# Supplementary file 2

**Undernutrition among children and its determinants across the parliamentary constituencies of India: A geospatial analysis**

**Spatial Regression Model Results**

**Table 1** OLS Model Results for children undernourished and its predictors for parliamentary constituencies, India, 2015-16

| PC- level predictor variables | Stunted | Underweight | Wasted |
| --- | --- | --- | --- |
| Coefficients | Probability | Coefficients | Probability | Coefficients | Probability |
| Poverty Head Count Ratio | 0.078 | 0 | 0.089 | 0 | 0.035 | 0.035 |
| Households using improved sanitation facility | -0.054 | 0.003 | -0.068 | 0 | -0.001 | -0.001 |
| Women with ten or more years of schooling | 0.043 | 0.168 | 0.073 | 0.018 | 0.085 | 0.085 |
| Institutional births | -0.133 | 0 | -0.048 | 0.046 | 0.06 | 0.06 |
| Mothers who had at least four antenatal care visits | -0.076 | 0 | 0.023 | 0.116 | 0.056 | 0.056 |
| Women whose Body Mass Index (BMI) is below normal (BMI < 18.5 kg/m2) | 0.344 | 0 | 0.651 | 0 | 0.404 | 0.404 |
| Women aged 20-24 years married before age 18 years  | 0.04 | 0.112 | 0.038 | 0.119 | 0.027 | 0.027 |
| Children aged 6-59 months who are anaemic  | 0.117 | 0 | 0.213 | 0 | 0.16 | 0.16 |
| Children aged 6-23 months receiving an adequate diet | -0.124 | 0 | -0.16 | 0 | -0.017 | -0.017 |
|  |
| R- squared value | 0.73 |  | 0.75 |  | 0.33 | 0.33 |
| Lambda Value (Lag Coefficient) |  |  |  |  |  |  |
| Rho Value (Lag coefficient) |  |  |  |  |  |  |
| Log likelihood | -1645.39 |  | -1637.11 |  | -1651.19 | -1651.19 |
| AIC value | 3310.78 |  | 3294.23 |  | 3322.39 | 3322.39 |
| No. of PCs | 543 |   | 543 |  | 543 | 543 |

**Table 2** Spatial Lag Model Results for children undernourished and its predictors for parliamentary constituencies, India, 2015-16

| PC- level predictor variables | Stunted | Underweight | Wasted |
| --- | --- | --- | --- |
| Coefficients | Probability | Coefficients | Probability | Coefficients | Probability |
| Poverty Head Count Ratio | 0.03 | 0.042 | 0.04 | 0.006 | 0.016 | 0.271 |
| Households using improved sanitation facility | -0.033 | 0.028 | -0.042 | 0.004 | -0.004 | 0.795 |
| Women with ten or more years of schooling | 0.007 | 0.791 | 0.036 | 0.153 | 0.044 | 0.082 |
| Institutional births | -0.085 | 0 | -0.044 | 0.026 | 0.019 | 0.338 |
| Mothers who had at least four antenatal care visits | -0.026 | 0.036 | 0.029 | 0.016 | 0.03 | 0.015 |
| Women whose Body Mass Index (BMI) is below normal (BMI < 18.5 kg/m2) | 0.226 | 0 | 0.43 | 0 | 0.189 | 0 |
| Women aged 20-24 years married before age 18 years  | 0 | 0.981 | -0.006 | 0.766 | -0.002 | 0.913 |
| Children aged 6-59 months who are anaemic  | 0.07 | 0 | 0.137 | 0 | 0.11 | 0 |
| Children aged 6-23 months receiving an adequate diet | -0.042 | 0.124 | -0.064 | 0.018 | 0.018 | 0.498 |
|  |
| R- squared value | 0.81 |  | 0.83 |  | 0.55 |  |
| Lambda Value (Lag Coefficient) |  |  |  |  |  |  |
| Rho Value (Lag coefficient) | 0.521 | 0 | 0.495 | 0 | 0.593 | 0 |
| Log likelihood | -1561.78 |  | -1554.06 |  | -1563.88 |  |
| AIC value | 3145.56 |  | 3130.12 |  | 3149.76 |  |
| No. of PCs | 543 |   | 543 |  | 543 |  |