Reviewer's report

Title: Regional variations in and correlates of disability-free life expectancy among older adults in China

Version: 1 Date: 1 March 2010

Reviewer: Flavia C Andrade

Reviewer's report:

Major compulsory revisions

# Editorial changes: needed throughout the text. It would be advisable to have a professional editor assisting the authors.

o In particular, the authors should use TLE instead of ‘total life expectancy’ throughout the text.

# Regression analysis:

o The authors should provide a rationale for the inclusion of some of the variables in the analyses (e.g. birth rate, traffic accidents)

o The model used for males and females should be the same and based on a theoretical perspective, rather than by using a stepwise approach.

# Discussion:

o Include more recent work on DFLE and DLE based on data from developing and emerging economies.

o Address how does the mortality data used in this article differ from UN Population division estimates for China.

o Address the limitations of the Sullivan method and its assumptions that may be affecting the findings. For instance, the citation to the work of Laditka & Hayward, 2003 is appropriate.

Minor essential revisions

Page 2: In the results section, give range of DFLE among regions. In the conclusion section, rewrite the last sentence.

Page 3, first paragraph: Rewrite first 2 sentences. In the second sentence, growth refers to economic or in life expectancy?

Page 3, second paragraph: It can be shortened; this is a well-known in the literature.

Page 4, first paragraph: 2 last sentences are out of place.

Page 5, first paragraph: Sentence “Regional variations…” is out of place.

Page 3, second paragraph: It should be 1.16 instead of 1.31 according to you 2009 paper [reference 15]. Last sentence needs to be rewritten.
Page 6, first paragraph: clarify the role of medical assessment for intellectual and hearing disabilities.

Page 7, first paragraph: besides the measures that need a rationale for their inclusion (see major revisions above), the variable prevalence of disability should not be included in the list of variables – since it is part of DFLE calculation. Variables should not be in both ends (response and explanatory sides).

Page 7, second paragraph: Prevalence rates are not in percentage, need to fix the numbers. Also, prevalence rates at administrative divisions should be presented here (at least to give a sense of range).

Page 7, third paragraph: ‘especially among women’ should be deleted or clarified.

Page 8, second paragraph: The results presented in this paragraph could be limited and having the values estimated for each administrative division presented in Table 1.

Page 9, first paragraph: Table 2 should focus only on the variables that are selected through an analysis of the relevant variables that are theory driven instead of data driven.

Page 10, second paragraph: Statement regarding the increase in disability in most administrative divisions in China should be informed by Liu et al (2009) paper in the Journal of Aging and Health. In particular, the previous paper show that only moderate disability has increased in China during these two periods.

Page 11, second paragraph: there were no variables that truly capture ‘speed of population aging’ included in the regressions, so statement is not valid. Dependency ratio does not capture ‘speed’ or ‘changes’. The sentence ‘The factors explaining variation in DFLE vary little between men and women’ is unclear and needs further clarification. The sentences that follow somewhat contradict this statement.

Table 1: Should include data all administrative divisions. In addition, prevalence rates should also be presented for all administrative divisions.

Table 2: should focus on a set of variables that are relevant for the research question and based on theoretical perspective.

Figure 1: needs better subtitles and intervals and colors used should be the same for males and females to facilitate comparison of findings.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interests.