The effects of access to health insurance for informally employed individuals in Peru

by

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Discussion

by

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Summary of the Paper

- Authors examine the effect of a public health insurance program (SIS) on various health-related outcomes
- They use a fuzzy RD design
- They find
  - large positive effects on measures of health care utilization,
  - Smaller positive effects on measures of preventive care
  - large positive effects on spending

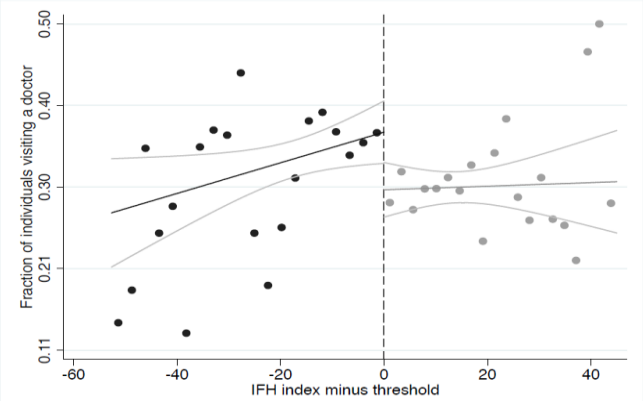
Plausibility of the research design

- Individuals cannot complete control their position with respect to the eligibility threshold → local randomized control trial
- Seems a plausible assumption with respect to the IFH index, as it depends on numerous variables and the exact formula is not likely to be known with certainty (although it seems to be available in the public domain)

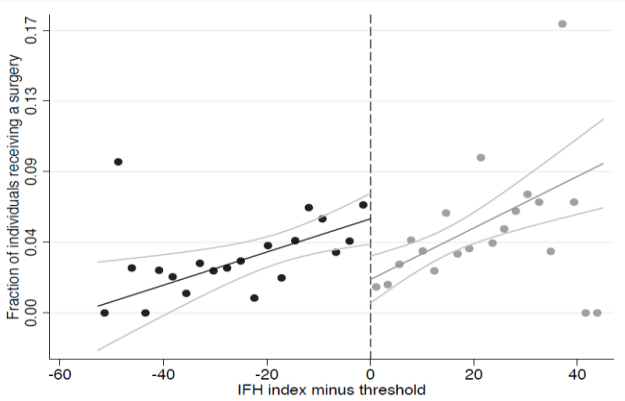
Graphical Evidence

Figure 3: Health Care Utilization

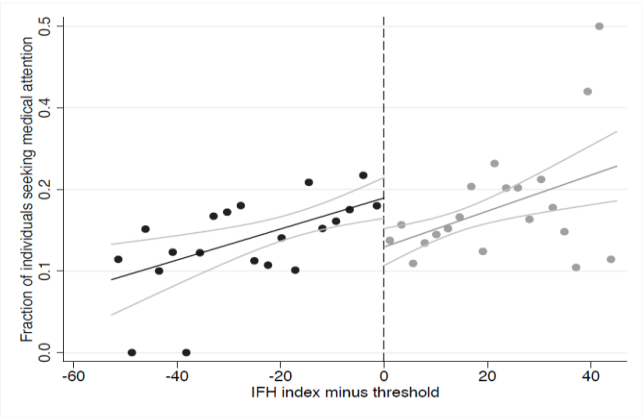
(a) Doctor visits



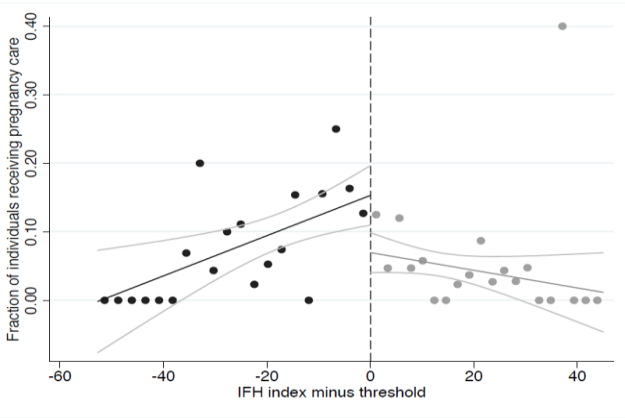
(b) Surgery



(c) Medical attention



(d) Pregnancy care



Multiple running variables

- Eligibility depends on
  - The IFH index
  - Water consumption
  - Electricity consumption
  - Income ("In case one of the household members works in the formal sector, then eligibility is related to income. Moreover, if the monthly wage is greater than 1,500 Soles, or 544.5 U.S. dollars, then the household is not eligible for a social program, unless either water or electricity service expenditures are below their thresholds")

- Authors examine only the IFH index

Multiple running variables (cont.)

- Fuzzy RD design is valid if (Hahn et al., 2001):
  - Y^0 is continuous around the IFH threshold. This could hold the other three running variables are continuous around the threshold. Graphical evidence suggests that this problematic for both electricity and water consumption. Maybe the authors can show some tables with results.
  - Treatment is randomly assigned around the IFH threshold. Might not be true if the distribution of the other two running variables are not continuous around the threshold
  - Monotonicity of the treatment assignment rule, which is likely to hold irrespective of the three other running variables

Multiple running variables (cont.)

- Look only at observations with missing water and electricity consumption information?

- Choi and Lee (2014) examine the case of multiple running variables determining a single treatment.
  - Only for sharp RD design

Combination of social insurance programs

- Authors are interested in SIS
- However, in their sample there is also EsSalud (ES)
- ES covers those in the formal sector, and those are excluded from the estimation sample
- However, formality is not sharply defined, so in the sample there are respondents who reported being covered by ES

Combination of social insurance programs (cont.)

- Could be that they are really covered by SIS and not ES
- Combination of ES and SIS problematic for the definition of the treatment
- Could the small jump of the treatment receipt at the threshold be due to ES?

Measurement error

- Authors do not observe the IFH index, but instead they construct it
- Measurement error: is it an issue?
- Cappeleri et al. (1991a, 1991b) show that it is not, but for a sharp RD design
- In a regular IV context, maybe what we have is an instrument measured with error. Does this transfer to a fuzzy RD setting?

Fuzzy RD and exclusion restriction

- For the fuzzy RD design to be valid it has to be the case that around the threshold

$$Y_0, Y_1, I(s) \perp S$$

where $I(s)$ index of receipt of the treatment.

- Hence *S* can affect potential outcomes only through $I(s) \rightarrow$ exclusion restriction
- Given that IFH depends on so many variables (incl. education, material goods, family size), maybe further elaboration would be useful

Specification tests

- Would be nice to see an RD estimation for income
  - If income jumps up at the threshold, medical expenses could be higher, hence the finding of higher expenses below the threshold becomes stronger
  - However, if higher income implies increased insurance coverage, then the opposite is true
- An RD of insurance coverage would be useful

Specification tests (cont.)

- Authors conduct local linear and quadratic polynomial analysis
  - Imbens and Lemieux (2008) report that linear IV and local linear polynomial analysis are equivalent. However, this is not true in the paper
  - Quadratic polynomial results are much weaker. Is there a reason?
  - Use the Akaike criterion to select the order of the polynomials

Specification tests (cont.)

- The distribution of the running variable (IFH) jumps up at the threshold
- Jump reinforces the authors' results, as it indicates the opposite of manipulation
- Could it be due to the confounding of SIS with ES?

THANK YOU!