

Review: THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND HEALTH IN CHINA

General assessment:

In my view, the idea of this paper is very interesting and the motivation of this work is clearly explained and the outline of whole paper is stated in the introduction section to make readers understand the process of analysis. This paper might be considered to publish. However, some of the contents are considered for adjustment and it still needs further elucidation.

Major comments:

- On page 6 and 7, the paper shows values of α from Cronbach's α method to check reliability of SC variables but authors just explain that the values obtained from the test are consistent with previous research on social capital so all four SC variables are standardized. They also give a reason "there are no formal standards for acceptable values of α ". Mention the exact values without providing "cutpoints" information makes readers unclear about it; authors raise the point but leave the ending of the paragraph unclear.
- After checking for heteroscedasticity, the existing of the problem is confirmed so authors decide to use Heteroscedastic Probit Models. However there is a caution of using it; the heteroskedastic probit does not allow researcher to distinguish between non-constant variance and a misspecified mean function. And misspecified mean function leads researcher to sum up that the variance is non-constant. If we made conclusions about the non-constant variance from the statistical significance of coefficients in the model, we would be in a wrong way.
- Authors explain too much detail in endogeneity topic (7 pages). Additionally, they only emphasis endogeneity from causality but in fact it is

not from causality only. Other causes of the problem are Omitted variable and Measurement error which should be considered as well.

- Instrument variables are used to solve “unmeasurable confounders” problem, which is generally found in Administrative data. However, the factors that qualify as “instrument” are difficult to find and they are often skeptical. And it produces less precision outcomes (broader Confidence Interval band), which is not suitable for small sample. I understood that authors look for IVs that are correlated with the SC variables and uncorrelated with health outcomes. But some IVs that they introduced are not likely to be correlated.
- For example, the authors attempt to find out the possible instrumental variables in order to correct endogeneity from the model. On page 17, they found *Phone_CountyMean* (average number of phones per household in the respondent’s county) to be used as one of instrumental variables for SC variables. They explained that the availability of telephones where a respondent lives reduces interacting cost with others and it allows more frequent contact which is a better opportunity to develop “trust relationship”. This reason might be true but in the real situation, respondent cannot accept 2 calls at the same time. In this case, having more telephones in the house doesn’t make more chance to contact others and develop trust relationships. In addition, number of phone that equals to number of people in the place where respondents live sounds plausible to develop trust in this sense.
- Authors have explained about diagnostic tests to confirm Instrumental Variables’ validity. But the tests for weak instruments and underidentification test, they do not explain about IID (Independent and Identically Distributed) assumption test to confirm whether the IID assumption fails. They just assume that the error terms are IID. This is being concerned because there are no concrete results in the literature to test for weak IVs when the IID assumption fails. So researchers just use asymptotic justification in a test of underidentification. In other words, the Kleibergen-Paap test can be used to test for underidentification without

the IID assumption but the justification is different from that underlying the Stock-Yogo critical values. So it is somehow hand-wavy.

Minor comments:

- Some methodology information and empirical findings in page 2 shouldn't be put in the introduction section.
- I couldn't find Table 1 (the pairwise result) mentioned in page 12.
- Specific abbreviations should be identified at the first time that they have been introduced in the paper, e.g. IID. It is useful for readers who are not specializing in statistics or econometrics. However, it is not necessary to explain every single abbreviation, just for the confusing ones.
- There are too many tables and some of them are not sequenced by the content. Also, there are unnecessary tables. If authors could sum up with less tables would be easy for readers to look at and understand.
- From the content of the paper, it seems like the paper emphasizes more on endogeneity with too much details for this issue rather than the relationship between the interested SC and health, which is a main research question. Also, there is a lot of unnecessary content. It would be enough if authors just show 2-3 best relevant calculations instead of showing all.
- Gender issue, which was introduced in the latter section, is very interesting but it would be better if authors exclude it from this paper and do it in another paper with more details and explanations.