

Interactive comment on “The Lumen Gini Coefficient: a satellite imagery derived human development index” by C. D. Elvidge et al.

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This is a really interesting and important paper. My only comment is that it is mistitled and that will throw a lot of people off. The authors need to take GINI out of the title. They start out trying to estimate the income GINI coefficient from nighttime satellite data and population, but find that there is no correlation and that what they are really estimating is something better correlated with the Human Development Index (although there are significant outliers). These days when someone says "GINI coefficient" they mean income distribution. The "Lumen GINI", although of the same mathematical form as the income GINI, is not picking up income distribution. Note the position of the USA, which has a lousy income GINI but a great lumen GINI.

So, my recommendation is to re-title the paper something like: "Estimates of the dis-
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tribution of nocturnal lights among human populations from satellite observations: an index of human development". The discussion should adjust to make the point that the distribution of nocturnal light does not replicate the distribution of income, but similar kinds of indices can be used for both. I would also rename "lumen GINI" to something more distinct from the income GINI. Maybe "NLDI" (Nocturnal Light Distribution Index) or some such.

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