

Title: Slum Mapping and Household Location Choice

Abstract: Current theories of slum formation attribute the growth in slums to when urban growth outpaces city infrastructure spending. In spite of this, aggregate slum populations around the world seem to be on the decline despite urban growth staying positive and a relatively constant amount of infrastructure spending. This may be in part due to the difficulty in collecting accurate slum data or some other uncaptured effect. This paper addresses both issues by first developing a predictive model for mapping slums using nighttime lights satellite imagery and spatial population density data; I find that slums tend to be in areas with low light levels and high population density levels while the biggest factor in reducing the log-likelihood of a certain location being a slum is high light levels. The second section of this paper constructs a spatial choice model to help address the question of decreasing slums at a microeconomics household level. Calibrating one such model can help determine which aspects of households push them to live in slums and the macro trends in these household characteristics.