

## Notes

The raw data for this project originates from XXX. For this project, the raw data was scaled and standardized several ways. First, each variable was assigned to a category where a high value equates to a high opportunity (“higher value is better”), or where a high value equates to a low opportunity (“lower is better”).

### Z-score

The z-score value represents the number of standard deviations x is from the mean. The z-score calculation is:

Where “higher is better”:  $z\ score = \frac{x - mean}{standard\ deviation}$

Where “lower is better”:  $z\ score = \frac{x - mean}{standard\ deviation} \times (-1)$

### Weights nominal

The weights nominal value represents where x falls nominally in the range of values, on a 0-10 scale. The weights nominal calculation is:

Where “higher is better”:  $weights\ nominal = \frac{x - minimum\ value}{maximum\ value - minimum\ value} \times 10$

Where “lower is better”:  $weights\ nominal = 10 - \frac{x - minimum\ value}{maximum\ value - minimum\ value} \times 10$

### Weights standard score

The weights standard score normally distributes the z score of x on a 0-10 scale. **This is the primary variable mapped in this tool.** It is calculated according to:

Where “higher is better”:  $weights\ standard\ score = (normal\ distribution\ of\ z\ score) \times 10$

Where “lower is better”:  $weights\ standard\ score = 10 - (normal\ distribution\ of\ z\ score) \times 10$

### Weights rank

The weights standard score normally distributes the z score of x on a 0-10 scale. It is calculated according to:

Where “higher is better”:  $weights\ rank = \frac{rank\ of\ the\ nominal\ weight\ of\ x}{number\ of\ tracts\ with\ data\ on\ x} \times 10$

Where “lower is better”:  $weights\ rank = \frac{rank\ of\ the\ nominal\ weight\ of\ x}{number\ of\ tracts\ with\ data\ on\ x} \times 10$