

PAF 586 – Data for the Public Good

Lab 02 Solutions

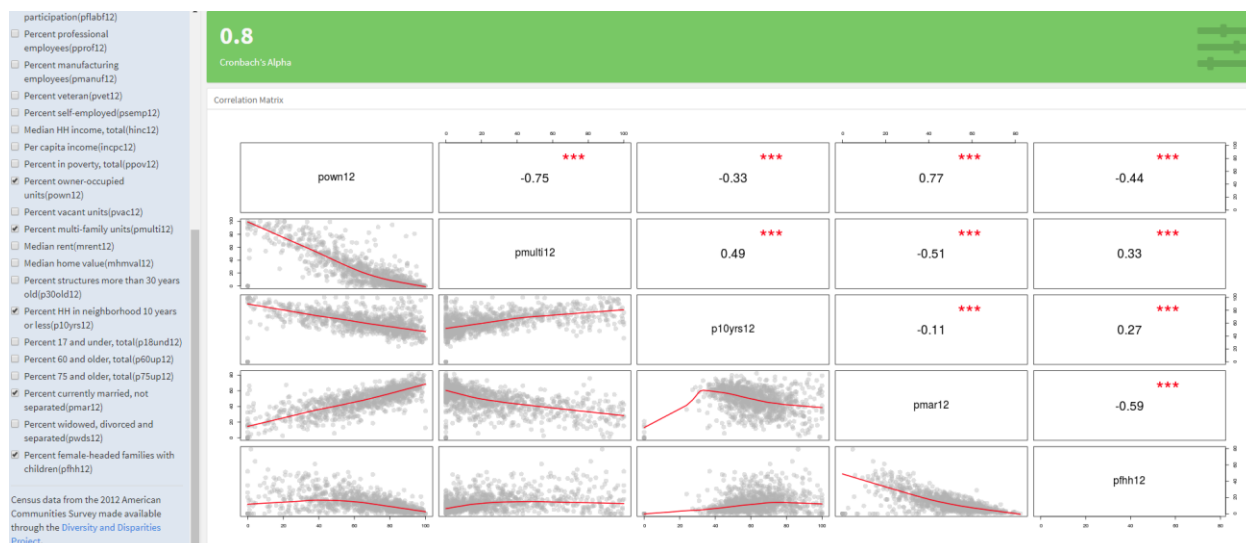
There are many ways that you could have constructed a reliable variable. Three examples are presented below. This suggests that neighborhood well-being might be similar to the SF-36 index for health, which can be decomposed into subcomponents of health like physical health and mental health. Perhaps it is too simplistic to define community well-being with a single dimension? Do you think the three measures below would be highly-correlated or uncorrelated?

In a real study you would not construct a scale by randomly selecting census variables to try to maximize a reliability score. However, it is not uncommon to combine a set of variables to construct an index. Perhaps you want a neighborhood vulnerability index, so you could select unemployment, crime, divorce, and high-school drop-outs. The reliability score will help determine if the fields are actually measuring the same thing.

Selecting index labels is never easy. You need to look for a theme and try to find a label that will make sense intuitively and accurately represents the construct that is being measured.

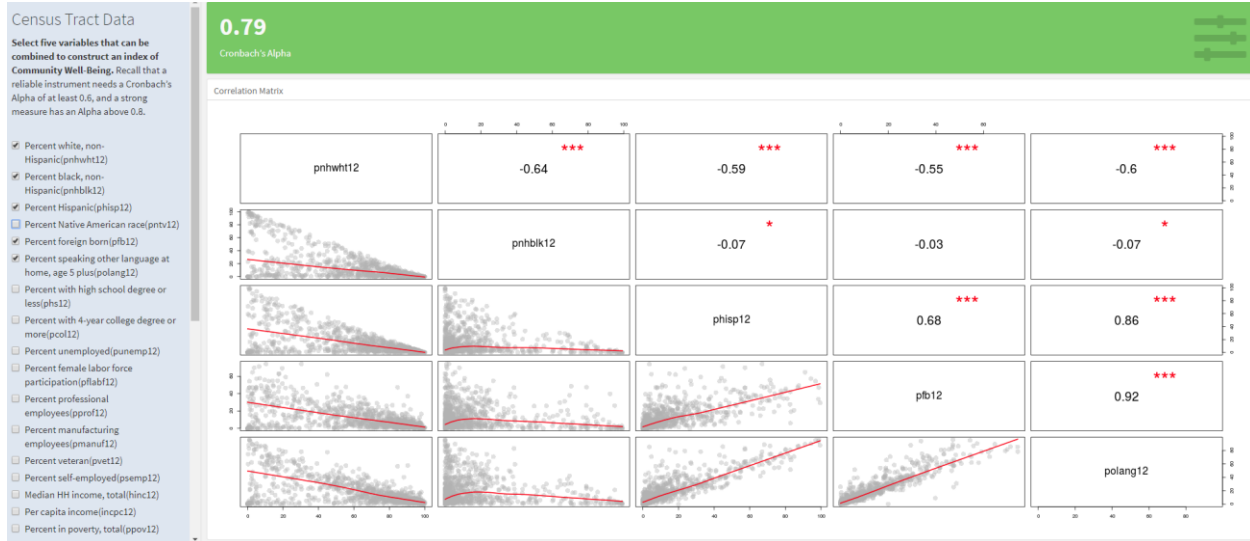
Neighborhood transitivity

- % homes that are owner occupied
- % of homes that are multi-family
- % of residents that have been in the neighborhood under 10 years
- % of households currently not married
- % of households led by single female



Neighborhood Diversity

- % white
- % black
- % Hispanic
- % foreign born
- % speaking another language at home



Human Capital

- % adults with college degree
- % adults with a high school degree or less
- % employed in professional industries
- Median household income + Per capita income (these give the high score, but cheating a little)
- Median home value (drops alpha to 0.92)

