



Social pensions in India – An analysis of targeting challenges

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Motivation



Social pensions can only be effective if they reach the “right” beneficiaries.



Background

- Social pensions = cash transfers to elderly poor

1995 Introduction of National Old Age Pension Scheme

Cap on number of beneficiaries

Eligibility primarily based on “destitution criterion” and age.

2007 Eligibility reforms

Cap on the number of beneficiaries removed

Eligibility primarily based on “Below Poverty Line (BPL)” card and age

Reform of eligibility criteria varied from state to state



Do social pensions reach the elderly poor?

(with Ankush Asri)

Paper 1



Theory

- Maximum welfare gains of social pensions if only poor elderly receive social pensions! Welfare losses can occur in two dimensions: inclusion and exclusion error.
- **National level expectations:**
 - Removal of the cap on the number of beneficiaries reduces the exclusion error but also may increase the inclusion error.
 - Switch to BPL card holding as eligibility criterion can improve/worsen targeting performance.
- **Individual level expectations:**
 - BPL card holding gains importance over time
 - Access to social pensions does not only depend on individual's eligibility: Political connection, participation in public meetings, membership in social organizations



Empirical Analysis

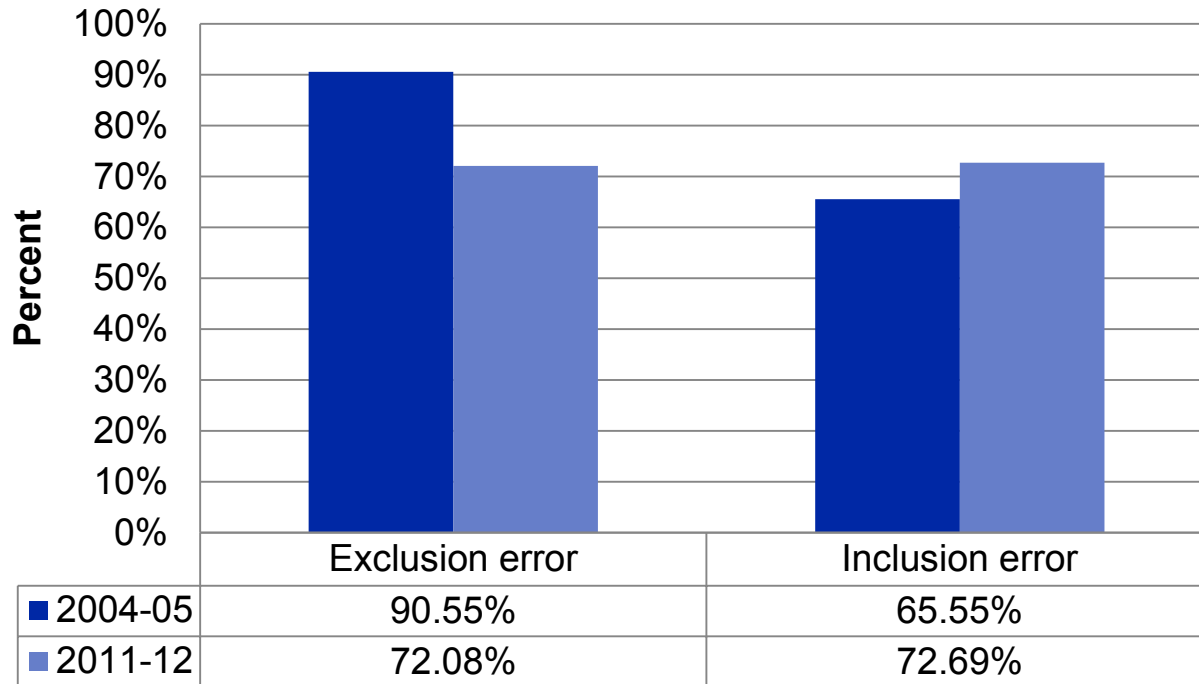
Based on India Human Development Survey:

1. Calculation of inclusion and exclusion errors:
 - a. Exclusion error: Out of 100 targeted individuals, how many are erroneously excluded from social pension benefits? – Poor and old but not receiving.
 - b. Inclusion error: Out of 100 beneficiaries, how many are erroneously included in the scheme? – Too young or non-poor or both but receiving.
2. Analysis of determinants of pension receipt: Panel linear probability model with individual fixed effects:

$$\begin{aligned} \text{Pension receipt}_{it} &= \beta_0 + \beta_1 \text{BPL card}_{it} + \beta_2 \text{Political connection}_{it} + \beta_3 \text{Public meeting}_{it} \\ &+ \beta_4 \text{Social organization}_{it} + \beta_5 \text{After}_t + \gamma X_{it} + a_i + u_{it} \end{aligned}$$



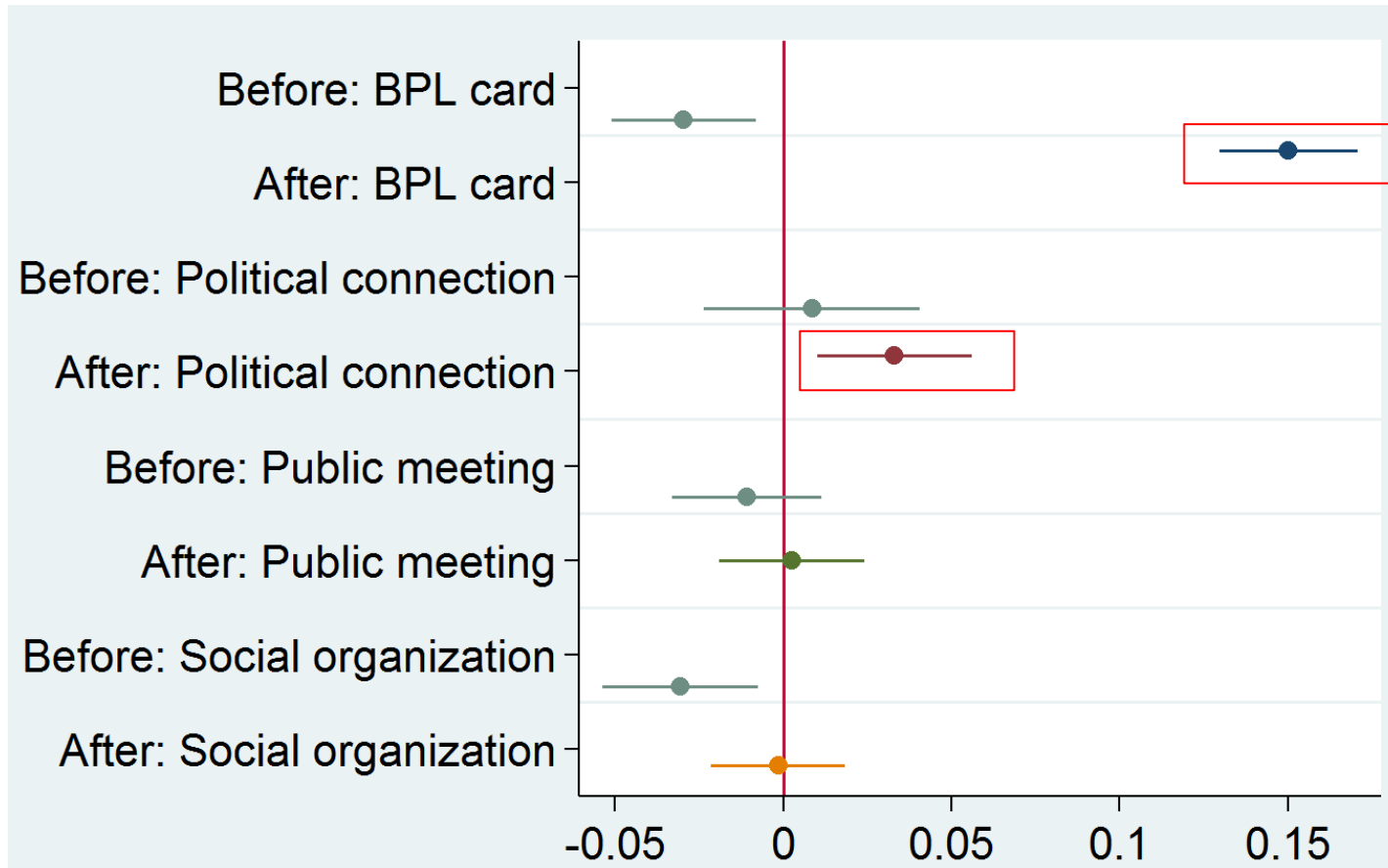
Empirical results – Inclusion and exclusion errors



Exclusion error decreased but inclusion error increased.



Empirical results – Access to social pensions



Similar results for clearly non-poor elderly indicate the targeting weaknesses of BPL cards in India!



Conclusion

- Social pension reforms have not been successful in facilitating access for the majority of elderly poor.
 - Targeting has improved only partially: Reduced exclusion error but increased inclusion error
- BPL card holding has substantially gained importance for access to social pensions despite its weaknesses
 - Clearly non-poor individuals use ration card holding to obtain access.
- Political connections facilitate access to social pensions

**Unanswered question:
How can selection of beneficiaries be improved?**



Does transparency improve targeting of old-age social pension?

Paper 2



Theory

- Increasing transparency improves poor people's access to public services and anti-poverty schemes (e.g., Reinikka and Svensson 2004, 2005, 2011; Olken 2007; Björkman and Svensson 2009)
 - Cost of preferential treatment increases and therefore targeting errors are expected to reduce.
 - Use of less complex eligibility criteria reduces administrative burden of selecting beneficiaries and the chance of `human error`.



Research question

- Eligibility reforms vary in their specific implementation across states
 - We can test this relationship between the transparency of eligibility criteria and the targeting errors.
 - We focus on official eligibility criteria to identify ‘wrongly excluded’ and ‘wrongly included’.

Does transparency of eligibility criteria mitigate the targeting errors of social pensions in India?



Methodology

- We use various government documents to identify state specific eligibility criteria and their change over time.
- We develop a transparency score to capture verifiability and complexity of eligibility criteria
 - We use different specifications of the transparency measure
- Transparency score increases if eligibility criteria are less complex and easy to verify.
- We use panel linear probability models to assess whether the likelihood of being wrongly excluded or wrongly included depends on transparency of eligibility criteria.

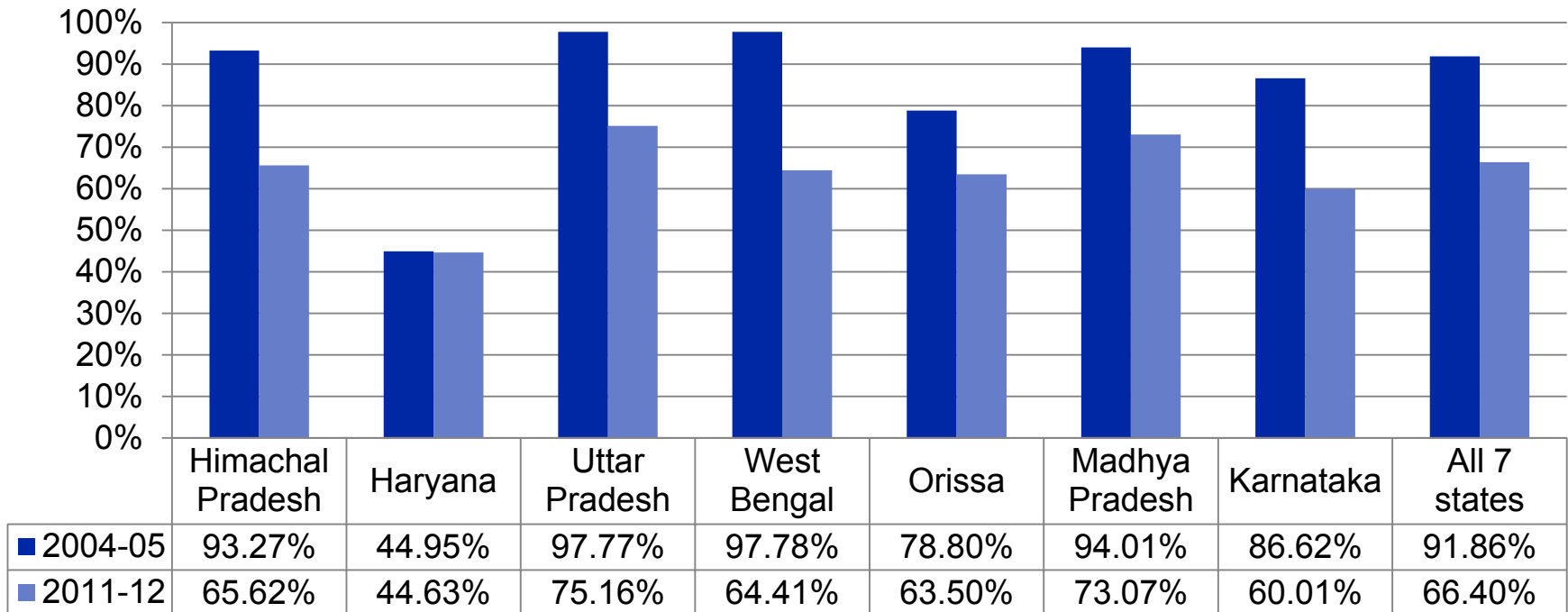


Tolerance band

- In addition to the sharp criteria, we use a tolerance band around the exact thresholds.
 - Applicants may not provide documentary proof of their eligibility
 - Administrative officers may only be able to observe roughly whether criteria are met
 - Leaves some type of subjective “margin of error” in deciding who should be (in)eligible for pensions
- We cannot find any statistical error band around some arbitrary number
- Construct a 95% confidence band around the cut-offs using the sampling distribution of the estimator of the corresponding percentile of the distribution

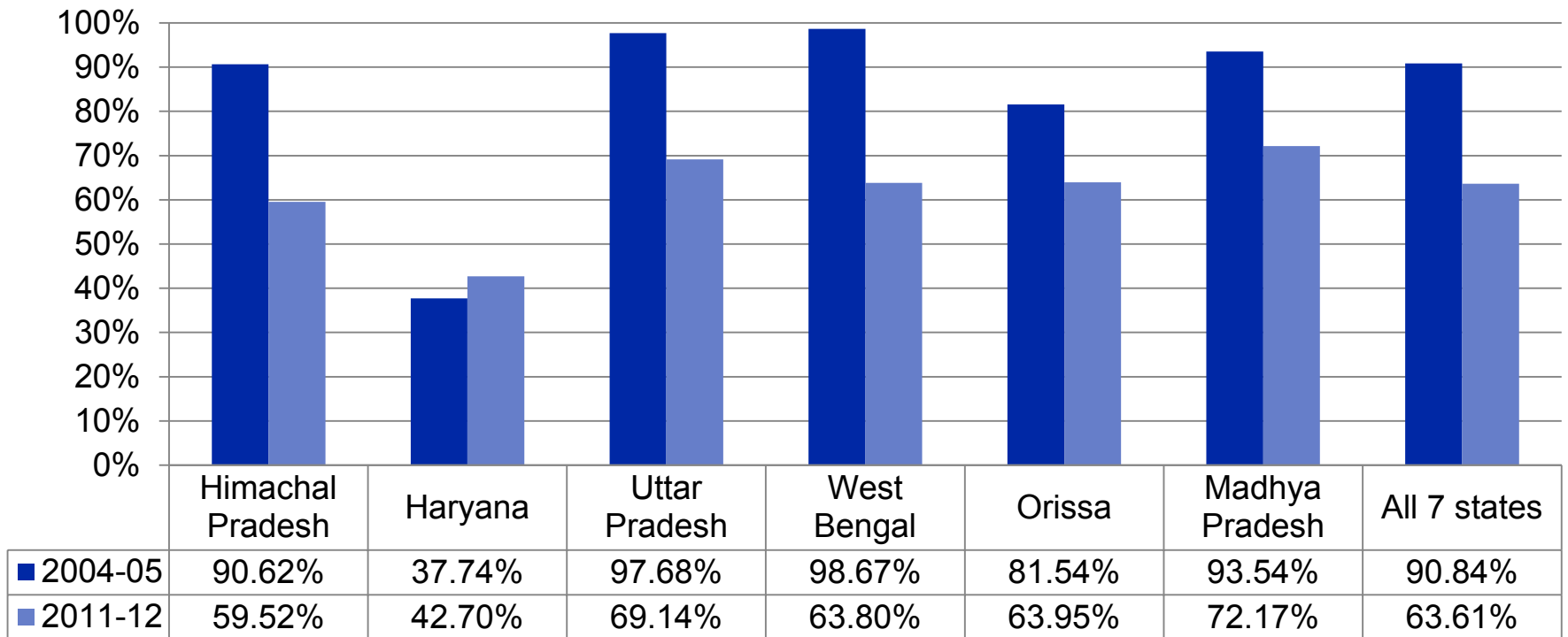
Descriptive statistics – Exclusion error

Share of wrongly excluded individuals in % (balanced)



Descriptive statistics – Exclusion error using tolerance band

Share of wrongly excluded individuals in % with tolerance band





Descriptive statistics – Inclusion error

In 2005 there are only very few beneficiaries and among those only very few are wrongly included:

	HP	HR	UP	WB	OR	MP	KA
Number of beneficiaries	32	250	26	6	69	33	23
Number of wrongly included	4	62	8	1	30	6	9

- Analysis of inclusion error could be misleading.
- We focus in our empirical analysis on the exclusion error.



Empirical results: Exclusion error

VARIABLES	(1) Wrongly excluded	(2) Wrongly excluded	(3) Wrongly excluded
Period	0.238*** (0.000)	0.275*** (0.000)	0.223*** (0.000)
Transparency A	-0.153*** (0.000)	-0.156*** (0.000)	-0.170*** (0.000)
Individual fixed effects	Yes	Yes	Yes
Household variables	No	Yes, clean controls	Yes, all controls
District characteristics	No	Yes, clean controls	Yes, all controls
Political variables	No	Yes, clean controls	Yes, all controls
Observations	13614	13614	13614
Number of id	6807	6807	6807
R-squared	0.084	0.095	0.107



Empirical results: Exclusion error with band

VARIABLES	(1) Wrongly excluded with band	(2) Wrongly excluded with band	(3) Wrongly excluded with band
Period	0.253*** (0.000)	0.281*** (0.000)	0.224*** (0.000)
Transparency A	-0.135*** (0.000)	-0.138*** (0.000)	-0.159*** (0.000)
Individual fixed effects	Yes	Yes	Yes
Household variables	No	Yes, clean controls	Yes, all controls
District characteristics	No	Yes, clean controls	Yes, all controls
Political variables	No	Yes, clean controls	Yes, all controls
Observations	13614	13614	13614
Number of id	6807	6807	6807
R-squared	0.086	0.095	0.102



Empirical results: Exclusion error

VARIABLES	(1) Wrongly excluded	(2) Wrongly excluded	(3) Wrongly excluded
Period	0.246*** (0.000)	0.269*** (0.000)	0.232*** (0.000)
Transparency B	-0.149*** (0.000)	-0.148*** (0.000)	-0.164*** (0.000)
Individual fixed effects	Yes	Yes	Yes
Household variables	No	Yes, clean controls	Yes, all controls
District characteristics	No	Yes, clean controls	Yes, all controls
Political variables	No	Yes, clean controls	Yes, all controls
Observations	13614	13614	13614
Number of id	6807	6807	6807
R-squared	0.082	0.091	0.100



Empirical results: Exclusion error with band

VARIABLES	(1) Wrongly excluded	(2) Wrongly excluded	(3) Wrongly excluded
Period	0.273*** (0.000)	0.287*** (0.000)	0.237*** (0.000)
Transparency B	-0.137*** (0.000)	-0.137*** (0.000)	-0.158*** (0.000)
Individual fixed effects	Yes	Yes	Yes
Household variables	No	Yes, clean controls	Yes, all controls
District characteristics	No	Yes, clean controls	Yes, all controls
Political variables	No	Yes, clean controls	Yes, all controls
Observations	13614	13614	13614
Number of id	6807	6807	6807
R-squared	0.087	0.096	0.110



Conclusion

- Clear relationship between the transparency of eligibility criteria and the likelihood of being wrongly excluded.
- More transparent eligibility criteria help to improve the targeting performance of a scheme.
- Caveat: Official eligibility criteria are not suitable for the identification of the poor (e.g. BPL card).
 - Among the officially ineligible individuals there are many poor individuals (and vice versa).
- Clear-cut exclusion criteria seem to be the best option for targeting (as suggested by other researchers and social activists).



Ongoing work and further research plans

Which political factors affect mistargeting? (ongoing)

- Participatory democracy
- Local government connection
- Political competition

How do living arrangements of elderly individuals change in response to the social pension reform in 2007? (ongoing with Sarmistha Pal)

- Do other household members continue living with the elderly individuals because of the additional income? – Income effect
- Do other household members leave the elderly individual alone because of the additional income? – Substitution effect

Mistargeting of BPL cards (planned)

- Which political conditions are related to the misallocation of BPL cards?



Looking back – Great collaboration but financial issues

- Several productive research visits in India and Switzerland
- We are currently looking for funding opportunities for our planned research.
- Several financial hurdles:
 - Late disbursements of funds on the Indian side.
 - Restriction to only one return travel for Indian researchers without any prior announcement made co-funding necessary.
 - Funding is not fungible: We would like to hold a workshop in Delhi in February 2017 but we only have funding for a workshop in Zurich (which the Indian colleagues could not even attend).
- Funding issues make project planning more complicated and increase the transaction costs of the project.



**Thank you! – We appreciate any comments and
questions.**

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