



Introduction to Spatial Statistics Tools

SPATIAL STATISTICS TOOLS

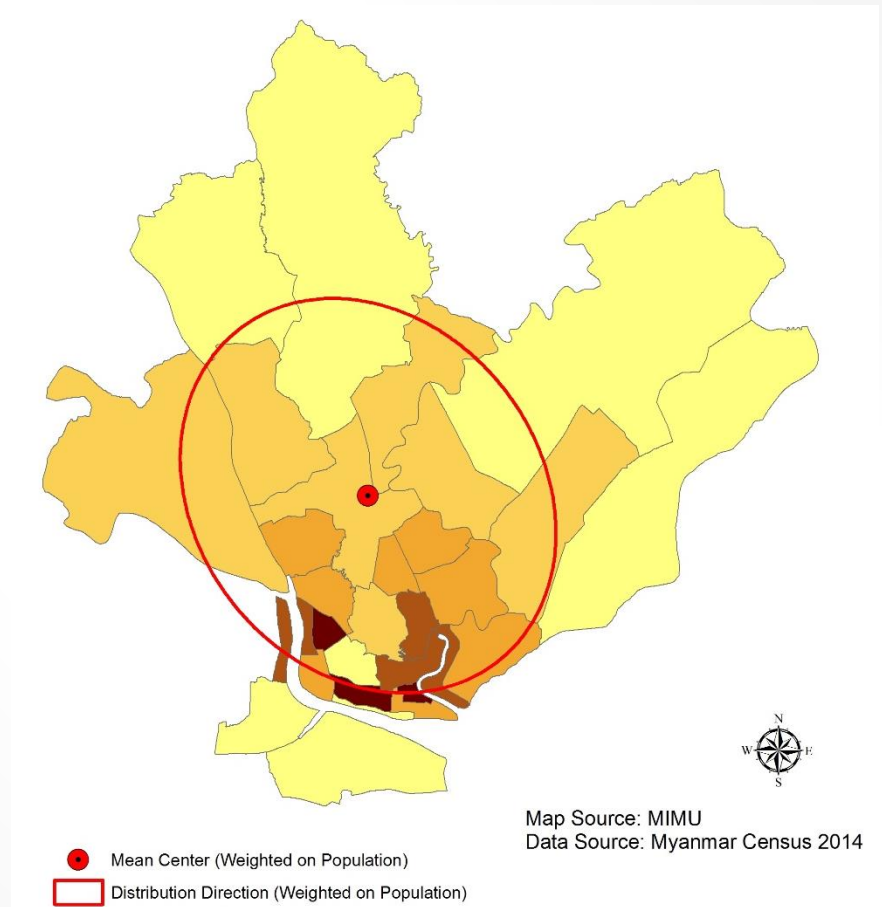
- The spatial statistics tools are a set of exploratory techniques that allow you to examine the distribution and pattern of various geographic phenomena and events.
- Not only can you visually determine if there are distinct distributions and patterns, but you can also determine if they are statistically significant or not.

Source: ESRI, 2007

CATEGORIES OF SPATIAL MEASUREMENTS

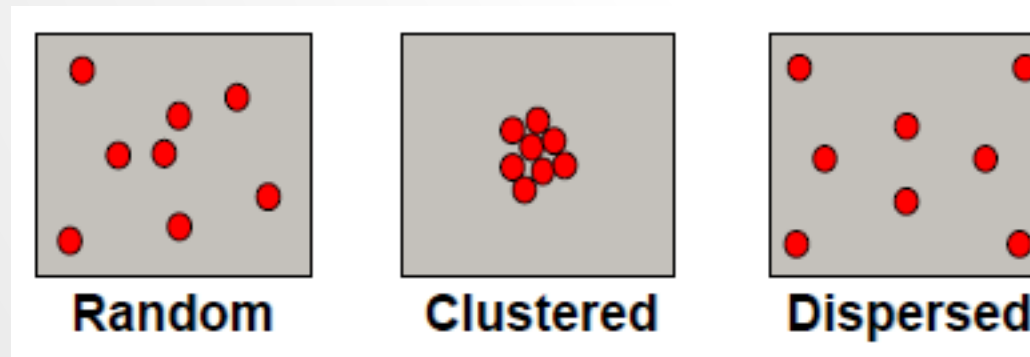
- Identifying characteristics of a distribution
 - descriptive in nature
 - identify characteristics of features
 - answer like “where is the center”, or “how are features distributed around the center”

Source: ESRI (2006)



CATEGORIES OF SPATIAL MEASUREMENTS

- Quantifying geographic pattern
 - describe spatial pattern
 - determine whether features are random, clustered, or dispersed across the study area



WHY USE SPATIAL STATISTICS?

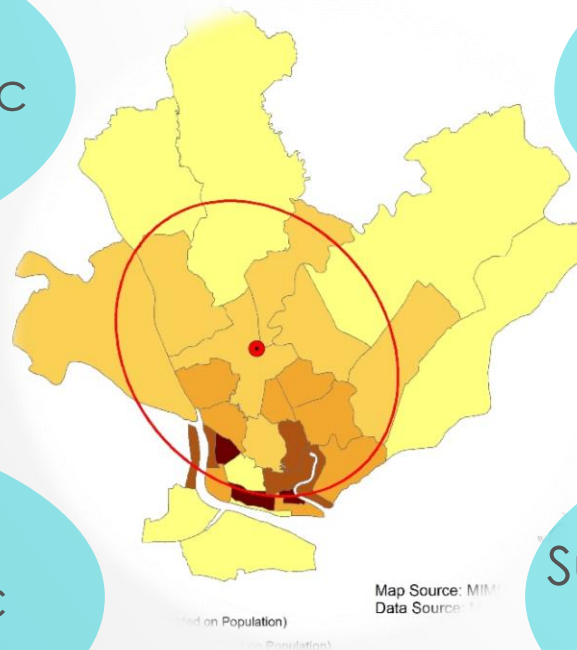
- to help assess patterns, trends and relationship

Better understand
behavior of geographic
phenomena

Make decisions with
higher level of
confidence

Pinpoint causes of
specific geographic
patterns

Summarize the distribution
in a single number



TOOLSETS FOR STATISTICAL FUNCTIONS

- Measuring Geographic Distributions
- Analyzing Patterns
- Mapping Clusters
- Modeling Spatial Relationships

