Health Inequality

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Framing : General

- I would divide the chapter in two parts.

    - The first part would be focusing on factors affecting health or access to health enhancing services. In that I would include : Access to water and sanitation and maternal health.

    - The second part would be focusing on children health outcomes that are in part affected by the factors mentioned in the first part.

Framing : General

- For child health I would start with results on IMR (kind of extensive margin) then will follow with the analysis on z-scores and obesity rates (that is conditional on survival how good is health).

- As for comparisons of the different outcomes discussed in the chapter with the rest the world I think it may be more useful to :

  - Condition on whether the countries are middle income countries or least developed countries.

  - Compare North Africa and West Asia conditional on these two categories.

Framing : Literature

- It is important also to motivate from an inequality perspective why these inequalities are of crucial importance. Perhaps refer to James Tobins argument of "specific egalitarianism" (Tobin, 1970).

  - Certain basic goods such as health and the basic necessities of life should be distributed less unequally. We are more offended by inequalities in nutrition and health than inequalities in capacity of buying clothes...

- Barker's Hypothesis (Barker, 1989 ; Almond 2005 ; Almond and Currie, 2011).

Specific Comments : Sample Categorization

- Have you tried relaxing some of the very restrictive classification conditions (most deprived vs. most privileged) to avoid the curse of dimensionality.

- You need to have met the 4 criteria mentioned to be classified. What if the family is small (widowed woman with child and her mother) but poor in all other dimension ?

Specific Comments

- I am not really sure whether the classification of the two subgroups should be reconsidered :

    - Do you think considering nuclear vs extended family a better ? Why did you choose the household size greater than 7 ?

    - Education, would it be better to use the highest level of education in the household ?

Specific Comments : Concentration Index

- The mirror property is not necessarily desirable property so I would not really worry about it but I agree, it is important to acknowledge that it was debated in the literature.

- For the non-ratio scale variable, I agree with what you. However Makdissi and Yazbeck (2017) proposed a method that allows for robust ordering of health distributions (with respect to the the AI and CI) using categorical variables.

- In the graph where you compare the annual average rate (stunting), you may want to look at the achievement index that is a more natural combination with the concentration index.

Specific Comments : Concentration Index

- A rank dependent health achievement or socioeconomic health inequality index can always be rewritten in a general form :

$$I = \sum_{i=1}^{N} \omega(r_i) h_i.$$

- When $\omega(r_i) = \frac{1}{N} - \frac{(N-r_i+1)^{\nu} - (N-r_i)^{\nu}}{N^{\nu}}$, $\nu > 1$, the index is the generalized extended health concentration index, $GC(\nu)$.

- In this case the Concentration Index can be obtained by dividing the generalized extended health concentration index by average health : $C(\nu) = \frac{GC\nu}{\mu_h}$.

- When $\omega(r_i) = \frac{(N-r_i+1)^{\nu} - (N-r_i)^{\nu}}{N^{\nu}}$, $\nu \geq 1$, the index is the health achievement index, $A(\nu)$.

Specific Comments : Concentration Index

TABLE: Link between the different indices

	$A(\nu)$	$GC(\nu)$	$C(\nu)$
$A(\nu)$		$\mu - GC(\nu)$	$\mu(1 - C(\nu))$
$GC(\nu)$	$\mu - A(\nu)$		$\mu C(\nu)$
$C(\nu)$	$\frac{\mu - A(\nu)}{\mu}$	$\frac{GC(\nu)}{\mu}$	

Specific Comments : Concentration Index

- You have to rescale the CI because you have bounded variables resulting from dichotomizing health variables... But why is it important to dichotomize when you are computing inequality ?

  - Zierbath (2010) shows that dichotomizing using a consistent threshold overestimates inequalities.

  - You can use the z-scores instead of dichotomizing in the CI : you will loose less information on the intensity of the stunting problem.

  - You can use max $[0, BMI-25]$ as a ratio scale measure of overweightness and $max[0, -2-z]$ as a ration scale for stunting to compute the CI

  - Test for dominance in your comparisons as in Khaled, Makdissi and