

## **Supplementary Information**

Systematic Comparison of Household Income, Consumption, and Assets to Measure Health  
Inequalities in Low- and Middle-Income Countries

Mathieu J.P. Poirier

**Table S1.** Survey and quintile-specific observations, sex ratio, and prevalence for stunting (ST) and underweight (UW) using income, consumption, and assets

|          | Income |        |      |       |       | Consumption |       |      |       |       | Assets |       |      |       |       |
|----------|--------|--------|------|-------|-------|-------------|-------|------|-------|-------|--------|-------|------|-------|-------|
|          | N      | Female | Age  | ST    | UW    | N           | Sex   | Age  | ST    | UW    | N      | Sex   | Age  | ST    | UW    |
| ALB_2002 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 335    | 0.430  | 32.6 | 0.442 | 0.125 | 279         | 0.466 | 32.9 | 0.391 | 0.115 | 367    | 0.493 | 32.6 | 0.460 | 0.106 |
| 2        | 221    | 0.439  | 29.9 | 0.516 | 0.154 | 263         | 0.452 | 32.2 | 0.490 | 0.106 | 312    | 0.429 | 31.1 | 0.429 | 0.122 |
| 3        | 308    | 0.458  | 31.1 | 0.435 | 0.078 | 260         | 0.458 | 31.0 | 0.469 | 0.100 | 246    | 0.419 | 31.7 | 0.382 | 0.069 |
| 4        | 222    | 0.446  | 31.7 | 0.428 | 0.117 | 251         | 0.406 | 30.6 | 0.414 | 0.120 | 191    | 0.476 | 29.8 | 0.435 | 0.110 |
| 5        | 252    | 0.413  | 30.5 | 0.361 | 0.052 | 285         | 0.404 | 29.6 | 0.414 | 0.081 | 217    | 0.346 | 30.2 | 0.456 | 0.111 |
| BRA_1996 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 435    | 0.485  | 30.1 | 0.301 | 0.092 |             |       |      |       |       | 560    | 0.473 | 29.8 | 0.293 | 0.089 |
| 2        | 397    | 0.511  | 31.0 | 0.176 | 0.065 |             |       |      |       |       | 419    | 0.549 | 30.2 | 0.189 | 0.057 |
| 3        | 332    | 0.509  | 30.4 | 0.181 | 0.045 |             |       |      |       |       | 344    | 0.445 | 31.6 | 0.163 | 0.044 |
| 4        | 276    | 0.536  | 31.5 | 0.167 | 0.029 |             |       |      |       |       | 244    | 0.553 | 30.8 | 0.164 | 0.029 |
| 5        | 207    | 0.507  | 30.3 | 0.116 | 0.024 |             |       |      |       |       | 195    | 0.533 | 32.8 | 0.108 | 0.031 |
| CIV_1987 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 249    | 0.498  | 31.4 | 0.233 | 0.104 | 201         | 0.547 | 31.3 | 0.244 | 0.090 | 426    | 0.472 | 31.8 | 0.228 | 0.131 |
| 2        | 345    | 0.493  | 32.3 | 0.214 | 0.099 | 370         | 0.484 | 31.1 | 0.224 | 0.119 | 496    | 0.484 | 31.7 | 0.179 | 0.119 |
| 3        | 479    | 0.480  | 31.5 | 0.188 | 0.115 | 505         | 0.487 | 32.5 | 0.208 | 0.119 | 484    | 0.488 | 32.2 | 0.155 | 0.085 |
| 4        | 559    | 0.487  | 32.4 | 0.174 | 0.131 | 593         | 0.464 | 32.9 | 0.174 | 0.106 | 447    | 0.494 | 32.9 | 0.177 | 0.087 |
| 5        | 571    | 0.504  | 33.9 | 0.135 | 0.068 | 564         | 0.509 | 33.5 | 0.112 | 0.085 | 353    | 0.518 | 34.2 | 0.164 | 0.091 |
| CIV_1988 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 233    | 0.459  | 29.2 | 0.240 | 0.150 | 200         | 0.470 | 28.7 | 0.290 | 0.140 | 387    | 0.463 | 30.9 | 0.204 | 0.124 |
| 2        | 369    | 0.496  | 32.3 | 0.203 | 0.106 | 352         | 0.494 | 31.6 | 0.216 | 0.122 | 467    | 0.450 | 31.8 | 0.216 | 0.124 |
| 3        | 417    | 0.520  | 32.4 | 0.201 | 0.098 | 467         | 0.505 | 32.3 | 0.203 | 0.111 | 459    | 0.510 | 33.5 | 0.170 | 0.118 |
| 4        | 537    | 0.443  | 33.0 | 0.196 | 0.102 | 526         | 0.475 | 33.3 | 0.173 | 0.089 | 448    | 0.520 | 32.7 | 0.172 | 0.078 |
| 5        | 549    | 0.519  | 34.5 | 0.149 | 0.100 | 576         | 0.497 | 34.9 | 0.148 | 0.101 | 356    | 0.511 | 35.2 | 0.194 | 0.090 |
| GHA_1988 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 365         | 0.493 | 33.4 | 0.362 | 0.230 | 655    | 0.501 | 32.8 | 0.389 | 0.263 |
| 2        |        |        |      |       |       | 511         | 0.503 | 30.6 | 0.348 | 0.233 | 603    | 0.514 | 33.1 | 0.443 | 0.274 |
| 3        |        |        |      |       |       | 603         | 0.493 | 33.7 | 0.406 | 0.250 | 678    | 0.509 | 33.6 | 0.382 | 0.258 |
| 4        |        |        |      |       |       | 686         | 0.520 | 33.2 | 0.340 | 0.206 | 549    | 0.486 | 32.8 | 0.279 | 0.166 |
| 5        |        |        |      |       |       | 741         | 0.495 | 34.1 | 0.286 | 0.201 | 413    | 0.492 | 33.2 | 0.157 | 0.099 |
| GHA_2009 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 414         | 0.478 | 34.5 | 0.297 | 0.232 | 926    | 0.524 | 34.3 | 0.362 | 0.241 |
| 2        |        |        |      |       |       | 625         | 0.522 | 34.2 | 0.301 | 0.246 | 545    | 0.475 | 34.1 | 0.301 | 0.251 |
| 3        |        |        |      |       |       | 678         | 0.501 | 34.2 | 0.326 | 0.230 | 416    | 0.466 | 34.5 | 0.252 | 0.216 |
| 4        |        |        |      |       |       | 618         | 0.494 | 35.0 | 0.270 | 0.223 | 378    | 0.513 | 34.7 | 0.238 | 0.169 |
| 5        |        |        |      |       |       | 596         | 0.503 | 35.0 | 0.233 | 0.168 | 342    | 0.494 | 34.9 | 0.173 | 0.164 |
| GTM_2000 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 1,205  | 0.491  | 29.0 | 0.589 | 0.222 | 1,192       | 0.484 | 29.3 | 0.637 | 0.236 | 1559   | 0.509 | 29.3 | 0.604 | 0.227 |
| 2        | 1,318  | 0.489  | 29.9 | 0.581 | 0.211 | 1,391       | 0.494 | 29.8 | 0.578 | 0.223 | 1392   | 0.481 | 29.3 | 0.585 | 0.224 |
| 3        | 1,271  | 0.500  | 30.3 | 0.496 | 0.164 | 1,272       | 0.501 | 29.9 | 0.499 | 0.153 | 1188   | 0.481 | 30.8 | 0.536 | 0.166 |
| 4        | 1,088  | 0.497  | 30.2 | 0.427 | 0.136 | 1,117       | 0.498 | 29.8 | 0.415 | 0.136 | 941    | 0.514 | 30.5 | 0.336 | 0.090 |
| 5        | 819    | 0.490  | 29.4 | 0.309 | 0.078 | 771         | 0.490 | 30.4 | 0.248 | 0.053 | 663    | 0.477 | 29.3 | 0.216 | 0.045 |
| GUY_1992 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 113    | 0.446  | 31.4 | 0.150 | 0.124 | 94          | 0.478 | 30.7 | 0.170 | 0.117 | 120    | 0.470 | 29.4 | 0.133 | 0.150 |
| 2        | 114    | 0.450  | 29.6 | 0.149 | 0.140 | 126         | 0.448 | 31.6 | 0.151 | 0.183 | 133    | 0.447 | 29.5 | 0.113 | 0.120 |
| 3        | 131    | 0.473  | 29.6 | 0.130 | 0.130 | 111         | 0.445 | 30.6 | 0.162 | 0.144 | 128    | 0.445 | 28.9 | 0.172 | 0.141 |
| 4        | 118    | 0.436  | 30.8 | 0.161 | 0.144 | 149         | 0.514 | 28.9 | 0.148 | 0.121 | 122    | 0.508 | 32.6 | 0.156 | 0.115 |
| 5        | 125    | 0.524  | 29.7 | 0.120 | 0.096 | 121         | 0.442 | 29.6 | 0.083 | 0.066 | 98     | 0.469 | 31.0 | 0.133 | 0.102 |
| KGZ_1997 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 154    | 0.468  | 38.0 | 0.390 | 0.143 | 140         | 0.493 | 40.4 | 0.436 | 0.150 | 320    | 0.500 | 38.3 | 0.338 | 0.106 |
| 2        | 181    | 0.486  | 37.3 | 0.398 | 0.122 | 233         | 0.468 | 36.7 | 0.421 | 0.124 | 294    | 0.476 | 38.4 | 0.395 | 0.068 |
| 3        | 243    | 0.535  | 39.2 | 0.391 | 0.111 | 246         | 0.476 | 38.0 | 0.431 | 0.093 | 237    | 0.511 | 37.9 | 0.435 | 0.122 |
| 4        | 293    | 0.485  | 38.5 | 0.365 | 0.082 | 250         | 0.512 | 37.5 | 0.348 | 0.084 | 164    | 0.512 | 37.8 | 0.372 | 0.116 |
| 5        | 291    | 0.491  | 36.7 | 0.326 | 0.082 | 294         | 0.517 | 38.3 | 0.272 | 0.085 | 98     | 0.500 | 36.8 | 0.255 | 0.122 |
| KGZ_1998 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |

|          | Income |        |      |       |       | Consumption |       |      |       |       | Assets |       |      |       |       |
|----------|--------|--------|------|-------|-------|-------------|-------|------|-------|-------|--------|-------|------|-------|-------|
|          | N      | Female | Age  | ST    | UW    | N           | Sex   | Age  | ST    | UW    | N      | Sex   | Age  | ST    | UW    |
| 1        | 283    | 0.516  | 36.0 | 0.466 | 0.152 | 294         | 0.432 | 37.4 | 0.459 | 0.095 | 506    | 0.471 | 35.3 | 0.433 | 0.140 |
| 2        | 338    | 0.501  | 36.8 | 0.408 | 0.121 | 378         | 0.525 | 36.9 | 0.452 | 0.159 | 433    | 0.519 | 37.8 | 0.397 | 0.150 |
| 3        | 304    | 0.510  | 38.1 | 0.431 | 0.138 | 337         | 0.497 | 35.5 | 0.409 | 0.145 | 286    | 0.489 | 37.4 | 0.434 | 0.154 |
| 4        | 361    | 0.457  | 36.6 | 0.391 | 0.133 | 384         | 0.505 | 37.0 | 0.370 | 0.143 | 275    | 0.467 | 37.1 | 0.433 | 0.131 |
| 5        | 403    | 0.483  | 35.6 | 0.385 | 0.159 | 334         | 0.467 | 36.4 | 0.377 | 0.150 | 143    | 0.486 | 35.5 | 0.350 | 0.119 |
| NGA_2010 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 62     | 0.463  | 33.4 | 0.484 | 0.258 | 326         | 0.460 | 32.3 | 0.377 | 0.218 | 502    | 0.482 | 31.6 | 0.416 | 0.315 |
| 2        | 67     | 0.524  | 31.9 | 0.507 | 0.418 | 512         | 0.508 | 31.4 | 0.422 | 0.285 | 530    | 0.435 | 31.7 | 0.415 | 0.330 |
| 3        | 56     | 0.439  | 29.2 | 0.321 | 0.196 | 582         | 0.467 | 31.4 | 0.368 | 0.313 | 495    | 0.490 | 31.1 | 0.343 | 0.267 |
| 4        | 55     | 0.438  | 28.1 | 0.364 | 0.164 | 578         | 0.498 | 30.4 | 0.315 | 0.285 | 492    | 0.491 | 31.1 | 0.333 | 0.260 |
| 5        | 42     | 0.622  | 28.3 | 0.095 | 0.095 | 578         | 0.459 | 31.5 | 0.370 | 0.277 | 385    | 0.459 | 30.4 | 0.242 | 0.174 |
| NGA_2012 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 43     | 0.442  | 30.6 | 0.140 | 0.093 | 297         | 0.448 | 30.8 | 0.249 | 0.128 | 673    | 0.478 | 31.4 | 0.218 | 0.123 |
| 2        | 44     | 0.477  | 29.3 | 0.273 | 0.023 | 556         | 0.496 | 32.0 | 0.218 | 0.133 | 597    | 0.461 | 31.6 | 0.261 | 0.127 |
| 3        | 59     | 0.593  | 28.8 | 0.220 | 0.153 | 643         | 0.474 | 30.2 | 0.215 | 0.112 | 498    | 0.504 | 30.1 | 0.183 | 0.106 |
| 4        | 22     | 0.455  | 33.8 | 0.182 | 0.091 | 635         | 0.490 | 31.5 | 0.198 | 0.096 | 537    | 0.471 | 31.1 | 0.214 | 0.110 |
| 5        | 37     | 0.486  | 34.2 | 0.189 | 0.054 | 606         | 0.474 | 31.6 | 0.216 | 0.111 | 461    | 0.497 | 31.0 | 0.174 | 0.082 |
| PAK_1991 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 685    | 0.512  | 29.8 | 0.463 | 0.413 | 618         | 0.518 | 29.9 | 0.500 | 0.437 | 759    | 0.503 | 29.3 | 0.478 | 0.480 |
| 2        | 761    | 0.524  | 29.2 | 0.498 | 0.423 | 727         | 0.527 | 29.9 | 0.470 | 0.406 | 767    | 0.527 | 30.2 | 0.499 | 0.374 |
| 3        | 775    | 0.503  | 30.0 | 0.489 | 0.426 | 768         | 0.487 | 29.9 | 0.445 | 0.397 | 879    | 0.522 | 30.7 | 0.504 | 0.407 |
| 4        | 788    | 0.509  | 29.4 | 0.411 | 0.340 | 887         | 0.516 | 28.8 | 0.419 | 0.370 | 818    | 0.484 | 29.3 | 0.379 | 0.339 |
| 5        | 902    | 0.479  | 29.1 | 0.357 | 0.308 | 916         | 0.479 | 29.2 | 0.390 | 0.309 | 680    | 0.479 | 27.5 | 0.319 | 0.279 |
| PAN_1997 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 525         | 0.488 | 28.6 | 0.430 | 0.120 | 724    | 0.453 | 29.3 | 0.452 | 0.127 |
| 2        |        |        |      |       |       | 578         | 0.462 | 29.3 | 0.230 | 0.080 | 479    | 0.503 | 29.4 | 0.136 | 0.048 |
| 3        |        |        |      |       |       | 434         | 0.493 | 28.9 | 0.113 | 0.035 | 440    | 0.493 | 26.9 | 0.077 | 0.020 |
| 4        |        |        |      |       |       | 427         | 0.492 | 29.1 | 0.082 | 0.014 | 370    | 0.503 | 29.4 | 0.046 | 0.016 |
| 5        |        |        |      |       |       | 330         | 0.533 | 28.7 | 0.039 | 0.009 | 279    | 0.538 | 29.3 | 0.043 | 0.011 |
| PAN_2003 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 718    | 0.506  | 29.2 | 0.421 | 0.102 | 659         | 0.496 | 28.4 | 0.487 | 0.106 | 948    | 0.487 | 29.2 | 0.500 | 0.117 |
| 2        | 600    | 0.440  | 30.3 | 0.297 | 0.060 | 725         | 0.469 | 30.0 | 0.303 | 0.070 | 651    | 0.467 | 30.0 | 0.266 | 0.046 |
| 3        | 609    | 0.496  | 28.9 | 0.284 | 0.049 | 569         | 0.480 | 29.9 | 0.257 | 0.046 | 563    | 0.481 | 29.6 | 0.179 | 0.023 |
| 4        | 561    | 0.480  | 30.0 | 0.210 | 0.037 | 534         | 0.466 | 29.7 | 0.204 | 0.030 | 442    | 0.466 | 29.8 | 0.143 | 0.025 |
| 5        | 418    | 0.500  | 31.8 | 0.167 | 0.024 | 435         | 0.515 | 32.0 | 0.110 | 0.016 | 318    | 0.535 | 32.1 | 0.104 | 0.016 |
| PER_1994 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 561    | 0.503  | 29.3 | 0.453 | 0.152 | 567         | 0.488 | 29.6 | 0.490 | 0.164 | 668    | 0.497 | 28.9 | 0.488 | 0.156 |
| 2        | 542    | 0.494  | 30.8 | 0.415 | 0.107 | 559         | 0.533 | 29.8 | 0.435 | 0.095 | 568    | 0.487 | 30.4 | 0.451 | 0.102 |
| 3        | 460    | 0.525  | 30.4 | 0.317 | 0.061 | 462         | 0.463 | 30.5 | 0.292 | 0.063 | 428    | 0.507 | 30.4 | 0.257 | 0.047 |
| 4        | 389    | 0.478  | 29.8 | 0.257 | 0.046 | 407         | 0.516 | 30.9 | 0.199 | 0.039 | 340    | 0.456 | 30.7 | 0.135 | 0.029 |
| 5        | 344    | 0.466  | 29.1 | 0.148 | 0.032 | 301         | 0.463 | 28.8 | 0.130 | 0.030 | 224    | 0.547 | 30.4 | 0.098 | 0.018 |
| TJK_2007 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 305         | 0.485 | 30.7 | 0.407 | 0.141 | 570    | 0.495 | 30.7 | 0.461 | 0.156 |
| 2        |        |        |      |       |       | 430         | 0.488 | 32.1 | 0.393 | 0.165 | 539    | 0.464 | 30.5 | 0.425 | 0.167 |
| 3        |        |        |      |       |       | 495         | 0.491 | 29.6 | 0.354 | 0.123 | 628    | 0.467 | 29.4 | 0.389 | 0.156 |
| 4        |        |        |      |       |       | 635         | 0.444 | 30.2 | 0.422 | 0.137 | 589    | 0.497 | 29.3 | 0.319 | 0.143 |
| 5        |        |        |      |       |       | 836         | 0.490 | 28.7 | 0.360 | 0.163 | 368    | 0.462 | 30.0 | 0.299 | 0.095 |
| TLS_2007 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 476         | 0.492 | 30.2 | 0.429 | 0.424 | 723    | 0.499 | 29.1 | 0.426 | 0.443 |
| 2        |        |        |      |       |       | 756         | 0.499 | 29.8 | 0.413 | 0.402 | 777    | 0.493 | 30.1 | 0.425 | 0.390 |
| 3        |        |        |      |       |       | 838         | 0.505 | 30.9 | 0.438 | 0.427 | 748    | 0.489 | 31.7 | 0.455 | 0.421 |
| 4        |        |        |      |       |       | 876         | 0.508 | 31.4 | 0.468 | 0.419 | 822    | 0.505 | 31.2 | 0.471 | 0.436 |
| 5        |        |        |      |       |       | 991         | 0.474 | 29.7 | 0.474 | 0.424 | 867    | 0.489 | 30.0 | 0.459 | 0.409 |
| TZA_2010 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        |        |        |      |       |       | 427         | 0.482 | 28.0 | 0.410 | 0.185 | 775    | 0.471 | 28.3 | 0.381 | 0.159 |
| 2        |        |        |      |       |       | 568         | 0.514 | 28.6 | 0.375 | 0.158 | 738    | 0.505 | 28.9 | 0.364 | 0.168 |
| 3        |        |        |      |       |       | 641         | 0.487 | 29.0 | 0.309 | 0.122 | 594    | 0.517 | 28.9 | 0.345 | 0.133 |
| 4        |        |        |      |       |       | 680         | 0.491 | 29.1 | 0.293 | 0.121 | 478    | 0.533 | 29.2 | 0.241 | 0.098 |

|          | Income |        |      |       |       | Consumption |       |      |       |       | Assets |       |      |       |       |
|----------|--------|--------|------|-------|-------|-------------|-------|------|-------|-------|--------|-------|------|-------|-------|
|          | N      | Female | Age  | ST    | UW    | N           | Sex   | Age  | ST    | UW    | N      | Sex   | Age  | ST    | UW    |
| 5        |        |        |      |       |       | 655         | 0.530 | 28.8 | 0.232 | 0.105 | 408    | 0.522 | 28.3 | 0.157 | 0.074 |
| UGA_2011 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 455    | 0.477  | 29.5 | 0.222 | 0.088 | 362         | 0.459 | 29.3 | 0.224 | 0.122 | 544    | 0.489 | 29.9 | 0.276 | 0.123 |
| 2        | 459    | 0.519  | 30.0 | 0.240 | 0.105 | 518         | 0.500 | 30.2 | 0.234 | 0.097 | 521    | 0.482 | 30.5 | 0.186 | 0.063 |
| 3        | 468    | 0.506  | 30.5 | 0.222 | 0.068 | 560         | 0.536 | 30.1 | 0.223 | 0.071 | 489    | 0.540 | 31.4 | 0.233 | 0.082 |
| 4        | 426    | 0.474  | 31.6 | 0.192 | 0.073 | 551         | 0.510 | 30.6 | 0.211 | 0.065 | 506    | 0.512 | 30.6 | 0.194 | 0.071 |
| 5        | 468    | 0.553  | 31.6 | 0.156 | 0.043 | 520         | 0.542 | 31.7 | 0.138 | 0.040 | 444    | 0.541 | 30.1 | 0.119 | 0.034 |
| UGA_2013 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 57     | 0.509  | 30.8 | 0.211 | 0.035 | 419         | 0.504 | 27.6 | 0.232 | 0.086 | 619    | 0.502 | 30.2 | 0.236 | 0.103 |
| 2        | 40     | 0.375  | 30.5 | 0.150 | 0.025 | 538         | 0.517 | 28.6 | 0.247 | 0.087 | 533    | 0.527 | 28.1 | 0.225 | 0.081 |
| 3        | 28     | 0.286  | 33.8 | 0.107 | 0.143 | 555         | 0.497 | 29.7 | 0.243 | 0.085 | 535    | 0.503 | 29.3 | 0.236 | 0.080 |
| 4        | 28     | 0.607  | 31.0 | 0.071 | 0.071 | 562         | 0.514 | 29.8 | 0.181 | 0.064 | 496    | 0.504 | 29.4 | 0.214 | 0.054 |
| 5        | 34     | 0.706  | 35.1 | 0.147 | 0.000 | 509         | 0.519 | 30.6 | 0.138 | 0.051 | 397    | 0.514 | 29.8 | 0.098 | 0.038 |
| ZAF_1993 |        |        |      |       |       |             |       |      |       |       |        |       |      |       |       |
| 1        | 1,099  | 0.496  | 29.5 | 0.334 | 0.168 | 953         | 0.461 | 30.5 | 0.366 | 0.159 | 1654   | 0.481 | 29.9 | 0.323 | 0.138 |
| 2        | 1,097  | 0.491  | 29.6 | 0.290 | 0.129 | 1,031       | 0.490 | 29.1 | 0.296 | 0.141 | 1196   | 0.493 | 29.9 | 0.281 | 0.165 |
| 3        | 1,020  | 0.480  | 30.6 | 0.282 | 0.158 | 1,123       | 0.508 | 29.4 | 0.240 | 0.136 | 898    | 0.510 | 29.4 | 0.247 | 0.131 |
| 4        | 1,036  | 0.499  | 30.0 | 0.212 | 0.103 | 1,205       | 0.496 | 30.4 | 0.231 | 0.118 | 675    | 0.505 | 30.2 | 0.178 | 0.089 |
| 5        | 622    | 0.513  | 30.4 | 0.113 | 0.053 | 648         | 0.522 | 30.7 | 0.114 | 0.065 | 544    | 0.496 | 31.0 | 0.118 | 0.053 |

Note: N refers to the number of observations, Female is the proportion of children that are female, age is the mean age in months, ST is the prevalence of stunting, and UW is the prevalence of underweight in each quintile, as measured by income, consumption, and assets

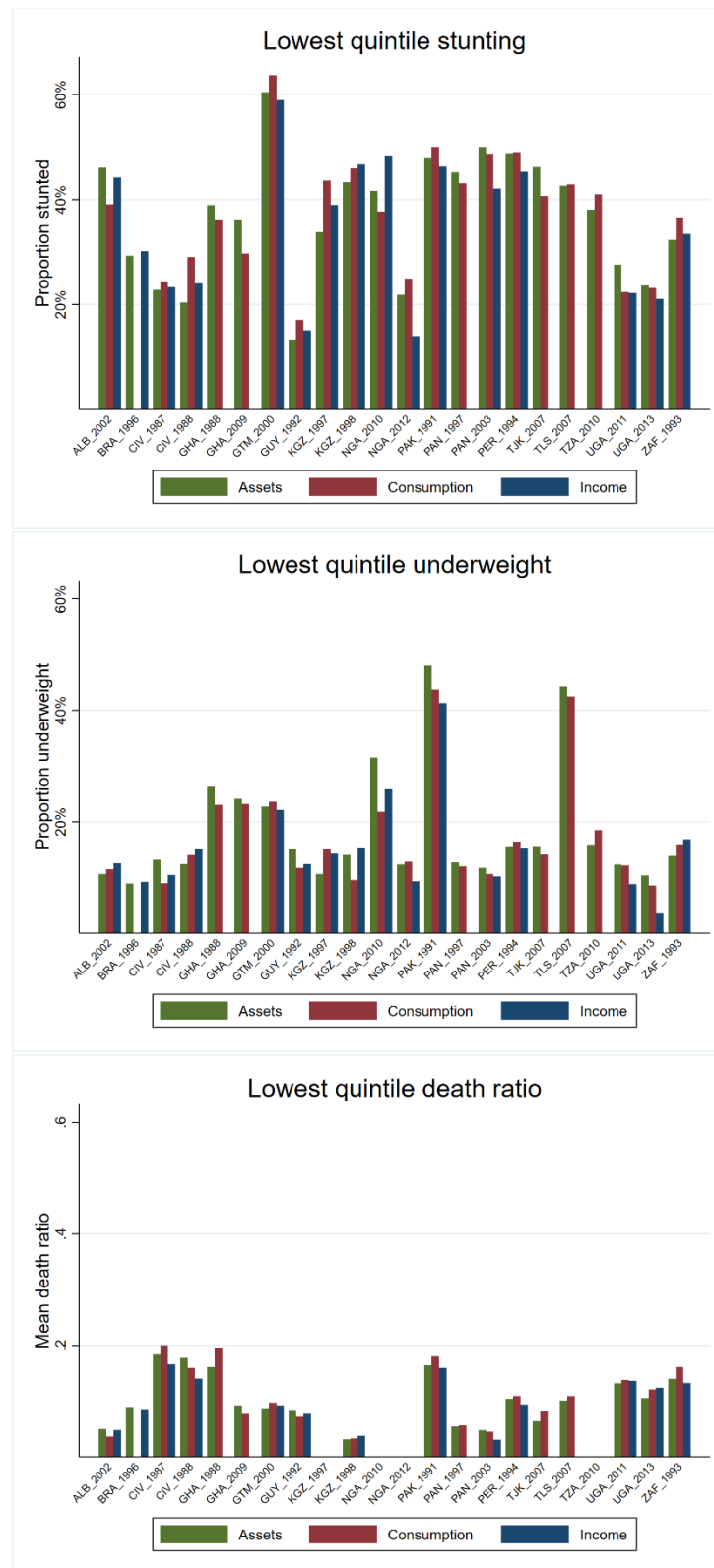
**Table S2.** Survey and quintile-specific prevalence for births, deaths, and child death ratio using income, consumption, and assets

|          | Income |        |        |             | Consumption |        |        |             | Assets |        |        |             |
|----------|--------|--------|--------|-------------|-------------|--------|--------|-------------|--------|--------|--------|-------------|
|          | N      | Births | Deaths | Death ratio | N           | Births | Deaths | Death ratio | N      | Births | Deaths | Death ratio |
| ALB_2002 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 517    | 3.29   | 0.23   | 0.048       | 441         | 2.87   | 0.16   | 0.037       | 551    | 3.31   | 0.24   | 0.050       |
| 2        | 450    | 2.94   | 0.16   | 0.042       | 490         | 3.00   | 0.18   | 0.041       | 558    | 2.95   | 0.13   | 0.030       |
| 3        | 604    | 2.72   | 0.11   | 0.027       | 549         | 2.78   | 0.14   | 0.034       | 536    | 2.70   | 0.12   | 0.030       |
| 4        | 518    | 2.63   | 0.09   | 0.022       | 579         | 2.73   | 0.11   | 0.027       | 491    | 2.45   | 0.08   | 0.022       |
| 5        | 573    | 2.26   | 0.05   | 0.015       | 603         | 2.46   | 0.06   | 0.016       | 519    | 2.28   | 0.05   | 0.017       |
| BRA_1996 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 541    | 3.39   | 0.42   | 0.085       |             |        |        |             | 662    | 3.94   | 0.49   | 0.089       |
| 2        | 609    | 3.08   | 0.24   | 0.047       |             |        |        |             | 700    | 2.99   | 0.20   | 0.048       |
| 3        | 626    | 2.81   | 0.18   | 0.042       |             |        |        |             | 686    | 2.57   | 0.16   | 0.039       |
| 4        | 624    | 2.58   | 0.14   | 0.033       |             |        |        |             | 619    | 2.48   | 0.12   | 0.027       |
| 5        | 620    | 2.33   | 0.05   | 0.014       |             |        |        |             | 574    | 2.13   | 0.05   | 0.016       |
| CIV_1987 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 161    | 3.81   | 0.66   | 0.166       | 160         | 3.98   | 0.83   | 0.200       | 187    | 4.79   | 0.98   | 0.184       |
| 2        | 199    | 4.14   | 0.63   | 0.142       | 211         | 4.15   | 0.68   | 0.148       | 219    | 4.38   | 0.67   | 0.147       |
| 3        | 214    | 4.28   | 0.63   | 0.118       | 223         | 4.38   | 0.59   | 0.097       | 204    | 4.31   | 0.70   | 0.124       |
| 4        | 209    | 4.31   | 0.56   | 0.106       | 222         | 3.89   | 0.50   | 0.110       | 208    | 3.67   | 0.35   | 0.093       |
| 5        | 215    | 3.91   | 0.47   | 0.085       | 199         | 4.02   | 0.36   | 0.060       | 184    | 3.23   | 0.22   | 0.050       |
| CIV_1988 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 169    | 4.04   | 0.73   | 0.140       | 161         | 4.27   | 0.86   | 0.160       | 207    | 4.77   | 0.97   | 0.177       |
| 2        | 201    | 4.42   | 0.70   | 0.130       | 211         | 4.08   | 0.65   | 0.139       | 230    | 4.85   | 0.79   | 0.139       |
| 3        | 226    | 4.13   | 0.56   | 0.125       | 238         | 4.56   | 0.70   | 0.115       | 222    | 4.41   | 0.70   | 0.124       |
| 4        | 243    | 4.41   | 0.68   | 0.121       | 234         | 4.18   | 0.58   | 0.104       | 214    | 3.52   | 0.34   | 0.093       |
| 5        | 222    | 4.05   | 0.47   | 0.096       | 223         | 3.98   | 0.38   | 0.100       | 192    | 3.36   | 0.26   | 0.067       |
| GHA_1988 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        |        |        |        |             | 258         | 3.79   | 0.86   | 0.195       | 377    | 4.37   | 0.84   | 0.161       |
| 2        |        |        |        |             | 345         | 3.69   | 0.66   | 0.140       | 361    | 4.06   | 0.79   | 0.179       |
| 3        |        |        |        |             | 387         | 4.02   | 0.70   | 0.149       | 381    | 4.19   | 0.74   | 0.141       |
| 4        |        |        |        |             | 413         | 4.06   | 0.64   | 0.124       | 346    | 3.93   | 0.53   | 0.115       |
| 5        |        |        |        |             | 410         | 4.12   | 0.52   | 0.119       | 345    | 3.18   | 0.38   | 0.107       |
| GHA_2009 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        |        |        |        |             | 332         | 3.42   | 0.30   | 0.077       | 695    | 4.24   | 0.49   | 0.092       |
| 2        |        |        |        |             | 575         | 3.75   | 0.34   | 0.068       | 491    | 4.04   | 0.32   | 0.061       |
| 3        |        |        |        |             | 617         | 3.91   | 0.36   | 0.068       | 441    | 3.72   | 0.25   | 0.049       |
| 4        |        |        |        |             | 641         | 3.77   | 0.34   | 0.062       | 463    | 3.29   | 0.17   | 0.035       |
| 5        |        |        |        |             | 677         | 3.49   | 0.20   | 0.042       | 442    | 2.83   | 0.12   | 0.031       |
| GTM_2000 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 1,028  | 3.92   | 0.49   | 0.092       | 981         | 3.83   | 0.51   | 0.097       | 1,205  | 4.67   | 0.52   | 0.087       |
| 2        | 1,140  | 4.33   | 0.42   | 0.075       | 1,161       | 4.36   | 0.43   | 0.076       | 1,221  | 4.48   | 0.47   | 0.080       |
| 3        | 1,200  | 4.16   | 0.39   | 0.067       | 1,248       | 4.21   | 0.42   | 0.075       | 1,220  | 4.16   | 0.40   | 0.069       |
| 4        | 1,268  | 3.98   | 0.31   | 0.053       | 1,262       | 4.12   | 0.29   | 0.049       | 1,170  | 3.41   | 0.25   | 0.056       |
| 5        | 1,257  | 3.31   | 0.23   | 0.049       | 1,277       | 3.18   | 0.20   | 0.042       | 1,113  | 2.84   | 0.14   | 0.035       |
| GUY_1992 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 168    | 3.19   | 0.35   | 0.077       | 136         | 3.14   | 0.30   | 0.072       | 208    | 3.32   | 0.39   | 0.084       |
| 2        | 187    | 3.13   | 0.44   | 0.092       | 208         | 3.04   | 0.38   | 0.077       | 202    | 2.94   | 0.28   | 0.064       |
| 3        | 196    | 2.66   | 0.26   | 0.070       | 201         | 2.66   | 0.26   | 0.082       | 185    | 2.78   | 0.26   | 0.064       |
| 4        | 208    | 2.63   | 0.24   | 0.072       | 214         | 2.89   | 0.30   | 0.068       | 191    | 2.65   | 0.26   | 0.063       |
| 5        | 195    | 2.97   | 0.19   | 0.041       | 195         | 2.87   | 0.22   | 0.052       | 168    | 2.77   | 0.26   | 0.074       |
| KGZ_1998 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 423    | 2.94   | 0.15   | 0.038       | 351         | 2.59   | 0.10   | 0.033       | 559    | 3.50   | 0.13   | 0.031       |
| 2        | 461    | 3.09   | 0.16   | 0.038       | 485         | 3.06   | 0.12   | 0.032       | 538    | 3.32   | 0.14   | 0.035       |
| 3        | 460    | 3.00   | 0.12   | 0.033       | 506         | 3.15   | 0.14   | 0.039       | 447    | 3.34   | 0.20   | 0.035       |
| 4        | 515    | 3.13   | 0.12   | 0.026       | 538         | 3.36   | 0.14   | 0.031       | 455    | 2.71   | 0.13   | 0.038       |
| 5        | 553    | 3.03   | 0.10   | 0.025       | 589         | 2.94   | 0.15   | 0.031       | 362    | 1.90   | 0.06   | 0.023       |

|          | Income |        |        |             | Consumption |        |        |             | Assets |        |        |             |
|----------|--------|--------|--------|-------------|-------------|--------|--------|-------------|--------|--------|--------|-------------|
|          | N      | Births | Deaths | Death ratio | N           | Births | Deaths | Death ratio | N      | Births | Deaths | Death ratio |
| PAK_1991 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 807    | 5.03   | 0.90   | 0.160       | 699         | 4.46   | 0.90   | 0.180       | 879    | 4.93   | 0.91   | 0.164       |
| 2        | 861    | 5.09   | 0.91   | 0.159       | 837         | 4.91   | 0.81   | 0.143       | 915    | 4.93   | 0.86   | 0.157       |
| 3        | 898    | 5.05   | 0.73   | 0.123       | 911         | 5.34   | 0.83   | 0.134       | 955    | 5.06   | 0.85   | 0.146       |
| 4        | 956    | 5.07   | 0.77   | 0.127       | 1,025       | 5.21   | 0.73   | 0.115       | 927    | 5.07   | 0.66   | 0.108       |
| 5        | 1,073  | 4.43   | 0.52   | 0.100       | 1,130       | 4.58   | 0.57   | 0.107       | 895    | 4.56   | 0.47   | 0.083       |
| PAN_1997 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        |        |        |        |             | 522         | 4.18   | 0.36   | 0.056       | 704    | 4.50   | 0.35   | 0.054       |
| 2        |        |        |        |             | 683         | 3.58   | 0.15   | 0.026       | 604    | 3.55   | 0.11   | 0.019       |
| 3        |        |        |        |             | 702         | 3.11   | 0.07   | 0.015       | 702    | 2.86   | 0.06   | 0.017       |
| 4        |        |        |        |             | 790         | 2.83   | 0.07   | 0.019       | 727    | 2.61   | 0.06   | 0.015       |
| 5        |        |        |        |             | 798         | 2.41   | 0.04   | 0.009       | 750    | 2.29   | 0.03   | 0.009       |
| PAN_2003 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 766    | 3.65   | 0.17   | 0.031       | 664         | 3.61   | 0.21   | 0.045       | 939    | 4.08   | 0.26   | 0.048       |
| 2        | 846    | 3.20   | 0.14   | 0.030       | 903         | 3.34   | 0.17   | 0.032       | 911    | 3.19   | 0.10   | 0.024       |
| 3        | 940    | 3.13   | 0.10   | 0.024       | 938         | 3.14   | 0.10   | 0.022       | 913    | 2.84   | 0.08   | 0.020       |
| 4        | 1,035  | 2.80   | 0.10   | 0.028       | 1,016       | 2.78   | 0.06   | 0.018       | 919    | 2.58   | 0.05   | 0.016       |
| 5        | 909    | 2.41   | 0.05   | 0.016       | 1,001       | 2.43   | 0.05   | 0.017       | 839    | 2.29   | 0.05   | 0.018       |
| PER_1994 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 551    | 4.09   | 0.54   | 0.094       | 530         | 4.14   | 0.66   | 0.109       | 591    | 4.30   | 0.59   | 0.104       |
| 2        | 577    | 3.92   | 0.49   | 0.091       | 574         | 3.87   | 0.43   | 0.084       | 604    | 4.13   | 0.56   | 0.094       |
| 3        | 576    | 3.55   | 0.35   | 0.061       | 599         | 3.59   | 0.32   | 0.055       | 577    | 3.49   | 0.29   | 0.056       |
| 4        | 625    | 3.26   | 0.24   | 0.046       | 634         | 3.27   | 0.23   | 0.046       | 588    | 3.06   | 0.14   | 0.033       |
| 5        | 594    | 3.00   | 0.15   | 0.035       | 586         | 2.96   | 0.14   | 0.036       | 482    | 2.71   | 0.11   | 0.032       |
| TJK_2007 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        |        |        |        |             | 645         | 3.10   | 0.29   | 0.082       | 910    | 3.81   | 0.30   | 0.064       |
| 2        |        |        |        |             | 827         | 3.45   | 0.26   | 0.059       | 909    | 3.61   | 0.28   | 0.066       |
| 3        |        |        |        |             | 912         | 3.51   | 0.27   | 0.065       | 945    | 3.52   | 0.25   | 0.059       |
| 4        |        |        |        |             | 954         | 3.66   | 0.25   | 0.054       | 948    | 3.18   | 0.21   | 0.056       |
| 5        |        |        |        |             | 1,143       | 3.45   | 0.22   | 0.052       | 742    | 3.10   | 0.21   | 0.056       |
| TLS_2007 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        |        |        |        |             | 433         | 3.62   | 0.53   | 0.109       | 595    | 4.28   | 0.57   | 0.101       |
| 2        |        |        |        |             | 613         | 4.00   | 0.48   | 0.084       | 605    | 4.53   | 0.49   | 0.080       |
| 3        |        |        |        |             | 656         | 4.58   | 0.46   | 0.072       | 625    | 4.32   | 0.45   | 0.073       |
| 4        |        |        |        |             | 720         | 4.56   | 0.39   | 0.063       | 689    | 4.38   | 0.36   | 0.060       |
| 5        |        |        |        |             | 838         | 4.54   | 0.35   | 0.054       | 746    | 4.16   | 0.31   | 0.055       |
| UGA_2011 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 286    | 4.95   | 0.86   | 0.136       | 241         | 4.90   | 0.86   | 0.138       | 329    | 4.99   | 0.81   | 0.132       |
| 2        | 314    | 5.19   | 0.81   | 0.127       | 340         | 4.84   | 0.79   | 0.124       | 328    | 5.37   | 0.77   | 0.110       |
| 3        | 316    | 4.93   | 0.68   | 0.106       | 380         | 5.01   | 0.68   | 0.111       | 344    | 5.35   | 0.80   | 0.123       |
| 4        | 333    | 4.94   | 0.64   | 0.104       | 380         | 5.06   | 0.65   | 0.102       | 381    | 4.98   | 0.65   | 0.112       |
| 5        | 353    | 4.61   | 0.45   | 0.073       | 407         | 4.63   | 0.42   | 0.071       | 371    | 3.81   | 0.30   | 0.060       |
| UGA_2013 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 59     | 3.44   | 0.41   | 0.124       | 372         | 3.61   | 0.58   | 0.121       | 532    | 4.11   | 0.59   | 0.105       |
| 2        | 41     | 2.59   | 0.17   | 0.040       | 513         | 3.60   | 0.49   | 0.104       | 526    | 3.76   | 0.44   | 0.094       |
| 3        | 40     | 2.88   | 0.18   | 0.053       | 569         | 3.55   | 0.43   | 0.093       | 571    | 3.83   | 0.52   | 0.104       |
| 4        | 56     | 1.89   | 0.16   | 0.065       | 647         | 3.83   | 0.42   | 0.087       | 605    | 3.39   | 0.38   | 0.089       |
| 5        | 47     | 2.55   | 0.30   | 0.082       | 742         | 2.84   | 0.26   | 0.068       | 605    | 2.28   | 0.18   | 0.068       |
| ZAF_1993 |        |        |        |             |             |        |        |             |        |        |        |             |
| 1        | 1,349  | 3.34   | 0.54   | 0.132       | 1,137       | 3.32   | 0.65   | 0.161       | 1,635  | 3.55   | 0.63   | 0.140       |
| 2        | 1,305  | 3.18   | 0.50   | 0.122       | 1,326       | 3.16   | 0.46   | 0.118       | 1,604  | 3.04   | 0.41   | 0.113       |
| 3        | 1,371  | 3.02   | 0.39   | 0.100       | 1,529       | 2.96   | 0.36   | 0.092       | 1,370  | 2.81   | 0.32   | 0.086       |
| 4        | 1,597  | 2.79   | 0.31   | 0.083       | 1,686       | 2.84   | 0.29   | 0.076       | 1,296  | 2.59   | 0.25   | 0.077       |
| 5        | 1,314  | 2.45   | 0.15   | 0.054       | 1,373       | 2.59   | 0.19   | 0.056       | 1,170  | 2.55   | 0.19   | 0.052       |

Note: N refers to the number of observations, Births is the mean number of births, Deaths is the mean number of deaths, and Death Ratio is the proportion of deaths to births in each quintile, as measured by income, consumption, and assets

**Figure S1.** Charts of the proportion stunted, proportion underweight, and mean death ratio for the lowest quintile of assets, consumption, and income for each country.



**Table S3.** Stunting concentration index values for each survey wave with income, consumption, and asset index comparison.

| Country       | Year | Income |       |            |       |       | Consumption |       |            |       |       | Assets |       |            |       |       |
|---------------|------|--------|-------|------------|-------|-------|-------------|-------|------------|-------|-------|--------|-------|------------|-------|-------|
|               |      | Obs.   | CI    | Std. error | UCI   | LCI   | Obs.        | CI    | Std. error | UCI   | LCI   | Obs.   | CI    | Std. error | UCI   | LCI   |
| Albania       | 2002 | 1338   | -0.08 | 0.03       | -0.02 | -0.14 | 1338        | -0.01 | 0.03       | 0.05  | -0.07 | 1333   | -0.03 | 0.03       | 0.03  | -0.09 |
| Brazil        | 1996 | 1647   | -0.21 | 0.04       | -0.14 | -0.28 |             |       |            |       |       | 1762   | -0.25 | 0.03       | -0.18 | -0.31 |
| Cote d'Ivoire | 1987 | 2215   | -0.12 | 0.03       | -0.06 | -0.18 | 2233        | -0.17 | 0.03       | -0.11 | -0.23 | 2206   | -0.09 | 0.03       | -0.03 | -0.15 |
| Cote d'Ivoire | 1988 | 2105   | -0.09 | 0.03       | -0.02 | -0.15 | 2121        | -0.14 | 0.03       | -0.08 | -0.20 | 2117   | -0.04 | 0.03       | 0.02  | -0.10 |
| Ghana         | 1988 |        |       |            |       |       | 2906        | -0.07 | 0.02       | -0.03 | -0.12 | 2898   | -0.19 | 0.02       | -0.15 | -0.24 |
| Ghana         | 2009 |        |       |            |       |       | 2931        | -0.07 | 0.02       | -0.02 | -0.11 | 2607   | -0.18 | 0.02       | -0.14 | -0.23 |
| Guatemala     | 2000 | 5743   | -0.22 | 0.01       | -0.19 | -0.25 | 5743        | -0.28 | 0.01       | -0.25 | -0.31 | 5743   | -0.28 | 0.01       | -0.26 | -0.31 |
| Guyana        | 1992 | 601    | -0.04 | 0.07       | 0.09  | -0.17 | 601         | -0.11 | 0.07       | 0.02  | -0.24 | 601    | 0.03  | 0.07       | 0.16  | -0.10 |
| Kyrgyzstan    | 1997 | 1162   | -0.06 | 0.04       | 0.00  | -0.13 | 1163        | -0.14 | 0.03       | -0.08 | -0.21 | 1113   | 0.01  | 0.04       | 0.08  | -0.06 |
| Kyrgyzstan    | 1998 | 1689   | -0.06 | 0.03       | -0.01 | -0.12 | 1727        | -0.08 | 0.03       | -0.02 | -0.13 | 1643   | -0.02 | 0.03       | 0.04  | -0.07 |
| Nigeria       | 2010 | 282    | -0.27 | 0.07       | -0.13 | -0.40 | 2576        | -0.05 | 0.02       | 0.00  | -0.09 | 2404   | -0.15 | 0.02       | -0.10 | -0.19 |
| Nigeria       | 2012 | 205    | 0.07  | 0.10       | 0.27  | -0.12 | 2737        | -0.04 | 0.03       | 0.02  | -0.09 | 2766   | -0.06 | 0.03       | -0.01 | -0.11 |
| Pakistan      | 1991 | 3911   | -0.12 | 0.02       | -0.08 | -0.15 | 3916        | -0.09 | 0.02       | -0.05 | -0.13 | 3903   | -0.14 | 0.02       | -0.11 | -0.18 |
| Panama        | 1997 |        |       |            |       |       | 2294        | -0.52 | 0.03       | -0.46 | -0.57 | 2292   | -0.61 | 0.03       | -0.55 | -0.66 |
| Panama        | 2003 | 2922   | -0.24 | 0.02       | -0.20 | -0.29 | 2922        | -0.35 | 0.02       | -0.30 | -0.39 | 2922   | -0.44 | 0.02       | -0.40 | -0.48 |
| Peru          | 1994 | 2296   | -0.28 | 0.02       | -0.23 | -0.32 | 2296        | -0.34 | 0.02       | -0.30 | -0.39 | 2228   | -0.38 | 0.02       | -0.33 | -0.43 |
| Tajikistan    | 2007 |        |       |            |       |       | 2701        | -0.02 | 0.02       | 0.02  | -0.07 | 2694   | -0.15 | 0.02       | -0.10 | -0.19 |
| Timor Leste   | 2007 |        |       |            |       |       | 3937        | 0.06  | 0.02       | 0.09  | 0.02  | 3937   | 0.04  | 0.02       | 0.07  | 0.00  |
| Tanzania      | 2010 |        |       |            |       |       | 2971        | -0.16 | 0.02       | -0.12 | -0.20 | 2993   | -0.18 | 0.02       | -0.13 | -0.22 |
| Uganda        | 2011 | 2276   | -0.09 | 0.03       | -0.03 | -0.15 | 2511        | -0.11 | 0.03       | -0.05 | -0.16 | 2504   | -0.15 | 0.03       | -0.09 | -0.21 |
| Uganda        | 2013 | 187    | -0.17 | 0.12       | 0.06  | -0.40 | 2583        | -0.13 | 0.03       | -0.08 | -0.19 | 2580   | -0.13 | 0.03       | -0.07 | -0.18 |
| South Africa  | 1993 | 4876   | -0.21 | 0.02       | -0.17 | -0.24 | 4960        | -0.22 | 0.02       | -0.18 | -0.25 | 4967   | -0.20 | 0.02       | -0.16 | -0.24 |
| Median        |      |        | -0.12 |            |       |       |             | -0.11 |            |       |       |        | -0.15 |            |       |       |
| Average       |      |        | -0.14 |            |       |       |             | -0.14 |            |       |       |        | -0.16 |            |       |       |
| Max           |      |        | 0.07  |            |       |       |             | 0.06  |            |       |       |        | 0.04  |            |       |       |
| Min           |      |        | -0.28 |            |       |       |             | -0.52 |            |       |       |        | -0.61 |            |       |       |

**Table S4.** Underweight concentration index values for each survey wave with income, consumption, and asset index comparison.

| Country       | Year | Income |       |            |       |       | Consumption |       |            |       |       | Assets |       |            |       |       |
|---------------|------|--------|-------|------------|-------|-------|-------------|-------|------------|-------|-------|--------|-------|------------|-------|-------|
|               |      | Obs.   | CI    | Std. error | UCI   | LCI   | Obs.        | CI    | Std. error | UCI   | LCI   | Obs.   | CI    | Std. error | UCI   | LCI   |
| Albania       | 2002 | 1338   | -0.15 | 0.05       | -0.05 | -0.26 | 1338        | -0.06 | 0.05       | 0.04  | -0.17 | 1333   | -0.04 | 0.05       | 0.07  | -0.14 |
| Brazil        | 1996 | 1647   | -0.24 | 0.06       | -0.12 | -0.36 |             |       |            |       |       | 1762   | -0.28 | 0.06       | -0.16 | -0.39 |
| Cote d'Ivoire | 1987 | 2215   | -0.06 | 0.04       | 0.02  | -0.14 | 2233        | -0.05 | 0.04       | 0.02  | -0.13 | 2206   | -0.11 | 0.04       | -0.03 | -0.19 |
| Cote d'Ivoire | 1988 | 2105   | -0.05 | 0.04       | 0.03  | -0.13 | 2121        | -0.07 | 0.04       | 0.01  | -0.15 | 2117   | -0.10 | 0.04       | -0.02 | -0.18 |
| Ghana         | 1988 |        |       |            |       |       | 2906        | -0.05 | 0.03       | 0.00  | -0.10 | 2898   | -0.18 | 0.03       | -0.13 | -0.23 |
| Ghana         | 2009 |        |       |            |       |       | 2931        | -0.07 | 0.03       | -0.02 | -0.12 | 2607   | -0.11 | 0.03       | -0.06 | -0.16 |
| Guatemala     | 2000 | 5743   | -0.20 | 0.02       | -0.16 | -0.24 | 5743        | -0.24 | 0.02       | -0.20 | -0.28 | 5743   | -0.26 | 0.02       | -0.22 | -0.30 |
| Guyana        | 1992 | 601    | -0.04 | 0.07       | 0.10  | -0.18 | 601         | -0.14 | 0.07       | -0.01 | -0.28 | 601    | -0.06 | 0.07       | 0.08  | -0.20 |
| Kyrgyzstan    | 1997 | 1162   | -0.15 | 0.06       | -0.04 | -0.26 | 1163        | -0.13 | 0.06       | -0.03 | -0.24 | 1113   | 0.06  | 0.06       | 0.18  | -0.05 |
| Kyrgyzstan    | 1998 | 1689   | 0.02  | 0.04       | 0.10  | -0.06 | 1727        | 0.05  | 0.04       | 0.13  | -0.03 | 1643   | -0.04 | 0.04       | 0.04  | -0.12 |
| Nigeria       | 2010 | 282    | -0.22 | 0.08       | -0.06 | -0.37 | 2576        | 0.03  | 0.03       | 0.08  | -0.02 | 2404   | -0.14 | 0.03       | -0.09 | -0.19 |
| Nigeria       | 2012 | 205    | 0.01  | 0.14       | 0.29  | -0.27 | 2737        | -0.06 | 0.03       | 0.00  | -0.13 | 2766   | -0.07 | 0.03       | 0.00  | -0.14 |
| Pakistan      | 1991 | 3911   | -0.11 | 0.02       | -0.08 | -0.15 | 3916        | -0.11 | 0.02       | -0.07 | -0.14 | 3903   | -0.14 | 0.02       | -0.11 | -0.18 |
| Panama        | 1997 |        |       |            |       |       | 2294        | -0.43 | 0.05       | -0.33 | -0.53 | 2292   | -0.51 | 0.05       | -0.41 | -0.61 |
| Panama        | 2003 | 2922   | -0.27 | 0.05       | -0.18 | -0.36 | 2922        | -0.32 | 0.05       | -0.23 | -0.40 | 2922   | -0.44 | 0.04       | -0.36 | -0.53 |
| Peru          | 1994 | 2296   | -0.33 | 0.04       | -0.25 | -0.41 | 2296        | -0.35 | 0.04       | -0.27 | -0.43 | 2228   | -0.39 | 0.04       | -0.31 | -0.48 |
| Tajikistan    | 2007 |        |       |            |       |       | 2701        | 0.03  | 0.03       | 0.09  | -0.03 | 2694   | -0.06 | 0.03       | 0.00  | -0.13 |
| Timor Leste   | 2007 |        |       |            |       |       | 3937        | 0.01  | 0.02       | 0.04  | -0.03 | 3937   | -0.01 | 0.02       | 0.03  | -0.04 |
| Tanzania      | 2010 |        |       |            |       |       | 2971        | -0.12 | 0.03       | -0.06 | -0.18 | 2993   | -0.14 | 0.03       | -0.08 | -0.20 |
| Uganda        | 2011 | 2276   | -0.15 | 0.05       | -0.06 | -0.24 | 2511        | -0.23 | 0.04       | -0.14 | -0.31 | 2504   | -0.20 | 0.04       | -0.12 | -0.29 |
| Uganda        | 2013 | 187    | 0.04  | 0.20       | 0.42  | -0.35 | 2583        | -0.13 | 0.04       | -0.04 | -0.21 | 2580   | -0.20 | 0.04       | -0.12 | -0.29 |
| South Africa  | 1993 | 4876   | -0.16 | 0.02       | -0.11 | -0.21 | 4960        | -0.14 | 0.02       | -0.09 | -0.18 | 4967   | -0.11 | 0.02       | -0.06 | -0.16 |
| Median        |      |        | -0.15 |            |       |       |             | -0.11 |            |       |       |        | -0.13 |            |       |       |
| Average       |      |        | -0.13 |            |       |       |             | -0.12 |            |       |       |        | -0.16 |            |       |       |
| Max           |      |        | 0.04  |            |       |       |             | 0.05  |            |       |       |        | 0.06  |            |       |       |
| Min           |      |        | -0.33 |            |       |       |             | -0.43 |            |       |       |        | -0.51 |            |       |       |

**Table S5.** Child deaths concentration index values for each survey wave with income, consumption, and asset index comparison.

| Country       | Year | Income |       |            |       |       | Consumption |       |            |       |       | Assets |       |            |       |       |
|---------------|------|--------|-------|------------|-------|-------|-------------|-------|------------|-------|-------|--------|-------|------------|-------|-------|
|               |      | Obs.   | CI    | Std. error | UCI   | LCI   | Obs.        | CI    | Std. error | UCI   | LCI   | Obs.   | CI    | Std. error | UCI   | LCI   |
| Albania       | 2002 | 2662   | -0.25 | 0.04       | -0.17 | -0.32 | 2662        | -0.18 | 0.04       | -0.10 | -0.25 | 2655   | -0.22 | 0.04       | -0.15 | -0.30 |
| Brazil        | 1996 | 3020   | -0.31 | 0.03       | -0.24 | -0.37 |             |       |            |       |       | 3241   | -0.34 | 0.03       | -0.28 | -0.40 |
| Cote d'Ivoire | 1987 | 1002   | -0.16 | 0.04       | -0.09 | -0.23 | 1015        | -0.23 | 0.04       | -0.16 | -0.30 | 1002   | -0.25 | 0.04       | -0.18 | -0.32 |
| Cote d'Ivoire | 1988 | 1061   | -0.08 | 0.03       | -0.01 | -0.15 | 1067        | -0.12 | 0.03       | -0.05 | -0.19 | 1065   | -0.19 | 0.03       | -0.13 | -0.26 |
| Ghana         | 1988 |        |       |            |       |       | 1813        | -0.11 | 0.02       | -0.06 | -0.15 | 1810   | -0.12 | 0.02       | -0.07 | -0.16 |
| Ghana         | 2009 |        |       |            |       |       | 2835        | -0.13 | 0.03       | -0.07 | -0.18 | 2526   | -0.26 | 0.03       | -0.20 | -0.32 |
| Guatemala     | 2000 | 5929   | -0.14 | 0.02       | -0.11 | -0.18 | 5929        | -0.18 | 0.02       | -0.14 | -0.22 | 5929   | -0.17 | 0.02       | -0.13 | -0.21 |
| Guyana        | 1992 | 936    | -0.13 | 0.05       | -0.03 | -0.22 | 936         | -0.07 | 0.05       | 0.02  | -0.16 | 936    | -0.04 | 0.05       | 0.05  | -0.14 |
| Kyrgyzstan    | 1998 | 2377   | -0.09 | 0.04       | 0.00  | -0.18 | 2433        | 0.00  | 0.04       | 0.08  | -0.09 | 2326   | -0.03 | 0.04       | 0.05  | -0.12 |
| Pakistan      | 1991 | 4557   | -0.11 | 0.02       | -0.08 | -0.14 | 4564        | -0.13 | 0.02       | -0.10 | -0.16 | 4533   | -0.15 | 0.02       | -0.12 | -0.18 |
| Panama        | 1997 |        |       |            |       |       | 3495        | -0.35 | 0.04       | -0.27 | -0.42 | 3487   | -0.37 | 0.04       | -0.29 | -0.44 |
| Panama        | 2003 | 4522   | -0.09 | 0.04       | -0.02 | -0.16 | 4522        | -0.22 | 0.04       | -0.15 | -0.29 | 4521   | -0.25 | 0.04       | -0.17 | -0.32 |
| Peru          | 1994 | 2922   | -0.22 | 0.03       | -0.17 | -0.28 | 2922        | -0.25 | 0.03       | -0.20 | -0.31 | 2841   | -0.27 | 0.03       | -0.21 | -0.32 |
| Tajikistan    | 2007 |        |       |            |       |       | 4481        | -0.08 | 0.03       | -0.03 | -0.13 | 4454   | -0.04 | 0.03       | 0.01  | -0.09 |
| Timor Leste   | 2007 |        |       |            |       |       | 3258        | -0.14 | 0.02       | -0.10 | -0.19 | 3258   | -0.14 | 0.02       | -0.09 | -0.19 |
| Uganda        | 2011 | 1602   | -0.14 | 0.03       | -0.09 | -0.19 | 1748        | -0.13 | 0.03       | -0.08 | -0.18 | 1753   | -0.13 | 0.03       | -0.08 | -0.18 |
| Uganda        | 2013 | 152    | -0.07 | 0.09       | 0.11  | -0.25 | 2129        | -0.12 | 0.02       | -0.07 | -0.16 | 2125   | -0.08 | 0.02       | -0.03 | -0.13 |
| South Africa  | 1993 | 6828   | -0.19 | 0.02       | -0.15 | -0.22 | 6940        | -0.23 | 0.02       | -0.19 | -0.26 | 6964   | -0.21 | 0.02       | -0.17 | -0.24 |
| Median        |      |        | -0.14 |            |       |       |             | -0.13 |            |       |       |        | -0.18 |            |       |       |
| Average       |      |        | -0.15 |            |       |       |             | -0.16 |            |       |       |        | -0.18 |            |       |       |
| Max           |      |        | -0.07 |            |       |       |             | 0.00  |            |       |       |        | -0.03 |            |       |       |
| Min           |      |        | -0.31 |            |       |       |             | -0.35 |            |       |       |        | -0.37 |            |       |       |

**Table S6.** Stunting RII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |      |      |       | Consumption |            |       |       |       | Hybrid |            |       |       |       |
|---------------|------|--------|------------|------|------|-------|-------------|------------|-------|-------|-------|--------|------------|-------|-------|-------|
|               |      | RII    | Std. error | LCI  | UCI  | Obs.  | RII         | Std. error | LCI   | UCI   | Obs.  | RII    | Std. error | LCI   | UCI   | Obs.  |
| Albania       | 2002 | 1.30   | 0.14       | 1.05 | 1.59 | 1,338 | 1.03        | 0.11       | 0.84  | 1.26  | 1,338 | 1.12   | 0.12       | 0.90  | 1.39  | 1,333 |
| Brazil        | 1996 | 2.86   | 0.50       | 2.03 | 4.04 | 1,647 |             |            |       |       |       | 3.44   | 0.59       | 2.46  | 4.80  | 1,762 |
| Cote d'Ivoire | 1987 | 1.80   | 0.29       | 1.32 | 2.46 | 2,215 | 2.30        | 0.36       | 1.69  | 3.13  | 2,233 | 1.56   | 0.25       | 1.14  | 2.13  | 2,206 |
| Cote d'Ivoire | 1988 | 1.52   | 0.24       | 1.12 | 2.06 | 2,105 | 1.97        | 0.31       | 1.45  | 2.68  | 2,121 | 1.23   | 0.19       | 0.90  | 1.67  | 2,117 |
| Ghana         | 1988 |        |            |      |      |       | 1.32        | 0.12       | 1.11  | 1.57  | 2,906 | 2.02   | 0.17       | 1.70  | 2.38  | 2,898 |
| Ghana         | 2009 |        |            |      |      |       | 1.33        | 0.13       | 1.10  | 1.62  | 2,931 | 2.19   | 0.24       | 1.78  | 2.70  | 2,607 |
| Guatemala     | 2000 | 1.86   | 0.08       | 1.71 | 2.03 | 5,743 | 2.20        | 0.10       | 2.02  | 2.40  | 5,743 | 2.15   | 0.09       | 1.97  | 2.34  | 5,743 |
| Guyana        | 1992 | 1.24   | 0.43       | 0.63 | 2.46 | 601   | 1.77        | 0.62       | 0.90  | 3.51  | 601   | 0.86   | 0.30       | 0.44  | 1.69  | 601   |
| Kyrgyzstan    | 1997 | 1.27   | 0.17       | 0.98 | 1.65 | 1,162 | 1.70        | 0.22       | 1.32  | 2.20  | 1,163 | 0.98   | 0.13       | 0.76  | 1.27  | 1,113 |
| Kyrgyzstan    | 1998 | 1.25   | 0.13       | 1.02 | 1.52 | 1,689 | 1.31        | 0.13       | 1.07  | 1.59  | 1,727 | 1.06   | 0.11       | 0.87  | 1.29  | 1,643 |
| Nigeria       | 2010 | 2.42   | 0.61       | 1.48 | 3.96 | 282   | 1.20        | 0.11       | 1.00  | 1.43  | 2,576 | 1.75   | 0.17       | 1.45  | 2.10  | 2,404 |
| Nigeria       | 2012 | 1.08   | 0.31       | 0.62 | 1.89 | 2,794 | 1.19        | 0.15       | 0.93  | 1.52  | 2,737 | 1.32   | 0.17       | 1.03  | 1.68  | 2,766 |
| Pakistan      | 1991 | 1.44   | 0.09       | 1.28 | 1.62 | 3,911 | 1.35        | 0.08       | 1.20  | 1.53  | 3,916 | 1.58   | 0.10       | 1.40  | 1.78  | 3,903 |
| Panama        | 1997 |        |            |      |      |       | 16.45       | 2.75       | 11.85 | 22.84 | 2,294 | 27.78  | 4.72       | 19.92 | 38.75 | 2,292 |
| Panama        | 2003 | 2.86   | 0.29       | 2.34 | 3.49 | 2,922 | 4.64        | 0.49       | 3.79  | 5.70  | 2,922 | 7.83   | 0.85       | 6.34  | 9.68  | 2,922 |
| Peru          | 1994 | 2.93   | 0.30       | 2.41 | 3.58 | 2,296 | 3.79        | 0.38       | 3.12  | 4.62  | 2,296 | 4.30   | 0.44       | 3.52  | 5.24  | 2,228 |
| Tajikistan    | 2007 |        |            |      |      |       | 1.08        | 0.09       | 0.92  | 1.28  | 2,701 | 1.72   | 0.15       | 1.46  | 2.03  | 2,694 |
| Timor Leste   | 2007 |        |            |      |      |       | 0.83        | 0.05       | 0.74  | 0.94  | 3,937 | 0.88   | 0.05       | 0.78  | 0.99  | 3,937 |
| Tanzania      | 2010 |        |            |      |      |       | 1.94        | 0.18       | 1.61  | 2.33  | 2,971 | 2.01   | 0.18       | 1.68  | 2.40  | 2,993 |
| Uganda        | 2011 | 1.54   | 0.22       | 1.17 | 2.04 | 2,276 | 1.67        | 0.23       | 1.28  | 2.18  | 2,511 | 2.04   | 0.28       | 1.56  | 2.67  | 2,504 |
| Uganda        | 2013 | 2.44   | 1.52       | 0.72 | 8.27 | 187   | 1.86        | 0.25       | 1.44  | 2.42  | 2,583 | 1.80   | 0.24       | 1.39  | 2.33  | 2,580 |
| South Africa  | 1993 | 2.46   | 0.21       | 2.08 | 2.89 | 4,876 | 2.64        | 0.22       | 2.24  | 3.12  | 4,960 | 2.41   | 0.20       | 2.05  | 2.84  | 4,967 |
| Median        |      | 1.67   |            |      |      |       | 1.70        |            |       |       |       | 1.77   |            |       |       |       |
| Average       |      | 1.89   |            |      |      |       | 2.55        |            |       |       |       | 3.27   |            |       |       |       |
| Max           |      | 2.93   |            |      |      |       | 16.45       |            |       |       |       | 27.78  |            |       |       |       |
| Min           |      | 1.08   |            |      |      |       | 0.83        |            |       |       |       | 0.86   |            |       |       |       |

**Table S7.** Underweight RII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |      |       |       | Consumption |            |      |       |       | Hybrid |            |       |       |       |
|---------------|------|--------|------------|------|-------|-------|-------------|------------|------|-------|-------|--------|------------|-------|-------|-------|
|               |      | RII    | Std. error | LCI  | UCI   | Obs.  | RII         | Std. error | LCI  | UCI   | Obs.  | RII    | Std. error | LCI   | UCI   | Obs.  |
| Albania       | 2002 | 2.29   | 0.64       | 1.32 | 3.97  | 1,338 | 1.41        | 0.39       | 0.82 | 2.44  | 1,338 | 1.21   | 0.34       | 0.70  | 2.09  | 1,333 |
| Brazil        | 1996 | 4.06   | 1.47       | 2.00 | 8.27  | 1,647 |             |            |      |       |       | 5.21   | 1.86       | 2.59  | 10.47 | 1,762 |
| Cote d'Ivoire | 1987 | 1.37   | 0.30       | 0.90 | 2.09  | 2,215 | 1.33        | 0.29       | 0.88 | 2.03  | 2,233 | 1.80   | 0.40       | 1.17  | 2.78  | 2,206 |
| Cote d'Ivoire | 1988 | 1.29   | 0.28       | 0.84 | 1.99  | 2,105 | 1.46        | 0.32       | 0.95 | 2.24  | 2,121 | 1.73   | 0.38       | 1.13  | 2.65  | 2,117 |
| Ghana         | 1988 |        |            |      |       |       | 1.27        | 0.15       | 1.00 | 1.61  | 2,906 | 2.20   | 0.26       | 1.74  | 2.78  | 2,898 |
| Ghana         | 2009 |        |            |      |       |       | 1.41        | 0.17       | 1.11 | 1.78  | 2,931 | 1.68   | 0.22       | 1.30  | 2.16  | 2,607 |
| Guatemala     | 2000 | 2.69   | 0.28       | 2.20 | 3.28  | 5,743 | 3.33        | 0.34       | 2.72 | 4.08  | 5,743 | 3.58   | 0.37       | 2.93  | 4.37  | 5,743 |
| Guyana        | 1992 | 1.21   | 0.45       | 0.59 | 2.51  | 601   | 2.10        | 0.78       | 1.01 | 4.34  | 601   | 1.36   | 0.50       | 0.66  | 2.80  | 601   |
| Kyrgyzstan    | 1997 | 2.30   | 0.70       | 1.26 | 4.19  | 1,162 | 2.10        | 0.64       | 1.15 | 3.82  | 1,163 | 0.71   | 0.22       | 0.39  | 1.30  | 1,113 |
| Kyrgyzstan    | 1998 | 0.89   | 0.18       | 0.59 | 1.33  | 1,689 | 0.78        | 0.16       | 0.52 | 1.17  | 1,727 | 1.21   | 0.25       | 0.80  | 1.81  | 1,643 |
| Nigeria       | 2010 | 2.52   | 0.90       | 1.25 | 5.07  | 282   | 0.88        | 0.09       | 0.71 | 1.09  | 2,576 | 1.83   | 0.21       | 1.46  | 2.29  | 2,404 |
| Nigeria       | 2012 | 1.73   | 0.80       | 0.70 | 4.28  | 2,794 | 1.41        | 0.26       | 0.98 | 2.03  | 2,737 | 1.47   | 0.27       | 1.02  | 2.11  | 2,766 |
| Pakistan      | 1991 | 1.50   | 0.11       | 1.31 | 1.72  | 3,911 | 1.49        | 0.11       | 1.29 | 1.71  | 3,916 | 1.71   | 0.12       | 1.48  | 1.97  | 3,903 |
| Panama        | 1997 |        |            |      |       |       | 14.98       | 5.10       | 7.68 | 29.20 | 2,294 | 30.48  | 11.26      | 14.77 | 62.89 | 2,292 |
| Panama        | 2003 | 4.91   | 1.34       | 2.87 | 8.38  | 2,922 | 6.53        | 1.82       | 3.78 | 11.29 | 2,922 | 17.01  | 5.24       | 9.31  | 31.09 | 2,922 |
| Peru          | 1994 | 6.85   | 1.74       | 4.16 | 11.28 | 2,296 | 7.75        | 1.99       | 4.69 | 12.81 | 2,296 | 10.20  | 2.71       | 6.06  | 17.17 | 2,228 |
| Tajikistan    | 2007 |        |            |      |       |       | 0.87        | 0.14       | 0.64 | 1.19  | 2,701 | 1.38   | 0.22       | 1.01  | 1.88  | 2,694 |
| Timor Leste   | 2007 |        |            |      |       |       | 0.98        | 0.06       | 0.86 | 1.11  | 3,937 | 1.02   | 0.07       | 0.90  | 1.16  | 3,937 |
| Tanzania      | 2010 |        |            |      |       |       | 1.87        | 0.31       | 1.36 | 2.58  | 2,971 | 2.05   | 0.33       | 1.49  | 2.80  | 2,993 |
| Uganda        | 2011 | 2.28   | 0.59       | 1.37 | 3.78  | 2,276 | 3.71        | 0.93       | 2.27 | 6.08  | 2,511 | 3.11   | 0.77       | 1.91  | 5.07  | 2,504 |
| Uganda        | 2013 | 0.82   | 0.91       | 0.09 | 7.27  | 187   | 2.05        | 0.50       | 1.27 | 3.30  | 2,583 | 3.15   | 0.78       | 1.94  | 5.13  | 2,580 |
| South Africa  | 1993 | 2.27   | 0.29       | 1.76 | 2.92  | 4,876 | 2.04        | 0.26       | 1.59 | 2.63  | 4,960 | 1.75   | 0.22       | 1.36  | 2.25  | 4,967 |
| Median        |      | 2.27   |            |      |       |       | 1.49        |            |      |       |       | 1.78   |            |       |       |       |
| Average       |      | 2.44   |            |      |       |       | 2.85        |            |      |       |       | 4.36   |            |       |       |       |
| Max           |      | 6.85   |            |      |       |       | 14.98       |            |      |       |       | 30.48  |            |       |       |       |
| Min           |      | 0.82   |            |      |       |       | 0.78        |            |      |       |       | 0.71   |            |       |       |       |

**Table S8.** Child deaths RII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |      |       |       | Consumption |            |      |       |       | Hybrid |            |      |       |       |
|---------------|------|--------|------------|------|-------|-------|-------------|------------|------|-------|-------|--------|------------|------|-------|-------|
|               |      | RII    | Std. error | LCI  | UCI   | Obs.  | RII         | Std. error | LCI  | UCI   | Obs.  | RII    | Std. error | LCI  | UCI   | Obs.  |
| Albania       | 2002 | 4.47   | 1.80       | 2.03 | 9.84  | 2,662 | 2.87        | 1.12       | 1.33 | 6.17  | 2,662 | 3.75   | 1.50       | 1.72 | 8.19  | 2,655 |
| Brazil        | 1996 | 6.47   | 2.08       | 3.44 | 12.16 | 3,020 |             |            |      |       |       | 8.17   | 2.55       | 4.43 | 15.06 | 3,241 |
| Cote d'Ivoire | 1987 | 2.37   | 0.71       | 1.32 | 4.27  | 1,002 | 3.52        | 1.08       | 1.93 | 6.42  | 1,015 | 3.95   | 1.22       | 2.16 | 7.23  | 1,002 |
| Cote d'Ivoire | 1988 | 1.54   | 0.44       | 0.88 | 2.70  | 1,061 | 1.87        | 0.54       | 1.06 | 3.30  | 1,067 | 2.82   | 0.82       | 1.59 | 5.00  | 1,065 |
| Ghana         | 1988 |        |            |      |       |       | 1.74        | 0.35       | 1.17 | 2.58  | 1,813 | 1.82   | 0.37       | 1.23 | 2.70  | 1,810 |
| Ghana         | 2009 |        |            |      |       |       | 2.04        | 0.53       | 1.23 | 3.38  | 2,835 | 4.51   | 1.33       | 2.53 | 8.03  | 2,526 |
| Guatemala     | 2000 | 2.26   | 0.39       | 1.61 | 3.16  | 5,929 | 2.81        | 0.49       | 2.00 | 3.94  | 5,929 | 2.65   | 0.46       | 1.89 | 3.72  | 5,929 |
| Guyana        | 1992 | 2.00   | 0.83       | 0.89 | 4.51  | 936   | 1.48        | 0.61       | 0.66 | 3.30  | 936   | 1.27   | 0.53       | 0.56 | 2.86  | 936   |
| Kyrgyzstan    | 1998 | 1.69   | 0.67       | 0.78 | 3.68  | 2,377 | 1.03        | 0.39       | 0.49 | 2.17  | 2,433 | 1.23   | 0.48       | 0.57 | 2.63  | 2,326 |
| Pakistan      | 1991 | 1.80   | 0.24       | 1.39 | 2.33  | 4,557 | 1.96        | 0.26       | 1.51 | 2.54  | 4,564 | 2.20   | 0.29       | 1.69 | 2.85  | 4,533 |
| Panama        | 1997 |        |            |      |       |       | 9.00        | 3.87       | 3.88 | 20.90 | 3,495 | 10.36  | 4.51       | 4.41 | 24.34 | 3,487 |
| Panama        | 2003 | 1.70   | 0.55       | 0.91 | 3.19  | 4,522 | 3.76        | 1.25       | 1.96 | 7.20  | 4,522 | 4.45   | 1.50       | 2.30 | 8.61  | 4,521 |
| Peru          | 1994 | 3.58   | 0.90       | 2.18 | 5.87  | 2,922 | 4.30        | 1.10       | 2.60 | 7.11  | 2,922 | 4.76   | 1.24       | 2.86 | 7.93  | 2,841 |
| Tajikistan    | 2007 |        |            |      |       |       | 1.60        | 0.33       | 1.07 | 2.40  | 4,481 | 1.25   | 0.26       | 0.84 | 1.88  | 4,454 |
| Timor Leste   | 2007 |        |            |      |       |       | 2.24        | 0.49       | 1.45 | 3.45  | 3,258 | 2.18   | 0.48       | 1.42 | 3.36  | 3,258 |
| Uganda        | 2011 | 2.09   | 0.53       | 1.28 | 3.42  | 1,602 | 1.96        | 0.48       | 1.22 | 3.16  | 1,748 | 1.95   | 0.47       | 1.22 | 3.13  | 1,753 |
| Uganda        | 2013 | 1.50   | 1.45       | 0.23 | 10.00 | 152   | 1.93        | 0.47       | 1.20 | 3.12  | 2,129 | 1.57   | 0.37       | 0.99 | 2.51  | 2,125 |
| South Africa  | 1993 | 2.76   | 0.36       | 2.14 | 3.56  | 6,828 | 3.51        | 0.46       | 2.71 | 4.54  | 6,940 | 3.13   | 0.41       | 2.42 | 4.04  | 6,964 |
| Median        |      | 2.09   |            |      |       |       | 2.04        |            |      |       |       | 2.74   |            |      |       |       |
| Average       |      | 2.63   |            |      |       |       | 2.80        |            |      |       |       | 3.45   |            |      |       |       |
| Max           |      | 6.47   |            |      |       |       | 9.00        |            |      |       |       | 10.36  |            |      |       |       |
| Min           |      | 1.50   |            |      |       |       | 1.03        |            |      |       |       | 1.23   |            |      |       |       |

**Table S9.** Stunting SII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |       |       |       | Consumption |            |       |       |       | Hybrid |            |       |       |       |
|---------------|------|--------|------------|-------|-------|-------|-------------|------------|-------|-------|-------|--------|------------|-------|-------|-------|
|               |      | SII    | Std. error | LCI   | UCI   | Obs.  | SII         | Std. error | LCI   | UCI   | Obs.  | SII    | Std. error | LCI   | UCI   | Obs.  |
| Albania       | 2002 | -0.12  | 0.05       | -0.21 | -0.03 | 1,338 | -0.01       | 0.05       | -0.11 | 0.08  | 1,338 | -0.05  | 0.05       | -0.14 | 0.04  | 1,333 |
| Brazil        | 1996 | -0.19  | 0.03       | -0.26 | -0.13 | 1,647 |             |            |       |       |       | -0.22  | 0.03       | -0.28 | -0.16 | 1,762 |
| Cote d'Ivoire | 1987 | -0.10  | 0.03       | -0.16 | -0.05 | 2,215 | -0.15       | 0.03       | -0.21 | -0.10 | 2,233 | -0.07  | 0.03       | -0.13 | -0.02 | 2,206 |
| Cote d'Ivoire | 1988 | -0.08  | 0.03       | -0.14 | -0.02 | 2,105 | -0.12       | 0.03       | -0.18 | -0.07 | 2,121 | -0.04  | 0.03       | -0.09 | 0.02  | 2,117 |
| Ghana         | 1988 |        |            |       |       |       | -0.10       | 0.03       | -0.16 | -0.04 | 2,906 | -0.28  | 0.03       | -0.34 | -0.22 | 2,898 |
| Ghana         | 2009 |        |            |       |       |       | -0.09       | 0.03       | -0.15 | -0.03 | 2,931 | -0.23  | 0.03       | -0.29 | -0.17 | 2,607 |
| Guatemala     | 2000 | -0.33  | 0.02       | -0.37 | -0.29 | 5,743 | -0.42       | 0.02       | -0.46 | -0.38 | 5,743 | -0.43  | 0.02       | -0.47 | -0.39 | 5,743 |
| Guyana        | 1992 | -0.03  | 0.05       | -0.13 | 0.07  | 601   | -0.09       | 0.05       | -0.19 | 0.01  | 601   | 0.02   | 0.05       | -0.08 | 0.12  | 601   |
| Kyrgyzstan    | 1997 | -0.09  | 0.05       | -0.19 | 0.00  | 1,162 | -0.21       | 0.05       | -0.30 | -0.11 | 1,163 | 0.01   | 0.05       | -0.09 | 0.11  | 1,113 |
| Kyrgyzstan    | 1998 | -0.09  | 0.04       | -0.17 | -0.01 | 1,689 | -0.11       | 0.04       | -0.19 | -0.03 | 1,727 | -0.03  | 0.04       | -0.11 | 0.06  | 1,643 |
| Nigeria       | 2010 | -0.41  | 0.10       | -0.61 | -0.22 | 282   | -0.07       | 0.03       | -0.13 | 0.00  | 2,576 | -0.21  | 0.03       | -0.27 | -0.14 | 2,404 |
| Nigeria       | 2012 | -0.02  | 0.06       | -0.13 | 0.10  | 2,794 | -0.04       | 0.03       | -0.09 | 0.02  | 2,737 | -0.06  | 0.03       | -0.12 | -0.01 | 2,766 |
| Pakistan      | 1991 | -0.17  | 0.03       | -0.23 | -0.12 | 3,911 | -0.13       | 0.03       | -0.19 | -0.08 | 3,916 | -0.21  | 0.03       | -0.27 | -0.16 | 3,903 |
| Panama        | 1997 |        |            |       |       |       |             |            |       |       |       |        |            |       |       |       |
| Panama        | 2003 | -0.30  | 0.03       | -0.36 | -0.25 | 2,922 | -0.41       | 0.03       | -0.47 | -0.36 | 2,922 | -0.49  | 0.02       | -0.54 | -0.44 | 2,922 |
| Peru          | 1994 | -0.38  | 0.03       | -0.44 | -0.32 | 2,296 | -0.47       | 0.03       | -0.54 | -0.41 | 2,296 | -0.53  | 0.03       | -0.59 | -0.47 | 2,228 |
| Tajikistan    | 2007 |        |            |       |       |       | -0.03       | 0.03       | -0.10 | 0.03  | 2,701 | -0.21  | 0.03       | -0.27 | -0.15 | 2,694 |
| Timor Leste   | 2007 |        |            |       |       |       | 0.08        | 0.03       | 0.03  | 0.14  | 3,937 | 0.06   | 0.03       | 0.00  | 0.11  | 3,937 |
| Tanzania      | 2010 |        |            |       |       |       | -0.21       | 0.03       | -0.26 | -0.15 | 2,971 | -0.25  | 0.03       | -0.30 | -0.19 | 2,993 |
| Uganda        | 2011 | -0.10  | 0.03       | -0.15 | -0.04 | 2,276 | -0.11       | 0.03       | -0.17 | -0.06 | 2,511 | -0.15  | 0.03       | -0.21 | -0.10 | 2,504 |
| Uganda        | 2013 | -0.11  | 0.08       | -0.27 | 0.05  | 187   | -0.14       | 0.03       | -0.20 | -0.08 | 2,583 | -0.14  | 0.03       | -0.19 | -0.08 | 2,580 |
| South Africa  | 1993 | -0.25  | 0.02       | -0.30 | -0.21 | 4,876 | -0.26       | 0.02       | -0.30 | -0.22 | 4,960 | -0.24  | 0.02       | -0.28 | -0.20 | 4,967 |
| Median        |      | -0.11  |            |       |       |       | -0.12       |            |       |       |       | -0.21  |            |       |       |       |
| Average       |      | -0.17  |            |       |       |       | -0.15       |            |       |       |       | -0.18  |            |       |       |       |
| Max           |      | -0.02  |            |       |       |       | 0.08        |            |       |       |       | 0.06   |            |       |       |       |
| Min           |      | -0.41  |            |       |       |       | -0.47       |            |       |       |       | -0.53  |            |       |       |       |

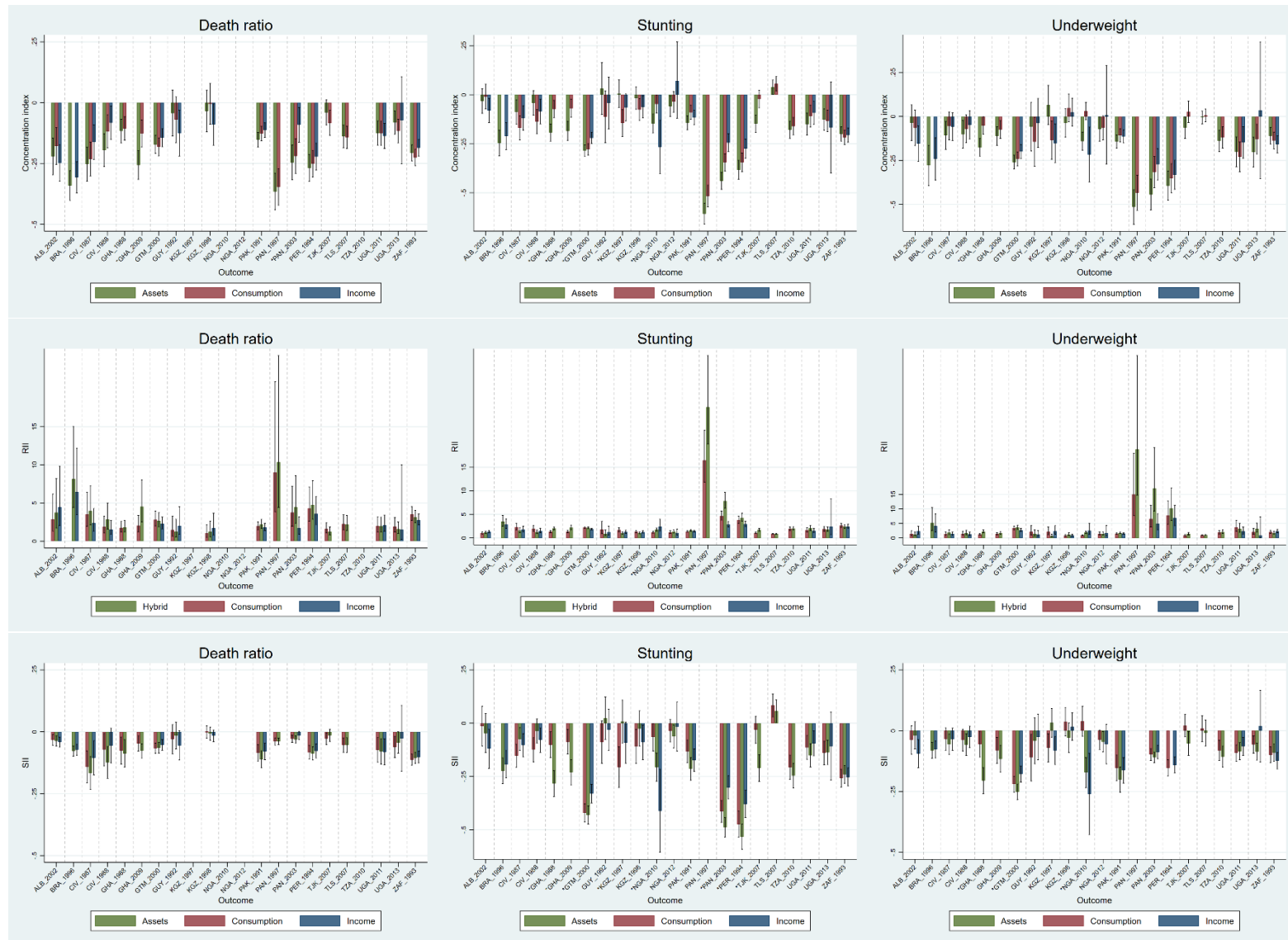
**Table S10.** Underweight SII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |       |       |       | Consumption |            |       |       |       | Hybrid |            |       |       |       |
|---------------|------|--------|------------|-------|-------|-------|-------------|------------|-------|-------|-------|--------|------------|-------|-------|-------|
|               |      | SII    | Std. error | LCI   | UCI   | Obs.  | SII         | Std. error | LCI   | UCI   | Obs.  | SII    | Std. error | LCI   | UCI   | Obs.  |
| Albania       | 2002 | -0.09  | 0.03       | -0.15 | -0.04 | 1,338 | -0.04       | 0.03       | -0.10 | 0.02  | 1,338 | -0.02  | 0.03       | -0.08 | 0.04  | 1,333 |
| Brazil        | 1996 | -0.08  | 0.02       | -0.11 | -0.04 | 1,647 |             |            |       |       |       | -0.08  | 0.02       | -0.11 | -0.05 | 1,762 |
| Cote d'Ivoire | 1987 | -0.04  | 0.02       | -0.08 | 0.01  | 2,215 | -0.03       | 0.02       | -0.08 | 0.01  | 2,233 | -0.06  | 0.02       | -0.10 | -0.01 | 2,206 |
| Cote d'Ivoire | 1988 | -0.03  | 0.02       | -0.07 | 0.02  | 2,105 | -0.04       | 0.02       | -0.08 | 0.01  | 2,121 | -0.06  | 0.02       | -0.10 | -0.01 | 2,117 |
| Ghana         | 1988 |        |            |       |       |       | -0.06       | 0.03       | -0.11 | 0.00  | 2,906 | -0.21  | 0.03       | -0.26 | -0.15 | 2,898 |
| Ghana         | 2009 |        |            |       |       |       | -0.08       | 0.03       | -0.13 | -0.03 | 2,931 | -0.12  | 0.03       | -0.17 | -0.06 | 2,607 |
| Guatemala     | 2000 | -0.18  | 0.02       | -0.21 | -0.15 | 5,743 | -0.22       | 0.02       | -0.25 | -0.19 | 5,743 | -0.25  | 0.02       | -0.28 | -0.22 | 5,743 |
| Guyana        | 1992 | -0.03  | 0.05       | -0.12 | 0.07  | 601   | -0.11       | 0.05       | -0.21 | -0.01 | 601   | -0.04  | 0.05       | -0.14 | 0.05  | 601   |
| Kyrgyzstan    | 1997 | -0.08  | 0.03       | -0.14 | -0.02 | 1,162 | -0.07       | 0.03       | -0.13 | -0.01 | 1,163 | 0.03   | 0.03       | -0.03 | 0.09  | 1,113 |
| Kyrgyzstan    | 1998 | 0.02   | 0.03       | -0.04 | 0.07  | 1,689 | 0.04        | 0.03       | -0.02 | 0.10  | 1,727 | -0.03  | 0.03       | -0.09 | 0.03  | 1,643 |
| Nigeria       | 2010 | -0.26  | 0.09       | -0.43 | -0.09 | 282   | 0.04        | 0.03       | -0.02 | 0.10  | 2,576 | -0.17  | 0.03       | -0.23 | -0.11 | 2,404 |
| Nigeria       | 2012 | -0.06  | 0.04       | -0.14 | 0.03  | 2,794 | -0.04       | 0.02       | -0.08 | 0.00  | 2,737 | -0.05  | 0.02       | -0.09 | 0.00  | 2,766 |
| Pakistan      | 1991 | -0.16  | 0.03       | -0.22 | -0.11 | 3,911 | -0.15       | 0.03       | -0.21 | -0.10 | 3,916 | -0.20  | 0.03       | -0.25 | -0.15 | 3,903 |
| Panama        | 1997 |        |            |       |       |       |             |            |       |       |       |        |            |       |       |       |
| Panama        | 2003 | -0.09  | 0.01       | -0.12 | -0.06 | 2,922 | -0.10       | 0.01       | -0.12 | -0.07 | 2,922 | -0.11  | 0.01       | -0.13 | -0.09 | 2,922 |
| Peru          | 1994 | -0.14  | 0.02       | -0.17 | -0.11 | 2,296 | -0.15       | 0.02       | -0.19 | -0.12 | 2,296 |        |            |       |       |       |
| Tajikistan    | 2007 |        |            |       |       |       | 0.02        | 0.02       | -0.03 | 0.07  | 2,701 | -0.05  | 0.02       | -0.10 | 0.00  | 2,694 |
| Timor Leste   | 2007 |        |            |       |       |       | 0.01        | 0.03       | -0.04 | 0.06  | 3,937 | -0.01  | 0.03       | -0.06 | 0.04  | 3,937 |
| Tanzania      | 2010 |        |            |       |       |       | -0.08       | 0.02       | -0.12 | -0.04 | 2,971 | -0.11  | 0.02       | -0.15 | -0.06 | 2,993 |
| Uganda        | 2011 | -0.06  | 0.02       | -0.10 | -0.03 | 2,276 | -0.09       | 0.02       | -0.13 | -0.06 | 2,511 | -0.08  | 0.02       | -0.12 | -0.05 | 2,504 |
| Uganda        | 2013 | 0.02   | 0.08       | -0.13 | 0.17  | 187   | -0.06       | 0.02       | -0.09 | -0.02 | 2,583 | -0.09  | 0.02       | -0.12 | -0.05 | 2,580 |
| South Africa  | 1993 | -0.12  | 0.02       | -0.16 | -0.09 | 4,876 | -0.10       | 0.02       | -0.13 | -0.07 | 4,960 | -0.09  | 0.02       | -0.13 | -0.06 | 4,967 |
| Median        |      | -0.08  |            |       |       |       | -0.06       |            |       |       |       | -0.08  |            |       |       |       |
| Average       |      | -0.09  |            |       |       |       | -0.07       |            |       |       |       | -0.09  |            |       |       |       |
| Max           |      | 0.02   |            |       |       |       | 0.04        |            |       |       |       | 0.03   |            |       |       |       |
| Min           |      | -0.26  |            |       |       |       | -0.22       |            |       |       |       | -0.25  |            |       |       |       |

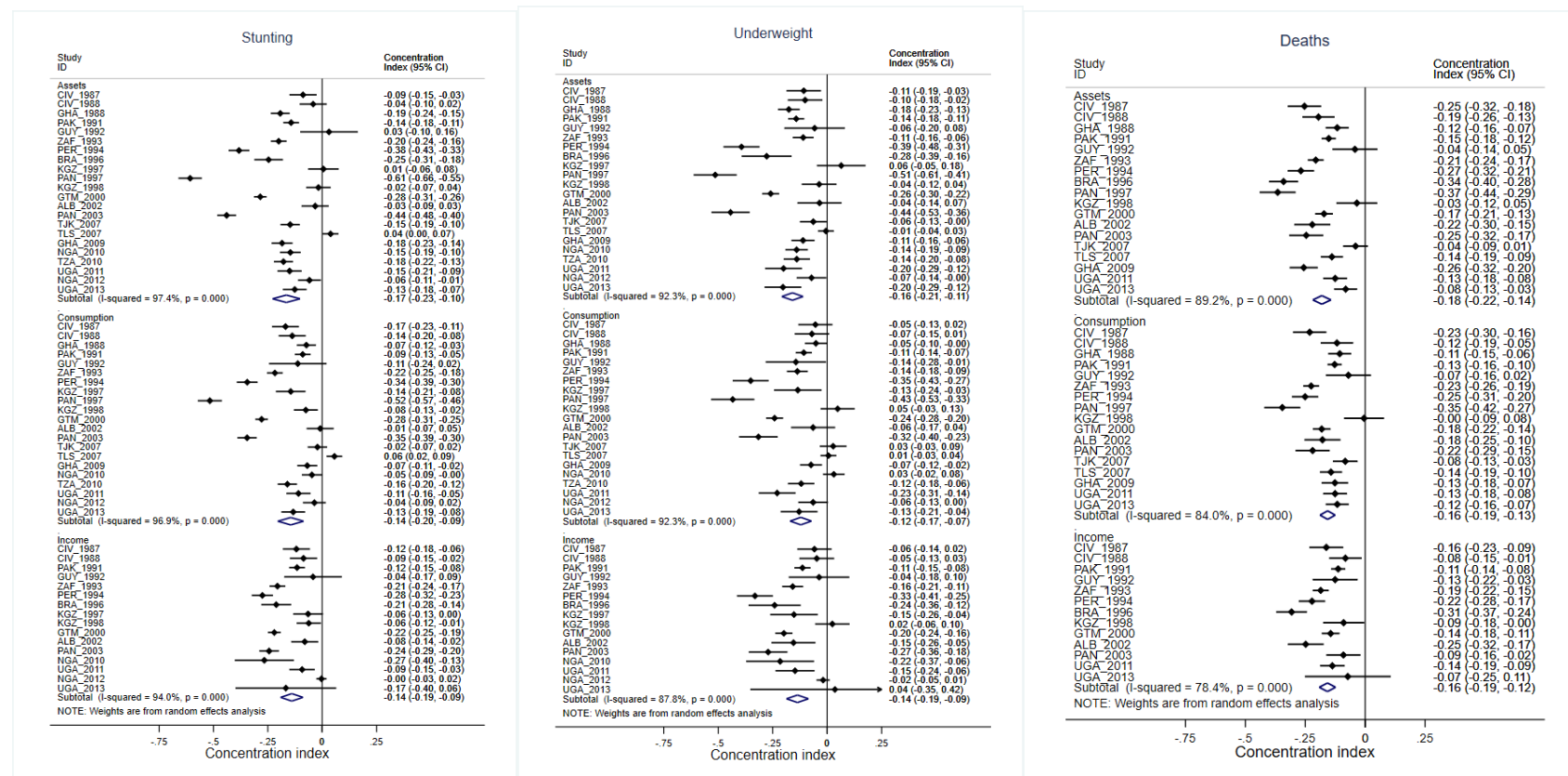
**Table S11.** Child deaths SII values for each survey wave with income, consumption, and hybrid income proxy comparison.

| Country       | Year | Income |            |       |       |       | Consumption |            |       |       |       | Hybrid |            |       |       |       |
|---------------|------|--------|------------|-------|-------|-------|-------------|------------|-------|-------|-------|--------|------------|-------|-------|-------|
|               |      | SII    | Std. error | LCI   | UCI   | Obs.  | SII         | Std. error | LCI   | UCI   | Obs.  | SII    | Std. error | LCI   | UCI   | Obs.  |
| Albania       | 2002 | -0.04  | 0.01       | -0.06 | -0.02 | 2,662 | -0.03       | 0.01       | -0.06 | -0.01 | 2,662 | -0.04  | 0.01       | -0.06 | -0.02 | 2,655 |
| Brazil        | 1996 | -0.07  | 0.01       | -0.09 | -0.05 | 3,020 |             |            |       |       |       | -0.08  | 0.01       | -0.10 | -0.06 | 3,241 |
| Cote d'Ivoire | 1987 | -0.11  | 0.04       | -0.17 | -0.04 | 1,002 | -0.14       | 0.03       | -0.21 | -0.08 | 1,015 | -0.17  | 0.03       | -0.23 | -0.10 | 1,002 |
| Cote d'Ivoire | 1988 | -0.06  | 0.04       | -0.13 | 0.01  | 1,061 | -0.07       | 0.03       | -0.14 | -0.01 | 1,067 | -0.12  | 0.03       | -0.19 | -0.06 | 1,065 |
| Ghana         | 1988 |        |            |       |       |       | -0.08       | 0.03       | -0.13 | -0.02 | 1,813 | -0.09  | 0.03       | -0.14 | -0.03 | 1,810 |
| Ghana         | 2009 |        |            |       |       |       | -0.05       | 0.02       | -0.08 | -0.02 | 2,835 | -0.08  | 0.01       | -0.11 | -0.05 | 2,526 |
| Guatemala     | 2000 | -0.05  | 0.01       | -0.07 | -0.03 | 5,929 | -0.07       | 0.01       | -0.09 | -0.05 | 5,929 | -0.06  | 0.01       | -0.09 | -0.04 | 5,929 |
| Guyana        | 1992 | -0.06  | 0.03       | -0.11 | 0.00  | 936   | -0.03       | 0.03       | -0.09 | 0.03  | 936   | -0.02  | 0.03       | -0.07 | 0.04  | 936   |
| Kyrgyzstan    | 1998 | -0.02  | 0.01       | -0.04 | 0.01  | 2,377 | 0.00        | 0.01       | -0.03 | 0.02  | 2,433 | -0.01  | 0.01       | -0.03 | 0.02  | 2,326 |
| Pakistan      | 1991 | -0.08  | 0.02       | -0.11 | -0.04 | 4,557 | -0.08       | 0.02       | -0.12 | -0.05 | 4,564 | -0.11  | 0.02       | -0.15 | -0.08 | 4,533 |
| Panama        | 1997 |        |            |       |       |       | -0.04       | 0.01       | -0.05 | -0.02 | 3,495 | -0.04  | 0.01       | -0.05 | -0.03 | 3,487 |
| Panama        | 2003 | -0.01  | 0.01       | -0.03 | 0.00  | 4,522 | -0.03       | 0.01       | -0.04 | -0.01 | 4,522 | -0.03  | 0.01       | -0.05 | -0.02 | 4,521 |
| Peru          | 1994 | -0.08  | 0.01       | -0.11 | -0.05 | 2,922 | -0.08       | 0.01       | -0.11 | -0.06 | 2,922 | -0.09  | 0.01       | -0.11 | -0.06 | 2,841 |
| Tajikistan    | 2007 |        |            |       |       |       | -0.03       | 0.01       | -0.05 | 0.00  | 4,481 | -0.01  | 0.01       | -0.04 | 0.01  | 4,454 |
| Timor Leste   | 2007 |        |            |       |       |       | -0.05       | 0.01       | -0.08 | -0.02 | 3,258 | -0.05  | 0.02       | -0.08 | -0.02 | 3,258 |
| Uganda        | 2011 | -0.08  | 0.03       | -0.13 | -0.03 | 1,602 | -0.07       | 0.03       | -0.12 | -0.02 | 1,748 | -0.08  | 0.03       | -0.13 | -0.03 | 1,753 |
| Uganda        | 2013 | -0.03  | 0.07       | -0.16 | 0.11  | 152   | -0.06       | 0.02       | -0.10 | -0.02 | 2,129 | -0.04  | 0.02       | -0.09 | 0.00  | 2,125 |
| South Africa  | 1993 | -0.10  | 0.01       | -0.13 | -0.08 | 6,828 | -0.11       | 0.01       | -0.14 | -0.09 | 6,940 | -0.11  | 0.01       | -0.13 | -0.08 | 6,964 |
| Median        |      | -0.06  |            |       |       |       | -0.06       |            |       |       |       | -0.07  |            |       |       |       |
| Average       |      | -0.06  |            |       |       |       | -0.06       |            |       |       |       | -0.07  |            |       |       |       |
| Max           |      | -0.01  |            |       |       |       | 0.00        |            |       |       |       | -0.01  |            |       |       |       |
| Min           |      | -0.11  |            |       |       |       | -0.14       |            |       |       |       | -0.17  |            |       |       |       |

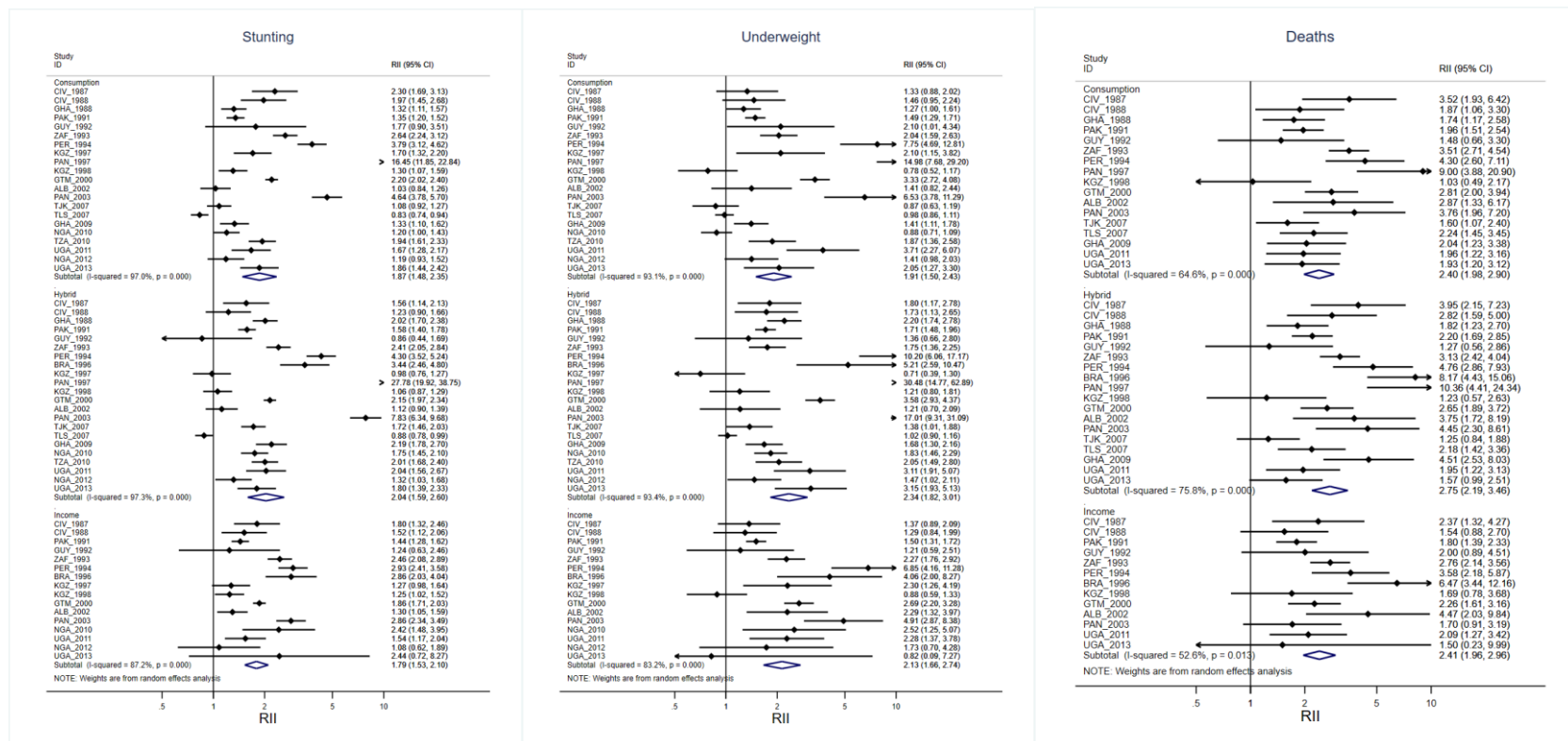
**Figure S2.** Concentration indices (top), RIIs (middle), and SIIs (bottom) for all outcomes, country-years, and SES measures with 95% confidence intervals



**Figure S3.** Forest plot comparisons of concentration indices using income, consumption, and assets for stunting (left), underweight (center), and child death ratios (right)



**Figure S4.** Forest plot comparisons of RII values using income, consumption, and income proxy hybrid for stunting (left), underweight (center), and child death ratios (right)



**Figure S5.** Forest plot comparisons of SII values using income, consumption, and income proxy hybrid for stunting (left), underweight (center), and child death ratios (right)

