Referee report

Leisure Time and Labor Productivity: A New Economic View Rooted from Sociological Perspective

Summary

Objective:
If and how leisure time influence labor productivity.

Significance:
Multiple perspective with systematical economic analysis.
Both theoretical and econometric analysis.
Significant influence factors of labor productivity are well controlled.
Conclusion can explain related phenomena well.
Optimal level of leisure time is offered.
Robustness check by sub-sample

Method:
21 OECD countries for the 1980-2013
Lucas (1988) production function
Special panel analysis
Panel-corrected standard error (PCSE)

Results:
Leisure time do have influence on labor productivity.
The effect of leisure time is nonlinearly.
A particular optimal level was calculated that leisure time has either positive or negative impact on labor productivity.

General comments

This paper uses data from 21 OECD countries for the 1980-2013 period, and finds that leisure time has a dual effect on labor productivity. They also find that leisure time is nonlinearly associated with labor productivity (inverted U-shaped). I think this is an interesting paper and should be published. Nevertheless, the following comments need to be accounted for in order to add to the quality of the paper:
1. This manuscript argues that the effect of leisure time on productivity has not been widely considered by previous economists. While, studies in either fields of economics or psychology have discussed related issue. More discussion can be added on why and how leisure time is significant in the parts of literature review and discussion.

2. Opinions that leisure time is not productive are based on references most published during years ago. Therefore, latest economic studies on this topic should be considered. For example, papers of experimental economics and behavioral economics.

3. Only one optimal level for all the sample countries was offered. One further question is that, will the optimal point different in different countries? How and why will it happen? The answer can make the paper more interesting and reasonable.

4. Equation (2) was put forward directly without any references. However, the equation is the very basis of the potential relationship between leisure time and productivity. Please give more explanation based on references.

**Minor comments**

1. Re-check the grammar.
2. “α”, which firstly used in Equation (2), was not explained
3. Acronym and proper noun in the tables and figures should be explained by note.
4. In regards to the model and results, the authors certainly do a good job describing the econometrics and modeling. The calculation of leisure time is taking the total number of hours in a year, and then subtracting working hours and educational hours. Based on this, they estimate that the optimal number of leisure hours would be 5813 hours, or about 15.93 hours per day of leisure. Essentially, their results are basically telling us that the best thing for workers is to have more than 15 hours leisure time a day. In this there is problem. the model essentially describes anything outside of work time as leisure time. Thus sleeping, driving to work, taking care of kids, going to the DMV, etc, are all leisure time activities. In this sense, the authors should give a detailed definition of leisure.