	0.163	-0.0268	-0.0488	-0.0970	0.0281
	(0.340)	(0.182)	(0.215)	(0.179)	(0.112)	(0.272)
Spouse*koraniccellh	-0.0299	0.0217	-0.0193	0.00380	-0.0157	0.0394
	(0.258)	(0.137)	(0.163)	(0.136)	(0.0851)	(0.206)
Other*koraniccellh	-0.0405	0.0187	-0.0200	-0.000520	-0.0173	0.0597
	(0.257)	(0.137)	(0.162)	(0.135)	(0.0850)	(0.205)
Spouse*nbcells	-0.00238	0.000632	0.00118	0.00368	-0.000461	-0.00265
	(0.00966)	(0.00515)	(0.00610)	(0.00509)	(0.00319)	(0.00772)
Other*nbcells	0.00232	-0.00550	0.00147	0.00195	0.00158	-0.00182
	(0.00911)	(0.00486)	(0.00575)	(0.00480)	(0.00301)	(0.00728)
Spouse*nbkidslt10inh	0.0130***	-0.00116	-0.00283	-0.00325	-0.00122	-0.00455
	(0.00409)	(0.00218)	(0.00258)	(0.00215)	(0.00135)	(0.00327)
Other*nbkidslt10inh	0.00401	0.00378*	-0.000989	-0.00243	0.000955	-0.00532
	(0.00428)	(0.00229)	(0.00270)	(0.00226)	(0.00142)	(0.00342)
Spouse*agehhead	-0.000294	0.00547	-0.00100	-0.00354	0.00228	-0.00290
	(0.00830)	(0.00443)	(0.00524)	(0.00437)	(0.00274)	(0.00663)
Other*agehhead	0.000959	0.00273	0.000580	-0.00265	0.00194	-0.00356
	(0.00839)	(0.00448)	(0.00529)	(0.00442)	(0.00277)	(0.00670)
Spouse*agehheadsq	-2.15e-05	4.08e-07	6.33e-06	1.95e-05	-2.47e-05*	1.99e-05
	(3.86e-05)	(2.06e-05)	(2.44e-05)	(2.03e-05)	(1.28e-05)	(3.09e-05)
Other*agehheadsq	-3.89e-05	2.46e-05	-5.84e-06	1.02e-05	-1.69e-05	2.68e-05
	(3.93e-05)	(2.10e-05)	(2.48e-05)	(2.07e-05)	(1.30e-05)	(3.14e-05)
Spouse*agechead	0.00349	-0.00496	0.000389	0.00214	-8.56e-05	-0.000972
	(0.00790)	(0.00421)	(0.00498)	(0.00416)	(0.00261)	(0.00631)
Other*agechead	0.00316	-0.00543	0.000571	0.00181	7.80e-05	-0.000193

VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.00701)	(0.00374)	(0.00442)	(0.00369)	(0.00232)	(0.00560)
Spouse*agecheadsq	-1.13e-05	-9.24e-06	3.10e-06	-3.39e-06	5.52e-06	1.53e-05
	(3.40e-05)	(1.81e-05)	(2.14e-05)	(1.79e-05)	(1.12e-05)	(2.71e-05)
Other*agecheadsq = o,	-	-	-	-	-	-
HH mean for _Itypecell_2	-1.838**	-0.872*	0.331	0.320	0.606**	1.452**
	(0.881)	(0.470)	(0.556)	(0.464)	(0.291)	(0.704)
HH mean for _Itypecell_3	-1.019	-1.108***	0.483	0.359	0.631***	0.654
	(0.664)	(0.354)	(0.419)	(0.350)	(0.219)	(0.530)
HH mean for _ItypXloghh_2	-0.0482	0.0402	0.0692*	0.0500	-0.0386*	-0.0727
	(0.0618)	(0.0330)	(0.0390)	(0.0325)	(0.0204)	(0.0494)
HH mean for _ItypXloghh_3	0.0127	0.0160	0.0279	0.0468	-0.0383**	-0.0651
	(0.0575)	(0.0307)	(0.0363)	(0.0303)	(0.0190)	(0.0459)
HH mean for logcellexp	0.114***	0.0331*	-0.00818	-0.0195	-0.0845***	-0.0353
	(0.0319)	(0.0170)	(0.0201)	(0.0168)	(0.0105)	(0.0255)
HH mean for _ItypXlogce_2	0.207***	-0.0124	-0.105***	-0.0683***	0.0209	-0.0415
	(0.0407)	(0.0217)	(0.0257)	(0.0214)	(0.0134)	(0.0325)
HH mean for _ItypXlogce_3	0.138***	0.000795	-0.0507*	-0.0623***	0.00647	-0.0319
	(0.0427)	(0.0228)	(0.0269)	(0.0225)	(0.0141)	(0.0341)
HH mean for _ItypXloghha2	0.128	0.0634	-0.110*	-0.0136	-0.0696**	0.00232
	(0.101)	(0.0539)	(0.0638)	(0.0532)	(0.0334)	(0.0808)
HH mean for _ItypXloghha3	0.137	0.0641	-0.165***	-0.0537	-0.0288	0.0460
	(0.0845)	(0.0451)	(0.0533)	(0.0445)	(0.0279)	(0.0675)
HH mean for logcellsize	-0.0482	-0.00123	0.0173	-0.0151	0.0552***	-0.00787
	(0.0333)	(0.0178)	(0.0210)	(0.0175)	(0.0110)	(0.0266)
HH mean for _ItypXlogcea2	-0.161***	0.0172	0.109***	0.0434*	-0.00388	-0.00477
	(0.0425)	(0.0227)	(0.0268)	(0.0224)	(0.0140)	(0.0340)
HH mean for _ItypXlogcea3	-0.125***	-0.0393	0.0857***	0.0716***	-0.0167	0.0234
	(0.0473)	(0.0252)	(0.0298)	(0.0249)	(0.0156)	(0.0378)
HH mean for prim1to3cellh	-0.0167	0.0855***	-0.0648**	-0.0162	0.00826	0.00391
	(0.0484)	(0.0258)	(0.0305)	(0.0255)	(0.0160)	(0.0386)
HH mean for prim4to5cellh	-0.0339	0.0230	-0.0151	0.0192	-0.000129	0.00686
	(0.0326)	(0.0174)	(0.0206)	(0.0172)	(0.0108)	(0.0261)
HH mean for juniorscellh	0.122***	-0.0194	-0.0432	-0.0394	-0.00564	-0.0143
	(0.0468)	(0.0250)	(0.0295)	(0.0247)	(0.0155)	(0.0374)
HH mean for hsorovercellh	1.575***	-1.272***	-0.0709	0.240	-0.362**	-0.110
	(0.485)	(0.259)	(0.306)	(0.255)	(0.160)	(0.387)
HH mean for koraniccellh	0.718	-1.083***	0.316	0.625**	-0.0383	-0.538
	(0.512)	(0.273)	(0.323)	(0.270)	(0.169)	(0.409)
HH mean for agechead	0.0184	-0.0150**	-9.26e-05	0.00200	-0.00187	-0.00343
	(0.0119)	(0.00636)	(0.00752)	(0.00628)	(0.00394)	(0.00952)
HH mean for agecheadsq	-0.000317**	0.000396***	-4.93e-05	-0.000104	2.37e-05	5.05e-05
	(0.000135)	(7.18e-05)	(8.49e-05)	(7.08e-05)	(4.44e-05)	(0.000107)
HH mean for _DHeadOth_3 = o,	-	-	-	-	-	-
HH mean for _DHeadnSP_2	0.347	0.143	-0.192	-0.216*	0.0842	-0.167
	(0.249)	(0.133)	(0.157)	(0.131)	(0.0822)	(0.199)
HH mean for _DHeadnSPOth_2 = o,	-	-	-	-	-	-
HH mean for _DHeadnSPOth_3	-0.562**	0.394***	-0.0428	0.0410	0.00820	0.162
	(0.230)	(0.123)	(0.145)	(0.121)	(0.0760)	(0.184)
HH mean for _DOtherkinds_3 = o,	-	-	-	-	-	-
HH mean for _Dsexhhead_2	-0.360*	0.248**	0.204	0.0427	-0.151**	0.0161

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VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.213)	(0.114)	(0.135)	(0.112)	(0.0705)	(0.170)
HH mean for _Dsexhhead_3	-0.0815	0.109	0.0920	-0.0473	-0.114**	0.0423
	(0.143)	(0.0762)	(0.0901)	(0.0752)	(0.0472)	(0.114)
HH mean for _Dprim1to3head_2	-0.256	0.0545	0.00852	0.0238	0.0357	0.133
	(0.172)	(0.0918)	(0.109)	(0.0907)	(0.0569)	(0.138)
HH mean for _Dprim1to3head_3	-0.318**	0.0837	-0.0494	0.0112	0.00898	0.264**
	(0.144)	(0.0770)	(0.0911)	(0.0760)	(0.0477)	(0.115)
HH mean for _Dprim4to5head_2	0.0644	-0.233***	0.00161	0.0546	0.0626*	0.0502
	(0.111)	(0.0594)	(0.0703)	(0.0587)	(0.0368)	(0.0890)
HH mean for _Dprim4to5head_3	-0.0339	-0.155***	-0.0124	0.113**	0.0368	0.0520
	(0.0897)	(0.0478)	(0.0566)	(0.0472)	(0.0296)	(0.0716)
HH mean for _Djuniorshead_2	0.273**	-0.170**	-0.0596	-0.0379	-0.0180	0.0118
	(0.132)	(0.0704)	(0.0832)	(0.0695)	(0.0436)	(0.105)
HH mean for _Djuniorshead_3	0.221**	-0.129**	-0.0424	-0.0685	0.0116	0.00669
	(0.106)	(0.0564)	(0.0667)	(0.0556)	(0.0349)	(0.0844)
HH mean for _Dhsoroverhead_2	1.324***	-1.182***	0.0501	0.264	-0.459***	0.00291
	(0.509)	(0.272)	(0.321)	(0.268)	(0.168)	(0.407)
HH mean for _Dhsoroverhead_3	1.419***	-1.213***	-0.0465	0.195	-0.397**	0.0419
	(0.500)	(0.267)	(0.316)	(0.264)	(0.165)	(0.400)
HH mean for _Dkoranichead_2	0.836	-1.062***	0.359	0.558**	-0.0789	-0.612
	(0.515)	(0.275)	(0.325)	(0.271)	(0.170)	(0.411)
HH mean for _Dkoranichead_3	0.758	-1.048***	0.326	0.580**	-0.0823	-0.534
	(0.514)	(0.274)	(0.324)	(0.270)	(0.170)	(0.410)
HH mean for _Dothurb_2	0.546	-0.708**	0.119	0.226	0.0637	-0.247
	(0.611)	(0.326)	(0.385)	(0.322)	(0.202)	(0.488)
HH mean for _Dothurb_3	0.722*	-0.536**	0.367	0.0432	0.0983	-0.696**
	(0.433)	(0.231)	(0.273)	(0.228)	(0.143)	(0.346)
HH mean for _Drural_2	0.738	-0.672**	0.149	0.146	0.00203	-0.363
	(0.606)	(0.323)	(0.383)	(0.319)	(0.200)	(0.484)
HH mean for _Drural_3	0.843**	-0.502**	0.408	-0.0427	0.0771	-0.784**
	(0.428)	(0.229)	(0.270)	(0.226)	(0.142)	(0.342)
HH mean for _Ddiourbel_2	-0.638	1.019***	-0.129	-0.322	-0.197	0.268
	(0.622)	(0.332)	(0.393)	(0.328)	(0.206)	(0.497)
HH mean for _Ddiourbel_3	-0.792*	0.905***	-0.378	-0.112	-0.111	0.488
	(0.443)	(0.236)	(0.279)	(0.233)	(0.146)	(0.354)
HH mean for _Dfatick_2	-0.700	0.820**	-0.242	-0.189	0.00591	0.305
	(0.610)	(0.325)	(0.385)	(0.321)	(0.201)	(0.487)
HH mean for _Dfatick_3	-0.840*	0.648***	-0.426	-0.0348	-0.0679	0.721**
	(0.435)	(0.232)	(0.274)	(0.229)	(0.144)	(0.347)
HH mean for _Dkaolack_2	-0.672	0.623*	-0.0984	-0.133	-0.000146	0.280
	(0.615)	(0.328)	(0.388)	(0.324)	(0.203)	(0.491)
HH mean for _Dkaolack_3	-0.692	0.440*	-0.365	0.0551	-0.0629	0.625*
	(0.436)	(0.233)	(0.275)	(0.230)	(0.144)	(0.349)
HH mean for _Dkolda_2	-0.885	0.677**	-0.237	0.0269	-0.00155	0.420
	(0.613)	(0.327)	(0.387)	(0.323)	(0.202)	(0.490)
HH mean for _Dkolda_3	-0.866**	0.456**	-0.479*	0.148	-0.0802	0.821**
	(0.436)	(0.233)	(0.275)	(0.230)	(0.144)	(0.348)
HH mean for _Dlouga_2	-0.862	0.779**	-0.104	-0.0789	-0.0236	0.290
	(0.609)	(0.325)	(0.385)	(0.321)	(0.201)	(0.487)
HH mean for _Dlouga_3	-0.932**	0.591**	-0.338	0.0162	-0.0477	0.711**
	(0.435)	(0.232)	(0.274)	(0.229)	(0.144)	(0.347)
HH mean for _Dmatam_2	-0.878	0.669**	-0.145	-0.190	0.00839	0.535
	(0.610)	(0.325)	(0.385)	(0.321)	(0.201)	(0.487)
HH mean for _Dmatam_3	-0.937**	0.551**	-0.358	0.000877	-0.0700	0.814**

VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.432)	(0.231)	(0.273)	(0.228)	(0.143)	(0.345)
HH mean for _Dsaintlouis_2	-0.912	0.705**	-0.118	-0.0722	-0.154	0.552
	(0.625)	(0.333)	(0.394)	(0.329)	(0.206)	(0.499)
HH mean for _Dsaintlouis_3	-1.090**	0.603**	-0.384	0.0761	-0.0709	0.865**
	(0.453)	(0.241)	(0.286)	(0.238)	(0.149)	(0.361)
HH mean for _Dtamba_2	-0.754	0.664**	0.0506	-0.138	-0.0302	0.208
	(0.616)	(0.328)	(0.389)	(0.324)	(0.203)	(0.492)
HH mean for _Dtamba_3	-0.804*	0.561**	-0.304	0.0544	-0.0809	0.573
	(0.441)	(0.235)	(0.279)	(0.232)	(0.146)	(0.353)
HH mean for _Dthies_2	-0.684	0.629*	-0.0952	-0.108	0.0120	0.246
	(0.612)	(0.326)	(0.386)	(0.322)	(0.202)	(0.489)
HH mean for _Dthies_3	-0.868**	0.507**	-0.321	0.0444	-0.0304	0.668*
	(0.434)	(0.232)	(0.274)	(0.229)	(0.143)	(0.347)
HH mean for _Dziguinchor_2	-0.594	0.767**	-0.131	-0.234	0.0143	0.178
	(0.621)	(0.331)	(0.392)	(0.327)	(0.205)	(0.496)
HH mean for _Dziguinchor_3	-0.839*	0.584**	-0.379	0.0288	-0.0379	0.643*
	(0.441)	(0.235)	(0.279)	(0.232)	(0.146)	(0.353)
HH mean for _Dprim1to3cellh_2	0.0103	-0.0527	0.0120	0.00734	-0.0182	0.0413
	(0.0645)	(0.0344)	(0.0407)	(0.0340)	(0.0213)	(0.0516)
HH mean for _Dprim1to3cellh_3 = o,	-	-	-	-	-	-
HH mean for _Dprim4to5cellh_2	0.0735	-0.0132	-0.0115	-0.0322	0.00446	-0.0211
	(0.0468)	(0.0249)	(0.0295)	(0.0246)	(0.0154)	(0.0374)
HH mean for _Dprim4to5cellh_3 = o,	-	-	-	-	-	-
HH mean for _Djuniorscellh_2	-0.169***	0.0103	0.0866**	0.0205	0.0373*	0.0140
	(0.0651)	(0.0347)	(0.0411)	(0.0343)	(0.0215)	(0.0520)
HH mean for _Djuniorscellh_3 = o,	-	-	-	-	-	-
HH mean for _Dhsorovercellh_2	-1.662***	1.280***	0.118	-0.252	0.373**	0.143
	(0.489)	(0.261)	(0.309)	(0.258)	(0.162)	(0.391)
HH mean for _Dhsorovercellh_3	-1.785***	1.291***	0.136	-0.192	0.436***	0.114
	(0.488)	(0.260)	(0.308)	(0.257)	(0.161)	(0.390)
HH mean for _Dkoraniccellh_2	-0.719	1.092***	-0.342	-0.642**	0.0423	0.568
	(0.513)	(0.273)	(0.324)	(0.270)	(0.169)	(0.410)
HH mean for _Dkoraniccellh_3	-0.709	1.097***	-0.331	-0.631**	0.0545	0.520
	(0.515)	(0.274)	(0.325)	(0.271)	(0.170)	(0.411)
HH mean for _Cnbcells_2	0.0408	-0.0133	0.000878	0.0173	0.0125	-0.0581
	(0.0816)	(0.0435)	(0.0515)	(0.0430)	(0.0269)	(0.0652)
HH mean for _Cnbcells_3	-0.0452	0.0199	0.00307	0.0363	0.0141	-0.0282
	(0.0740)	(0.0395)	(0.0467)	(0.0390)	(0.0244)	(0.0591)
HH mean for _Cnbkidslt10inh_2	-0.0175	0.000524	-0.00311	0.00140	0.00873	0.00995
	(0.0163)	(0.00872)	(0.0103)	(0.00861)	(0.00540)	(0.0131)
HH mean for _Cnbkidslt10inh_3	0.00282	0.000829	-0.00547	-0.00302	0.00636	-0.00152
	(0.0132)	(0.00703)	(0.00832)	(0.00694)	(0.00436)	(0.0105)
HH mean for _Cagehhead_2	0.0140	-0.00941	0.0121	0.00508	-0.0101	-0.0117
	(0.0186)	(0.00990)	(0.0117)	(0.00978)	(0.00613)	(0.0148)
HH mean for _Cagehhead_3	0.0180	-0.0164*	0.0124	0.00336	-0.0108**	-0.00649
	(0.0165)	(0.00883)	(0.0104)	(0.00872)	(0.00547)	(0.0132)
HH mean for _Cagehheadsq_2	-0.000262	0.000328***	-0.000163	-0.000138	0.000109*	0.000126
	(0.000185)	(9.86e-05)	(0.000117)	(9.74e-05)	(6.11e-05)	(0.000148)
HH mean for _Cagehheadsq_3	-0.000315*	0.000411***	-0.000183*	-0.000115	0.000113**	8.92e-05
	(0.000170)	(9.06e-05)	(0.000107)	(8.94e-05)	(5.61e-05)	(0.000136)
HH mean for _Cagechead_2	-0.0199	0.0161**	-0.00280	-0.00431	0.00289	0.00809

VARIABLES	Food	Common	Transport	Clothing	Education	Other
	(0.0128)	(0.00682)	(0.00807)	(0.00673)	(0.00422)	(0.0102)
HH mean for _Cagechead_3	-0.0254**	0.0224***	-0.00337	-0.00209	0.00322	0.00526
	(0.0120)	(0.00638)	(0.00755)	(0.00630)	(0.00395)	(0.00955)
HH mean for _Cagecheadsq_2	0.000314**	-0.000390***	6.78e-05	0.000146*	-3.78e-05	-0.000100
	(0.000143)	(7.63e-05)	(9.03e-05)	(7.53e-05)	(4.73e-05)	(0.000114)
HH mean for _Cagecheadsq_3	0.000363**	-0.000451***	8.79e-05	0.000106	-3.64e-05	-6.88e-05
	(0.000141)	(7.52e-05)	(8.89e-05)	(7.42e-05)	(4.65e-05)	(0.000113)
Constant	2.973***	0.463*	-0.786***	-0.00826	-0.250	-1.391***
	(0.475)	(0.253)	(0.300)	(0.250)	(0.157)	(0.379)
Observations	3,972	3,972	3,972	3,972	3,972	3,972
R-squared	0.487	0.245	0.263	0.132	0.201	0.280

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

B2: Household level Engel curves estimates, controlling for confounders.

Table B2.1: Household level Engel Curves, with γ-weighted Theil, household fixed effect and all covariates

VARIABLES	Food	Common	Transport	Clothing	Education	Other
γ-weighted Theil	0.799***	0.906***	1.088***	2.131***	-0.466*	0.515***
	(0.0389)	(0.126)	(0.0723)	(0.145)	(0.265)	(0.0766)
Household fixed effect	0.991***	0.970***	1.052***	1.057***	1.354***	1.013***
	(0.00677)	(0.00673)	(0.0108)	(0.0119)	(0.0154)	(0.00973)
Log(total hhold exp. per cap.)	-0.204***	-0.0339***	0.0971***	0.0243***	0.0304***	0.100***
	(0.00173)	(0.000902)	(0.00149)	(0.00120)	(0.000985)	(0.00174)
Log(hhold size)	0.0190***	0.000776	0.00369	-0.0104***	0.0219***	-0.0403***
	(0.00304)	(0.00168)	(0.00269)	(0.00232)	(0.00183)	(0.00325)
Nb. cells=2: Head + oth.	0.0129**	0.000396	-0.00667	-0.0112**	0.00161	0.00632
	(0.00566)	(0.00318)	(0.00510)	(0.00438)	(0.00347)	(0.00607)
Nb. cells>2: Head + (n) spouses	0.0101***	0.00197	-0.0281***	-0.00370	-0.00516**	0.0234***
	(0.00362)	(0.00203)	(0.00327)	(0.00280)	(0.00221)	(0.00387)
Nb. cells>2: head + (n) spouses + oth.	-0.00626*	0.00479**	-0.00980***	0.00410	-0.00903***	0.0138***
	(0.00334)	(0.00188)	(0.00302)	(0.00259)	(0.00205)	(0.00358)
Other types of households	-0.0107	0.00223	0.00102	-0.00981*	-0.00248	0.0176**
	(0.00662)	(0.00372)	(0.00597)	(0.00512)	(0.00405)	(0.00709)
Sex of hhold head (1 for male)	-0.00501	0.00548*	-0.0187***	-0.00275	0.0279***	0.00643
	(0.00571)	(0.00321)	(0.00516)	(0.00442)	(0.00354)	(0.00612)
Hhold head's educ: 1 to 3 years of sch.	0.0134***	-0.0167***	0.0181***	0.0119***	-0.00330	-0.0223***
	(0.00511)	(0.00288)	(0.00462)	(0.00396)	(0.00313)	(0.00548)
Hhold head's educ: 4 to 5 years of sch.	-0.0135***	0.00341*	0.00857***	0.00550**	-0.000171	-0.00105
	(0.00330)	(0.00186)	(0.00297)	(0.00255)	(0.00202)	(0.00353)
Hhold head's educ: 6 to 9 years of sch.	-0.00883**	0.000856	-0.0147***	0.0211***	-0.0119***	0.00871**
	(0.00377)	(0.00212)	(0.00340)	(0.00293)	(0.00232)	(0.00404)
Hhold head educ: 10 years of sch. or more	-0.0200***	-0.00408*	0.0105***	-0.0157***	0.0106***	0.0120***
	(0.00379)	(0.00212)	(0.00340)	(0.00293)	(0.00233)	(0.00404)
Hhold head has koranic educ.	-0.128***	0.134***	0.00235	-0.0626***	-0.0193***	0.0634***
	(0.00240)	(0.00157)	(0.00203)	(0.00184)	(0.00140)	(0.00245)
Other urban	0.0184*	0.00215	0.0112	-0.00707	-0.00507	-0.0139
	(0.0111)	(0.00624)	(0.01000)	(0.00857)	(0.00679)	(0.0119)
Rural	0.0273**	-0.00703	0.0140	-0.00263	-0.00857	-0.0205*
	(0.0108)	(0.00609)	(0.00977)	(0.00837)	(0.00663)	(0.0116)
Diourbel	-0.0135	-0.0151**	-0.0154	0.0128	-0.0117	0.0290**
	(0.0117)	(0.00662)	(0.0106)	(0.00908)	(0.00720)	(0.0126)
Fatick	0.00605	-0.0250***	-0.00726	0.00498	-0.00151	0.0245**
	(0.0112)	(0.00627)	(0.0101)	(0.00863)	(0.00683)	(0.0120)
Kaolack	-0.00165	-0.0145**	-0.00668	0.00291	0.00760	0.0124
	(0.0114)	(0.00638)	(0.0102)	(0.00875)	(0.00693)	(0.0121)
kolda	0.00804	-0.0230***	-0.0217**	-0.00144	0.0149**	0.0191
	(0.0115)	(0.00646)	(0.0103)	(0.00885)	(0.00700)	(0.0123)
Louga	-0.0150	-0.00547	-0.0142	0.0118	-0.00361	0.0228*
	(0.0112)	(0.00630)	(0.0101)	(0.00865)	(0.00685)	(0.0120)
Matam	0.00217	-0.0122*	-0.000111	0.00742	0.00290	-9.38e-05
	(0.0111)	(0.00624)	(0.01000)	(0.00856)	(0.00678)	(0.0119)
Saint-Louis	0.0262**	-0.0175***	-0.0300***	-0.00151	-0.00369	0.0221*
	(0.0114)	(0.00641)	(0.0102)	(0.00878)	(0.00695)	(0.0122)
Tambacounda	-0.000871	-0.0222***	-0.0257**	0.00539	-0.00139	0.0414***
	(0.0116)	(0.00650)	(0.0104)	(0.00893)	(0.00706)	(0.0124)
Thies	0.000137	-0.0307***	-0.0153	0.00210	-0.00336	0.0445***
	(0.0113)	(0.00636)	(0.0102)	(0.00874)	(0.00692)	(0.0121)

VARIABLES	Food	Common	Transport	Clothing	Education	Other
Ziguinchor	-0.00837	-0.0101	-0.0133	-0.00113	-0.00384	0.0385***
	(0.0118)	(0.00659)	(0.0105)	(0.00901)	(0.00714)	(0.0125)
Number of cells in household	-0.00606***	-0.000563	0.00346***	0.00324***	-0.00349***	0.00335**
	(0.00141)	(0.000794)	(0.00128)	(0.00110)	(0.000864)	(0.00151)
Number of children less than 10 in hh.	0.00547***	0.000870**	-0.00239***	-0.00118**	-0.000162	-0.00206***
	(0.000614)	(0.000345)	(0.000555)	(0.000475)	(0.000376)	(0.000658)
Household head's age in y.	0.000890*	0.00408***	0.000431	-0.00474***	0.00159***	-0.00183***
	(0.000459)	(0.000261)	(0.000414)	(0.000360)	(0.000282)	(0.000492)
(Household head's age)^2	-3.53e-05***	9.93e-06***	-7.24e-06*	2.76e-05***	-1.54e-05***	1.39e-05***
	(4.26e-06)	(2.40e-06)	(3.84e-06)	(3.32e-06)	(2.62e-06)	(4.57e-06)
Constant	3.203***	0.223***	-1.135***	-0.0255	-0.435***	-1.000***
	(0.0279)	(0.0147)	(0.0244)	(0.0199)	(0.0166)	(0.0284)
Observations	1,429	1,429	1,429	1,429	1,429	1,429
R-squared	0.968	0.948	0.903	0.866	0.868	0.908

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The reference category for urbanization and region is *Dakar* and for education level, it is *no education*. Household structure is described with the following series of dummies: *Nb. cells=2: Head + oth* equals 1 if the household is composed of 2 cells only, the second cell being headed by someone who isn't the spouse of the head; *Nb. cells>2: Head + (n) spouses* equals one for households composed of more than two cells, all of them being headed either by the household head or by one of his spouse(s)*; Nb. cells>2: head + (n) spouses + oth* equals one for households composed of more than two cells, , that headed by the household head, at least one headed by a spouse of the head and at least one headed by someone not married to the household head. The reference category is the two cells household composed of the household head and his spouse.

Table B2.2: Household level Engel Curves, with Intra-household Theil, household fixed effect and all covariates

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Intra-household Theil	-0.162***	-0.0322***	0.106***	0.0299***	-0.00944*	0.0533***
	(0.00827)	(0.00452)	(0.00736)	(0.00682)	(0.00492)	(0.00863)
Household fixed effect	0.991***	0.970***	1.053***	1.064***	1.354***	1.013***
	(0.00685)	(0.00674)	(0.0108)	(0.0129)	(0.0154)	(0.00975)
Log(total hhold exp. per cap.)	-0.205***	-0.0339***	0.0972***	0.0248***	0.0304***	0.100***
	(0.00175)	(0.000903)	(0.00150)	(0.00132)	(0.000984)	(0.00174)
Log(hhold size)	0.0182***	0.000785	0.00341	-0.00820***	0.0218***	-0.0402***
	(0.00307)	(0.00168)	(0.00271)	(0.00247)	(0.00183)	(0.00326)
Nb. cells=2: Head + oth.	0.0147**	0.000341	-0.00638	-0.0135***	0.00165	0.00565
	(0.00572)	(0.00318)	(0.00513)	(0.00467)	(0.00347)	(0.00608)
Nb. cells>2: Head + (n) spouses	0.0107***	0.00197	-0.0278***	-0.00606**	-0.00511**	0.0236***
	(0.00366)	(0.00203)	(0.00329)	(0.00298)	(0.00221)	(0.00388)
Nb. cells>2: head + (n) spouses + oth.	-0.00601*	0.00477**	-0.00977***	0.00402	-0.00901***	0.0137***
	(0.00338)	(0.00188)	(0.00304)	(0.00276)	(0.00204)	(0.00359)
Other types of households	-0.00986	0.00220	0.00103	-0.0103*	-0.00247	0.0172**
	(0.00670)	(0.00372)	(0.00601)	(0.00546)	(0.00405)	(0.00711)
Sex of hhold head (1 for male)	-0.00404	0.00546*	-0.0181***	-0.00664	0.0280***	0.00661
	(0.00577)	(0.00321)	(0.00519)	(0.00471)	(0.00354)	(0.00613)
Hhold head's educ: 1 to 3 years of sch.	0.0135***	-0.0167***	0.0182***	0.0109**	-0.00328	-0.0222***
	(0.00517)	(0.00288)	(0.00465)	(0.00423)	(0.00313)	(0.00550)
Hhold head's educ: 4 to 5 years of sch.	-0.0133***	0.00341*	0.00865***	0.00483*	-0.000166	-0.00104
	(0.00333)	(0.00186)	(0.00299)	(0.00272)	(0.00202)	(0.00354)
Hhold head's educ: 6 to 9 years of sch.	-0.00899**	0.000874	-0.0146***	0.0206***	-0.0119***	0.00895**
	(0.00381)	(0.00212)	(0.00342)	(0.00313)	(0.00232)	(0.00405)
Hhold head educ: 10 years of sch. or more	-0.0194***	-0.00407*	0.0107***	-0.0177***	0.0106***	0.0120***
	(0.00383)	(0.00212)	(0.00343)	(0.00313)	(0.00233)	(0.00406)
Hhold head has koranic educ.	-0.128***	0.134***	0.00252	-0.0639***	-0.0192***	0.0635***
	(0.00242)	(0.00157)	(0.00204)	(0.00196)	(0.00140)	(0.00245)
Other urban	0.0190*	0.00211	0.0116	-0.00865	-0.00499	-0.0139
	(0.0112)	(0.00624)	(0.0101)	(0.00915)	(0.00679)	(0.0119)
Rural	0.0277**	-0.00708	0.0143	-0.00311	-0.00850	-0.0206*
	(0.0110)	(0.00610)	(0.00983)	(0.00894)	(0.00663)	(0.0116)
Diourbel	-0.0138	-0.0151**	-0.0157	0.0145	-0.0117	0.0288**
	(0.0119)	(0.00662)	(0.0106)	(0.00968)	(0.00720)	(0.0126)
Fatick	0.00553	-0.0250***	-0.00735	0.00549	-0.00154	0.0247**
	(0.0113)	(0.00628)	(0.0101)	(0.00921)	(0.00683)	(0.0120)
Kaolack	-0.00211	-0.0144**	-0.00709	0.00495	0.00750	0.0122
	(0.0115)	(0.00638)	(0.0103)	(0.00934)	(0.00693)	(0.0122)
kolda	0.00634	-0.0229***	-0.0224**	0.00260	0.0148**	0.0192
	(0.0116)	(0.00646)	(0.0104)	(0.00945)	(0.00700)	(0.0123)
Louga	-0.0155	-0.00545	-0.0145	0.0135	-0.00368	0.0228*
	(0.0113)	(0.00630)	(0.0101)	(0.00923)	(0.00685)	(0.0120)
Matam	0.00178	-0.0122*	-0.000409	0.00904	0.00283	-0.000258
	(0.0112)	(0.00624)	(0.0101)	(0.00914)	(0.00678)	(0.0119)
Saint-Louis	0.0254**	-0.0174***	-0.0302***	-0.000934	-0.00374	0.0224*
	(0.0115)	(0.00641)	(0.0103)	(0.00937)	(0.00695)	(0.0122)
Tambacounda	-0.00207	-0.0221***	-0.0262**	0.00829	-0.00147	0.0415***
	(0.0117)	(0.00650)	(0.0105)	(0.00953)	(0.00706)	(0.0124)
Thies	-0.00103	-0.0306***	-0.0160	0.00554	-0.00350	0.0444***
	(0.0115)	(0.00637)	(0.0103)	(0.00933)	(0.00692)	(0.0122)
Ziguinchor	-0.00895	-0.0101	-0.0137	0.000610	-0.00394	0.0383***

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
	(0.0119)	(0.00659)	(0.0106)	(0.00962)	(0.00714)	(0.0126)
Number of cells in household	-0.00633***	-0.000565	0.00323**	0.00487***	-0.00353***	0.00320**
	(0.00143)	(0.000795)	(0.00128)	(0.00116)	(0.000864)	(0.00152)
Number of children less than 10 in hh.	0.00560***	0.000867**	-0.00228***	-0.00186***	-0.000143	-0.00200***
	(0.000621)	(0.000345)	(0.000558)	(0.000507)	(0.000376)	(0.000659)
Household head's age in y.	0.000973**	0.00408***	0.000501	-0.00524***	0.00160***	-0.00179***
	(0.000464)	(0.000261)	(0.000416)	(0.000382)	(0.000282)	(0.000493)
(Household head's age)^2	-3.61e-05***	9.93e-06***	-7.94e-06**	3.25e-05***	-1.56e-05***	1.35e-05***
	(4.31e-06)	(2.40e-06)	(3.87e-06)	(3.53e-06)	(2.62e-06)	(4.58e-06)
Constant	3.206***	0.224***	-1.138***	-0.0257	-0.435***	-1.002***
	(0.0283)	(0.0147)	(0.0245)	(0.0217)	(0.0166)	(0.0285)
Observations	1,429	1,429	1,429	1,429	1,429	1,429
R-squared	0.967	0.948	0.902	0.848	0.868	0.907

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The reference category for urbanization and region is *Dakar* and for education level, it is *no education*. Household structure is described with the following series of dummies: *Nb. cells=2: Head + oth* equals 1 if the household is composed of 2 cells only, the second cell being headed by someone who isn't the spouse of the head; *Nb. cells>2: Head + (n) spouses* equals one for households composed of more than two cells, all of them being headed either by the household head or by one of his spouse(s*); Nb. cells>2: head + (n) spouses + oth* equals one for households composed of more than two cells, , that headed by the household head, at least one headed by a spouse of the head and at least one headed by someone not married to the household head. The reference category is the two cells household composed of the household head and his spouse.

B3: Correlates of confounders.

Table B3.1 : Correlates of household fixed effects

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Log(total hhold exp.)	0.110***	0.0394***	-0.0478***	-0.0240***	-0.0190***	-0.0582***
	(0.00601)	(0.00334)	(0.00338)	(0.00262)	(0.00159)	(0.00440)
Log(hhold size)	-0.195***	-0.0371***	0.0590***	0.0318***	0.0243***	0.117***
	(0.0119)	(0.00661)	(0.00670)	(0.00519)	(0.00315)	(0.00872)
Number of cells in household	0.00671	0.00346	-0.00724**	-0.00178	-0.000719	-0.000423
	(0.00567)	(0.00315)	(0.00320)	(0.00247)	(0.00150)	(0.00415)
Number of children less than 10 in hh.	-0.00453*	0.000420	0.00360***	0.00104	-0.00111*	0.000580
	(0.00246)	(0.00137)	(0.00139)	(0.00107)	(0.000652)	(0.00180)
Household head's age in y.	0.000830	-0.00569***	0.000190	0.00419***	-0.00165***	0.00212
	(0.00184)	(0.00102)	(0.00104)	(0.000804)	(0.000488)	(0.00135)
(Household head's age)^2	2.19e-05	3.31e-06	4.94e-07	-2.40e-05***	1.58e-05***	-1.75e-05
	(1.71e-05)	(9.51e-06)	(9.65e-06)	(7.47e-06)	(4.53e-06)	(1.25e-05)
Nb. cells=2: Head + oth.	-0.0311	0.00739	-0.00409	0.00485	-0.00916	0.0321*
	(0.0227)	(0.0126)	(0.0128)	(0.00992)	(0.00602)	(0.0166)
Nb. cells>2: Head + (n) spouses	-0.0283*	0.00666	0.0303***	0.00837	0.00266	-0.0197*
	(0.0145)	(0.00806)	(0.00818)	(0.00633)	(0.00384)	(0.0106)
Nb. cells>2: head + (n) spouses + oth.	-0.0291**	-0.0117	0.0187**	0.0108*	0.000205	0.0111
	(0.0134)	(0.00745)	(0.00756)	(0.00585)	(0.00355)	(0.00983)
Other types of households	-0.0286	-0.00944	0.0116	0.00975	0.000116	0.0166
	(0.0266)	(0.0148)	(0.0150)	(0.0116)	(0.00704)	(0.0195)
Sex of hhold head (1 for male)	0.00833	-0.0163	0.0323**	-0.00295	-0.0373***	0.0159
	(0.0229)	(0.0127)	(0.0129)	(0.0100)	(0.00607)	(0.0168)
Hhold head's educ: 1 to 3 years of sch.	0.00618	0.00825	-0.0193*	-0.0206**	0.00503	0.0204
	(0.0206)	(0.0114)	(0.0116)	(0.00897)	(0.00544)	(0.0151)
Hhold head's educ: 4 to 5 years of sch.	-0.0166	0.0222***	-0.0113	-0.00471	-0.00357	0.0141
	(0.0132)	(0.00735)	(0.00746)	(0.00577)	(0.00351)	(0.00969)
Hhold head's educ: 6 to 9 years of sch.	-0.0175	-0.00126	0.00772	-0.0288***	0.0170***	0.0228**
	(0.0151)	(0.00841)	(0.00853)	(0.00660)	(0.00401)	(0.0111)
Hhold head educ: 10 years of sch. or more	-0.0396***	-0.000601	-0.00439	0.0160**	0.0174***	0.0113
	(0.0151)	(0.00841)	(0.00853)	(0.00661)	(0.00401)	(0.0111)
Hhold head has koranic educ.	0.123***	-0.138***	-0.00750	0.0508***	0.0168***	-0.0457***
	(0.00902)	(0.00501)	(0.00508)	(0.00393)	(0.00239)	(0.00661)
Other urban	-0.102**	0.0454*	0.00316	0.0106	-0.0158	0.0591*
	(0.0445)	(0.0247)	(0.0251)	(0.0194)	(0.0118)	(0.0326)
Rural	-0.0666	0.0154	0.0165	0.00731	-0.0110	0.0384
	(0.0435)	(0.0242)	(0.0245)	(0.0190)	(0.0115)	(0.0319)
Diourbel	0.0843*	-0.0745***	0.0229	-0.0176	0.0338***	-0.0489
	(0.0471)	(0.0262)	(0.0266)	(0.0206)	(0.0125)	(0.0345)
Fatick	0.0923**	-0.0224	-0.0192	-0.0167	0.00167	-0.0357
	(0.0448)	(0.0249)	(0.0252)	(0.0196)	(0.0119)	(0.0328)
Kaolack	0.182***	-0.0651***	-0.0477*	-0.000522	0.00388	-0.0723**
	(0.0455)	(0.0252)	(0.0256)	(0.0198)	(0.0120)	(0.0333)
kolda	0.143***	-0.0785***	-0.00333	0.0218	0.00237	-0.0852**
	(0.0460)	(0.0255)	(0.0259)	(0.0201)	(0.0122)	(0.0337)
Louga	0.0873*	-0.0529**	0.00525	-0.0121	0.00733	-0.0349
	(0.0449)	(0.0250)	(0.0253)	(0.0196)	(0.0119)	(0.0329)
Matam	0.140***	-0.0564**	-0.0413*	0.00129	0.00287	-0.0469
	(0.0445)	(0.0247)	(0.0251)	(0.0194)	(0.0118)	(0.0326)
Saint-Louis	0.154***	-0.0819***	0.00791	-0.0210	0.0132	-0.0720**
	(0.0456)	(0.0253)	(0.0257)	(0.0199)	(0.0121)	(0.0334)

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Tambacounda	0.130***	-0.0582**	0.0325	-0.0227	0.00554	-0.0867**
	(0.0464)	(0.0258)	(0.0261)	(0.0202)	(0.0123)	(0.0340)
Thies	0.125***	-0.0213	-0.00909	-0.00624	0.00820	-0.0962***
	(0.0454)	(0.0252)	(0.0256)	(0.0198)	(0.0120)	(0.0333)
Ziguinchor	0.258***	-0.0886***	-0.0454*	-0.00841	0.00252	-0.118***
	(0.0468)	(0.0260)	(0.0264)	(0.0204)	(0.0124)	(0.0343)
Constant	-1.340***	-0.130**	0.531***	0.111**	0.297***	0.531***
	(0.103)	(0.0573)	(0.0581)	(0.0450)	(0.0273)	(0.0756)
Observations	1,429	1,429	1,429	1,429	1,429	1,429
R-squared	0.484	0.702	0.380	0.386	0.235	0.333

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

The reference category for urbanization and region is *Dakar* and for education level, it is *no education*. Household structure is described with the following series of dummies: *Nb. cells=2: Head + oth* equals 1 if the household is composed of 2 cells only, the second cell being headed by someone who isn't the spouse of the head; *Nb. cells>2: Head + (n) spouses* equals one for households composed of more than two cells, all of them being headed either by the household head or by one of his spouse(s)*; Nb. cells>2: head + (n) spouses + oth* equals one for households composed of more than two cells, , that headed by the household head, at least one headed by a spouse of the head and at least one headed by someone not married to the household head. The reference category is the two cells household composed of the household head and his spouse.

Table B3.2 : Correlates of γ-weighted Theils

VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Log(total hhold exp.)	-0.0114***	-0.00118***	0.00566***	0.00153***	7.39e-05	0.00528***
	(0.00136)	(0.000134)	(0.000712)	(0.000192)	(6.45e-05)	(0.000629)
Log(hhold size)	0.00711***	0.000592**	-0.00418***	-0.000412	0.000209	-0.00332***
	(0.00269)	(0.000266)	(0.00141)	(0.000381)	(0.000128)	(0.00125)
Number of cells in household	0.00209	-7.07e-05	-0.00143**	7.84e-05	0.000287***	-0.000955
	(0.00128)	(0.000127)	(0.000672)	(0.000182)	(6.10e-05)	(0.000594)
Number of children less than 10 in hh.	-0.00176***	-7.95e-05	0.00106***	7.14e-05	-0.000107***	0.000815***
	(0.000556)	(5.51e-05)	(0.000292)	(7.88e-05)	(2.65e-05)	(0.000258)
Household head's age in y.	-0.000664	9.86e-06	0.000449**	-1.88e-05	-8.07e-05***	0.000304
	(0.000416)	(4.13e-05)	(0.000218)	(5.90e-05)	(1.98e-05)	(0.000193)
(Household head's age)^2	6.36e-06	-1.46e-07	-4.34e-06**	2.17e-07	8.19e-07***	-2.91e-06
	(3.87e-06)	(3.83e-07)	(2.03e-06)	(5.48e-07)	(1.84e-07)	(1.79e-06)
Nb. cells=2: Head + oth.	0.00683	0.000268	-0.00241	-0.00167**	4.44e-05	-0.00306
	(0.00513)	(0.000509)	(0.00269)	(0.000728)	(0.000244)	(0.00238)
Nb. cells>2: Head + (n) spouses	-0.00295	-9.97e-06	0.00210	-0.000162	-0.000344**	0.00137
	(0.00328)	(0.000325)	(0.00172)	(0.000465)	(0.000156)	(0.00152)
Nb. cells>2: head + (n) spouses + oth.	-0.00253	-0.000422	0.00140	0.000249	9.97e-05	0.00120
	(0.00303)	(0.000300)	(0.00159)	(0.000430)	(0.000144)	(0.00140)
Other types of households	0.00562	0.000232	-0.00249	-0.000959	0.000147	-0.00255
	(0.00601)	(0.000595)	(0.00315)	(0.000851)	(0.000286)	(0.00278)
Sex of hhold head (1 for male)	-0.00716	-0.000288	0.00469*	-2.41e-05	-0.000549**	0.00333
	(0.00518)	(0.000513)	(0.00272)	(0.000734)	(0.000246)	(0.00240)
Hhold head's educ: 1 to 3 years of sch.	-0.000159	0.000232	0.000317	-0.000209	-0.000236	5.41e-05
	(0.00464)	(0.000460)	(0.00244)	(0.000658)	(0.000221)	(0.00215)
Hhold head's educ: 4 to 5 years of sch.	0.00197	0.000292	-0.000822	-0.000406	-0.000114	-0.000916
	(0.00299)	(0.000296)	(0.00157)	(0.000424)	(0.000142)	(0.00139)
Hhold head's educ: 6 to 9 years of sch.	-0.000586	0.000260	0.000339	-4.44e-06	-0.000241	0.000232
	(0.00342)	(0.000339)	(0.00179)	(0.000484)	(0.000163)	(0.00158)
Hhold head educ: 10 years of sch. or more	0.00655*	0.000919***	-0.00286	-0.00125***	-0.000313*	-0.00305*
	(0.00342)	(0.000339)	(0.00179)	(0.000485)	(0.000163)	(0.00159)
Hhold head has koranic educ.	-0.00212	-8.84e-05	0.00134	3.35e-05	-0.000148	0.000981
	(0.00204)	(0.000202)	(0.00107)	(0.000289)	(9.69e-05)	(0.000944)
Other urban	-0.0131	-0.00131	0.00715	0.00122	-9.53e-05	0.00609
	(0.0101)	(0.000996)	(0.00527)	(0.00143)	(0.000478)	(0.00466)
Rural	-0.0128	-0.00154	0.00683	0.00139	0.000136	0.00600
	(0.00983)	(0.000973)	(0.00515)	(0.00139)	(0.000467)	(0.00455)
Diourbel	0.00373	0.000123	-0.00225	-0.000140	0.000260	-0.00172
	(0.0107)	(0.00106)	(0.00559)	(0.00151)	(0.000507)	(0.00493)
Fatick	0.00274	0.000476	-0.00166	-0.000148	-8.72e-05	-0.00131
	(0.0101)	(0.00100)	(0.00531)	(0.00143)	(0.000482)	(0.00469)
Kaolack	0.0149	0.00128	-0.00812	-0.00140	0.000261	-0.00693
	(0.0103)	(0.00102)	(0.00539)	(0.00146)	(0.000489)	(0.00476)
kolda	0.00614	0.000498	-0.00447	0.000358	0.000393	-0.00291
	(0.0104)	(0.00103)	(0.00545)	(0.00147)	(0.000494)	(0.00481)
Louga	0.00832	0.000759	-0.00474	-0.000613	0.000161	-0.00388
	(0.0102)	(0.00101)	(0.00532)	(0.00144)	(0.000483)	(0.00470)
Matam	0.00961	0.000781	-0.00532	-0.000828	0.000219	-0.00446
	(0.0101)	(0.000996)	(0.00527)	(0.00142)	(0.000478)	(0.00466)
Saint-Louis	0.00717	0.00111	-0.00405	-0.000623	-0.000199	-0.00340
	(0.0103)	(0.00102)	(0.00540)	(0.00146)	(0.000490)	(0.00477)
Tambacounda	0.00553	0.000522	-0.00373	6.92e-05	0.000231	-0.00261
	(0.0105)	(0.00104)	(0.00549)	(0.00148)	(0.000498)	(0.00485)

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VARIABLES	Food	(Public)	Transport	Clothing	Education	Other
Thies	0.0170*	0.00158	-0.00972*	-0.00123	0.000313	-0.00794*
	(0.0103)	(0.00102)	(0.00538)	(0.00145)	(0.000488)	(0.00475)
Ziguinchor	0.0167	0.00162	-0.00902	-0.00166	0.000139	-0.00778
	(0.0106)	(0.00105)	(0.00555)	(0.00150)	(0.000503)	(0.00490)
Constant	0.158***	0.0157***	-0.0802***	-0.0199***	-0.000150	-0.0733***
	(0.0233)	(0.00231)	(0.0122)	(0.00330)	(0.00111)	(0.0108)
Observations	1,429	1,429	1,429	1,429	1,429	1,429
R-squared	0.092	0.091	0.092	0.083	0.136	0.092

Source: PSF survey, authors' calculations.

Note: Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

The reference category for urbanization and region is *Dakar* and for education level, it is *no education*. Household structure is described with the following series of dummies: *Nb. cells=2: Head + oth* equals 1 if the household is composed of 2 cells only, the second cell being headed by someone who isn't the spouse of the head; *Nb. cells>2: Head + (n) spouses* equals one for households composed of more than two cells, all of them being headed either by the household head or by one of his spouse(s*); Nb. cells>2: head + (n) spouses + oth* equals one for households composed of more than two cells, , that headed by the household head, at least one headed by a spouse of the head and at least one headed by someone not married to the household head. The reference category is the two cells household composed of the household head and his spouse.