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Dietary Diversity as a Household Food Security Indicator: Technical Appendix

May 2002

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Full results of associations between dietary diversity and food security
and between unique food groups and dietary diversity

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TABLE A1: Associations between dietary diversity and per capita consumption

a) India

	Round 1	Round 2	Round 3	Pooled
Pearson correlation coefficient	0.159**	0.318**	0.194**	0.137**
Spearman correlation coefficient	0.336**	0.456**	0.485**	0.257**
Parameter estimate, dietary diversity	0.661	0.390	0.619	0.551
	(7.35)**	(3.41)**	(2.72)**	(7.07)**
Contingency table: Specificity	0.53	0.50	0.61	0.46
Sensitivity	0.74	0.75	0.80	0.71
Chi squared statistic	23.11**	19.77**	52.30**	26.78**

b) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.470**	0.519**	0.551**	0.575**	0.530**
Spearman correlation coefficient	0.537**	0.552**	0.587**	0.599**	0.573**
Parameter estimate, dietary diversity	0.990	0.953	1.059	1.083	0.995
	(13.11)**	(14.63)**	(13.34)**	(12.80)**	(26.52)**
Contingency table: Specificity	0.65	0.70	0.71	0.73	0.70
Sensitivity	0.75	0.75	0.70	0.69	0.73
Chi squared statistic	74.72**	89.46**	73.94**	78.99**	327.62**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.238**	0.225**	0.280**
Spearman correlation coefficient	0.454**	0.304**	0.378**
Parameter estimate, dietary diversity	1.002	0.614	0.661
	(21.69)**	(28.68)**	(34.35)**
Contingency table: Specificity	0.71	0.74	0.75
Sensitivity	0.57	0.48	0.52
Chi squared statistic	142.91**	195.29**	433.16**

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.101**	0.241**	0.117**
Spearman correlation coefficient	0.470**	0.423**	0.445**
Parameter estimate, dietary diversity	1.373	1.309	1.334
	(81.80)**	(86.57)**	(118.21)**
Contingency table: Specificity	0.61	0.51	0.56
Sensitivity	0.73	0.77	0.75
Chi squared statistic	2630.15**	1981.08**	4563.83**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.358**	0.340**	0.347**	0.340**	0.350**
Spearman correlation coefficient	0.526**	0.511**	0.453**	0.434**	0.488**
Parameter estimate, dietary diversity	1.203	1.161	0.987	1.326	1.095
	(19.08)**	(19.68)**	(7.52)**	(10.87)**	(20.54)**
Contingency table: Specificity	0.59	0.55	0.56	0.54	0.56
Sensitivity	0.78	0.76	0.73	0.71	0.78
Chi squared statistic	134.65**	94.94**	81.39**	60.14**	465.79**

f) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.339**	0.406**	0.372**
Spearman correlation coefficient	0.497**	0.480**	0.520**
Parameter estimate, dietary diversity	0.829	0.865	0.859
	(9.60)**	(20.68)**	(19.21)**
Contingency table: Specificity	0.46	0.45	0.45
Sensitivity	0.87	0.88	0.89
Chi squared statistic	126.57**	151.28**	296.12**

g) Mali

	Round 1	Round 4	Pooled
Pearson correlation coefficient	0.289**	0.327**	0.254**
Spearman correlation coefficient	0.362**	0.258**	0.284**
Parameter estimate, dietary diversity	0.819	0.543	0.696
	(8.44)**	(5.54)**	(10.72)**
Contingency table:			
Specificity	0.51	0.43	0.46
Sensitivity	0.76	0.66	0.71
Chi squared statistic	21.59**	2.63**	16.73**

h) Malawi

Pearson correlation coefficient	0.308**
Spearman correlation coefficient	0.384**
Parameter estimate, dietary diversity	0.634
	(10.45)**
Contingency table: Specificity	0.75
Sensitivity	0.52
Chi squared statistic	55.17**

i) Accra

Pearson correlation coefficient	0.142**
Spearman correlation coefficient	0.275**
Parameter estimate, dietary diversity	0.654
	(10.23)**
Contingency table: Specificity	0.85
Sensitivity	0.27
Chi squared statistic	6.71**

j) Kenya (7 days recall)

	Round 1	**Round 3**	**Round 4**	**Pooled**
Pearson correlation coefficient	0.305**	0.300**	0.368**	0.312**
Spearman correlation coefficient	0.498**	0.449**	0.416**	0.451**
Parameter estimate, dietary diversity	1.111	1.250	0.882	0.975
	(16.55)**	(19.73)**	(7.55)**	(13.48)**
Contingency table: Specificity	0.72	0.71	0.75	0.75
Sensitivity	0.55	0.56	0.58	0.55
Chi squared statistic	39.84**	40.46**	62.59**	131.98**

Notes:

1. *significant at the 5% level; ** significant at the 1% level;

2. Cut-offs for contingency curves are based on proportion of national population known to be poor;

3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design;

4. Absolute values of t statistics are in parentheses;

5. Note: In order to save space, the full contingency tables are not reported. For this reason, it is helpful to provide a little additional detail regarding their construction. Contingency tables require cut-offs to be established that places individual households into different cells. Here, these are based on the proportion of the population who are deemed to be poor, defined as having levels of per capita expenditures below some locally defined minimum subsistence level for the consumption of food and non-food goods. These cut-offs are applied to the per capita expenditure and dietary diversity data. Accordingly, for example, the four cells for the Egyptian contingency table are: households have per capita expenditures below the poverty line and households have a level of dietary diversity that puts them in the bottom 20% of all households (*specificity*); households have per capita expenditures below the poverty line but a level of dietary diversity that puts them above the bottom 20% of all households; households have per capita expenditures above the poverty line but a level of dietary diversity that puts them in the bottom 20% of all households; and households have per capita expenditures above the poverty line and households have a level of dietary diversity that puts them above the bottom 20% of all households (*sensitivity*). Thus, cut-offs for contingency tables are based on centile below which household is deemed poor using locally defined poverty line. These centiles are: 36 (India), 50 (Philippines), 69 (Mozambique), 42 (Mexico), 40 (Bangladesh), 20 (Egypt), 48 (Mali), 41 (Malawi), 84 (Accra), 67 (Kenya).

TABLE A2: Associations between unique food groups and per capita consumption

a) India

(Food groups are not available)

b) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.442**	0.425**	0.383**	0.395**	0.403**
Spearman correlation coefficient	0.523**	0.518**	0.508**	0.544**	0.523**
Parameter estimate, food groups	1.822	1.703	1.602	2.037	1.766
	(9.90)**	(12.15)**	(8.92)**	(10.66)**	(2.94)**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.167**	0.181**	0.227**
Spearman correlation coefficient	0.359**	0.259**	0.332**
Parameter estimate, food groups	1.049	0.618	0.654
	(14.55)**	(22.97)**	(26.10)**

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.115**	0.348**	0.138**
Spearman correlation coefficient	0.522**	0.514**	0.513**
Parameter estimate, food groups	1.225	1.255	1.229
	(61.44)**	(67.67)**	(89.32)**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.252**	0.196**	0.260**	0.226**	0.240**
Spearman correlation coefficient	0.362**	0.345**	0.351**	0.295**	0.351**
Parameter estimate, food groups	1.376	1.139	1.092	1.510	1.219
	(11.73)**	(9.10)**	(5.41)**	(7.29)**	(12.78)**

f) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.152**	0.241**	0.158**
Spearman correlation coefficient	0.281**	0.297**	0.267**
Parameter estimate, food groups	0.874	1.077	0.992
	(6.30)**	(13.05)**	(12.83)**

g) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.167**			0.177**	0.179**
Spearman correlation coefficient	0.224**			0.118**	0.198**
Parameter estimate, food groups	0.829			0.485	0.628
	(4.97)**			(2.58)**	(5.73)**

h) Malawi

Pearson correlation coefficient	0.302**
Spearman correlation coefficient	0.343**
Parameter estimate, food groups	0.633
	(8.82)**

i) Accra

Pearson correlation coefficient	0.224**
Spearman correlation coefficient	0.346**
Parameter estimate, food groups	1.064
	(9.80)**

j) Kenya (7 days recall)

	Round 1	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.234**	0.201**	0.261**	0.226**
Spearman correlation coefficient	0.387**	0.353**	0.309**	0.351**
Parameter estimate, food groups	1.379	1.338	0.860	1.150
	(12.09)**	(13.35)**	(5.77)**	(10.60)**

Notes:
1. *significant at the 5% level; ** significant at the 1% level; 2. Cut-offs for contingency curves are based on proportion of national population known to be poor; 3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design; and 4. absolute values of t statistics are in parentheses.

TABLE A3: Associations between dietary diversity and per capita caloric availability

a) India

	Round 1	Round 2	Round 3	Pooled
Pearson correlation coefficient	-0.095	-0.119*	-0.037	-0.093**
Spearman correlation coefficient	-0.048	-0.039	-0.001	-0.030
Parameter estimate, dietary diversity	0.036	-0.067	0.167	0.035
	(0.28)	(1.31)	(2.20)*	(0.65)
Contingency tables: (common caloric requirement)				
Specificity	0.90	0.92	0.91	0.91
Sensitivity	0.09	0.12	0.08	0.08
Chi Squared	0.09	0.35	0.02	0.08
Odds ratio from logistic regression	0.300	-0.940	0.752	-0.124
(common caloric requirement)	(0.47)	(2.60)**	(1.22)	(0.40)
Area under the Receiver –Operator-Curve	0.67	0.79	0.75	0.72
(common caloric requirement)				
Contingency tables: (national caloric requirement)				
Specificity	0.90	0.89	0.87	0.91
Sensitivity	0.09	0.13	0.12	0.07
Chi Squared	0.056	0.102	0.011	0.264
Odds ratio from logistic regression	0.255	-1.101	0.796	-0.208
(national caloric requirement)	(0.42)	(2.90)**	(1.22)	(0.68)
Area under the Receiver –Operator-Curve	0.658	0.812	0.762	0.730
(national caloric requirement)				

b) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.253**	0.330**	0.468**	0.408**	0.370**
Spearman correlation coefficient	0.250**	0.333**	0.426**	0.370**	0.348**
Parameter estimate, dietary diversity	0.367	0.465	0.545	0.481	0.471
	(6.38)**	(8.58)**	(9.71)**	(7.67)**	(16.09)**
Contingency tables: (common caloric requirement)	0.83	0.82	0.86	0.83	0.84
Specificity	0.28	0.37	0.39	0.42	0.36
Sensitivity	6.46**	13.38**	27.91**	20.19**	68.26**
Chi squared					
Odds ratio from logistic regression	1.963	3.245	3.380	4.055	1.963
(common caloric requirement)	(4.02)**	(3.81)**	(5.07)**	(5.49)**	(4.02)**
Area under the Receiver-operator-curve (common caloric requirement)	0.73	0.78	0.82	0.82	0.78
Contingency tables: (national caloric requirement)					
Specificity	0.83	0.84	0.86	0.85	0.84
Sensitivity	0.30	0.33	0.41	0.41	0.37
Chi squared	9.698**	11.242**	32.317**	22.088**	72.962**
Odds ratio from logistic regression	2.068	3.38	3.49	4.004	2.911
(national caloric requirement)	(3.94)**	(3.83)**	(5.08)**	(5.36)**	(9.12)**
Area under the Receiver-operator-curve (national caloric requirement)	0.744	0.795	0.821	0.818	0.784

c) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.085**	0.182**	0.190**	0.143**	0.161**
Spearman correlation coefficient	0.092**	0.164**	0.192**	0.126**	0.158**
Parameter estimate, dietary diversity	0.190	0.197	0.228	0.197	0.203
	(5.48)**	(6.70)**	(7.86)**	(7.39)**	(13.62)**
Contingency tables: (common caloric requirement)					
Specificity	0.69	0.77	0.73	0.70	0.75
Sensitivity	0.38	0.36	0.46	0.39	0.38
Chi squared	10.35**	36.52**	65.53**	17.77**	142.4**
Odds ratio from logistic regression (common caloric requirement)	0.649	0.897	1.380	0.898	0.923
	(5.07)**	(5.68)**	(8.43)**	(6.29)**	(12.79)**
Area under the Receiver-operator-curve (common caloric requirement)	0.60	0.62	0.66	0.65	0.63
Contingency tables: (national caloric requirement)					
Specificity	0.69	0.77	0.72	0.70	0.75
Sensitivity	0.38	0.36	0.47	0.40	0.38
Chi squared	12.23**	35.50**	68.36**	18.57**	145.43**
Odds ratio from logistic regression (z statistic in parentheses) (national caloric requirement)	0.672	0.952	1.436	0.915	0.956
	(5.16)**	(5.91)**	(8.53)**	(6.26)**	(12.92)**
Area under the Receiver-operator-curve (national caloric requirement)	0.601	0.629	0.661	0.663	0.637

d) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.238**	0.225**	0.280**
Spearman correlation coefficient	0.454**	0.304**	0.378**
Parameter estimate, dietary diversity	0.695	0.369	0.422
	(20.72)**	(16.66)**	(22.86)**
Contingency tables: (common caloric requirement)			
Specificity	0.69	0.57	0.61
Sensitivity	0.51	0.45	0.42
Chi squared	70.68**	2.11	8.96**
Odds ratio from logistic regression (common caloric requirement)	2.984	1.249	1.463
	(13.02)**	(10.67)**	(15.05)**
Area under the Receiver-operator-curve (common caloric requirement)	0.80	0.79	0.77
Contingency tables: (national caloric requirement)			
Specificity	0.68	0.68	0.67
Sensitivity	0.51	0.35	0.36
Chi squared	66.945**	2.339	6.989**
Odds ratio from logistic regression (national caloric requirement)	3.026	1.223	1.468
	(12.88)**	(10.32)**	(14.84)**
Area under the Receiver-operator-curve (national caloric requirement)	0.767	0.805	0.787

e) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.215**	0.169**	0.185**
Spearman correlation coefficient	0.233**	0.195**	0.205**
Parameter estimate, dietary diversity	0.781	0.605	0.685
	(36.63)**	(39.87)**	(50.60)**
Contingency tables: (common caloric requirement)			
Specificity	0.59	0.61	0.65
Sensitivity	0.56	0.52	0.48
Chi Squared	445.00**	348.76**	663.85**
Odds ratio from logistic regression	2.360	2.916	2.432
(common caloric requirement)	(31.52)**	(33.21)**	(44.38)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.73	0.78	0.74
Contingency tables: (national caloric requirement)			
Specificity	0.68	0.60	0.64
Sensitivity	0.45	0.52	0.48
Chi Squared	371.82**	297.31**	581.43**
Odds ratio from logistic regression (national caloric requirement)	2.279	2.914	2.364
	(30.03)**	(31.60)**	(42.00)**
Area under the Receiver –Operator-Curve (national caloric requirement)	0.733	0.782	0.743

f) Bangladesh (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.334**	0.311**	0.249**	0.358**	0.307**
Spearman correlation coefficient	0.348**	0.311**	0.355**	0.310**	0.340**
Parameter estimate, dietary diversity	0.690	0.728	1.321	1.222	0.998
	(12.87)**	(8.66)**	(6.17)**	(8.09)**	(10.41)**
Contingency tables: (common caloric requirement)					
Specificity	0.61	0.59	0.62	0.64	0.61
Sensitivity	0.65	0.60	0.60	0.55	0.61
Chi Squared	62.65**	33.18**	46.50**	34.43**	179.01**
Odds ratio from logistic regression	3.665	3.477	3.879	4.442	3.573
(common caloric requirement)	(9.27)**	(9.39)**	(8.99)**	(10.14)**	(19.15)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.76	0.78	0.77	0.79	0.76
Contingency tables: (national caloric requirement)					
Specificity	0.67	0.64	0.63	0.64	0.66
Sensitivity	0.59	0.55	0.60	0.56	0.56
Chi Squared	64.61**	35.13**	50.89**	38.78**	173.71**
Odds ratio from logistic regression	3.66	3.453	3.928	4.50	3.590
(national caloric requirement)	(9.19)**	(9.26)**	(8.99)**	(10.17)**	(19.09)**
Area under the Receiver –Operator-Curve (national caloric requirement)	0.768	0.773	0.773	0.787	0.760

g) Bangladesh (24 hrs recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.121**	0.106**	0.061**	0.171**	0.105**
Spearman correlation coefficient	0.181**	0.131**	0.097**	0.190**	0.136**
Parameter estimate, dietary diversity	0.093 (10.20)**	0.067 (7.54)**	0.083 (7.53)**	0.113 (11.49)**	0.084 (17.75)**
Contingency tables: (common caloric requirement)					
Specificity	0.59	0.59	0.58	0.60	0.58
Sensitivity	0.49	0.49	0.48	0.49	0.48
Chi Squared	28.04**	25.30**	13.02**	32.61**	72.44**
Odds ratio from logistic regression (common caloric requirement)	0.305 (8.50)**	0.213 (5.94)**	0.274 (6.73)**	0.312 (8.24)**	0.252 (14.03)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.62	0.63	0.64	0.65	0.60
Contingency tables: (national caloric requirement)					
Specificity	0.61	0.61	0.58	0.69	0.60
Sensitivity	0.47	0.47	0.48	0.40	0.46
Chi Squared	28.025**	24.209**	12.70**	27.646**	70.206**
Odds ratio from logistic regression (national caloric requirement)	0.318 (8.85)**	0.224 (6.24)**	0.274 (6.69)	0.309 (8.19)**	0.257 (14.28)**
Area under the Receiver –Operator-Curve (national caloric requirement)	0.620	0.634	0.638	0.653	0.602

h) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.373**	0.383**	0.353**
Spearman correlation coefficient	0.391**	0.405**	0.380**
Parameter estimate, dietary diversity	0.709 (15.73)**	0.707 (18.34)**	0.676 (23.57)**
Contingency tables: (common caloric requirement)			
Specificity	0.41	0.39	0.42
Sensitivity	0.85	0.86	0.83
Chi squared	72.05**	80.30**	134.39**
Odds ratio from logistic regression (common caloric requirement)	4.468 (9.90)**	3.567 (10.06)**	3.804 (14.11)**
Area under the Receiver-operator-curve (common caloric requirement)	0.85	0.83	0.83
Contingency tables: (national caloric requirement)			
Specificity	0.41	0.39	0.44
Sensitivity	0.83	0.83	0.81
Chi squared	70.48**	71.68**	151.49**
Odds ratio from logistic regression (national caloric requirement)	4.593 (10.15)**	3.608 (10.71)**	3.805 (14.97)**
Area under the Receiver-operator-curve (national caloric requirement)	0.846	0.818	0.822

g) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.362** 0.212**			0.187** 0.146**	0.198** 0.237**
Parameter estimate, dietary diversity	0.665 (6.24)**			0.342 (3.71)**	0.513 (7.51)**
Contingency tables: (common caloric requirement) Specificity Sensitivity Chi squared	 0.50 0.75 18.18**			 0.41 0.64 0.69	 0.45 0.70 13.22**
Odds ratio from logistic regression (common caloric requirement)	3.89 (5.97)**			1.213 (2.40)**	2.160 (6.00)**
Area under the Receiver-operator-curve (common caloric requirement)	0.830			0.712	0.754
** National caloric requirement is equal to common caloric requirement ***					

h) Malawi

Pearson correlation coefficient Spearman correlation coefficient	0.242** 0.223**
Parameter estimate, dietary diversity	0.371 (7.48)**
Contingency tables: (common caloric requirement) Specificity Sensitivity Chi squared	 0.43 0.68 9.045**
Odds ratio from logistic regression (common caloric requirement)	1.458 (5.56)**
Area under the Receiver-operator-curve (common caloric requirement)	0.780
Contingency tables: (national caloric requirement) Specificity Sensitivity Chi squared	 0.42 0.69 8.978**
Odds ratio from logistic regression (national caloric requirement)	1.378 (5.29)**
Area under the Receiver-operator-curve (national caloric requirement)	0.776

i) Accra

Pearson correlation coefficient Spearman correlation coefficient	0.308** 0.320**
Parameter estimate, dietary diversity	0.599 (10.74)**
Contingency tables: (common caloric requirement) Specificity Sensitivity Chi squared	 0.85 0.29 10.273**
Odds ratio from logistic regression (common caloric requirement)	2.201 (5.33)**
Area under the Receiver-operator-curve (common caloric requirement)	0.754
Contingency tables: (national caloric requirement) Specificity Sensitivity Chi squared	 0.88 0.19 2.163
Odds ratio from logistic regression (national caloric requirement)	2.232 (4.77)**
Area under the Receiver-operator-curve (national caloric requirement)	0.752

j) Kenya (7 days recall)

	Round 1	**Round 3**	**Round 4**	**Pooled**
Pearson correlation coefficient Spearman correlation coefficient	0.309** 0.456**	0.307** 0.401**	0.316** 0.410**	0.312** 0.435**
Parameter estimate, dietary diversity	1.036 (14.72)**	1.152 (16.13)**	0.879 (8.62)**	1.000 (18.52)**
Contingency tables: (common caloric requirement) Specificity Sensitivity Chi squared	 0.73 0.54 42.706**	 0.70 0.59 42.856**	 0.73 0.53 40.616**	 0.75 0.54 142.010**
Odds ratio from logistic regression (common caloric requirement)	4.444 (8.15)**	4.627 (8.10)**	4.940 (8.44)**	4.524 (14.39)**
Area under the Receiver-operator-curve (common caloric requirement)	0.841	0.832	0.841	0.841
Contingency tables: (national caloric requirement) Specificity Sensitivity Chi squared	 0.71 0.53 36.602**	 0.76 0.54 45.249**	 0.78 0.48 41.092**	 0.74 0.54 131.98**
Odds ratio from logistic regression (national caloric requirement)	4.380 (7.92)**	4.769 (7.97)**	5.001 (8.31)**	4.478 (14.12)**
Area under the Receiver-operator-curve (national caloric requirement)	0.842	0.836	0.835	0.828

Notes:
1. *significant at the 5% level; ** significant at the 1% level;

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Z statistics in parentheses for odds ratios.

4. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.

5. Contingency tables using a "Common caloric requirement" are constructed by assuming that, for each country, a minimum level of utilization is 2345 kcal per person per day. As is well known, a level of sufficient caloric utilization depends on a person's age, sex and levels of physical activity. The figure of 2345kcal per person per day corresponds to the caloric needs of a 60 kg male, aged 30-59 undertaking "light" activities such as sitting quietly, with no moving around and no strenuous activity or a 55 kg female, aged 30-59 undertaking seated work and limited home production. This minimum was also used to classify households for the logistic regressions that were used in the ROC exercise. Households were further divided into groups based on their level of dietary diversity. Specifically, they were divided based on whether they are above or below the percentile of households who are considered to be food insecure as defined by the 2345 kcal cut-off described above. Centiles for cut-offs for contingency tables based on this requirement are: 92 (India), 88 (Philippines, 7 day recall), 76 (Philippines, 24 hour recall), 65 (Mozambique), 60 (Mexico), 56 (Bangladesh, 7 day and 24 hour recall), 23 (Egypt), 48 (Mali), 23 (Malawi), 23 (Accra), 68 (Kenya). Note that for most countries in the sample, these are virtually identical to the proportions of households deemed to be poor.

6. Contingency tables using a "National caloric requirement" are constructed on the basis of data found in FANTA (1999). These "National caloric requirements" (expressed in kcal per person per day) and centiles for cut-offs for contingency tables based on this requirement are: 2377 kcal & 92 respectively for India, 2388 & 82 for Philippines, 7 day recall, 2388 & 77 for Philippines, 24 hour recall, 2467 kcal & 65 for Mozambique, 2544 kcal & 60 for Mexico, 2358 kcal & 57 for Bangladesh, 7 day and 24 hour recall, 2622 kcal & 23 (Egypt), 2347 kcal & 48 for Mali, 2386 & 43 for Malawi, 2485 & 88 for Accra), and 2427 & 69 for Kenya.

TABLE A4: Associations between unique food groups and per capita caloric availability

a) India

(Food groups are not available)

b) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient Spearman correlation coefficient	0.188** 0.172**	0.236** 0.257**	0.343** 0.336**	0.315** 0.332**	0.273** 0.274**
Parameter estimate, food groups	0.587 (4.48)**	0.715 (5.98)**	0.817 (6.52)**	1.023 (6.12)**	0.788 (11.29)**
Odds ratio from logistic regression (common caloric requirement)	2.23 (2.12)**	5.395 (3.14)**	4.446 (2.97)**	6.02 (3.63)**	3.870 (5.82)**
Area under the Receiver-operator-curve (common caloric requirement)	0.721	0.764	0.773	0.771	0.743
Odds ratio from logistic regression (national caloric requirements)	2.205 (2.00)*	5.209 (3.21)**	4.848 (3.03)**	6.436 (3.70)**	4.010 (5.81)**
Area under the Receiver-operator-curve (national caloric requirements)	0.727	0.770	0.780	0.772	0.747

c) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.088** 0.087**	0.161** 0.143**	0.180** 0.178**	0.122** 0.113**	0.149** 0.143**
Parameter estimate, food groups	0.221 (5.44)**	0.183 (5.62)**	0.237 (7.79)**	0.183 (6.30)**	0.206 (12.66)**
Odds ratio from logistic regression (common caloric requirement)	0.779 (5.12)**	0.944 (5.32)**	1.482 (8.40)**	0.786 (5.00)**	0.972 (11.96)**
Area under the Receiver-operator-curve (common caloric requirement)	0.594	0.619	0.653	0.645	0.627
Odds ratio from logistic regression (national caloric requirements)	0.772 (4.96)**	0.998 (5.47)**	1.530 (8.39)**	0.804 (5.01)**	1.00 (11.94)**
Area under the Receiver-operator-curve (national caloric requirements)	0.596	0.624	0.653	0.654	0.632

d) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient Spearman correlation coefficient	0.186** 0.223**	0.056** 0.071**	0.085** 0.103**
Parameter estimate, food groups	0.728 (13.92)**	0.351 (12.77)**	0.402 (16.66)**
Odds ratio from logistic regression (common caloric requirement)	2.743 (8.680**	1.058 (7.72)**	1.197 (10.340)**
Area under the Receiver-operator-curve (common caloric requirement)	0.766	0.778	0.750
Odds ratio from logistic regression (national caloric requirements)	2.859 (8.65)**	1.034 (7.40)**	1.214 (10.23)**
Area under the Receiver-operator-curve (national caloric requirements)	0.768	0.779	0.751

e) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.167** 0.176**	0.120** 0.148**	0.130** 0.146**
Parameter estimate, food groups	0.724 (28.99)**	0.551 (29.45)**	0.630 (37.92)**
Odds ratio from logistic regression (common caloric requirement)	1.907 (24.79)**	2.451 (25.35)**	1.956 (33.81)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.721	0.761	0.728
Odds ratio from logistic regression (national caloric requirements)	1.813 (23.05)**	2.443 (23.95)**	1.877 (31.42)**
Area under the Receiver –Operator-Curve (national caloric requirements)	0.720	0.768	0.730

f) Bangladesh (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.277** 0.271**	0.217** 0.204**	0.218** 0.288**	0.250** 0.195*	0.244** 0.254**
Parameter estimate, food groups	0.884 (9.18)**	0.933 (5.25)**	2.214 (5.54)**	1.763 (5.58)**	1.519 (7.73)**
Odds ratio from logistic regression (common caloric requirement)	4.368 (6.73)**	3.378 (5.73)**	5.556 (6.61)**	3.808 (5.59)**	3.953 (12.33)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.724	0.736	0.744	0.735	0.716
Odds ratio from logistic regression (national caloric requirements)	4.405 (6.72)**	3.249 (5.54)**	5.688 (6.62)**	3.901 (5.67)**	3.954 (12.27)**
Area under the Receiver –Operator-Curve (national caloric requirements)	0.732	0.733	0.749	0.736	0.718

g) Bangladesh, 24 hrs recall

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.221** 0.194**	0.136** 0.117**	0.138** 0.105**	0.203** 0.186**	0.169** 0.147**
Parameter estimate, food groups	0.475 (12.86)**	0.307 (8.33)**	0.523 (9.95)**	0.425 (10.36)**	0.411 (20.05)**
Odds ratio from logistic regression (common caloric requirement)	1.632 (11.42)**	1.004 (7.02)**	1.847 (9.87)**	1.242 (8.84)**	1.279 (17.89)**
Area under the Receiver –Operator-Curve (common caloric requirement)	0.633	0.638	0.652	0.656	0.611
Odds ratio from logistic regression (national caloric requirements)	1.682 (11.67)**	1.066 (7.40)**	1.837 (9.78)**	1.207 (8.62)**	1.292 (18.01)**
Area under the Receiver –Operator-Curve (national caloric requirements)	0.633	0.639	0.653	0.653	0.611

h) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient Spearman correlation coefficient	0.239** 0.255**	0.282** 0.304**	0.265** 0.283**
Parameter estimate, food groups	0.906 (8.84)**	0.958 (13.11)**	0.925 (15.49)**
Odds ratio from logistic regression (common caloric requirement)	4.974 (5.89)**	4.375 (8.78)**	4.519 (10.26)**
Area under the Receiver-operator-curve (common caloric requirement)	0.786	0.781	0.774
Odds ratio from logistic regression (national caloric requirements)	4.43 (5.38)**	4.64 (8.74)**	4.443 (10.04)**
Area under the Receiver-operator-curve (national caloric requirements)	0.778	0.778	0.768

g) Mali

	Round 1	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.167* 0.220**	0.171** 0.118**	0.179** 0.198**
Parameter estimate, food groups	0.829 (4.98)**	0.485 (2.58)**	0.628 (5.73)**
Odds ratio from logistic regression (z statistic in parentheses) (common caloric requirement)	4.448 (5.38)**	1.132 (1.62)	2.375 (4.77)**
Area under the Receiver-operator-curve (common caloric requirement)	0.814	0.706	0.746
** National caloric requirement is equal to common caloric requirement ***			

h) Malawi

Pearson correlation coefficient Spearman correlation coefficient	0.224** 0.214**
Parameter estimate, food groups	0.377 (6.36)**
Odds ratio from logistic regression (common caloric requirement)	1.586 (5.13)**
Area under the Receiver-operator-curve (common caloric requirement)	0.781
Odds ratio from logistic regression (national caloric requirements)	1.505 (4.91)**
Area under the Receiver-operator-curve (national caloric requirements)	0.778

i) Accra

Pearson correlation coefficient Spearman correlation coefficient	0.329** 0.254**
Parameter estimate, food groups	0.933 (6.08)**
Odds ratio from logistic regression (common caloric requirement)	4.756 (4.11)**
Area under the Receiver-operator-curve (common caloric requirement)	0.739
Odds ratio from logistic regression (national caloric requirements)	5.535 (4.07)**
Area under the Receiver-operator-curve (national caloric requirements)	0.736

j) Kenya

	Round 1	**Round 3**	**Round 4**	**Pooled**
Pearson correlation coefficient Spearman correlation coefficient	0.237** 0.370**	0.229** 0.346**	0.270** 0.349**	0.247** 0.363**
Parameter estimate, food groups	1.209 (9.54)**	1.315 (11.68)**	0.931 (6.48)**	1.108 (11.80)**
Odds ratio from logistic regression (common caloric requirement)	5.569 (7.61)**	4.774 (6.35)**	5.335 (6.73)**	5.01 (11.76)**
Area under the Receiver-operator-curve (common caloric requirement)	0.799	0.790	0.804	0.828
Odds ratio from logistic regression (national caloric requirements)	5.389 (7.22)**	4.951 (6.09)**	5.711 (6.79)**	5.109 (11.36)**
Area under the Receiver-operator-curve (national caloric requirements)	0.799	0.794	0.800	0.789

Notes:

1. *Significant at the 5% level; ** Significant at the 1% level.

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Z statistics in parentheses for odds ratios.

4. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.

5. “Common caloric requirement” is 2345 kcal per person per day. Centiles for cut-offs for contingency tables based on this requirement are: 92 (India), 88 (Philippines, 7 day recall), 76 (Philippines, 24 hour recall), 65 (Mozambique), 60 (Mexico), 56 (Bangladesh, 7 day and 24 hour recall), 23 (Egypt), 48 (Mali), 23 (Malawi), 23 (Accra), 68 (Kenya).

6. “National caloric requirement” (expressed in kcal per person per day) and centiles for cut-offs for contingency tables based on this requirement are: 2377 kcal & 92 respectively for India, 2388 & 82 for Philippines, 7 day recall, 2388 & 77 for Philippines, 24 hour recall, 2467 kcal & 65 for Mozambique, 2544 kcal & 60 for Mexico, 2358 kcal & 57 for Bangladesh, 7 day and 24 hour recall, 2622 kcal & 23 (Egypt), 2347 kcal & 48 for Mali, 2386 & 43 for Malawi, 2485 & 88 for Accra), and 2427 & 69 for Kenya.

TABLE A5: Associations between dietary diversity and per capita caloric availability from staples

a) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.097*	0.203**	0.385**	0.260**	0.244**
Spearman correlation coefficient	0.093*	0.202**	0.309**	0.242**	0.212**
Parameter estimate, dietary diversity	0.184	0.311	0.413	0.320	0.315
	(2.88)**	(5.05)**	(6.94)**	(4.58)**	(9.67)**

b) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	-0.028	0.042*	0.037	-0.009	0.023*
Spearman correlation coefficient	-0.021	0.036	0.055**	-0.009	0.028**
Parameter estimate, dietary diversity	0.084	0.051	0.064	0.024	0.045
	(1.24)	(1.60)	(2.05)*	(0.82)	(2.81)**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.074**	-0.039**	0.017
Spearman correlation coefficient	0.163**	0.016	0.093**
Parameter estimate, dietary diversity	0.512	0.073	0.158
	(8.75)**	(1.82)	(4.90)**

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.146**	0.093**	0.111**
Spearman correlation coefficient	0.158**	0.110**	0.123**
Parameter estimate, dietary diversity	0.634	0.423	0.515
	(28.97)**	(24.80)**	(36.30)**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.188**	0.166**	0.153**	0.204**	0.173**
Spearman correlation coefficient	0.190**	0.162**	0.228**	0.151**	0.184**
Parameter estimate, dietary diversity	0.469	0.594	0.759	0.763	0.646
	(7.71)**	(3.11)**	(5.89)**	(6.55)**	(9.53)**

f) Bangladesh (24 hrs recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.096**	0.089**	0.023	0.148**	0.078**
Spearman correlation coefficient	0.139**	0.096**	0.050**	0.157**	0.095**
Parameter estimate, dietary diversity	0.086	0.063	0.064	0.108	0.076
	(8.62)**	(6.74)**	(6.07)**	(10.88)**	(15.54)**

g) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.153**	0.239**	0.148**
Spearman correlation coefficient	0.135**	0.254**	0.156**
Parameter estimate, dietary diversity	0.369	0.487	0.391
	(7.30)**	(9.87)**	(11.12)**

h) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.173**			0.109	0.149**
Spearman correlation coefficient	0.226**			0.077	0.169**
Parameter estimate, dietary diversity	0.580			0.206	0.410
	(5.01)**			(2.11)**	(5.40)**

i) Malawi

Pearson correlation coefficient	0.151**
Spearman correlation coefficient	0.155**
Parameter estimate, dietary diversity	0.249
	(4.27)**

j) Accra

Pearson correlation coefficient	0.202**
Spearman correlation coefficient	0.237**
Parameter estimate, dietary diversity	0.654
	(10.23)**

k) Kenya

	Round 1	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.237**	0.229**	0.244*	0.238**
Spearman correlation coefficient	0.389**	0.337**	0.341**	0.372**
Parameter estimate, dietary diversity	1.027	1.126	0.782	0.952
	(11.73)**	(12.27)**	(7.11)**	(14.97)**

Notes:
1. *significant at the 5% level; ** significant at the 1% level.

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.

TABLE A6: Associations between unique food groups and per capita caloric availability from staples

a) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.049	0.126**	0.274**	0.206**	0.169**
Spearman correlation coefficient	0.021	0.136**	0.233**	0.219**	0.151**
Parameter estimate, unique foods	0.258	0.424	0.592	0.864	0.543
	(1.73)	(3.28)**	(4.68)**	(3.73)**	(6.49)**

b) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	-0.027	0.035	0.036	-0.007	0.020*
Spearman correlation coefficient	-0.03	0.024	0.049*	-0.009	0.019
Parameter estimate, unique foods	0.064	0.037	0.075	0.029	0.051
	(1.47)	(1.09)	(2.27)*	(0.90)	(2.93)**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.021	-0.038*	0.0002
Spearman correlation coefficient	0.107**	0.01	0.08**
Parameter estimate, unique foods	0.466	-0.054	0.049
	(5.22)**	(1.05)	(1.13)

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.095**	0.042**	0.051**
Spearman correlation coefficient	0.096**	0.057**	0.058**
Parameter estimate, unique foods	0.557	0.334	0.432
	(22.86)**	(17.01)**	(26.49)**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.174**	0.10**	0.133**	0.143**	0.140**
Spearman correlation coefficient	0.153**	0.084**	0.201**	0.10**	0.141**
Parameter estimate, unique foods	0.613	0.820	1.303	0.979	0.923
	(5.70)**	(1.83)	(4.58)**	(4.28)**	(5.72)**

f) Bangladesh (24 hrs recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.150**	0.085**	0.044**	0.143**	0.097**
Spearman correlation coefficient	0.131**	0.065**	0.011**	0.130**	0.077**
Parameter estimate, unique foods	0.394	0.220	0.338	0.347	0.311
	(8.90)**	(5.78)**	(7.25)**	(8.73)**	(14.86)**

g) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.110**	0.189**	0.157**
Spearman correlation coefficient	0.104**	0.219**	0.170**
Parameter estimate, unique foods	0.340	0.569	0.463
	(3.61)**	(6.63)**	(7.16)**

h) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.125*			0.107	0.131**
Spearman correlation coefficient	0.155*			0.047	0.129**
Parameter estimate, unique foods	0.656			0.129	0.401
	(3.70)**			(1.08)	(3.91)**

i) Malawi

Pearson correlation coefficient	0.158**
Spearman correlation coefficient	0.162**
Parameter estimate, unique foods	0.633
	(8.82)**

j) Accra

Pearson correlation coefficient	0.177**
Spearman correlation coefficient	0.123**
Parameter estimate, unique foods	0.652
	(4.20)**

k) Kenya

	Round 1	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.174**	0.181**	0.219**	0.192**
Spearman correlation coefficient	0.319**	0.296**	0.291**	0.313
Parameter estimate, unique foods	1.118	1.255	0.792	0.999
	(6.71)**	(9.05)**	(5.19)**	(9.45)**

Notes:
1. *significant at the 5% level; ** significant at the 1% level.

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.

TABLE A7: Associations between dietary diversity and per capita caloric availability from non-staples

a) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.496**	0.524**	0.539**	0.630**	0.543**
Spearman correlation coefficient	0.594**	0.601**	0.629**	0.624**	0.614**
Parameter estimate, dietary diversity	1.490	1.552	1.583	1.381	1.490
	(16.38)**	(15.20)**	(14.26)**	(18.49)**	(31.06)**

b) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.321**	0.411**	0.457**	0.434**	0.407**
Spearman correlation coefficient	0.411**	0.468**	0.517**	0.500**	0.486**
Parameter estimate, dietary diversity	1.124	1.183	1.191	1.177	1.168
	(19.95)**	(20.45)**	(26.59)**	(25.35)**	(45.65)**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.348**	0.152***	0.167**
Spearman correlation coefficient	0.430**	0.274**	0.257**
Parameter estimate, dietary diversity	1.167	1.011	0.992
	(22.35)**	(23.40)**	(29.58)**

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.322**	0.280**	0.303**
Spearman correlation coefficient	0.361**	0.325**	0.345**
Parameter estimate, dietary diversity	1.347	1.101	1.227
	(53.86)**	(57.99)**	(76.34)**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.525**	0.511**	0.404***	0.413**	0.460**
Spearman correlation coefficient	0.570**	0.591**	0.533**	0.540**	0.574**
Parameter estimate, dietary diversity	1.601	1.469	1.567	1.613	1.496
	(23.08)**	(27.17)**	(10.84)**	(28.17)**	(28.56)**

f) Bangladesh (24 hrs recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.122**	0.113**	0.130**	0.147**	0.125**
Spearman correlation coefficient	0.238**	0.219**	0.184**	0.221**	0.205**
Parameter estimate, dietary diversity	0.150	0.117	0.123	0.155	0.134
	(11.46)**	(8.90)**	(9.82)**	(12.00)**	(20.86)**

g) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.417**	0.441**	0.442**
Spearman correlation coefficient	0.488**	0.512**	0.518**
Parameter estimate, dietary diversity	1.373	1.418	1.378
	(9.39)**	(11.74)**	(14.91)**

h) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.290**			0.367**	0.318**
Spearman correlation coefficient	0.519**			0.381**	0.463**
Parameter estimate, dietary diversity	1.308			1.191	1.312
	(8.48)**			(9.60)**	(14.47)**

i) Malawi

Pearson correlation coefficient	0.213**
Spearman correlation coefficient	0.241**
Parameter estimate, dietary diversity	0.663
	(7.74)**

j) Accra

Pearson correlation coefficient	0.299**
Spearman correlation coefficient	0.359**
Parameter estimate, dietary diversity	0.822
	(10.86)**

k) Kenya

	Round 1	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.337**	0.338**	0.292**	0.319**
Spearman correlation coefficient	0.487**	0.442**	0.474**	0.468**
Parameter estimate, dietary diversity	1.291	1.416	1.589	1.407
	(11.26)**	(16.33)**	(11.48)**	(21.21)**

Notes:
1. *significant at the 5% level; ** significant at the 1% level.

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.

TABLE A8: Associations between unique food groups and per capita caloric availability from non-staples

a) Philippines (7 day recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.430**	0.431**	0.422**	0.470**	0.435**
Spearman correlation coefficient	0.531**	0.519**	0.525**	0.534**	0.528**
Parameter estimate, unique foods	2.645	2.881	2.778	2.623	2.731
	(11.05)**	(11.34)**	(9.25)**	(12.81)**	(20.98)**

b) Philippines (24 hour recall)

	Round 1	Round 2	Round 3	Round 4	Pooled sample
Pearson correlation coefficient	0.324**	0.370**	0.427**	0.368**	0.378**
Spearman correlation coefficient	0.405**	0.424**	0.487**	0.462**	0.454**
Parameter estimate, unique foods	1.247	1.103	1.183	1.105	1.156
	(18.07)**	(17.00)**	(23.49)**	(22.23)**	(39.86)**

c) Mozambique

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient	0.258**	0.121**	0.120**
Spearman correlation coefficient	0.343**	0.228**	0.213**
Parameter estimate, unique foods	1.317	1.046	1.034
	(16.10)**	(19.43)**	(23.17)**

d) Mexico

	June 1999	November 1999	Pooled
Pearson correlation coefficient	0.317**	0.259**	0.293**
Spearman correlation coefficient	0.357**	0.312*8	0.338**
Parameter estimate, unique foods	1.424	1.174	1.310
	(52.05)**	(49.23)**	(69.52)**

e) Bangladesh (7 days recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.393**	0.358**	0.295**	0.251**	0.325**
Spearman correlation coefficient	0.415**	0.434**	0.391**	0.329**	0.419**
Parameter estimate, unique foods	1.919	1.711	2.182	2.010	1.914
	(14.41)**	(12.05)**	(5.81)**	(13.48)**	(13.52)**

f) Bangladesh (24 hrs recall)

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient	0.288**	0.255**	0.310**	0.271**	0.288**
Spearman correlation coefficient	0.300**	0.263**	0.308**	0.287**	0.297**
Parameter estimate, unique foods	0.927	0.829	0.946	0.785	0.846
	(15.96)**	(13.69)**	(17.24)**	(15.21)**	(30.57)**

g) Egypt

	Urban sub-sample	Rural sub-sample	Pooled sample
Pearson correlation coefficient Spearman correlation coefficient	0.259** 0.304**	0.307** 0.339**	0.280** 0.317**
Parameter estimate, unique foods	2.22 (7.03)**	2.28 (9.21)**	2.25 (11.52)**

h) Mali

	Round 1	Round 2	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.294** 0.463**			0.308** 0.382**	0.304** 0.436**
Parameter estimate, unique foods	1.675 (8.83)**			1.396 (6.12)**	1.578 (11.65)**

i) Malawi

Pearson correlation coefficient Spearman correlation coefficient	0.178** 0.210**
Parameter estimate, unique foods	0.632 (6.29)**

j) Accra

Pearson correlation coefficient Spearman correlation coefficient	0.364** 0.366**
Parameter estimate, unique foods	1.531 (8.12)**

k) Kenya

	Round 1	Round 3	Round 4	Pooled
Pearson correlation coefficient Spearman correlation coefficient	0.274** 0.421**	0.229** 0.379**	0.233** 0.404**	0.244** 0.401**
Parameter estimate, unique foods	1.947 (9.47)**	1.726 (12.13)**	2.120 (9.09)**	1.920 (16.57)**

Notes:
1. *significant at the 5% level; ** significant at the 1% level.

2. Absolute value of t statistics in parentheses for parameter estimates.

3. Regressions control for log household size, log age of household head, education of head, location and survey round. Standard errors are robust to cluster survey design.