

# Inequality Traps and Human Capital Accumulation in SA

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# Overview

- Question
- Context
- Theory
- Empirical Findings
- Discussion

# Question

- Is South Africa in an inequality trap on the human capital dimension?
- If so, can we differentiate between the various types of inequality traps?

# Context

- SA has exceptionally high inequality, Gini between 0.5 and 0.7.
- Has been unequal since pre- '94, and research suggests it has increased since '94.
- Inequality is now part of the government's priority areas.
- Both normative and efficiency concerns.

# Definition

Inequality trap:

- Situation of high inequality,
- Where the poor are unable to participate in profitable investments due to income and credit constraints,
- And the small group of rich people can and do invest,
- And this scarcity of investments means the poor stay poor and the rich stay rich,
- Resulting in persistence of the high inequality.

# Theory

- 3 models:
  - Perfect credit markets (no trap),
  - Imperfect credit markets (trap due to market failures),
  - Social Externalities (trap due to neighbourhood and peer effects).
- We focus particularly on tertiary schooling, but applies to any form of human capital investment.

# Empirical Section

- Use NIDS 2008 and CAPS 2002.
- Look at returns to education, who studies, and reasons for not continuing to study.
- Also look at role models, educational expectations and career aspirations.
- Some evidence on differences in the rate of learning by income group.

Table 1: Educational attainment and returns to education:  
25 - 29 year olds in NIDS Wave 1

Education Level	(1) N	(2) % (weighted)	(3) Employed (%)	(4) Total Income (mean)	(5) Expected value (3)*(4)
no matric	1,028	59.94	43.2	1237	534
matric	356	23.55	56.9	2681	1524
some tertiary	173	16.51	73.6	5547	4081
Total	1,557	100			

Notes:

1. The total income column is calculated using only 656 observations.

This is due to:

a. The low levels of employment. (754 observations in our sample)

b. Missing data / invalid responses.

2. All summary statistics are calculated using the post stratification weights.

3. The definition of employment includes wage employment, self-employment, casual work, working without pay in a family business, or subsistence agriculture.



Table 2: Mean of some tertiary qualification in NIDS

(by age and income quintile)

age	Per capita household income quintiles					Total
	1	2	3	4	5	
18	0.000	0.000	0.007	0.000	0.000	0.001
19	0.000	0.041	0.004	0.005	0.037	0.016
20	0.050	0.036	0.038	0.054	0.212	0.070
21	0.035	0.106	0.034	0.043	0.290	0.087
22	0.035	0.063	0.026	0.117	0.345	0.101
23	0.005	0.089	0.007	0.130	0.233	0.084
24	0.097	0.123	0.098	0.157	0.314	0.151
Total	0.027	0.058	0.031	0.075	0.191	0.068

Table 3: Reasons for not being enrolled in 2008 (NIDS)

	Quintiles					Total
	1	2	3	4	5	
Finished school	9.1	15.1	12.2	10.5	16.1	12.1
I was working	3.7	7.4	21.7	35.4	52.2	21.3
Could not afford it	32.2	24.8	31.2	17.4	10.0	24.7
Looking for a job	24.8	27.1	14.7	18.3	11.6	19.9
Pregnancy/ had baby	17.2	13.5	9.1	9.2	3.8	11.3
Was needed at home	2.0	1.6	2.8	1.1	0.3	1.7
Was ill/sick	2.7	2.5	2.8	2.1	0.6	2.3
I got married	2.1	2.3	0.0	1.7	0.7	1.4
Grades were very poor	2.1	0.4	2.4	1.5	0.6	1.5
Suspended/expelled	0.9	0.5	0.3	0.5	1.1	0.6
Other (specify)	3.3	4.7	2.3	1.8	3.2	3.0
Too old	0.0	0.0	0.5	0.5	0.0	0.2
Total	100	100	100	100	100	100
N	422	396	440	350	135	1,743

Notes:

Sample is aged 18 - 24, are not currently enrolled and do not have a tertiary qualification

Means are weighted using the post-stratification weights

# Conclusion 1

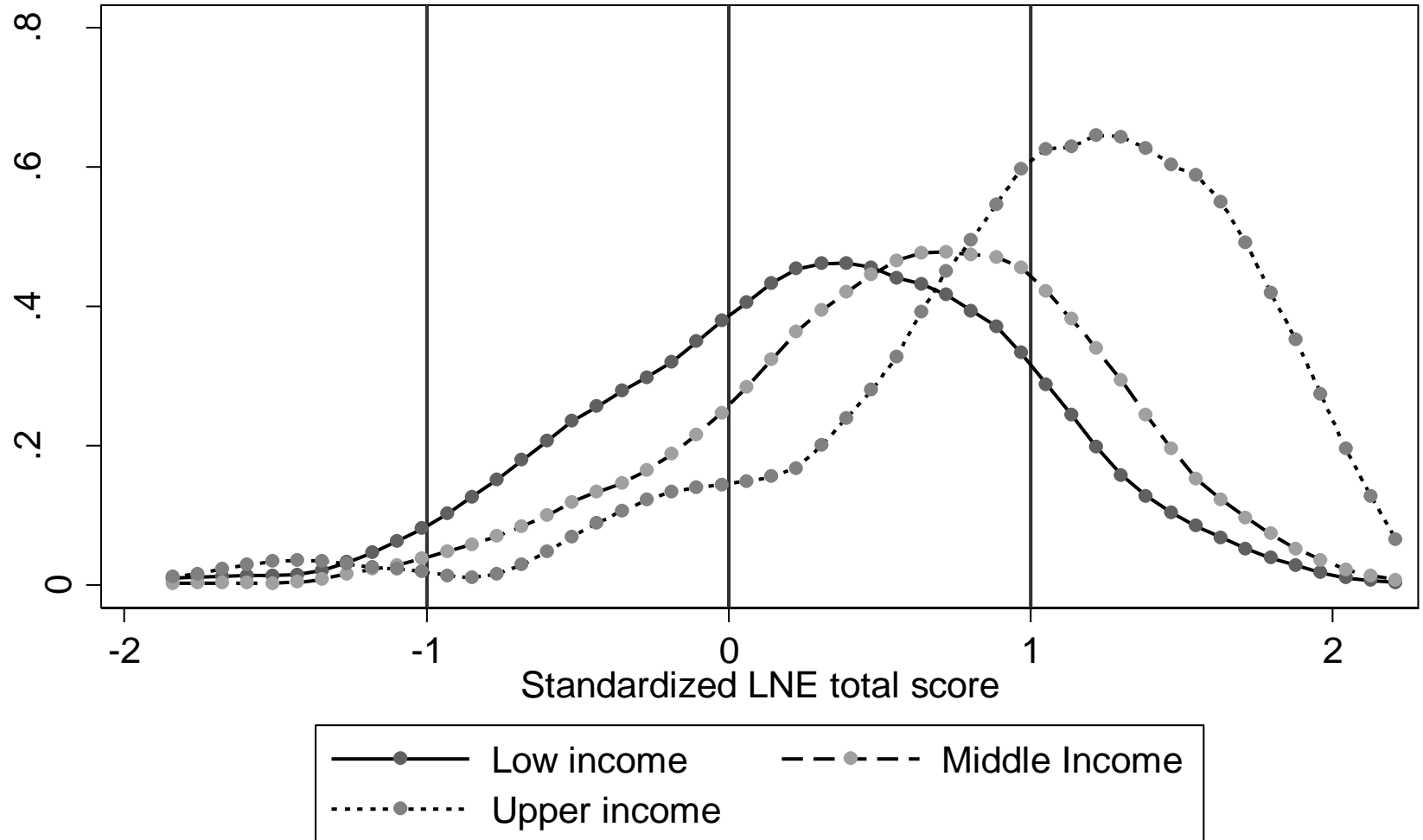
- Returns to education are very high.
- Attainment is strongly correlated with SES.
- Credit markets / financial reasons for not continuing to study matter for most people.
- So we reject the perfect credit markets hypothesis in favour of the imperfect markets.

Table 4: Proportion who expect to complete a tertiary qualification  
(15 - 19 year olds in NIDS 2008)

age	Quintiles					Total
	1	2	3	4	5	
15	0.96	0.96	0.93	0.96	0.98	0.96
16	0.96	0.94	0.92	0.95	0.98	0.95
17	0.94	0.96	0.92	0.98	1.00	0.95
18	0.89	0.95	0.96	0.84	0.92	0.92
19	0.94	0.90	0.96	0.84	0.90	0.92
Total	0.94	0.95	0.94	0.93	0.97	0.94

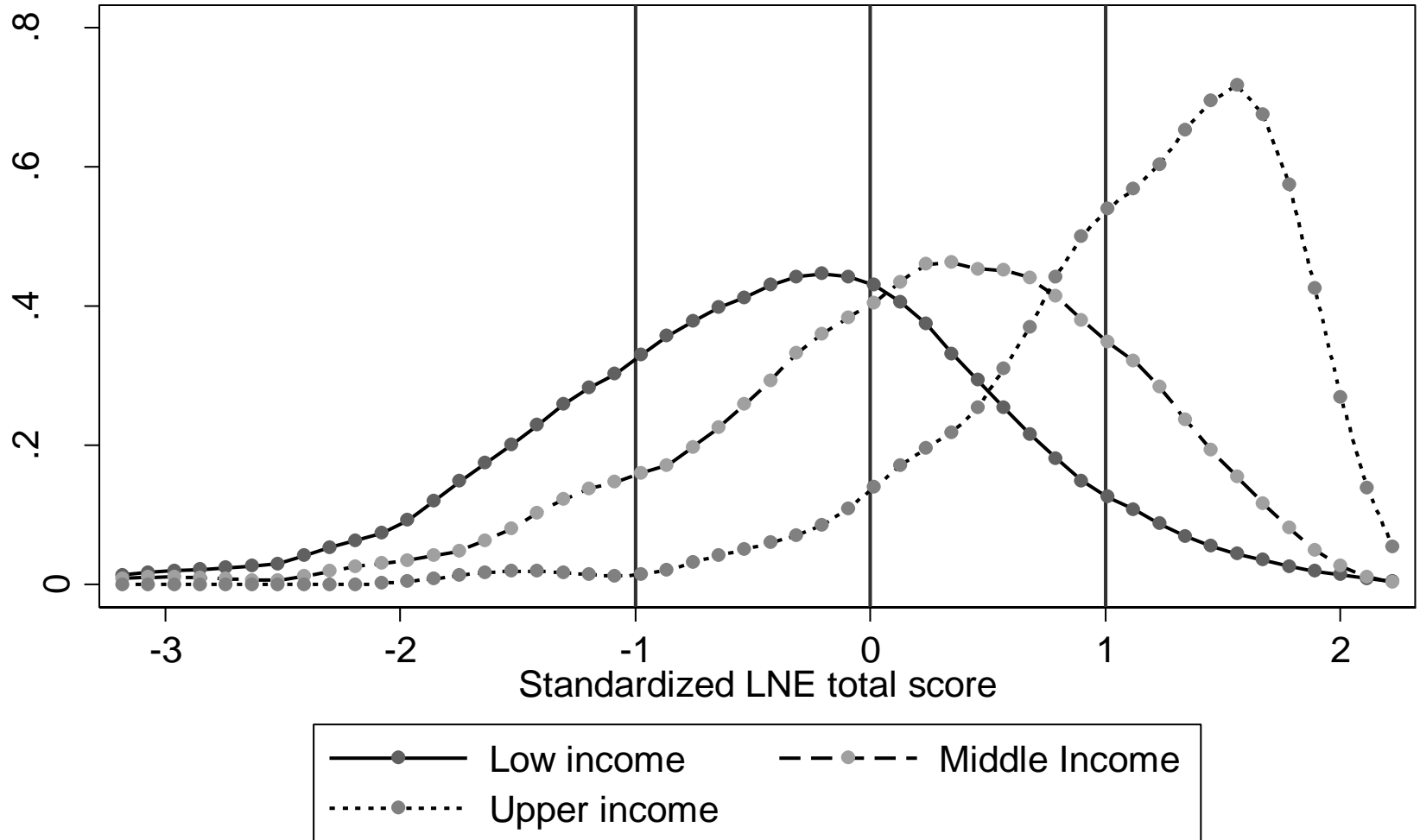
# Performance on aptitude test by income group: Ages 14 - 16

Source: CAPS Wave 1 (2002)



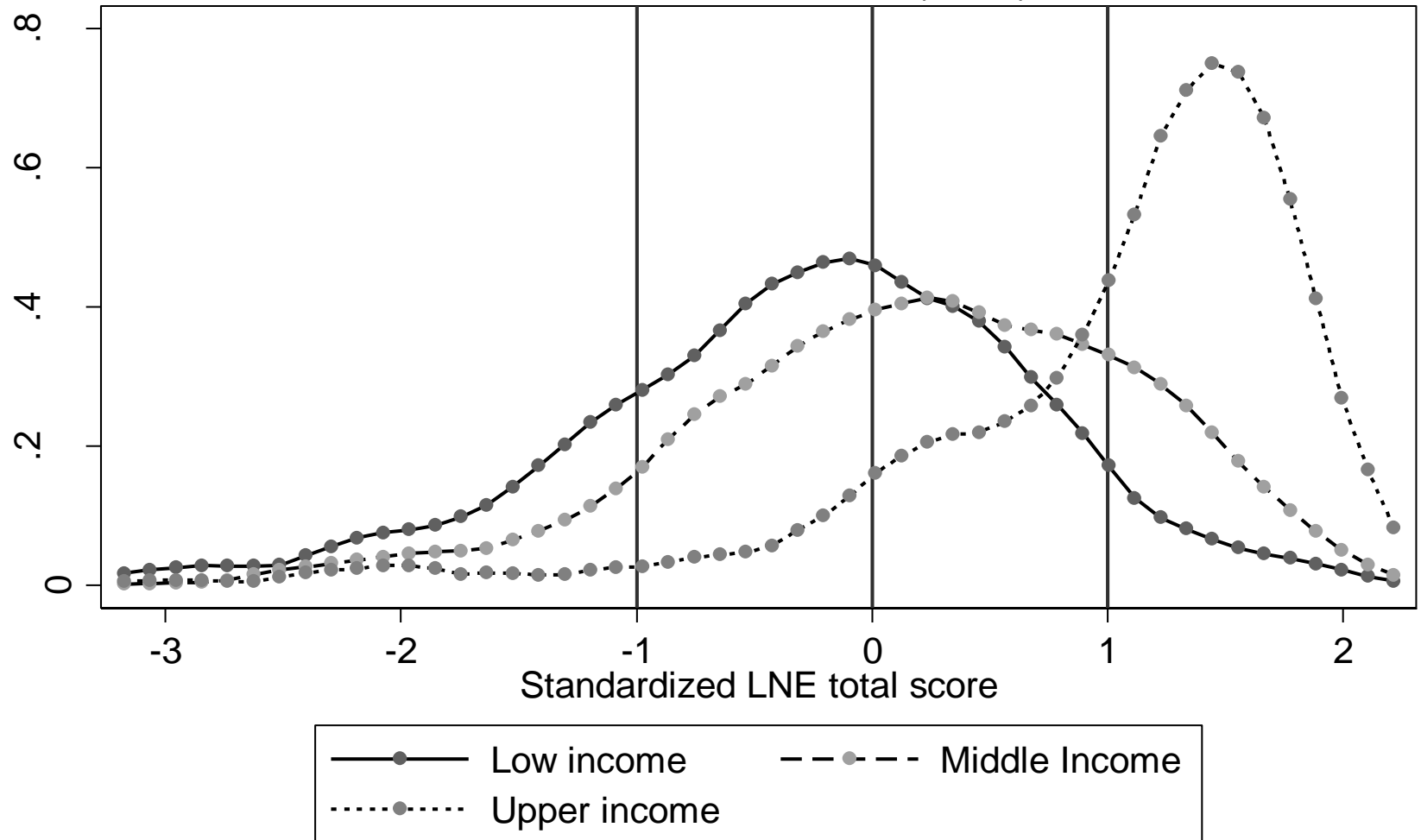
# Performance on aptitude test by income group: Ages 17 - 19

Source: CAPS Wave 1 (2002)



# Performance on aptitude test by income group: Ages 20 - 22

Source: CAPS Wave 1 (2002)



# Conclusion 2

- No large differences in expectations of achieving a tertiary education or career aspirations.
- However, large differences in scholastic aptitude manifest by income group at early ages, and become more pronounced with time.
  - Could be resources or social externalities or both.



Table 5: Expected occupation at age 30.

Occupation	Quintile					5 Total
	1	2	3	4		
Accountant	4.68	3.64	4.4	7.44	6.3	5.39
Medical doctors	7.75	6.47	4.85	2.93	4.14	5.14
Agriculture and fishery	4.29	4.12	6.08	3.15	7.63	5.11
Lawyers/Attorneys	6.56	4.86	5.43	3.88	2.89	4.61
Social worker	7.27	4.81	3.16	3	0.8	3.67
Teaching professional in higher education	4.95	4.47	1.68	2.63	2.25	3.18
Nursing	6.26	4.27	3.78	1.87	0.53	3.17
Decorators and designers	1.39	1.57	1.81	3.23	6.69	3.14
Machinery, mechanics and fitters	2.43	3.88	2.78	2.65	1.5	2.6
Mechanical Engineers	2.48	3.35	2.61	2.74	1.21	2.42
Productions and operations manager	2.5	2.13	2.68	2.74	1.79	2.34
General manager (Wholesale/retail trade)	1.5	1.67	1.55	1.86	3.29	2.04
Other	47.94	54.76	59.19	61.88	60.98	57.19
Total	100	100	100	100	100	100

- When we look at career aspirations in CAPS, we found that fewer than 10 respondents, out of approximately 4800, plan to be teachers (in primary or secondary schools) at the age of 30.

# Policy implications

- Taxes and re-distribution.
- Could take the form of local public goods, e.g. Invest in schools and/or teacher incentives.
- Intervene in credit market for higher education, e.g. Subsidies, application fees, cheap loans.
- One aspect involves making teaching an attractive career choice for bright young students.

Thanks