

Share the Love: Parental Bias, Women Empowerment and Intergenerational Mobility

Yoseph Getachew
(with Théophile Azomahou and Eleni Yitbarek)

University of Pretoria

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I Love You ALL the SAME

- Do parents have a favorite child? Do parents love all their kids **equally**? Do you?
- Many parents claim they love their children to the same degree regardless of their sex, which is **often true**.
- However, it is also **evident** that there exists some form of *parental gender bias* and *sex preferences* in families.
 - In India: many report that boys fared better than girls. They receive more child care, are breast-fed longer and get more dietary supplements ([Barcellos, Carvalho and Lleras-Muney, 2014](#); [Aurino, 2016](#)).
 - In China: sex-selective abortion is not uncommon.
 - In many developing countries: the mortality rates are substantially higher for girls than for boys ([Chen, Huq and D'Souza, 1981](#); [Arnold, Choe and Roy, 1998](#); [Sen 1990](#))

Inequality of Opportunity at Home: Why Do We Care

- *Differential treatments* of sons and daughters in intra-household resource allocation, in the form of **disproportional parental time spending** and **investment in children education**.

- This in turn could lead to *differences in adulthood outcome* such as differences in **human capital development** and **intergenerational occupational mobility (hereafter IG mobility)** of men and women.

What are the Evidences

We have estimated IG mobility of men and women within three sectors using the Nigerian General Household Survey to find that:

- There exists a *strong and positive* **gender based IG persistence that favored boys than girls.**
 - **Inequality of Opportunity**
- **Women empowerment** *is positively related to IG mobility.* However, the effect is **much stronger for boys than for girls**
 - **Parental Gender Bias**

What are the Problems

- Why families are gender bias?
- How does this relate to human capital development and IG mobility of boys and girls? What are the mechanisms?
- Why and how intra-household bargaining power relate to individual IG mobility?

What Do We Do

- We provide **theories**, that are particularly helpful in understanding **parental gender bias** and **gender inequality in human capital development** and **IG mobility** in developing countries.
- We develop **a collective household decision model** that allows for a dynamic interaction between **parental gender bias**, **IG Mobility** and **intra-household bargaining power**.

- 1 Altruistic household models with **warm-glow utility** and human capital **investment threshold**, which defines inequality.
- 2 A **collective household decision model** (Chiappori, 1988, 1992, *Econometrica*).
- 3 The debate over **gender inequality in human capital investment**.
 - Becker (1981), Echevarria and Merlo (1999), Iyigun and Walsh (2007) and de la Croix and Doncht (2010) put **biological differences between women and men** at the centre of gender inequality in human capital accumulation.
 - Due to their biological time commitment to child care during **pregnancy, childbirth** and **breast-feeding**, women devote lower amount of their time to labor market activities, which negatively impacts their returns to education relative to men.

Some Contributions: Why are families gender bias

- We argue here there is a **non-pecuniary cost** associated to parental children investment, which negatively impacts the parents' marginal benefit of investing in their children.
- **Psychic cost** : could be understood as parents' *pessimistic view of the world*, due to some **gender stereotypes** ...
 - *Child marriage*: .
 - Sexual harassment – A real life example is the Chibok schoolgirls kidnapping by Boko Haram Militia in Nigeria.
 - *Child soldiers* (boys) – If boys are more likely to become combatants during a civil conflict, for instance, parents may rather send their daughters to schools (Stewart et al. 2001; de Walque 2006).
- We model **Parental gender bias** as a *relatively larger psychic cost* attached to a specific gender that leads to *differences in gender based IG mobility*.

The Model

- Suppose an overlapping generations of **heterogenous** households. A household consists of a couple with a daughter and a son.
- Each individual lives for two periods as a child and as an adult.
- Children either go to school and accumulate human capital **if** their parents invest in their education, *or do nothing*.
- Couples work and earn income that they allocate optimally and between their consumption, and their children education.

Preferences, Parental Gender Bias & Relative Bargaining Power

- The utility function of the i th household is:

$$u_{it}(c_{it}, h_{it+1}) = \theta_{it} u^f(c_{it}^f, h_{it+1}) + (1 - \theta_{it}) u^m(c_{it}^m, h_{it+1})$$

- θ_{it} defines the **bargaining power** of the female adult (de la Croix and Vander Donckt, 2010), as a function of her *relative human capital*:

$$\theta_{it} = (1 - \epsilon)(1 - \bar{\theta}) + \epsilon \frac{h_{it}^f}{h_{it}^f + h_{it}^m}$$

- Assume "warm glow" preferences as in Galor and Weil (2000, AER):

$$u^j(c_{it}^j, h_{it+1}) = \ln(c_{it}^j - \bar{c}) + \beta^j \ln \left\{ (h_{it+1}^f + \gamma^f)^\sigma (h_{it+1}^m + \gamma^m)^{1-\sigma} \right\}$$

- Women attach a relatively higher weight to the human capital of their children (Doepke and Tertilt, 2009, QJE):

$$\beta^f > \beta^m$$

Technologies, Constraints and Occupation

- The human capital of the j th offspring of the i th household is given by:

$$h_{it+1}^j = \left(e_{it}^j\right)^v \left(h_{it}^j\right)^\eta$$

- The budget constraint of the i th household:

$$c_{it}^f + c_{it}^m + e_{it}^f + e_{it}^m = y_{it}$$

- In every period, the economy has access to both **traditional (farm)** and **modern technologies (nonfarm)**.
- *Only* individuals who received education during their childhood would have access to modern technologies.

Definition

Suppose there are four types of couples initially. We refer to **group 1** couple, denoted by $i = 1$, when both members of the household work in the non-farm sectors. **Group 2**, $i = 2$, is when the female works in non-farm while the male works in the farm sectors. **Group 3**, $i = 3$, is the opposite of group 2; the male works in non-farm while the female works in the farm sectors. **Group 4**, $i = 4$, is when both adults work in farm.

Gender Bias, Women Empowerment and Education Investment

- The following proposition directly follows from the solutions for the couple's problem:

Proposition

(i) Individuals benefit from their opposite-sex sibling misfortunes (higher γ^{-j}) (ii) An increase in women's bargaining power increases couples' investment in children's education (iii) The presence of a psychic cost or parental gender bias could reduce the total household investment in education.

- **Aggregate inefficiency**

Effective Investment in Education and Human Capital

- Solutions for the couple problem consist of a **corner solution** due to the presence of *minimum consumption* requirement and the *psychic cost*:

$$e_{it}^j = \max\left(0, e_{it}^{j*}\right)$$
$$h_{it}^j = \max\left(0, h_{it}^{j*}\right)$$

- This implies that *individual human capital will also have a corner solution*:

$$h_{it+1}^j = \max\left(0, h_{it+1}^{j*}\right)$$

- Note that given that there are four groups of households at time t , at time $t + 1$ there could be a **maximum of eight groups of heterogeneous individuals**, categorized *based on their gender and family background, who will work in the non-farm sectors*.

IG Mobility and Threshold

- Let's define

$$h_{it+1}^j \geq 0 \equiv \Omega_i^j \text{ and } h_{it+1}^j = 0 \equiv \bar{\Omega}_i^j$$

- First, the implicit function $\bar{\Omega}_i^j$ defines *critical points* at which parents do not invest in their children human capital.
- Second, an individual works in the non-farm sectors iff $\Omega_i^j > \bar{\Omega}_i^j$. The individual works in farm, however, iff $\Omega_i^j = \bar{\Omega}_i^j$.
- Third, the mobility of two individuals can thus be compared and contrasted using the associated Ω_i^j :
 - For instance, if $\Omega_2^m > \Omega_3^f$, then sons whose mothers work in the non-farm sectors are more likely to show (upward) mobility than daughters whose fathers work in the same sectors.

- If $\gamma^m < \gamma^f$ and $\sigma < 1/2$, or, boys are favored:

Proposition

- (i) Individual IG mobility is mainly determined by family income (occupation) and intra-household bargaining power.*
- (ii) Women's bargaining power is positively associated to IG mobility.*
- (iii) Between siblings, sons are relatively more mobile than their sisters.*
- (iv) Children whose mothers work in nonfarm ($i = 2$) are more likely to work in nonfarm than children whose two parents work in farm ($i = 4$).*
- (v) Children whose two parents work in nonfarm ($i = 1$) are more likely to work in nonfarm than children whose fathers work in nonfarm ($i = 3$).*
- (vi) The relative mobility of children between group 1 and 2, and, between group 2 and 3 households are ambiguous.*

Thank You!