Explaining the differences in premium contribution in government support CBHI in Rwanda

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Outline

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1.0 Background

- Health is a human right = 1978 Alma-Ata declaration of “health for all”.
- ensure that everyone access health in an equal and fair manner
- In achieving this, WHO proposed (UHC) to ensure health for all.
- UHC=== about people having access to the health care they need without suffering financial hardship.
  - prevent people from falling into poverty due to illness
  - give people the opportunity to lead healthier, more productive lives, ***Despite this….***
- **GBD**
- That withstanding, as of 2005, LMICs- supported 84% of the global population
- 90% of the global burden of disease occurred. only 12% of global resources spent on health (Gottret and Schieber ,2006).
- As of 2012,
  - Infectious diseases, childhood illnesses, and maternal causes of death accounted for 70% of the burden of disease.
  - By comparison, these conditions account for only one-third of the burden in south Asia and Oceania, and less than 20% in all other regions of the world
- **Why this GDB:** Poor access to Health due to costs (Moreno-Sera & Smith, 2012; Moreno-Serra, Millett, & Smith, 2011)

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1.0 Background…….

- **Financing issues**

  - Within LMICs there is a general reliance on publicly funded health systems,

  - although public expenditures on health is low. (You & Kobayashi, 2011).

  - Due to poor public investments in the health care delivery system,
    - OOP, CHE &HE when accessing care (Moreno-Sera & Smith, 2012; Moreno-Serra, Millett, & Smith, 2011).

  - OOP increase vulnerability for the poor leading to catastrophic spending especially in Africa, thereby acting as a barrier to health care access(Brinda, Andrés, & Enemark, 2014; Saksena, Antunes, Xu, Musango, & Carrin, 2010; WHO, 2010; Xu et al., 2007; Xu et al., 2003).

1.0 Background……

❖In View of this, UHC requires that the health system provides all citizens with adequate health care at an affordable cost

❖ health care be financed according to ability-to-pay and that services are accessible according to need.

❖**Problem to Nations:** Raise revenue vs equitable financing vs Health care need

❖Various forms of social protection suggested: SHI, User Fees, MHI/CBHI).
(Ekman, 2004; Giedion et al., 2013; Jakab & Krishnan, 2001; Jütting, 2004; Mebratie, Sparrow, Alemu, & Bedi, 2013; Soors, Devadasan, Durairaj, & Criel, 2010; Spaan et al., 2012; Tabor, 2005; Wang & Pielemeier, 2012 Habib, Perveen, & Khuwaja, 2016; Kim, 2013; WHO, 2010)

❖User fees?. Started with IMF and WB late 80,s and are , regressive, inefficient and inequitable(Yates 2009, Gilson 1997, Legarde 2010) = NO : WHO

Background……

- SHI Or CBHI ?:
  - **SHI** membership is mandatory, and that premiums set are in proportion to income. Payment into the system is generally shared by employers, workers, and the government
  - Requires good revenue institutional capacity, and difficult for developing countries

  - **CBHI** is a not-for-profit mechanism based upon solidarity among a relatively small group of people.
    - CBHI schemes vary a great deal in terms of who they cover, how, for what, and at what cost.
    - The majority operate in rural areas, and their members are relatively poor
    - Is one being recommended for LIMCS as move towards SHI

- *The big problem then*: Are these effective? Does anyone have the muscle to pay? What about differences in ability to pay? Willingness, acceptability etc?

2.0. PhD Research in general

- The title;
  - ***Essays on health insurance for universal health coverage in selected low and middle income countries***

- 3 distinct essays broadly covering themes on insurance for UHC, specifically CBHI
  - Essay1: Analysing the relationship between CBHI and adult, as well as child health outcomes between the periods 2000 to 2008 in Rwanda
    - Aim is to measure effectiveness of CBHI
    - ? : Looking through counter factual regression RIF
    - Data used is DHS (secondary)

2.0 PhD Research……

- Essay 2: Todays talk
- Essay 3: In this essay we do a counterfactual decomposition analysis of factors associated with WTP for rural versus urban, differences in Social capital.
  - Malawi Health system is mainly free at point of use
  - **Puzzle?**
    - households pay between 9% and 11% of the total health expenditures through out of pocket (OOP) per year, through hidden costs of health care access
  - Solution: CBHI supported by Gvt Vs Self?
    - CBHI mainly dwells on Social capital which has less been researched
  - To use Primary data to be collected in Malawi 2017

3.0 Why need to study This? Why it matters?

- UHC is a target of SDG3 of post 2015 development agenda
  - "achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all."
  - Health insurance is part of financial risk protection
    - We need to understand how effective they are?
    - How equitable they are?
    - The demand and acceptability?

3. Today's Work : Essay 2

- **Aim:** ***Explaining differences in premium contribution in government supported CBHI***

- Q?-Specifically,

1. Are the contributions to insurance progressive or regressive?
   - Progressive - rising income is matched with a rising fraction of income being paid to the health-care system.
   - progressive = poor contribute a lower proportion towards health care than their share of society's income

2. By how much does Social economic status contribute to the insurance premium gap between
   - The rural poor and the urban poor?
   - Female headed households vs male
   - Access to village finance and Not (VSL)

3.1 The Issue

- In order to achieve UHC Rwanda started supporting CBHIs
  - To make health accessible to all at affordable cost
- By 2008, health Insurance became mandatory in Rwanda
  - The enrolment is at household level and contributions is at individual level
- Poverty is estimated to be
  - 44.9% nationally, with 22.1% poor in urban areas and 48.7% poor in rural areas
  - Extreme poverty fell from 40% in 2000/01; to 36% in 2005/06;and to 24% in 2010/11. The Gini coefficient
  - also falls from 0.52 in 2005/06 to 0.49 in 2010/11, lower than its level in 2000/01
- However government support on 16% of the bottom poor
  - What about the rest? What of those on the margins of poverty who fall into poverty next period?
  - Means other poor still pay

3.1 The issue……

- **Premiums**
  - Before 2007,the annual premium for a household with up to seven members varied across regions, ranging typically from 2,500 to 11,500 RWF (4.72 to 20.83 current USD).
  - Since 2007, the annual premium has been 1,000 RWF (1.81 current USD) per member (Lu et al, 2012)
  - By 2012 revised again;

Ubudehe Categories	CBHI Categories	Amount per capita (rwf)
1&2	One	2,000 (sponsored by the Government and partners)
3&4	Two	3,000
5&6	Three	7,000

Source: Makaka 2012

- Classification is based on assets (Makaka 2012) and identification of poor at local level
- Do these constant revision to premium sings a song we can suspect??
- Given that enrolment is at household level, not sure whether the contributions are progressive or not? What about factors explaining premium contribution?

Why the this study component ?

- To my knowledge there exists no published study that has accounted for the contribution of the factors explaining insurance gap in SES contribution by using decomposition technique

- To Cleary come up with premiums its needed to understand how much factor contribute (explain)

- An advantage of the decomposition analysis over the regression analyses is that it quantifies the contribution of factors that explain the average gap in an outcome between two groups

- The present paper goes one step beyond to explain the factors contributing to the average distance between the different SES

4.0. Methods

- Uses secondary data from WB Rwanda LSMS(EICV3)
- Regression based decomposition methods
  1. Blinder-Oaxca, Methords
  2. RIF ---- extension beyond the mean

  To explain gaps

  (Firpo, Fortin, & Lemieux, 2007; Firpo, Fortin, & Lemieux, 2009; Fortin, Lemieux, & Firpo, 2011).
  3. Kakwani Index to explain progressivity Progressivity?

What's the essence of decomposition?

- Having *measured* inequalities, natural next step is to seek to *account* for them (Wagstaff and O'donell 2008)

- The decomposition methods reveal how far inequalities in insurance contribution can be explained by inequalities in, SES.

  i.e *Want to know extent to which inequalities in Y are due to Xi*

Oaxaca-Blinder

1. $$y_i = \begin{cases} \beta^{poor} x_i + \varepsilon_i^{poor} & if\ poor \\ \beta^{rich} x_i + \varepsilon_i^{rich} & if\ nonpoor \end{cases}$$

- Suppose a outcome variable, *y*, which is interest. We have two groups, which we shall call the **poor** and the **nonpoor**.

- ***y*** is explained by a vector of determinants, *x*, according to the regression model above

Gap in outcomes….

2 $$y^{non-poor} - y^{poor} = \beta^{non-poor} x^{non-poor} - \beta^{poor} x^{poor}$$

- where $\mathbb{E}[e|rich] = \mathbb{E}[e|poor] = 0$

Oaxaca-Blinder therefore

3 $$y^{non-poor} - y^{poor} = \Delta x \beta^{poor} + \Delta \beta x^{non-poor}$$

General decomposition

$$y^{non-poor} - y^{poor} = \Delta x \beta^{poor} + \Delta \beta x^{poor} + \Delta x \Delta \beta$$
$$= E + C + CE$$

E – gap in 'endowments' ("explained")
C – gap in 'coefficients' ("unexplained")
CE – interaction of differences in endowments & coefficients

Oaxaca decomposition #1:

$$y^{non-poor} - y^{poor} = \Delta x \beta^{poor} + \Delta \beta x^{non-poor} = E + \left(CE + C\right)$$

Oaxaca decomposition #2:

$$y^{non-poor} - y^{poor} = \Delta x \beta^{non-poor} + \Delta \beta x^{poor} = \left(E + CE\right) + C$$

1. The interaction effect is difficult to interpret.
2. The first decomposition places the interaction in the unexplained part and the second places it in the explained part.

Source "Analyzing Health Equity Using Household Survey Data" Owen O'Donnell, Eddy van Doorslaer, Adam Wagstaff and Magnus Lindelow, The World Bank, Washington DC, 2008, www.worldbank.org/analyzinghealthequity

Status Quo on Research

- Working on data cleaning

Thank You

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