

Nussbaumer et al (2012) apply the method defined for poverty by Alkire & Foster (2011) and Chakravarty and D'Ambrosio (2006) to energy poverty. They call the Multidimensional Energy Poverty Index proposed as MEPI. Then, they present an empirical application based on MEPI. This paper shows an application to Mexico following the Nussbaumer method to measures energy poverty. Therefore, since the paper is only an empirical application, it should be done originally and it should provide something new to the literature on energy poverty. My comments about the paper are the following:

1. I do not understand some aspects of the paper. Authors apply MEPI for 5 variables and then, they add another variable, the *thermal comfort*, and they compute MEPI again for 6 variables. Authors speak about computing MEPI considering temperature and no temperature but they do not say how it is done or added. It is no clear if it is added in the *thermal comfort* variable or not.
2. Authors compute MEPI, H and A for four different elections of the weights, N, NTC, C and TC. However, they only show 3, one in table 3 and two in table 4. And it is not very clear the variables used in each method and their corresponding weights. In addition, authors have used the Nussbaumer's weights for the first election; however, they should justify the election of the other weights.
3. I suppose that the cut-offs for all the applications are the same, $k=0.3$. However, if we focus on table 3, weights (0.2, 0.2, 0.2, 0.13, 0.13, 0.13) for variables 1, 2, 3, 4, 5 and 6, and table 4, weights (0.13, 0.13, 0.24, 0.21, 0.07, 0.08, 0.14) for variables 1, 2, 3, 4, 5, 6 and 7, the energy poor households will be those deprived in at least the variables:

weights (0.2, 0.2, 0.2, 0.13, 0.13, 0.13)	weights (0.13, 0.13, 0.24, 0.21, 0.07, 0.08, 0.14)
var1+var2	
var1+var3	var1+var3
var2+var3	var2+var3
var1+var4	var1+var4
var1+var5	
var1+var6	
var2+var4	var2+var4
var2+var5	
var2+var6	
var3+var4	var3+var4
var3+var5	var3+var5
var3+var6	var3+var6
var4+var5+var6	var4+var5+var6
	var3+var1
	var3+var2
	var1+var2+var3
	var1+var2+var4
	var1+var2+var5
	var1+var2+var6
	
	All the combinations with var7

Hence, for the first weights a household is poor if it is deprived in variables 1 and 2 and for the second weights the household would not be poor. Authors mention that they want to compare the differences when adding a new variable. However, they change the weights of the variables maintaining the cut-off the same, and some households considered energy poor in the first scenario will not be poor with the addition of the new variable. Authors could choose infinity weights and they would found a lot of different results. Hence, if they want to compare the difference adding a new variable, they should consider every household that is energy poor in the first scenario also poor in the second one. Consequently, it is clear that energy poverty would be always higher in the second scenario. Then, they could compare the effect of the addition of the new variable. All this could be done changing the cut-offs of the second scenario.

4. I want to mention that in addition to the weights, the poverty score is also sensitive to the multidimensional cut-offs. Several works have been done on poverty and energy poverty related with the robustness of the cut-offs, see Lasso de la Vega (2011) and Aristondo & Onaindia (2018). In this aspect, authors could think also on applying a method for the robustness of the cut-offs.

References

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