# Oxford Poverty and Human Development Initiative (OPHI)

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*Oxford Dept of International Development,*
*Queen Elizabeth House, University of Oxford*

UNIVERSITY OF
**OXFORD**

# Country Briefing: Mexico

## Multidimensional Poverty Index (MPI) *At a Glance*
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This Country Briefing presents the results of the Multidimensional Poverty Index (MPI) and explains key findings graphically. Further information as well as international comparisons are available at www.ophi.org.uk/policy/multidimensional-poverty-index/.

*The MPI was constructed by OPHI for UNDP's 2011 Human Development Report (http://hdr.undp.org/en/).*

Citation: Alkire, Sabina; Jose Manuel Roche; Maria Emma Santos & Suman Seth (2011). Mexico Country Briefing. Oxford Poverty & Human Development Initiative (OPHI) Multidimensional Poverty Index Country Briefing Series. Available at: www.ophi.org.uk/policy/multidimensional-poverty-index/mpi-country-briefings/.

*For more information on the MPI please see Alkire, Sabina and Maria Emma Santos. "Acute Multidimensional Poverty: A New Index for Developing Countries" OPHI Working Paper 38 and the latest MPI resources online: http://www.ophi.org.uk/policy/multidimensional-poverty-index/mpi-resources/.*

## Inside the MPI

The MPI has three dimensions and 10 indicators, which are shown in the box below. Each dimension is equally weighted, each indicator within a dimension is also equally weighted, and these weights are shown in brackets within the diagram.
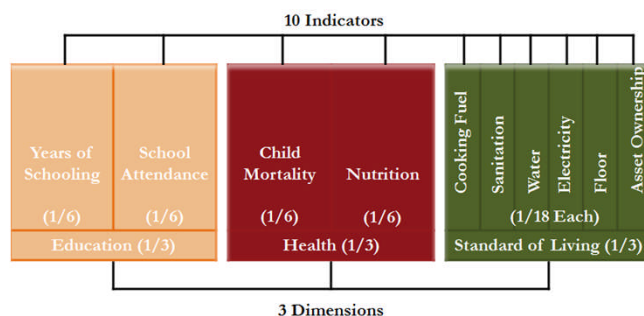


## Country Profile                                               **Mexico-ENSANUT-2006**

**Country:**      Mexico          **Year:** 2006    **Survey:** ENSANUT

**Region:** Latin America and Caribbean
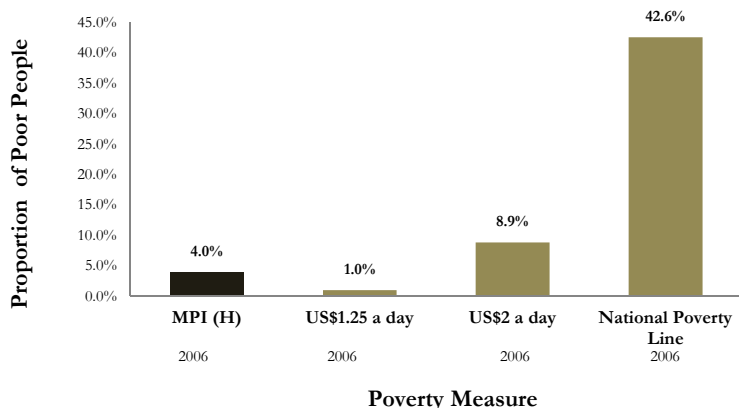
## Multidimensional Poverty Index (MPI)

The MPI reflects both the incidence or headcount ratio (H) of poverty – the proportion of the population that is multidimensionally poor – and the average intensity (A) of their poverty – the average proportion of indicators in which poor people are deprived. The MPI is calculated by multiplying the incidence of poverty by the average intensity across the poor (H*A). A person is identified as poor if he or she is deprived in at least one third of the weighted indicators. The following table shows the multidimensional poverty rate (MPI) and its two components: incidence of poverty (H) and average intensity of deprivation faced by the poor (A). The first and second columns of the table report the survey and year used to generate the MPI results. Those identified as MPI poor are deprived in at least 33% of weighted indicators. Those identified as "Vulnerable to Poverty" are deprived in 20% - 33% of weighted indicators and those identified as in "Severe Poverty" are deprived in over 50%.

| Survey | Year | Multidimensional Poverty Index (MPI = H×A) | Incidence of Poverty (H) | Average Intensity Across the Poor (A) | Percentage of Population Vulnerable to Poverty | Percentage of Population in Severe Poverty |
|---|---|---|---|---|---|---|
| ENSANUT | 2006 | 0.015 | 4.0% | 38.9% | 5.8% | 0.5% |

## Comparing the MPI with Other Poverty Measures

Column chart A compares the poverty rate using the MPI with three other commonly used poverty measures. The height of the first column denotes the percentage of people who are MPI poor (also called the incidence or headcount ratio). The second and third columns denote the percentages of people who are poor according to the $1.25 a day income poverty line and $2.00 a day line, respectively. The final column denotes the percentage of people who are poor according to the national income poverty line. The table on the right-hand side reports various descriptive statistics for the country. The statistics shaded in khaki/olive are taken from the year closest to the year of the survey used to calculate the MPI. The year is provided below each column in chart A.

### A. Comparative Poverty Measures



**Summary**

| | |
|---|---|
| Multidimensional Poverty Index | 0.015 |
| Percentage of MPI Poor (H) | 4.0% |
| Average Intensity of Deprivation (A) | 38.9% |
| Percentage of Income Poor ($1.25 a day)‡ | 1.0% |
| Percentage of Income Poor ($2.00 a day)‡ | 8.9% |
| Percentage of Poor (National Poverty Line)‡ | 42.6% |
| Human Development Index 2011* | 0.770 |
| HDI rank* | 57 |
| HDI category* | High |

‡ The World Bank (2011). "World Development Indicators." Washington, DC.

* UNDP (2011). "Human Development Report", Statistical Table 1 . New York.

Note: For population figures and numbers of MPI poor people, consult the tables on OPHI's website: http://www.ophi.org.uk/policy/multidimensional-poverty-index/.

## Comparing the MPI with Other Poverty Measures

Column chart B shows the percentage of people who are MPI poor (also called the incidence or headcount) in the 109 developing countries analysed. The column denoting this country is dark, with other countries shown in light grey. The dark dots denote the percentage of people who are income poor according to the $1.25 a day poverty line in each country. The graph above tells you the year this data comes from. Dots are only shown where the income data available is within three years of the MPI survey year.

### B. Headcounts of MPI Poor and $1.25/day Poor



■ Percentage of MPI Poor            ● Percentage of Income Poor (living on less than $1.25 a day)
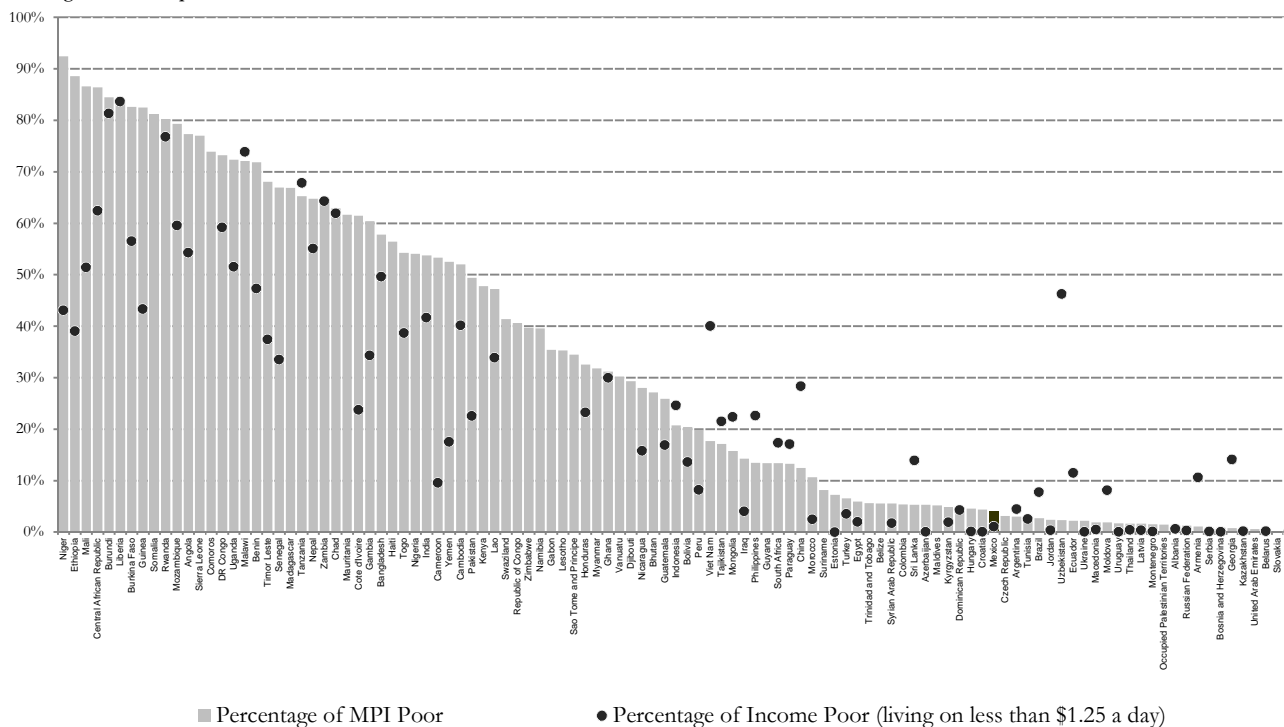
## Incidence of Deprivation in Each of the MPI Indicators

The MPI uses 10 indicators to measure poverty in three dimensions: education, health and living standards. The bar chart to the left reports the proportion of the population that is poor and deprived in each indicator. We do not include the deprivation of non-poor people. The spider diagram to the right compares the proportions of the population that are poor and deprived across different indicators. At the same time it compares the performance of rural areas and urban areas with that of the national aggregate. Patterns of deprivation may differ in rural and urban areas.
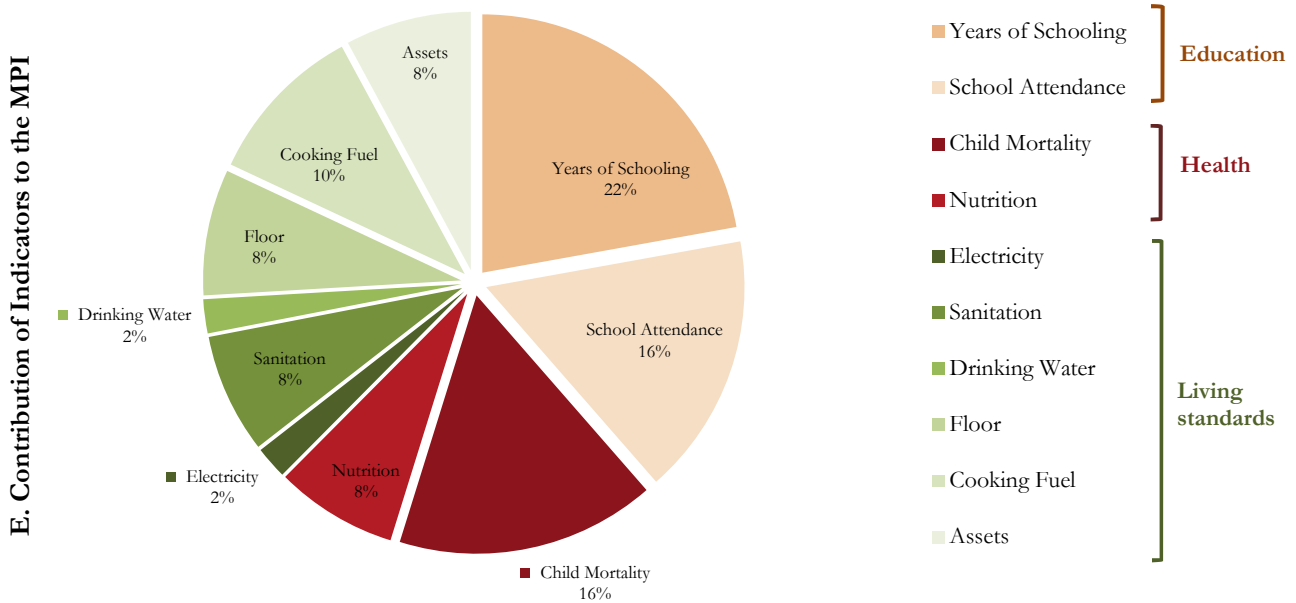
### C. Deprivations in each Indicator



Percentage of the Population who are MPI poor and deprived in each indicator
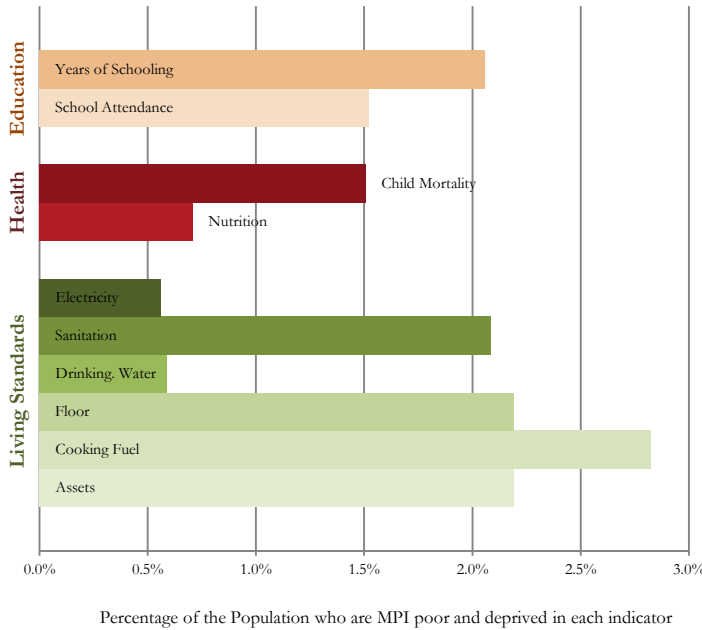
### D. Percentage of the Population MPI Poor and Deprived



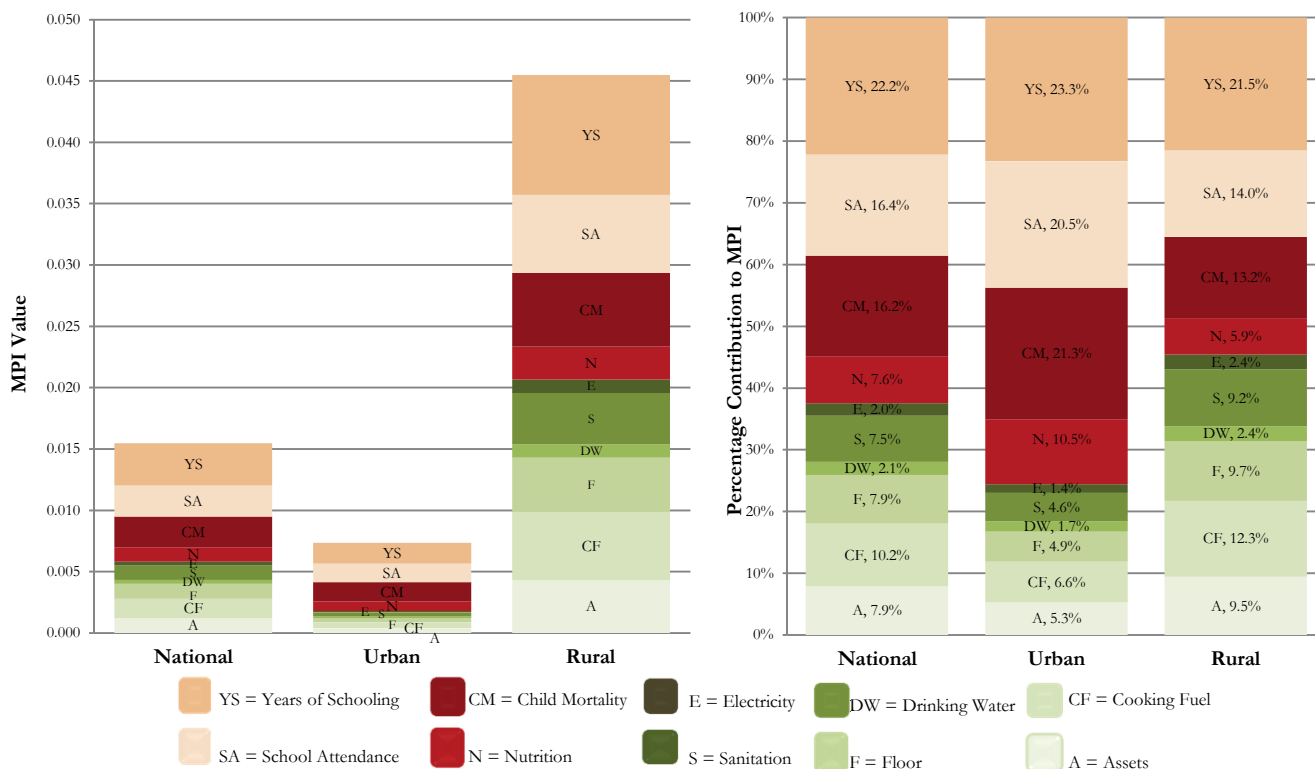National    Urban    Rural
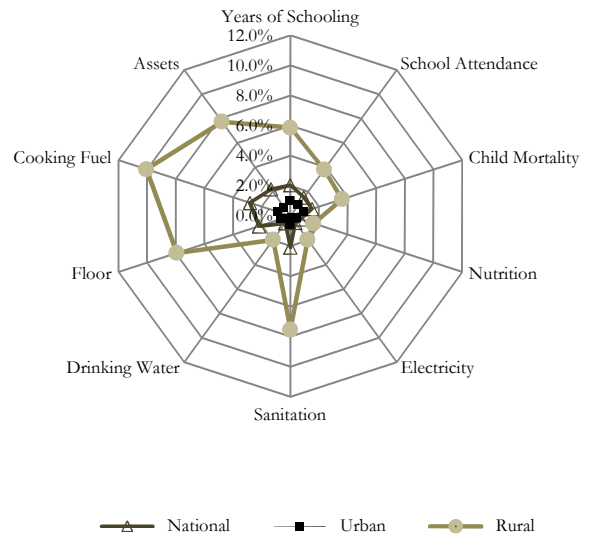
## Composition of the MPI

The MPI can be broken down to see directly how much each indicator contributes to multidimensional poverty. The following figure shows the composition of the MPI using a pie chart. Each piece of the pie represents the percentage contribution of each indicator to the overall MPI of the country. The larger the slice of the pie chart, the bigger the weighted contribution of the indicator to overall poverty.

### E. Contribution of Indicators to the MPI



- Years of Schooling
- School Attendance
Education

- Child Mortality
- Nutrition
Health

- Electricity
- Sanitation
- Drinking Water
- Floor
- Cooking Fuel
- Assets
Living standards
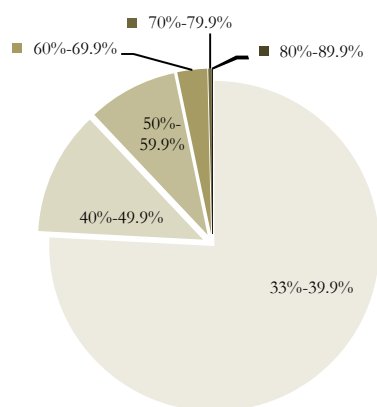
## Decomposition of MPI by Region

The MPI can be decomposed by different population subgroups, then broken down by dimension, to show how the composition of poverty differs between different regions or groups. On the left-hand side of column chart F, the height of each of the three bars shows the level of MPI at the national level, for urban areas, and for rural areas, respectively. Inside each bar, different colours represent the contribution of different weighted indicators to the overall MPI. On the right-hand side of column chart F, the colours inside each bar denote the percentage contribution of each indicator to the overall MPI, and all bars add up to 100%. This enables an immediate visual comparison of the composition of poverty across regions.

### F. Contribution of Indicators to the MPI at the National Level, for Urban Areas, and for Rural Areas

YS = Years of Schooling    CM = Child Mortality    E = Electricity    DW = Drinking Water    CF = Cooking Fuel

SA = School Attendance    N = Nutrition    S = Sanitation    F = Floor    A = Assets
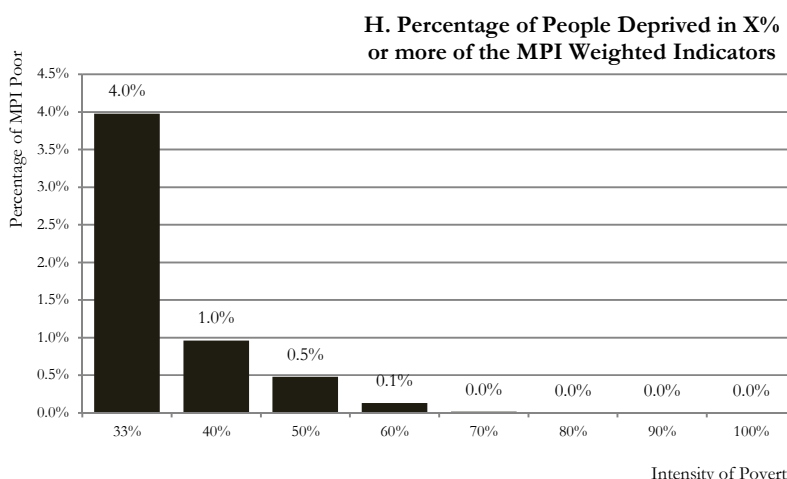
## Intensity of Multidimensional Poverty

Recall that i) a person is considered poor if they are deprived in at least one third of the weighted indicators and ii) the intensity of poverty denotes the proportion of indicators in which they are deprived. A person who is deprived in 100% of the indicators has a greater intensity of poverty than someone deprived in 40%. The following figures show the percentage of MPI poor people who experience different intensities of poverty. The pie chart below breaks the poor population into seven groups based on the intensity of their poverty. For example, the first slice shows deprivation intensities of greater than 33% but strictly less than 40%. It shows the proportion of poor people whose intensity (the percentage of indicators in which they are deprived) falls into each group. The column chart H reports the proportion of the population in a country that is poor in that percentage of indicators or more. For example, the number over the 40% bar represents the percentage of people who are deprived in 40% or more indicators.

### H. Percentage of People Deprived in X% or more of the MPI Weighted Indicators

### G. Intensity of Deprivation Among MPI Poor

## Multidimensional Poverty at the Sub-national Level

In addition to providing data on multidimensional poverty at the national level, the MPI can also be 'decomposed' by sub-national regions to show disparities in poverty within countries. This analysis can be easily performed when the survey used for the MPI is representative at the sub-national level. The following table shows the MPI value and its two components at the sub-national level: the incidence of poverty (H) and the average intensity of deprivation faced by the poor (A). The last two columns present the percentage of the population vulnerable to multidimensional poverty and living in severe poverty, respectively. Regional population figures, in the second column, are estimated using the weighted sample share of each region and the 2008 population estimates from UNDESA, Population Division (2011), World Population. The map shows visually how the MPI varies across regions - a darker colour indicates higher MPI and therefore greater poverty.

### I. Multidimensional Poverty across Sub-national Regions

| Region | Percentage of Population | Multidimensional Poverty Index (MPI = H×A) | Incidence of Poverty (H) | Average Intensity Across the Poor (A) | Percentage of Population Vulnerable to Poverty | Percentage of Population in Severe Poverty |
|---|---|---|---|---|---|---|
| Aguascalientes | 1.0% | 0.007 | 1.9% | 35.8% | 2.8% | 0.1% |
| Baja California | 2.8% | 0.005 | 1.4% | 38.5% | 2.0% | 0.2% |
| Baja California Sur | 0.4% | 0.004 | 1.0% | 36.7% | 3.3% | 0.1% |
| Campeche | 0.7% | 0.017 | 4.3% | 40.2% | 8.6% | 0.7% |
| Chiapas | 4.1% | 0.042 | 10.9% | 39.0% | 12.9% | 1.6% |
| Chihuahua | 3.1% | 0.013 | 3.5% | 38.0% | 3.3% | 0.5% |
| Coahuila | 2.4% | 0.004 | 1.2% | 36.7% | 2.4% | 0.0% |
| Colima | 0.5% | 0.009 | 2.2% | 39.3% | 3.3% | 0.3% |
| Distrito Federal | 8.4% | 0.002 | 0.7% | 33.3% | 0.5% | 0.0% |
| Durango | 1.4% | 0.009 | 2.2% | 39.8% | 5.7% | 0.5% |
| Guanajuato | 4.7% | 0.013 | 3.6% | 36.6% | 8.2% | 0.0% |
| Guerrero | 3.0% | 0.050 | 12.3% | 41.1% | 16.1% | 2.3% |
| Hidalgo | 2.3% | 0.014 | 3.9% | 37.5% | 7.0% | 0.4% |
| Jalisco | 6.5% | 0.005 | 1.5% | 35.2% | 3.0% | 0.0% |
| Mexico | 13.7% | 0.008 | 2.2% | 37.8% | 2.7% | 0.1% |
| Michoacan | 3.9% | 0.020 | 5.2% | 38.7% | 6.5% | 0.7% |
| Morelos | 1.6% | 0.008 | 2.1% | 37.2% | 5.0% | 0.2% |
| Nayarit | 0.9% | 0.021 | 5.3% | 40.0% | 6.6% | 0.9% |
| Nuevo Leon | 4.0% | 0.004 | 1.2% | 36.7% | 1.9% | 0.0% |
| Oaxaca | 3.4% | 0.050 | 12.2% | 40.8% | 14.8% | 2.1% |
| Puebla | 5.2% | 0.018 | 4.9% | 37.1% | 9.7% | 0.2% |
| Queretaro | 1.5% | 0.018 | 4.6% | 39.9% | 5.6% | 0.7% |
| Quintana Roo | 1.1% | 0.011 | 3.0% | 37.9% | 4.2% | 0.2% |
| San Luis Potosi | 2.3% | 0.021 | 5.6% | 37.9% | 8.2% | 0.7% |
| Sinaloa | 2.5% | 0.016 | 3.7% | 43.4% | 5.1% | 1.1% |
| Sonora | 2.3% | 0.007 | 1.7% | 37.7% | 3.5% | 0.1% |
| Tabasco | 2.0% | 0.010 | 2.6% | 38.3% | 6.1% | 0.5% |
| Tamaulipas | 2.9% | 0.011 | 3.1% | 36.6% | 3.9% | 0.0% |
| Tlaxcala | 1.0% | 0.008 | 2.2% | 38.4% | 3.4% | 0.2% |
| Veracruz | 6.9% | 0.030 | 7.5% | 40.2% | 9.8% | 1.1% |
| Yucatan | 1.8% | 0.014 | 3.8% | 37.8% | 9.0% | 0.3% |
| Zacatecas | 1.3% | 0.013 | 3.5% | 36.1% | 6.5% | 0.3% |

**J. Mapping Poverty Rates at the Sub-national Level**



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by OPHI or the University of Oxford. This map is intended for illustrative purposes only.