



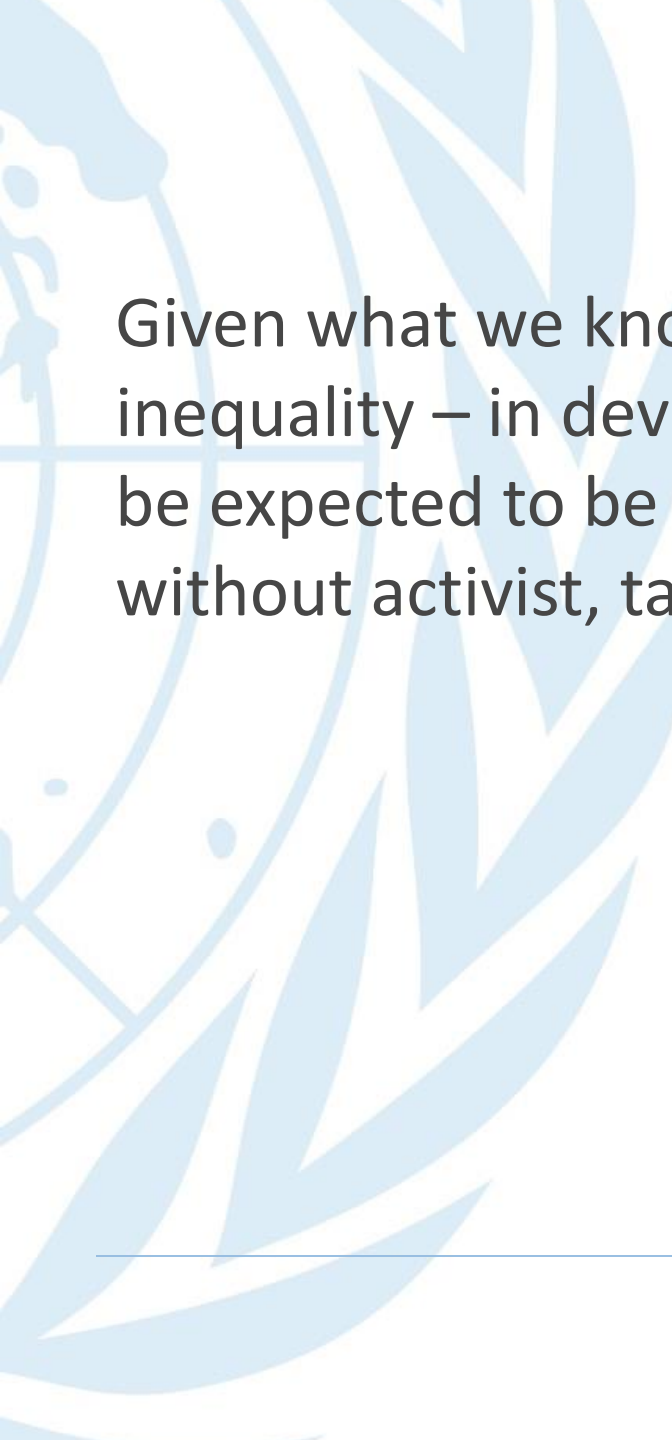
Horizontal Inequality and Social Mobility

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Given what we know about social mobility, horizontal inequality – in developing countries in particular - can be expected to be persistent, possibly indefinitely, without activist, targeted policy intervention.

Why does this matter?

Normative: Differences in well-being and status linked systematically to 'ethnic' attributes such as skin color, maternal language, and indigenous status are at odds with basic principles of equality, justice, and fairness.

Instrumental: Negative implications for peace and prosperity (Alesina, Michalopoulos & Papaioannou 2016; Baldwin & Huber 2010, Brown & Langer 2010; Stewart 2008; UN & World Bank 2018).

Also: gaps in the research literature on horizontal inequality as an outcome (Canelas & Gisselquist 2018)

I. Core concepts

Intergenerational (income) mobility

- Relative mobility or ‘positional movement’
 - 1 - intergenerational elasticity of income (IGE)
 - Measurement using a rank-rank specification (Chetty et al 2014, 2018)
- Absolute mobility

Horizontal inequality (HI) – ‘in economic, social, or political dimensions or cultural status between culturally defined groups’ (Stewart 2008).

- Contrast: vertical inequality (VI) between individuals or households
 - **GGini** compares the mean in the outcome variable of every group with that of every other group
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Ethnic groups are socially constructed with membership based on attributes generally inherited at birth, including skin colour, maternal language, tribe, caste, religion, and sometimes region ([Chandra 2004](#); [Horowitz 1985](#))

Proto-typical ethnic group characteristics include ([Fearon 2003](#)):

- members derive normative and psychological value from membership
- Some shared cultural features, such as language, religion, and customs
- A homeland or memory of one
- A sense of shared collective history

Examples:

- Hindus/Muslims ([Varshney, 2007](#)) & scheduled castes in India ([Chandra, 2004](#))
 - African/White/'Coloured'/Indian in South Africa ([see Ferree, 2010](#))
 - Bemba/Nyanja/Tonga/Lozi speakers in Zambia ([Posner, 1998](#))
 - Indigenous/non-indigenous populations in Latin America ([Htun, 2004](#); [Van Cott, 2007](#))
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II. A conceptual framework

- Consider a standard approach to intergenerational income persistence with a regression-to-the-mean model (Becker & Tomes 1979):
 - $y_{i,t} = \alpha + \beta y_{i,t-1} + \varepsilon_{i,t}$
- Following Chetty et al. (2018), we adapt this so that an individual's income is modelled as an ethnic group specific linear function of their parent's income:

- $y_{i,t} = \alpha_r + \beta_r y_{i,t-1} + \varepsilon_{i,t}$

We assume they do not vary across generations.

- Under the linear specification, the mean rank of individuals of each ethnic group in generation t is thus:

- $\bar{y}_{r,t} = \alpha_r + \beta_r \bar{y}_{r,t-1}$

- Over the long-run, the mean rank of group r converges to:

- $\bar{y}_{r,t} = \bar{y}_{r,t-1} = \bar{y}_r^{SS} = \frac{\alpha_r}{1-\beta_r}$

- We can then consider HI using the GGini measure:

- $GGini = \frac{1}{2\bar{y}} \sum_r^R \sum_s^S p_r p_s \left| \bar{y}_r - \bar{y}_s \right|$

3 expectations

1a. If rates of absolute and relative mobility are the same across groups, a horizontally unequal society will eventually become horizontally equal.

- Over the long-run, given that $\bar{y}_r^{SS} = \frac{\alpha_r}{1-\beta_r}$, $GGini_{t+n}$ becomes:

- $$GGini_{t+n} = \frac{1}{2\bar{y}} \sum_r^R \sum_s^S p_r p_s \left| \frac{\alpha_r}{1-\beta_r} - \frac{\alpha_s}{1-\beta_s} \right|$$

- If $\alpha_r = \alpha_s$ and $\beta_r = \beta_s$ for all groups, we can see that $GGini_{t+n} = 0$, which is perfect horizontal equality.
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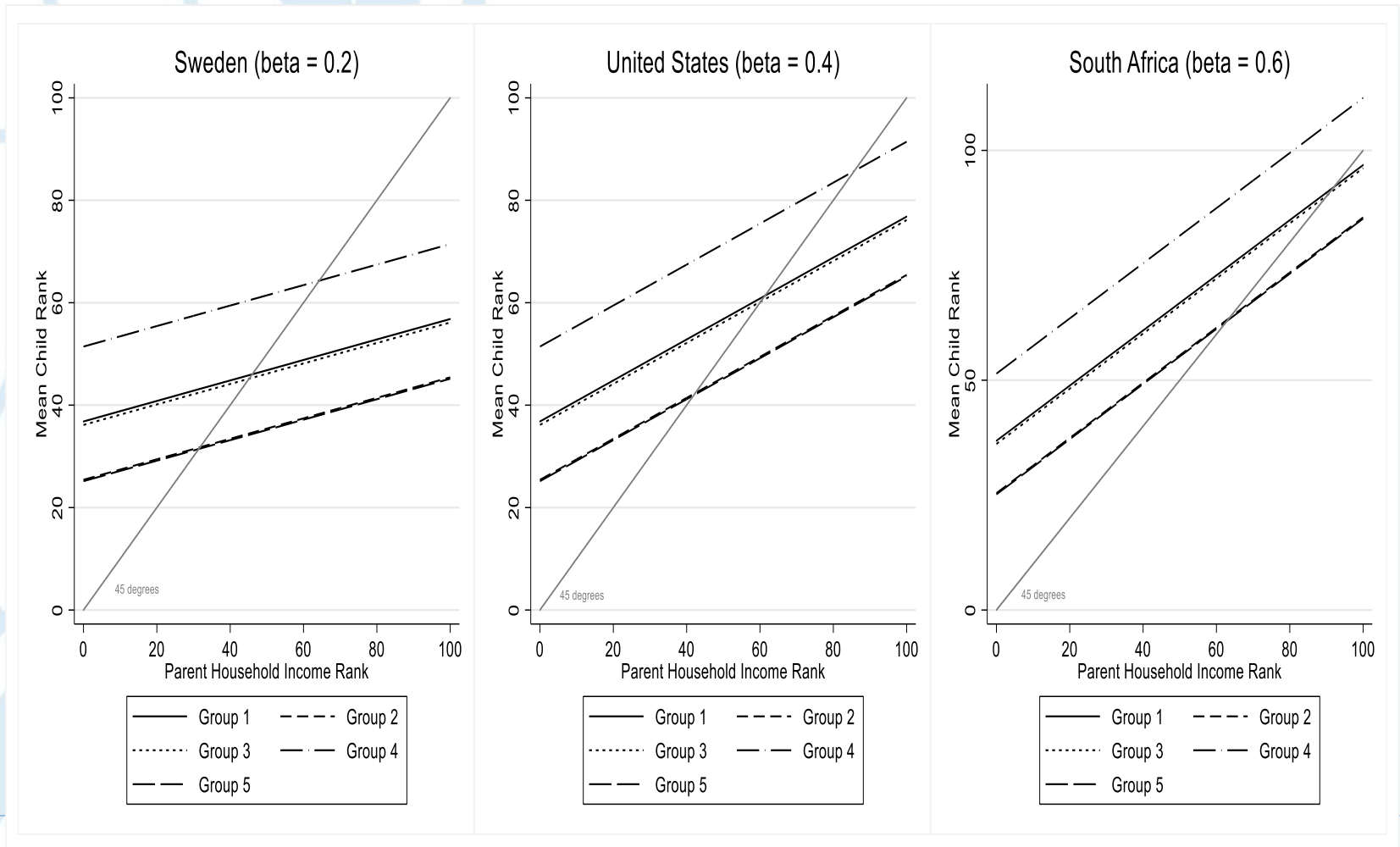
1b. Horizontal inequality can be persistent over multiple generations when initial HI is high and overall mobility is low.

Generation	Year starting in 1960	Advantaged group (50%)		Disadvantaged group (50%)		GGINI
		Income % above mean	Income	Income % above mean	Income	
First	1960	100.00%	2,000	-100.00%	0	1.0000
Second	1985	60.00%	1,600	-60.00%	400	0.6000
Third	2010	36.00%	1,360	-36.00%	640	0.3600
Fourth	2035	21.60%	1,216	-21.60%	784	0.2160
Fifth	2060	12.96%	1,130	-12.96%	870	0.1296
Sixth	2085	7.78%	1,078	-7.78%	922	0.0778
Seventh	2110	4.67%	1,047	-4.67%	953	0.0467



2. *HI will be persistent over multiple generations – possibly permanent – when mobility varies across ethnic groups and is lowest for disadvantaged groups.*

Scenario 1 – relative mobility is constant, absolute mobility varies across groups



Empirical work shows that such variation exists:

- India: Asher, Novosad & Rafkin 2018; Hnatkovska, Lahiri & Paul 2013
 - U.S.: Chetty et al. 2018
 - South Africa: Nimubona & Vencatachellum 2007, Piraino 2015
 - Brazil: Osorio 2008
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What we know about the determinants of mobility suggests such variation should be found elsewhere as well:

- Iversen, Krishna & Sen (2019)'s consideration of determinants of mobility in developing countries:
 - Human capital investment and parental endowments
 - Credit constraints
 - Neighborhood effects
 - Peer influence and role model effects
 - Several of their arguments with respect to low-income countries can be extended straightforwardly to low-income groups within low-income countries
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Group-based discrimination

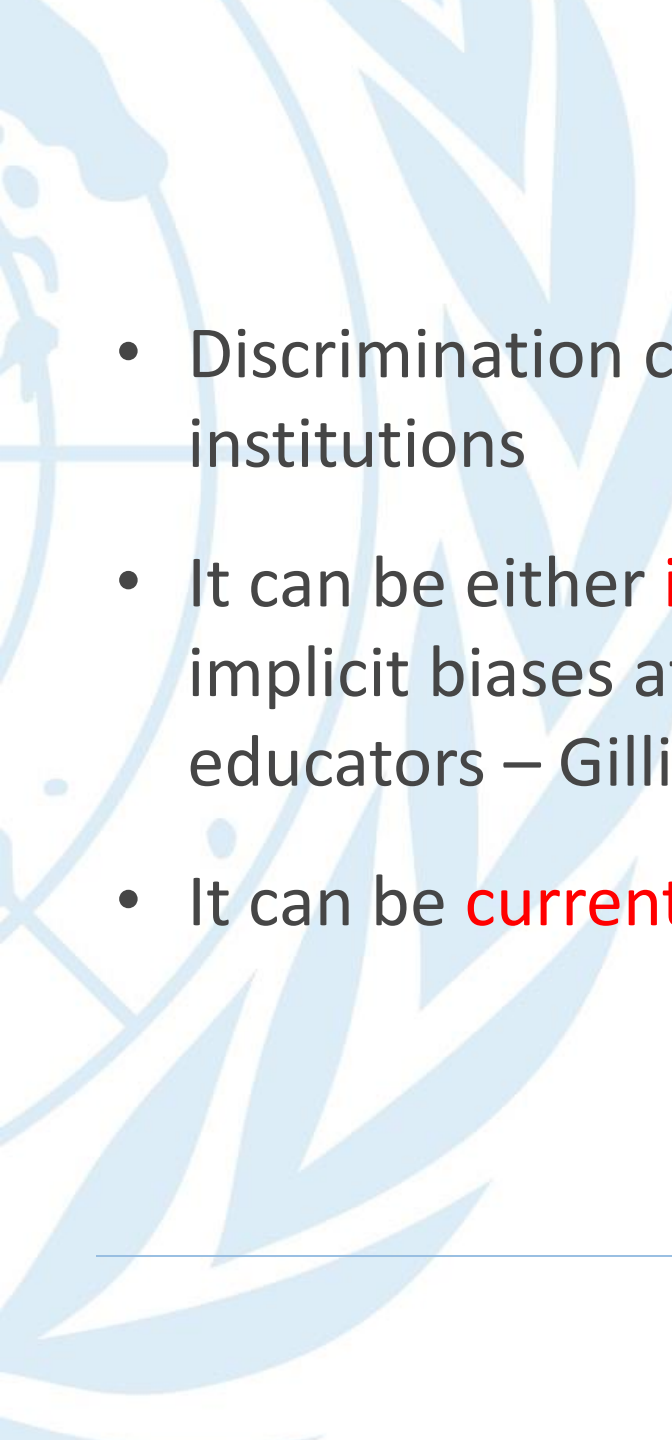
In the **labor market**: ethnic disparities and discrimination in callback rates, hiring, and in career advancement. U.S. ([Bertrand and Mullainathan 2004](#), [Pager, Bonikowski, and Western 2009](#)) and Peru ([Galarza and Yamada 2014](#)) but not India ([Banerjee, Bertrand, Datta, and Mullainathan 2009](#)).

In **education**: ethnic disparities in educational outcomes traced to the quality of schools in minority neighborhoods and how teachers respond to different children

In **credit markets**: disadvantaged groups are more likely to be credit constrained, to be turned down for loans, to receive less favorable loan terms

In **housing markets**: minority home-seekers receive less favorable treatment than white home-seekers

In the **distribution of public resources**: minority neighborhoods may receive lower public resources; government officials may be less responsive to members of disadvantaged groups

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- Discrimination can be linked with **formal or informal** institutions
 - It can be either **intentional or unintentional** (e.g. implicit biases affect the behavior of preschool educators – Gilliam et al. 2016)
 - It can be **current or historical**.
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Ethnic discrimination (and favoritism) may be more problematic in developing countries

State capacity and the rule of law tend to be weaker

- discrimination in personalized informal institutions/practice
- more limited possibilities for legal recourse
- capacity challenges in the implementation of the law

Ethnic divisions seem to be more apparent in developing countries

- Standard measures of ethnic fractionalization are higher (e.g. Alesina et al 2003)
 - Ethnic parties, ethnic conflict, and ethnic balancing are comparatively more important in work
 - Links between processes of modernization and the salience of ethnic networks (e.g. Lipset 1960, Bates 1974, Hechter 1974)
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Other ethnic factors

- Ethnic **geography**, residential patterns, and remoteness: e.g. via neighborhood effects
 - Ethnic **social networks**: e.g. via peer influence and role models
 - **Culture**: e.g. diverse preferences across groups regarding language of instruction in schools and the 'fit' of public services provided for cultural minorities
 - **Representation**: e.g. minorities have fewer role models 'like them' in high status occupations and positions of influence
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In summary

(1) Long-term persistence in horizontal inequality comes about when

- Initial levels of horizontal inequality are high;
- Overall social mobility is low; and
- Mobility varies across ethnic groups and disadvantaged groups lower rates than others.

(2) Variation in social mobility across ethnic groups is not uncommon and stems from a variety of factors.

(3) Persistent horizontal inequality is probably a larger problem in the Global South than the Global North.

Implications and next steps

For research:

- Extensions of the framework & empirical testing
- Consideration of different types of horizontal inequalities (e.g. recent migrants versus 'established' minorities)
- Levers of change and country experiences in dealing with reform

For policy:

- Universalist policies may not be enough; targeted policies may be needed
 - Timing and risks
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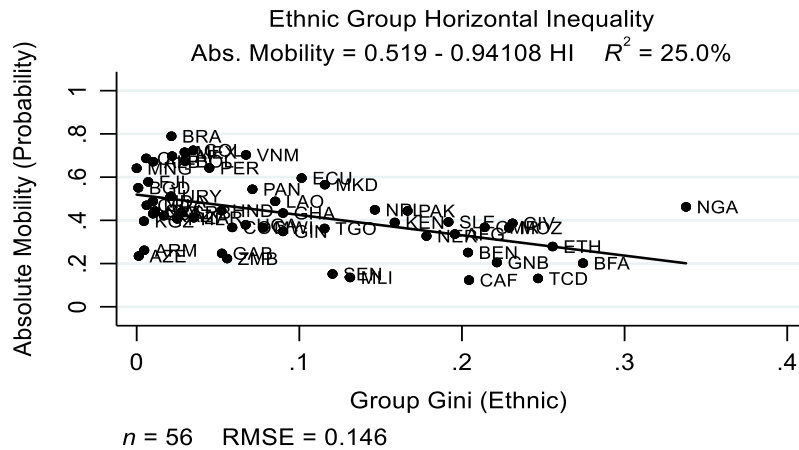
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The Great Gatsby Curve revisited

Using GINI in educational attainment (EIC 2015) & mobility data from GDIM 2018

Absolute mobility & HI



IGE (relative mobility) & HI

