

Presentation at Annual Bangladesh Institute of Development Studies
Conference, December 2021

Left Behind?

Economic Development, Social Protection and
the World's Poorest

Martin Ravallion



The presentation has drawn on:

- Ravallion, Martin (2016) “Are the World’s Poorest Being Left Behind?,” *Journal of Economic Growth*, June, 21(2): 139–164.
- Ravallion, Martin (2019) “What Might Explain Today’s Conflicting Narratives on Global Inequality?” in *Inequality in the Developing World*, edited by C. Gradin, M. Leibbrandt, and F. Tarp. Oxford: Oxford University Press, forthcoming.
- Margitic, Juan and Martin Ravallion (2019) “Lifting the Floor? Economic Development, Social Protection and the Developing World’s Poorest”, *Journal of Development Economics* 139: 97-108.
- Ongoing research.

Arguments against poverty

- Advocates against poverty have variously seen it as:
 - the most morally objectionable aspect of **inequality**, stemming mainly from economic and political forces rather than bad choices by poor people;
 - a key material **constraint on human freedom**;
 - a **risk** of deprivation, whether currently poor or not; and
 - a **cost** to other valued goals, including economic efficiency, human development and environmental sustainability.
- However, those seen to be “poor” are not all equally poor.
- There is a moral case for giving highest weight to the **poorest**.

Arguments for focusing on the poorest

- Rights-based approaches to justice
 - Justice must be concerned with each citizen **not averages**
 - Rights must be secured for all; **none left behind.**
- Mahatma Gandhi's talisman:
 - “*Recall the face of the poorest and weakest person you have seen and ask if the step you contemplate is going to be any use to them.*”
- UN's Sustainable Development Goals: “*ensure no one is left behind.*”
- UN Report on World Social Situation: *Leave No One Behind*
- **Social policies** also aim to raise the income floor above the biological minimum for survival =>

Safety net as a floor

- The term “safety net” evokes the idea of a floor to living standards above the biological (survival) level.
- Statutory minimum wage rates: first appeared in late 19th century in an effort to help raise the consumption floor.
- Universal basic-income (UBI): From the 1970s, we started to see arguments in support of a fixed cash transfer to every adult. A firm floor.
- Social policy as a “*right of citizenship*” rather than something to be targeted based on “need.”
- The ILO calls for a comprehensive Social Protection Floor: “*nationally defined sets of basic social security guarantees*”.

Social policies that strive to lift the floor in developing countries

- Examples include the two largest programs to date:
 - China's *Di Bao* program aims to assure that no family in urban China falls below a stipulated minimum income.
 - India's *National Rural Employment Guarantee* an attempt to enforce the minimum wage rate in an informal economy.
- Lifting the floor is a common motivation for SSNs.

Anecdotal judgements “on the ground” often look to the poorest

- In an article “*Just a little bit richer*” the *Economist* (4/4/15) asked how much China’s poor area programs have helped reduce poverty.



The article points to a poor village in NE Shanxi that has been left behind:

“They laugh in unison when asked if they receive subsidies. The arrival of electricity 30 years ago was a vast improvement. But little else has changed in their lives since.”

Are we lifting the floor, or leaving the poorest behind?

- We lack systematic evidence for or against the claims that the poorest are left behind.
- This presentation describes a research program that aims to help fill this gap.

Outline

1. Something is missing from how we currently assess progress against poverty
2. Estimating the floor with cross-sectional data
3. A global perspective on the floor over time
4. Cross-country evidence on the floor and social protection
5. Conclusions

1. Current approaches miss what is happening at the floor

Assessing progress against poverty:

The counting approach

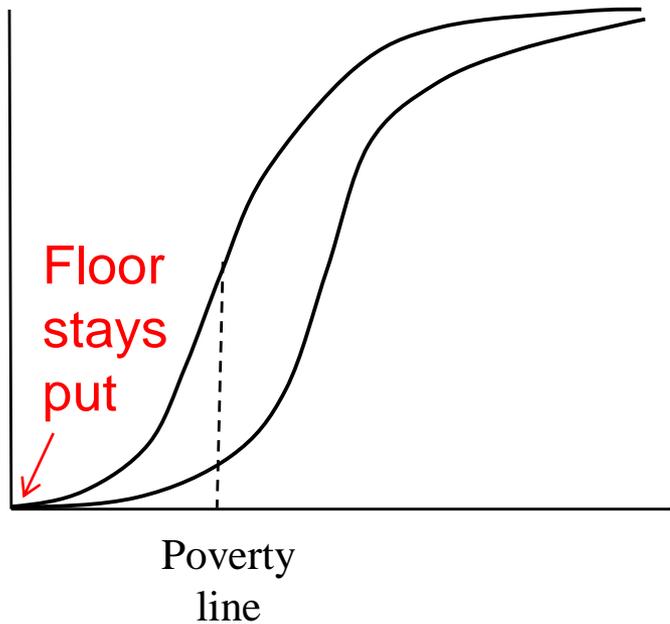
- The theoretical foundations of the counting approach are found in a large literature on poverty measurement, in which various axioms have been proposed.
 - Focus, monotonicity, subgroup monotonicity, scale invariance, transfer principle,.....
- The counting approach includes counts with unequal weights such as Watts index and the FGT P_α measures (PG, SPG).

Assessing progress against poverty: The Rawlsian approach

- This approach suggests that we should focus on the **floor**—the lowest expected level of living.
- Rawls's **difference principle**:
 - This was explicitly not a proposal to maximize the lowest income, as it is sometimes interpreted, but rather to maximize the welfare of the “worst off group” in society.
 - Rawls recognized that some degree of **averaging** was required in defining the “least advantaged.”
- If the poorest person sees a gain (loss) then (by definition) the floor must rise (fall).

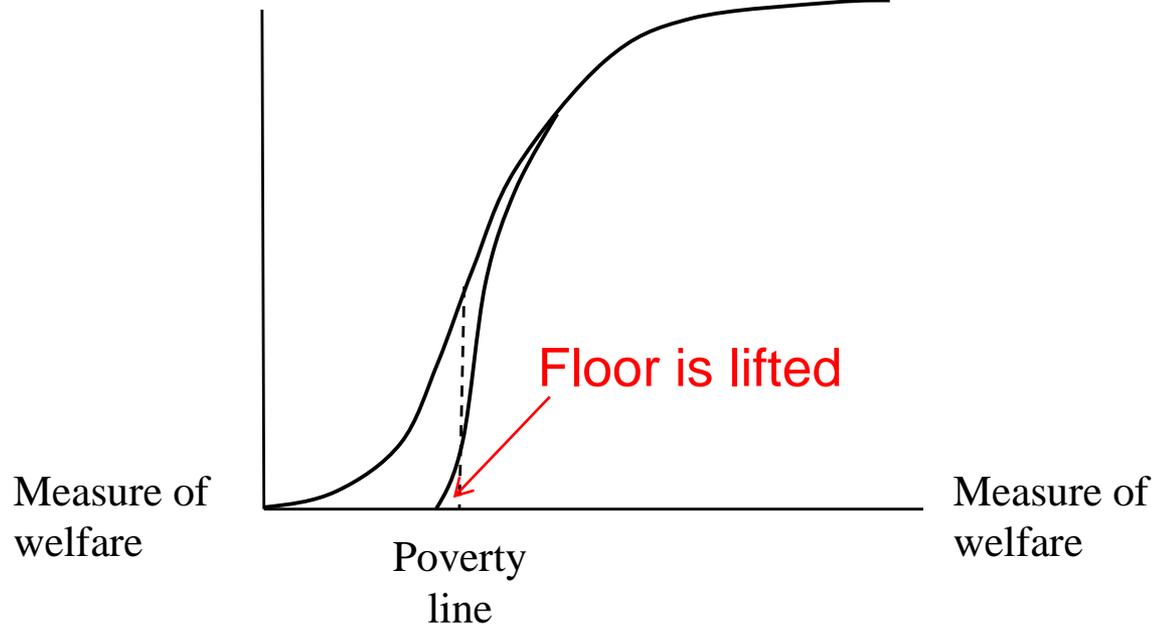
Same reduction in the poverty count but different implications for the poorest

Cumulative % of population



Poorest left behind

Cumulative % of population



Same reduction in poverty count but not leaving the poorest behind

In short: something is missing from how we measure poverty

- Economists count poor people, possibly with uneven (distributional) weights.
- Yet much of the public discourse focuses on living standards of the poorest.
- Something is missing from our dashboard of social indicators intended to inform policy debates.

2. How can the floor be estimated?

We need a method that is operational with only cross-sectional surveys

We might look at the lowest observed income or consumption

- There is always some minimum observed income or consumption in a household survey.
- However, this is never used in practice. Concerns about measurement: **transient effects** and **measurement errors**.
- The lowest observed level in the data is an unreliable statistic.

We cannot be sure that the lowest consumption in a survey is the floor

- When we refer to the “typical level of living of the poorest stratum” (Rawls) we are acknowledging that income or consumption may be low at one date for purely transient reasons (incl. measurement errors).
- We need an approach that is more robust to transient effects and measurement errors, but is still operational.

=>Some sort of **averaging** among low observed incomes.

- However, even best household surveys may miss the poorest, esp., **homeless**.

Estimating the floor with cross-sectional data

- Let $y_{\min}^* = \min\{y_i^*\}$ denote the lowest time-mean (“permanent”) income or consumption. This is the floor.
- We have n observed incomes, $y = \{y_i\}$.
- The task is to use that data to estimate the **expected value of the floor**:

$$E(y_{\min}^* | y) = \sum_{i=1}^n \phi(y_i) y_i$$

where

$$\phi(y_i) \equiv \Pr(y_i = y_{\min}^*)$$

This is the probability that person i , with observed y_i , is in fact the worst off person in the distribution of time-mean consumption or income.

Assumptions about $\phi(y_i)$

- Beyond some critical level of observed income or consumption there is no longer any chance of being the poorest person.
- For those observed to be living below z the probability of observed income being the true lower bound falls monotonically as observed income rises until z is reached.

An operational measure

- To derive an operational measure, the assumption of monotonic-decreasing probabilities is specialized as:

$$\phi_{\alpha}(y_i) = \frac{I_i \left(1 - \frac{y_i}{z}\right)^{\alpha}}{\sum_{y_j \leq z} \left(1 - \frac{y_j}{z}\right)^{\alpha}} \text{ for } \alpha > 0$$

($I_i = 1$ if $y_i \leq z$ and $I_i = 0$ otherwise.)

- Then the expected value of the consumption floor is:

$$E(y_{min}^* | y_i, i = 1, \dots, n) = z(1 - P_{\alpha+1}/P_{\alpha})$$

- In limit, $\alpha \rightarrow 0$, this gives equally-weighted mean for those with $y_i < z$. But this is implausible.
- For today, the benchmark is $\alpha = 1$. (Robustness tests.)

The estimated floor and the mean

- There is nothing to guarantee that a specific process of poverty-reducing growth, or a specific spending program that benefits poor people, lifts the floor by this measure.
- This requires (for fixed z) a larger proportionate reduction in $P_{\alpha+1}$ than P_{α} , i.e., a greater response of the more distribution-sensitive measure.

- For $\alpha = 1$:

$$\frac{\partial \ln E(y_{min}^*)}{\partial \ln m} = \left(\frac{\partial \ln PG}{\partial \ln m} - \frac{\partial \ln SPG}{\partial \ln m} \right) \left(\frac{SPG/PG}{1-SPG/PG} \right)$$

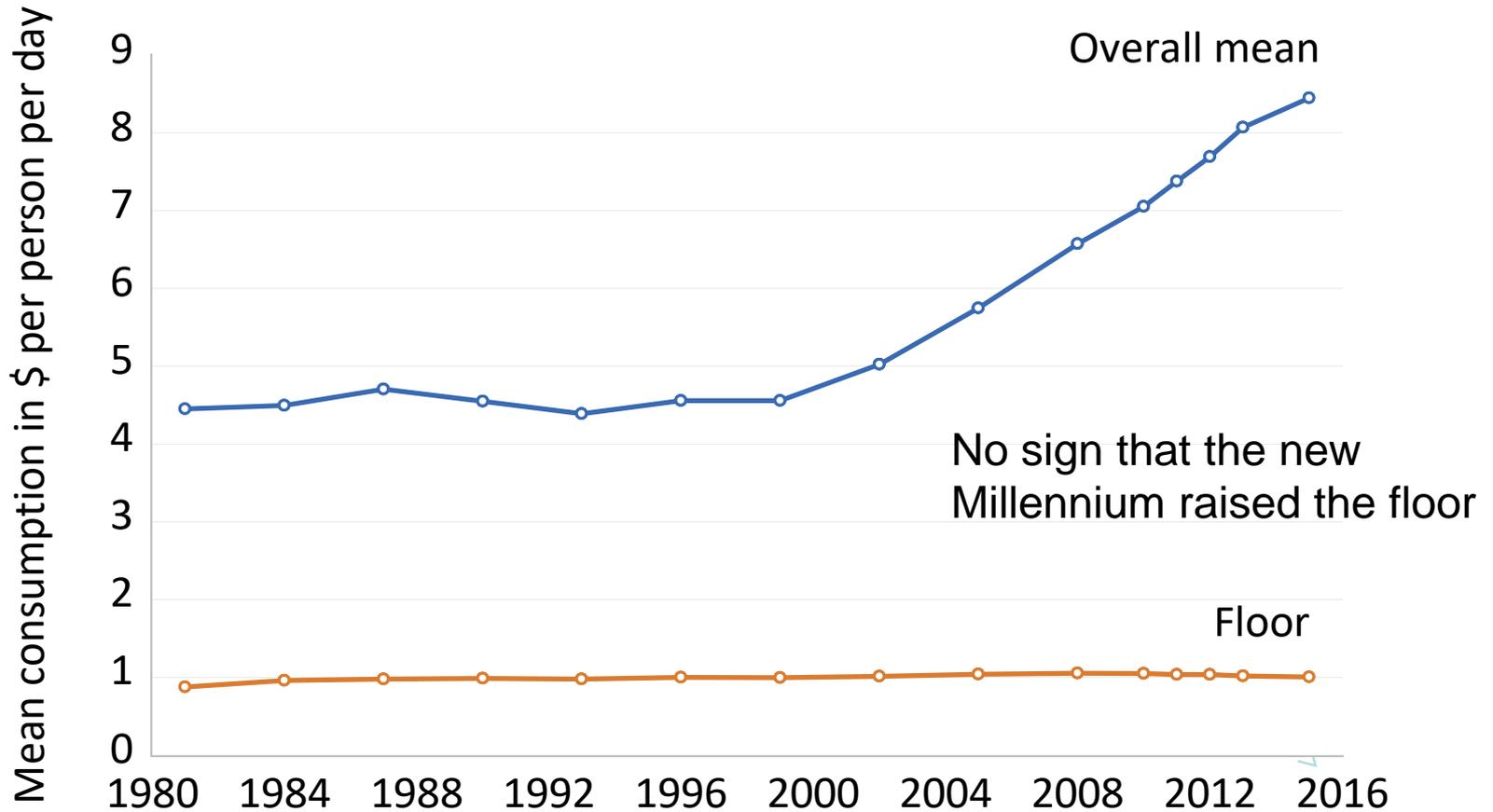
- This is a natural consequence of putting higher weight on lower observed incomes when calculating the floor.

3. A global perspective on the floor

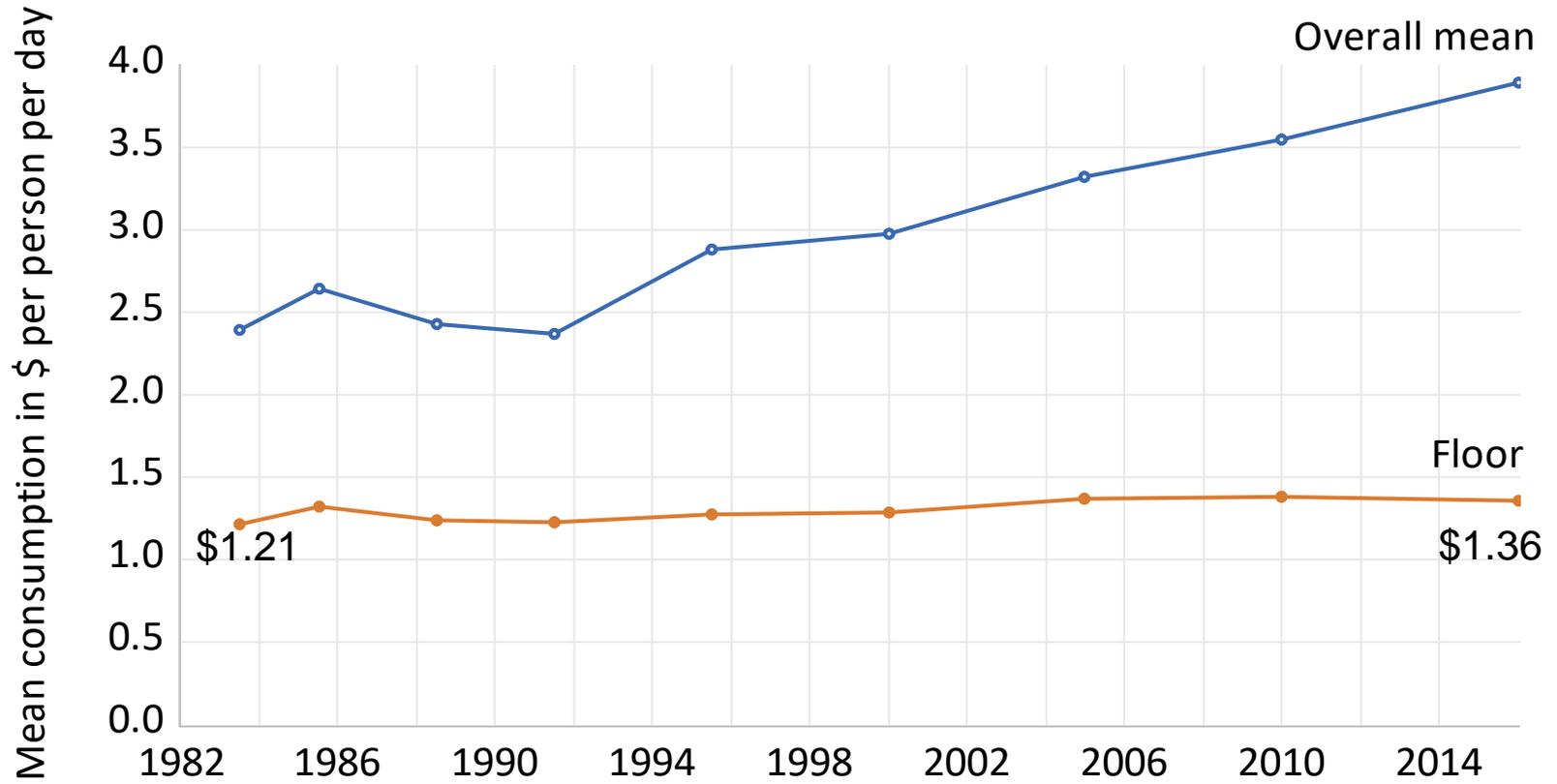
Floor = \$1.00 a day (2011 PPP)

- With $z = \$1.90$, $E(y_{min}^*|y) = \$1.00$.
 - St. error=\$0.012; 95% confidence interval: (\$0.98, \$1.03).
- Slow growth in the floor—at 0.3% per annum
- And **unresponsive to growth** in the overall mean consumption.
- Using only consumption surveys: $E(y_{min}^*|y) = \$1.03$ (s.e.=\$0.013). (Given that incomes can be zero; 36% are income surveys; n=2,400+)

Much less progress in raising the floor



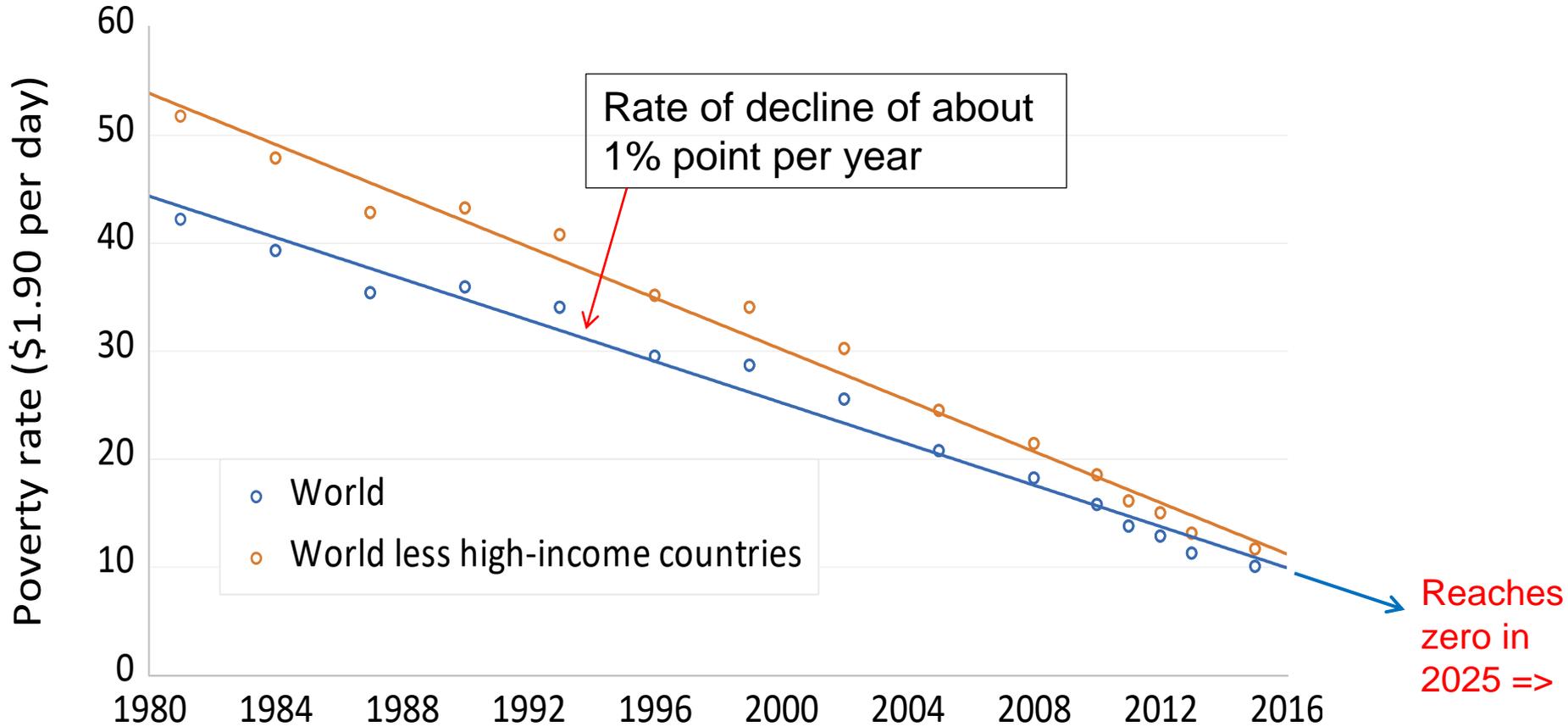
Bangladesh



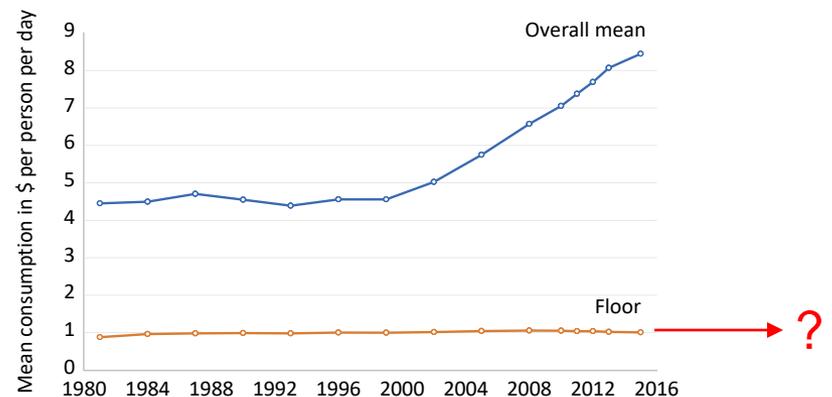
Comparison to the biological floor

- Recall that the consumption floor is not defined as the biological minimum for survival, but rather the lower bound to permanent consumptions.
- The estimated mean floor is remarkably close to Lindgren's (2015) (independent) estimate of the "physical minimum line," which aims to measure the cost of a "barebones basket" of food items that assure at least 2100 calories per person per day.
- The present estimates can thus be interpreted as telling us that the consumption floor in the developing world has not yet risen above the biological floor.

SDG1? A linear projection suggests it will be achieved



However, last few % may be much harder

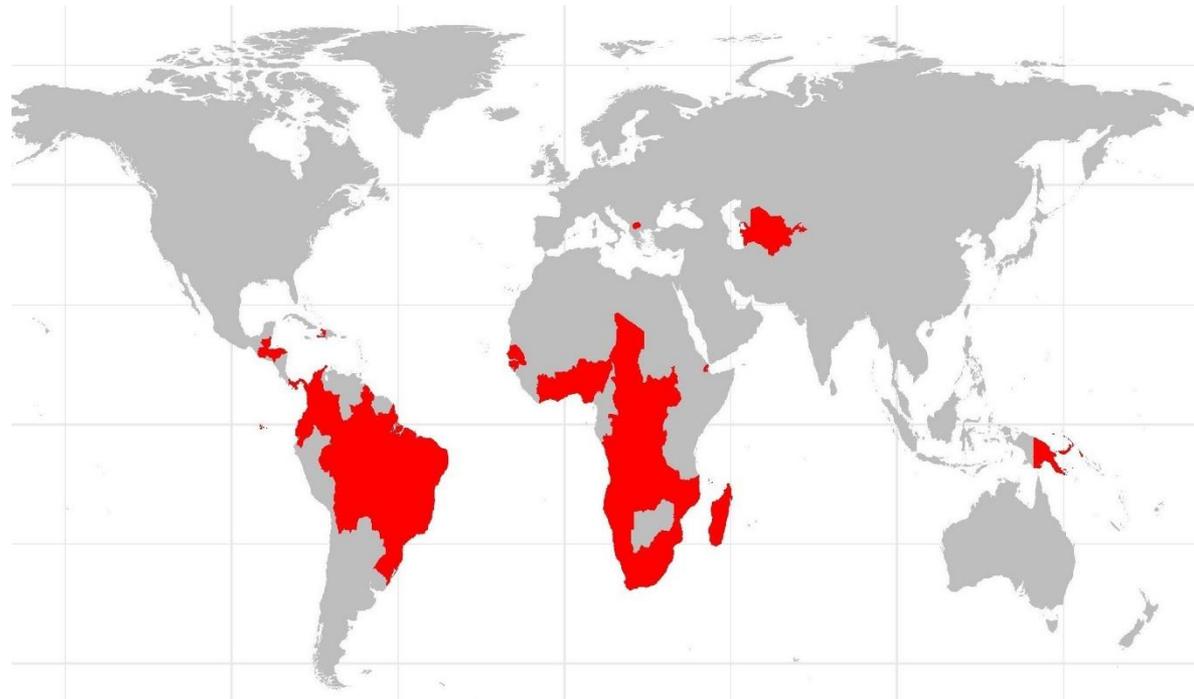


- “Eradicating extreme poverty” requires that the poorest person should have \$1.90 a day or more.
- There is a (statistically significant) positive slope to how the floor has evolved. But the slope is very small.
 - From \$0.87 to \$1.00 a day in 25 years.
- At this rate, extreme poverty will not be eliminated for another **250 years!** We are way off target.
- The developing world is not making enough progress in reaching the poorest—well below the \$1.90 line.

Which countries have the global floor?

Angola	Haiti
Belize	Honduras
Benin	Lesotho
Bolivia	Madagascar
Brazil	Malawi
Burundi	Micronesia
CAR	Mozambique
Chad	Nigeria
Colombia	North Macedonia
Comoros	Panama
Congo	PNG
DRC	Rwanda
Cote d'Ivoire	Senegal
Djibouti	South Africa
Ecuador	South Sudan
Eswatini	St. Lucia
Ghana	Turkmenistan
Guatemala	Uzbekistan
Guinea-Bissau	Zambia
Guyana	

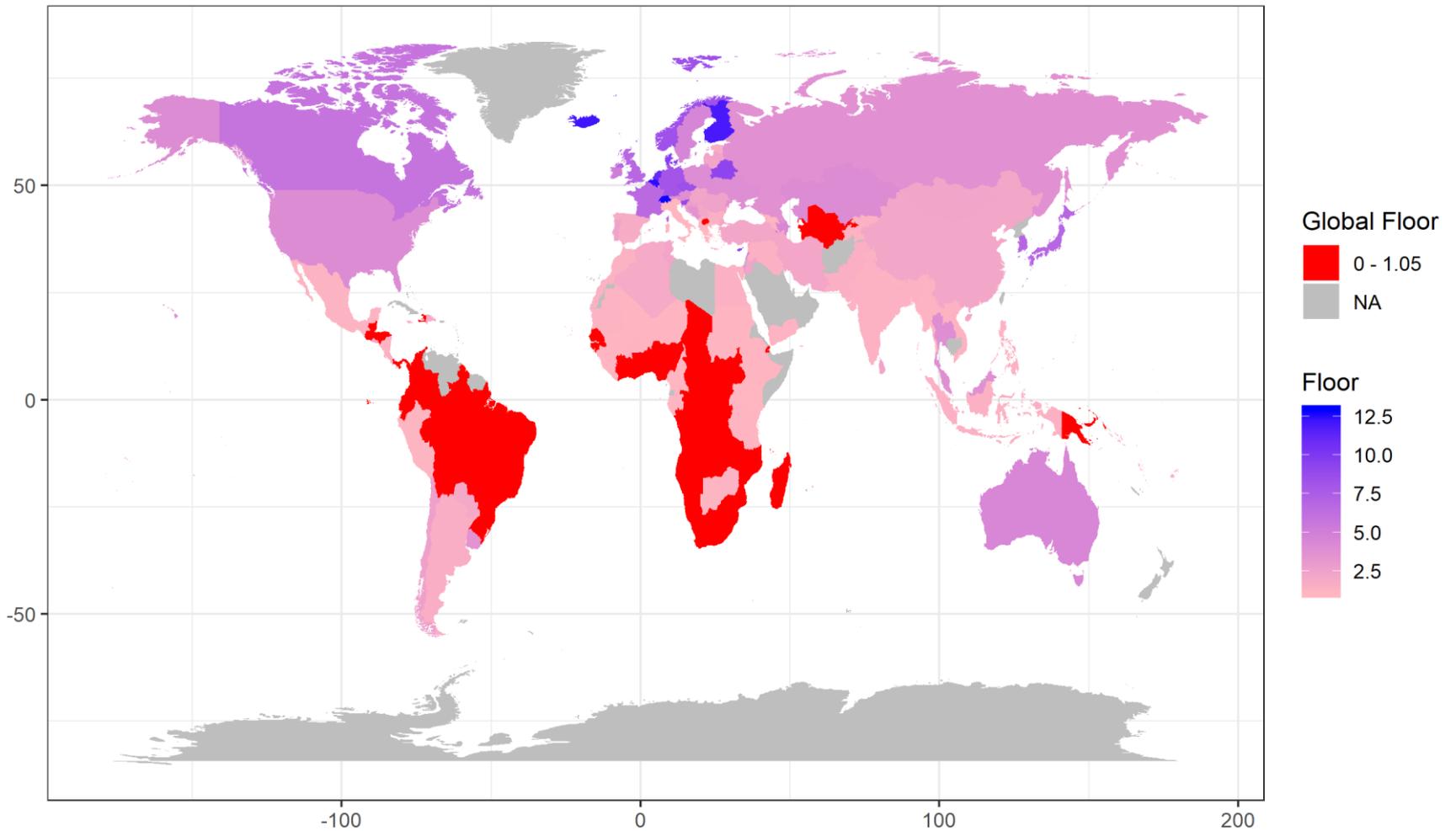
Countries with estimated floor under \$1.05



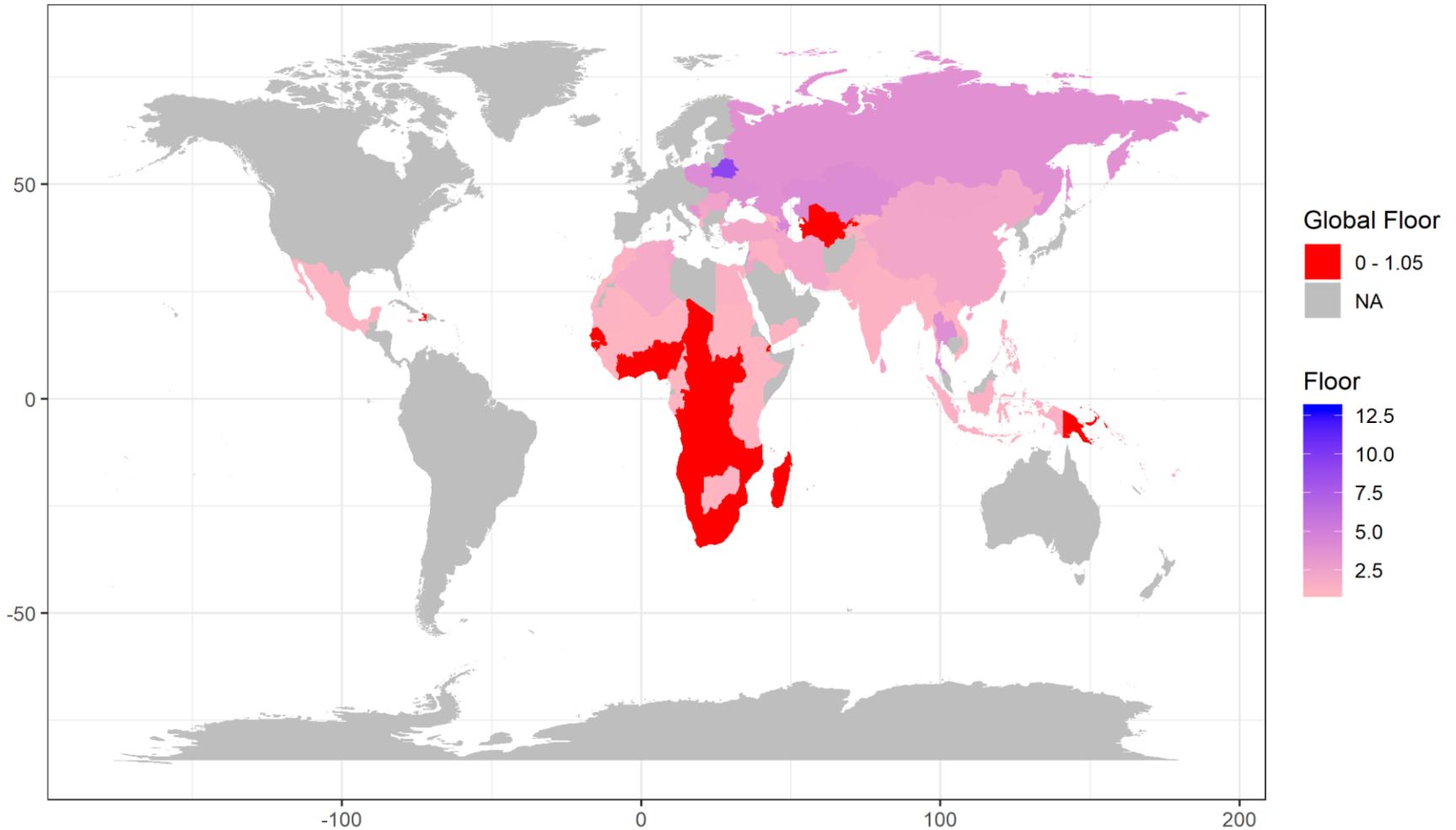
Lower floor in countries with

- Low mean consumption or income
- High inequality
- Income (not consumption) survey

Mapping the floor: all surveys



Mapping the floor: consumption surveys



4. Cross-country evidence on the response of the floor to social protection and development

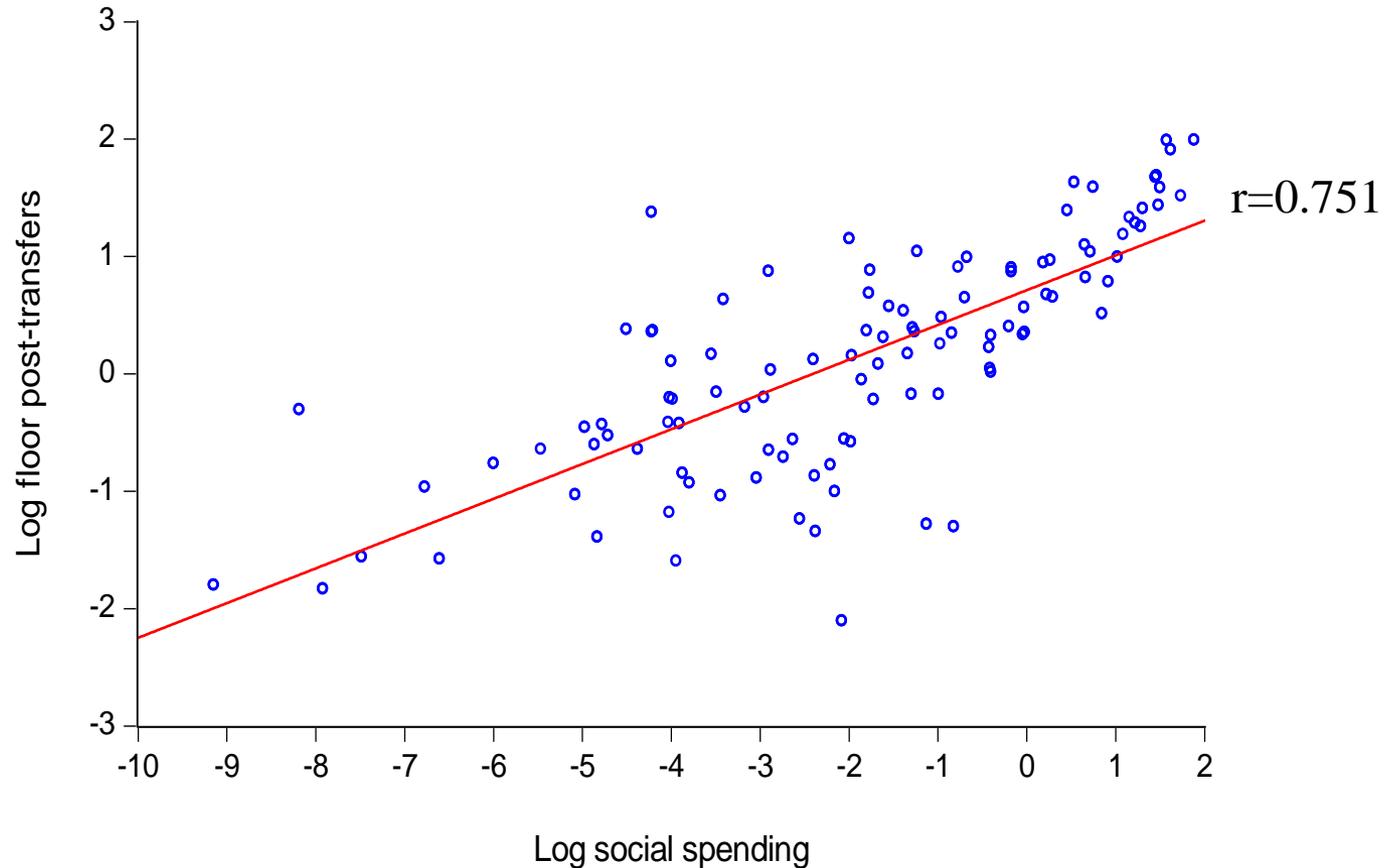
Huge expansion in “social safety nets” (SSN) in the developing world

- SSN: Direct non-contributory income transfers to poor or vulnerable families
- In the last 15 years many developing countries have introduced new SSN programs.
- Today almost every developing country has at least one SSN program.
- Roughly **one billion** people currently receive assistance.
- Using ASPIRE, population coverage of SSN programs (% receiving any help) is growing at 9% per annum (3.5% points).
- Focus here on poorest 20% ($z=F^{-1}(0.2)$).

SP lifts the floor, but almost all is social insurance

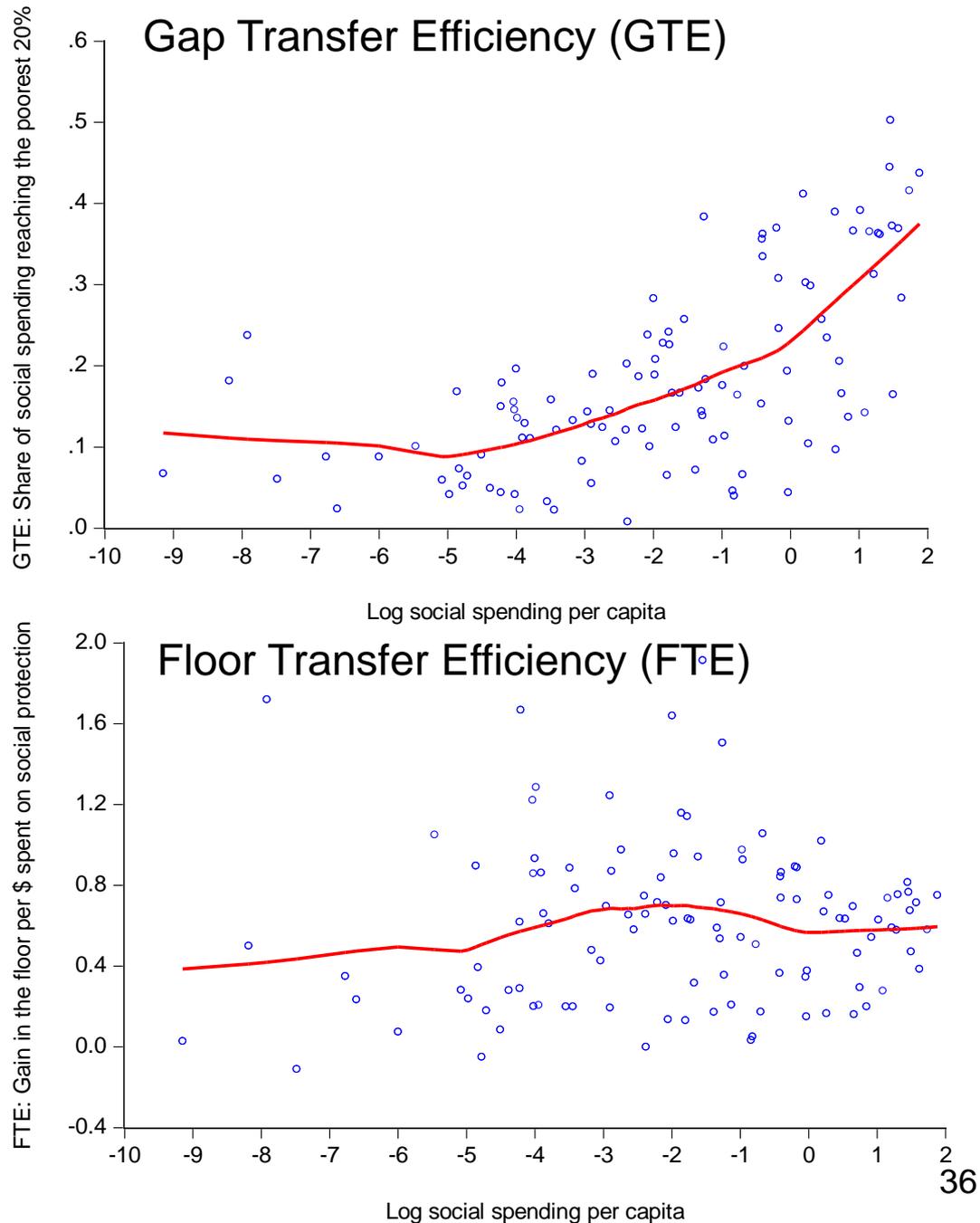
- The bulk of the impact of SP spending on the floor is due to social insurance; social assistance on its own only lifts the floor by **1.5 cents per day** on average!
- This is less than 10% of mean spending on social assistance.
- The floor would be lifted more by a (budget-neutral) universal basic income (UBI).

Countries that spend more on social protection tend to have a higher floor



Transfer efficiency varies

- FTE and GTE respond differently to high social spending.
- As countries spend more on SP, a larger share tends to reach the poorest 20% but not the poorest.

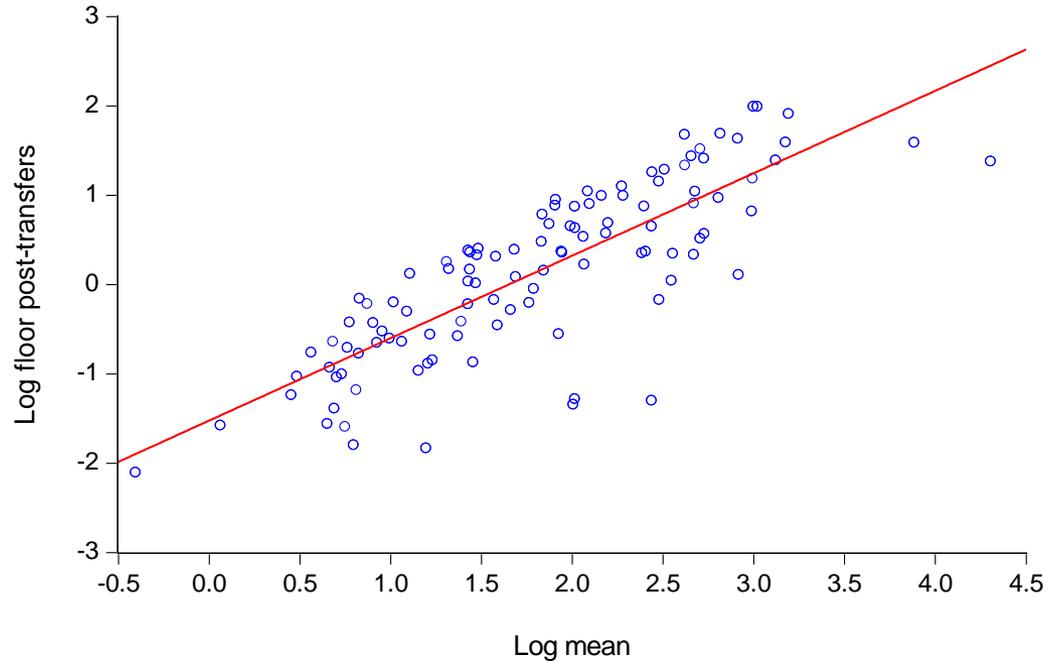


Is it spending more or spending better that lifts the floor?

- The bulk of the variance in the effectiveness of social spending in reaching the poorest is due to the variance in **levels of social spending** rather than the efficiency of that spending in reaching the poorest.
- Decompose the variance in $\ln(y_{min}^{*post} / y_{min}^{*pre})$ into:
 - the variance in log spending per capita (**77%**)
 - the variance in log of FTE (14%)
 - Covariance (9%)

Richer countries have a higher floor

- This reflects both higher social spending in richer countries, and a direct effect at given spending.



- The bulk (74%= $0.686/0.923$) of the effect of economic development on the floor is direct, via the pre-transfer floor

Regressions for pre-transfer floor

	(1)	(2)
	Log floor, pre-transfers	
Log SP transfers per capita ($\ln\tau$)	0.027 (0.033)	
Log mean income ($\ln m$)	0.740*** (0.105)	0.792*** (0.065) <1
Constant	-1.399*** (0.249)	-1.544*** (0.131)
R^2	0.629	0.626

Note: The dependent variable is the log of the floor.

OLS. Robust standard errors in parentheses.

N=110. ***: 1% significance; **: 5%; *10%.

Regressions for post-transfer floor

	(3)	(4)
	Log floor, post-transfers	
Log SP transfers per capita ($\ln\tau$)	0.145*** (0.025)	
Log mean income ($\ln m$)	0.642*** (0.070)	0.923*** (0.062)
Constant	-0.738*** (0.160)	-1.530*** (0.109)
R ²	0.738	0.665

About 1

5. Conclusions

Poverty monitoring must be socially relevant

- An approach to measurement and monitoring that is out of step with social thought and the aims of social policy will become irrelevant.
- While it would be ill-advised to look solely at the level of the floor, it can be acknowledged that this has normative significance independently of attainments in reducing the numbers of people living near that floor.
- We need not accept that the floor is all we care about, but we cannot continue to ignore it in monitoring poverty.

We can measure our success at leaving no-one behind

- Our success in assuring that no-one is left behind can be readily monitored from existing data sources under certain assumptions.
 - The proposed approach recognizes that there are both measurement errors and transient consumption effects in the observed data.
- That would also assure more consistency between how we monitor poverty and how we think about social protection policies.

Social assistance lifts the floor, but not by much

- The poorest do benefit from social spending.
- Considerable variability across countries, the bulk of which (in terms of variance) is due to differences in the level of social spending rather than the transfer efficiency of that spending.
- Social insurance does the heavy lifting; social assistance contributes little to the poorest (so far).

Poorest gain less than average SSN spending in developing countries

- For the cross-country sample, the gain to the poorest—those living at the floor—from social spending is significantly less than aggregate spending per capita.
- For developing countries, the poorest would even do better with a **universal basic income** anchored to existing social spending.

Economic development generally comes with a higher floor

- Richer countries tend to have a higher floor.
- Pre-transfer floor tends to fall relative to the mean in developing economies.
- This is also true post-transfers, but much closer to constant share (elasticity to mean not significantly different from unity).

Thank you for your attention!