Reviewer's report

Title: Labour force participation and the cost of lost productivity due to cancer in Australia

Version: 1 Date: 06 Jan 2018

Reviewer: Tomoyuki Takura

Reviewer's report:

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Comments to the Author:

This second version of the paper has been improved and it is now in good condition. Overall, the conclusions and findings of this study are supported by the exposition or limited data. The labour force participation rates of people with cancer has already published, according to several recent papers (references 4-7, and John R. Moran. Med Care Res Rev. 2015, etc.), but the aims of investigating the GDP impact (cost of labour force absence associated with cancer) and concentration index (inequality in the distribution of labour force absence amongst those with cancer) were interesting and novel. However, there are several issues that must be addressed before the paper can be accepted. It would be useful to perform a relevant analysis to put this work in context. Additionally, the manuscript would benefit from advice from an expert in labour economics or macroeconomics, and a modeling analysis.

Major points:

1. P6-L134: The financial impact on the gross domestic product (GDP)
The authors added comments to the methods. However, I think that considering the unemployment rate (labour absorption or operation buffer) is necessary for the following reasons:

- Was the unemployment rate extremely low in comparison to the median value in OECD countries?

- Did the government's financial position influence the calculation of GDP in this study?

- Was it proven that the labour supply and demand did not influence the GDP in Australia?
2. P5-L125: Labour force participation of people with cancer

I am sorry I should have explained this point more clearly. I think that it is necessary to consider the bias (or confounding) related to voluntary turnover and the mismatch in employment for the following reasons:

- Wasn't there gap between the skill or the wishes of the target population (cancer candidates) and the labour market (labour demand)?

- In Australia, is there a support system (service of administration or private sector: might influence the work ethic) related to life support and economic assistance for cancer patient (injury insurance, disability insurance, poverty remedy)?

- Was the dataset in present study able to prove the employee turnover after the onset of cancer similarly to a longitudinal study (various bias of an individual background is comparatively tiny)?

3. P4-L103: Dataset (correction weights)

The authors responded to the comments on the methods and limitations. However, I am concerned that the employee turnover differed according to the type and stage of cancer. Did correction weighting using the ICD10 code achieve a scientific correction for these issues, or reveal any further information that should be discussed as sampling bias? This issue is also thought to affect the results of the analysis of the concentration index.

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.

No

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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