Reviewer's report

Title: Long term unemployment, income, poverty, and social public expenditure, and their relationship with self-perceived health in Spain (2007-2011)

Version: 1 Date: 22 Aug 2017

Reviewer: Christos Grigoroglou

Reviewer's report:

Major

P.17 line 342: I don't see how the exclusion of individuals who were unemployed at the beginning of the panel satisfies bi-directionality? (if that's the rationale behind this model) For some individuals it could also be that someone becomes unemployed at some point from February 2007 until January 2009. Thus even at the end of your panel he/she would fall into the very long term unemployed categories. In the same manner, someone who became unemployed later on would still fall in one of your other unemployment groups. I assume that you did this in order to account for the bi-directionality but I do not see how this addresses the problem. Dropping those individuals only takes into account the different time points when someone became unemployed in order to avoid merging recently unemployed with long term unemployed people and helps you become more specific about your unemployment groups.

P.17 line 347: The same applies here. If you include individuals who reported their health as being good or very good at the beginning of the panel someone could argue that those individuals may report poor/bad or very bad health later on in your panel. It is not so unlikely for people to change their value of self-perceived health so quickly and there is a possibility for this to occur. Therefore bi-directionality is again not accounted for, if that was the motivation behind this. Someone can still argue that having bad health is likely to lead to unemployment and vice versa.

P.17 line 350: I do not see how you accounted for bi-directionality by using sub samples for those who reported having good or very good health or by dropping those individuals who were employed at the beginning of the panel. See previous comments. Your statement regarding addressing bi-directionality is introduced arbitrarily without explanation. Bi-directionality persists and I am not sure how you could overcome this (perhaps a structural equation modelling would work as the editor pointed out). This is a major limitation as it was pointed out in the first review and needs to be addressed sufficiently.
Minor:

P.14 line 292: I think this sentence adds little to the manuscript.

P.15 Lines 297-300: I am unclear as to what this statement adds. It is already known that bad health has an effect on the variables that you use in your models. You possibly wanted to say something else here. Also it is not the dichotomisation per se that answers the research questions. I would suggest the removal of this statement. I know that in the previous review we asked you to justify the use of dichotomisation but the use of the ordered logit model to test the effects of the ordinal self-perceived health, I believe is sufficient in this case. The statement that self-perceived health has been used in the literature justifies dichotomisation and along with the ordered logit you cover both ends.

P.16 line 319: A reference is needed for this statement.

P.16 line 320: So? What is the use of the isolation of the chronic illness effect? You do not look into the effects of chronic illness on self-perceived health as a research question, this is already known. Furthermore,

P.16 line 332: I would suggest to move all the equations after the descriptions of the variables to ease readability.

P.24 line 452: I am not clear as to what this statement means.

p.27 line 520: How do you support this statement? At least one reference is needed.

p.29 line 560: What are these factors that increase the risk of death?

p.31 line: 614: I would move this paragraph to the discussion section.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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