Breakout sessions: Education 2
Chaucer

14:00-15:20

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Trajectories of Young People's Aspirations to go to University in England

Andrew McCulloch

- Motivation for study

- Analysis aim and data

- Results

- Conclusions

Study Motivation

- Persistent socioeconomic inequalities in education
- No direct effect of family background on education
- Aspirations and achievement mediate effect of family background

DIAGRAM 1

PATH COEFFICIENTS OF ANTECEDENTS OF EDUCATIONAL AND OCCUPATIONAL ATTAINMENT LEVELS

Aspirations

Family Background

Attainment

X_y .84
.22 .54 .33 .82
.21 .01 .47 .59 .21
.63 .84 .44 .43 .73
.78 .81 .56
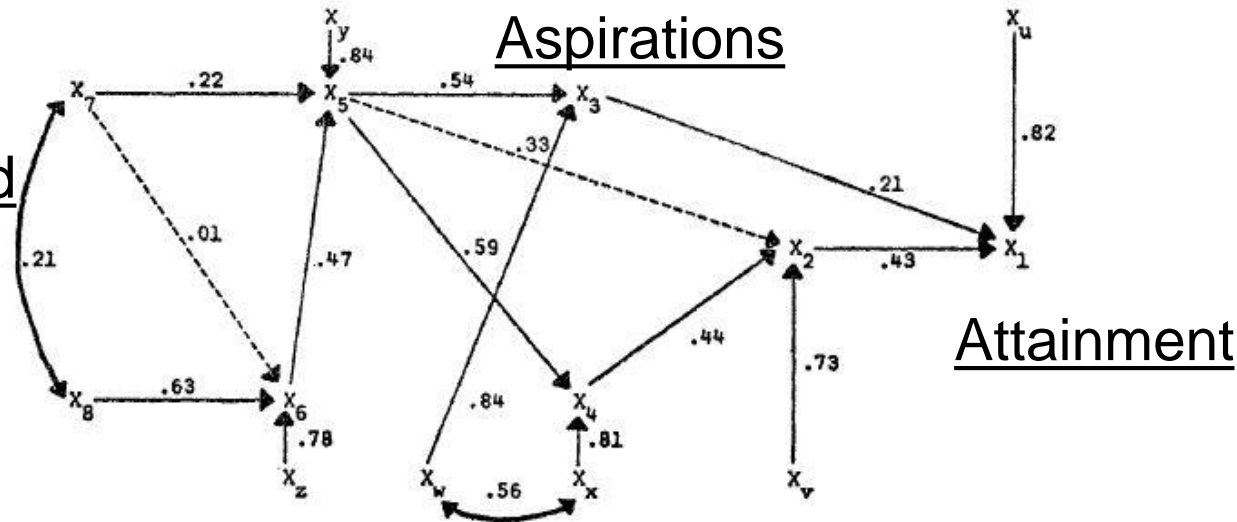
X_1 – Occupational Attainment X_5 – Significant Others' Influence
X_2 – Educational Attainment X_6 – Academic Performance
X_3 – Level of Occupational Aspiration X_7 – Socioeconomic Status
X_4 – Level of Educational Aspiration X_8 – Mental Ability

Model and Data

- Trajectories delineate structures that link origins and destinations
- Longitudinal survey from 2004 (year 9) to 2010
- Waves 1 to 4 asked: 'How likely do you think it is that you will ever apply to go to university to do a degree?'
- Response options: 'very likely', 'fairly likely', 'fairly unlikely' and 'Not at all likely'
- Information on university admissions, key stage results, socioeconomic characteristics (social class, parental educational qualifications and housing tenure), ethnicity, behavioural risks and attitudes towards school

Steps in Latent Class Analysis

- Estimate number of groups or trajectories
- Assign respondents to most likely trajectory
- Look at variation in probability of responses across pathways
- Look at variation in behavioural and family characteristics between trajectories

Aspirations to go to University (six latent classes)
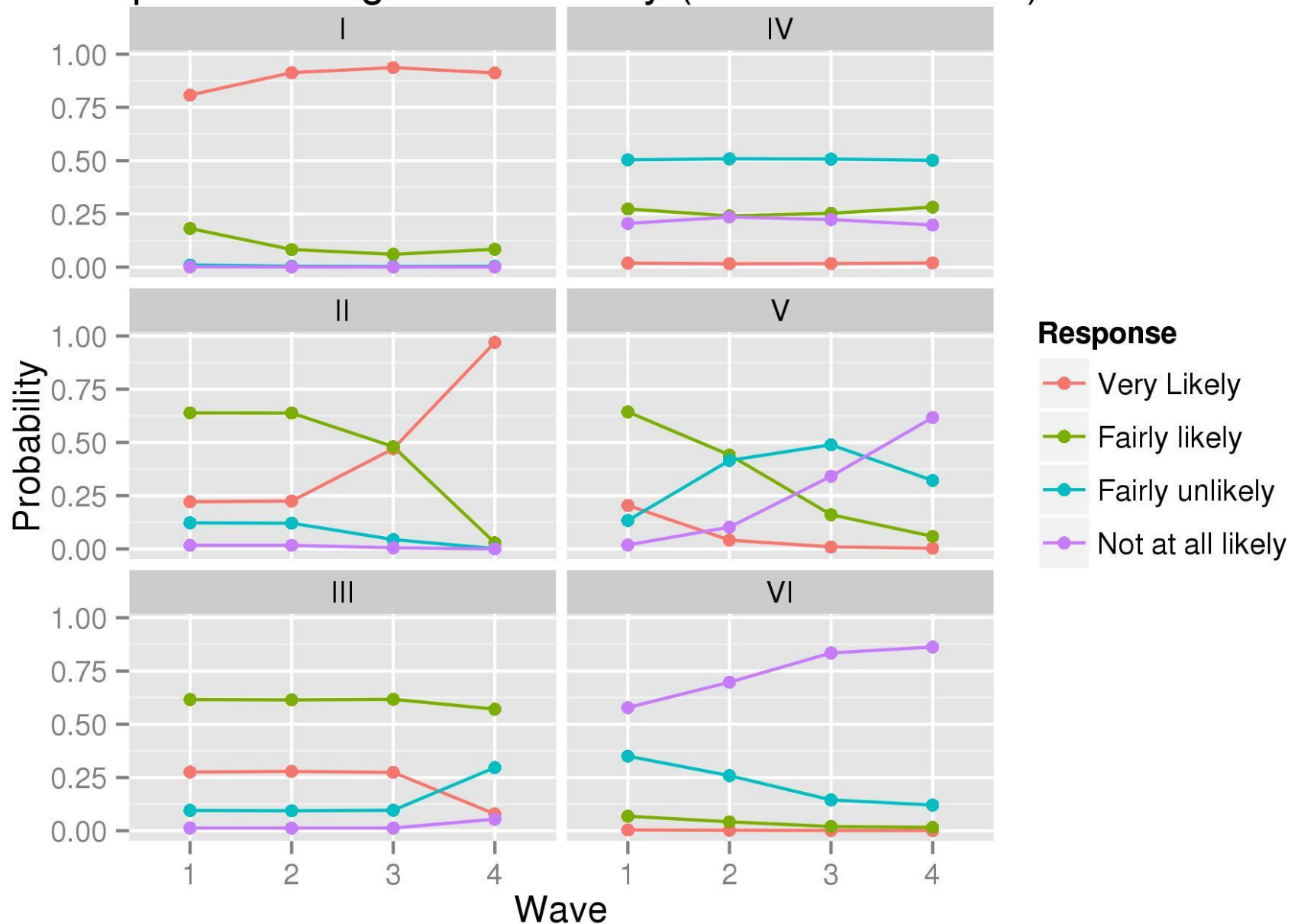
Response Patterns in Class I and II

| Wave				Number	Class Percent
I	II	III	IV		
Class I					
Very likely	Very likely	Fairly likely	Very likely	158	5.8
Very likely	Fairly likely	Very likely	Very likely	277	10.2
Fairly likely	Very likely	Very likely	Very likely	411	15.1
Very likely	Very likely	Very likely	Very likely	1700	62.5
Class II					
Fairly likely	Very likely	Fairly likely	Very likely	104	9.6
Very likely	Fairly likely	Fairly likely	Very likely	132	12.2
Fairly likely	Fairly likely	Fairly likely	Very likely	265	24.5
Fairly likely	Fairly likely	Very likely	Very likely	318	29.4

Aspirations to go to University (six latent classes)
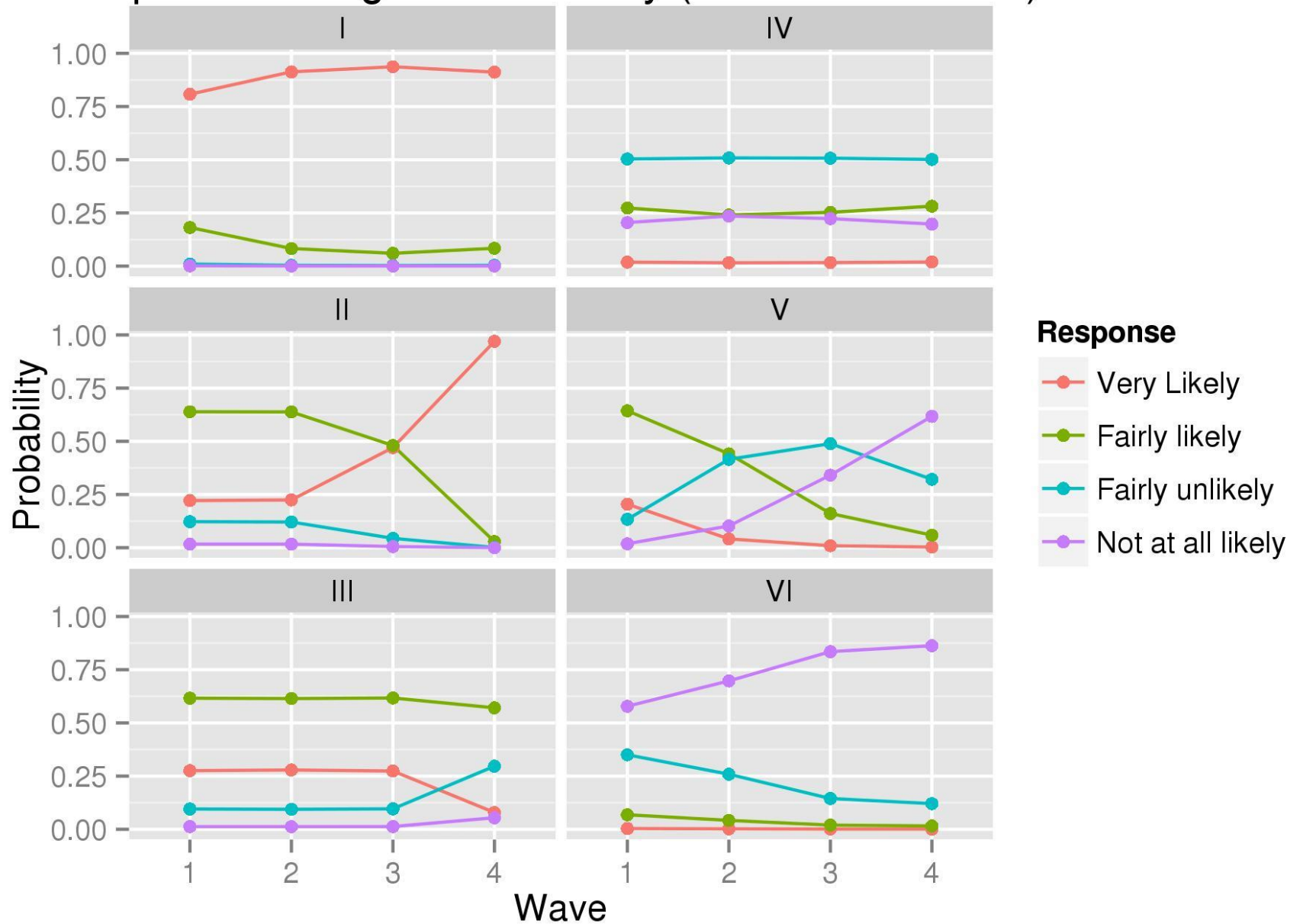
Response Patterns in Class IV

| Wave				Number	Class Percent
I	II	III	IV		
Fairly unlikely	Not at all likely	Fairly unlikely	Fairly unlikely	16	2.0
Fairly unlikely	Fairly likely	Fairly unlikely	Fairly likely	19	2.3
Not at all likely	Not at all likely	Fairly unlikely	Fairly unlikely	20	2.5
Fairly unlikely	Fairly likely	Fairly unlikely	Fairly unlikely	21	2.6
Fairly likely	Fairly unlikely	Fairly unlikely	Fairly likely	22	2.7
Not at all likely	Fairly unlikely	Fairly unlikely	Fairly unlikely	26	3.2
Fairly unlikely	Fairly unlikely	Fairly likely	Fairly unlikely	31	3.8
Fairly likely	Fairly unlikely	Fairly likely	Fairly unlikely	32	3.9
Fairly unlikely	Fairly likely	Fairly likely	Fairly unlikely	35	4.3
Fairly unlikely	Fairly unlikely	Not at all likely	Fairly unlikely	35	4.3
Fairly unlikely	Fairly unlikely	Fairly likely	Fairly likely	38	4.7
Fairly unlikely	Fairly unlikely	Fairly unlikely	Fairly likely	42	5.1
Fairly likely	Fairly unlikely	Fairly unlikely	Fairly unlikely	61	7.5
Fairly unlikely	Fairly unlikely	Fairly unlikely	Not at all likely	71	8.7
Fairly unlikely	Fairly unlikely	Fairly unlikely	Fairly unlikely	87	10.7

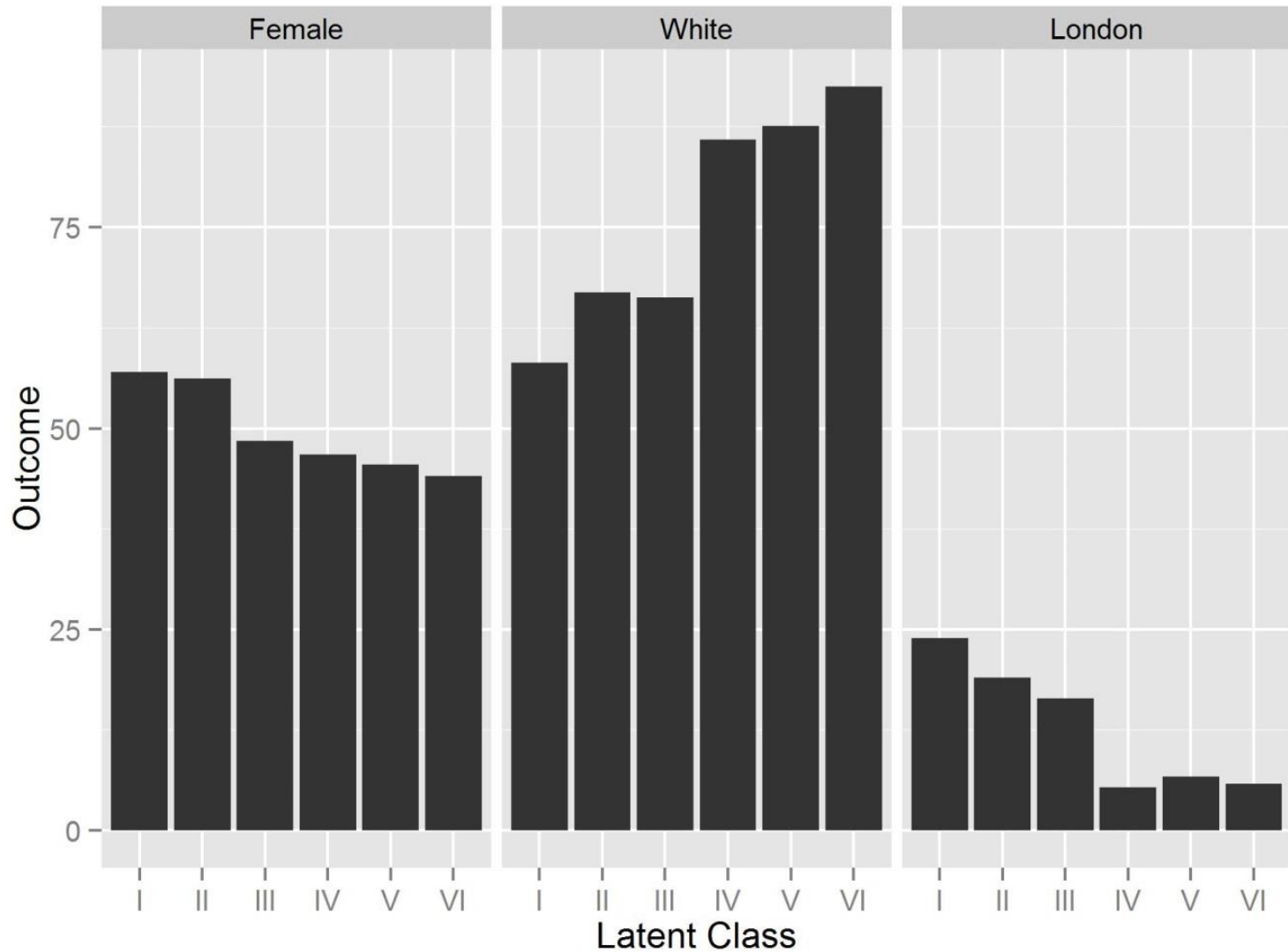# Variation Between Classes in Educational Achievement and Destinations
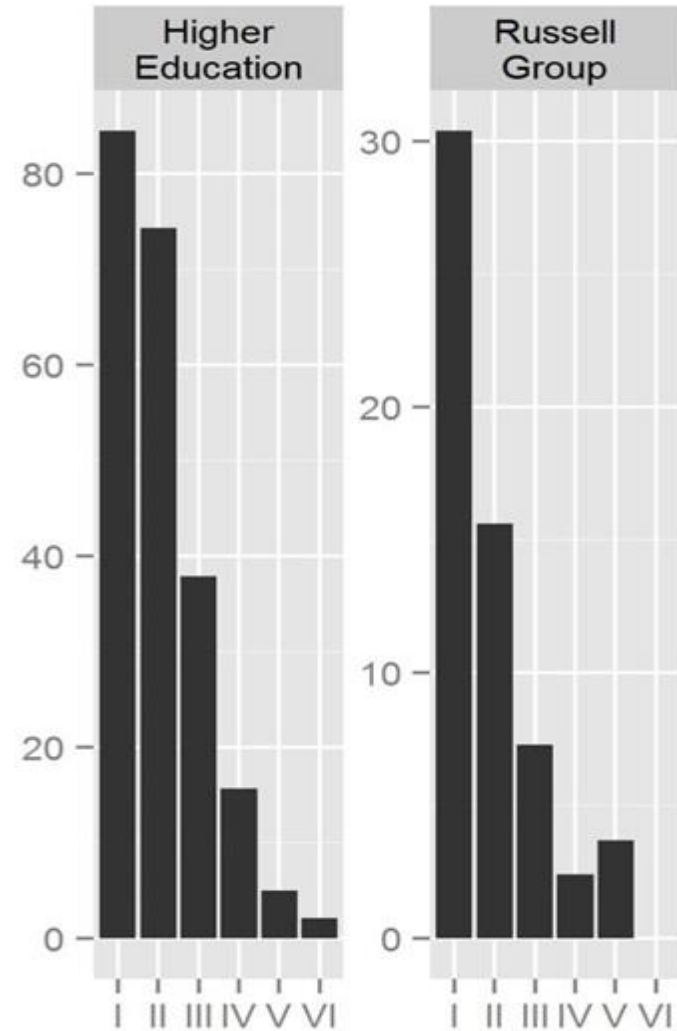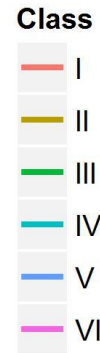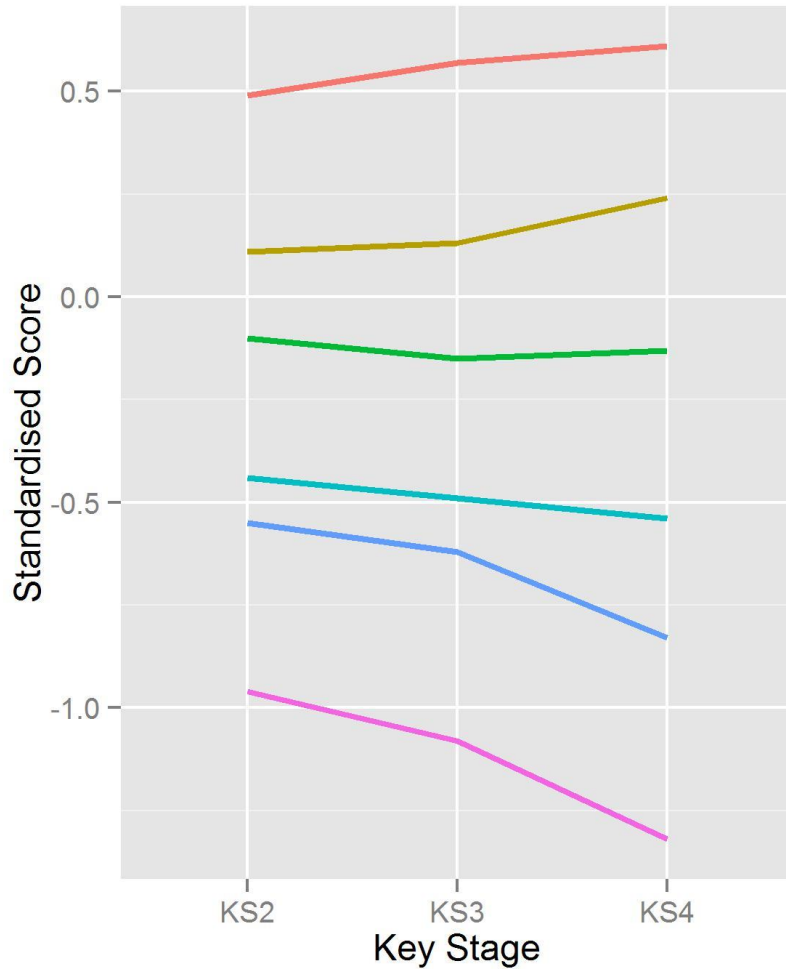
Variation in Truancy Between Classes
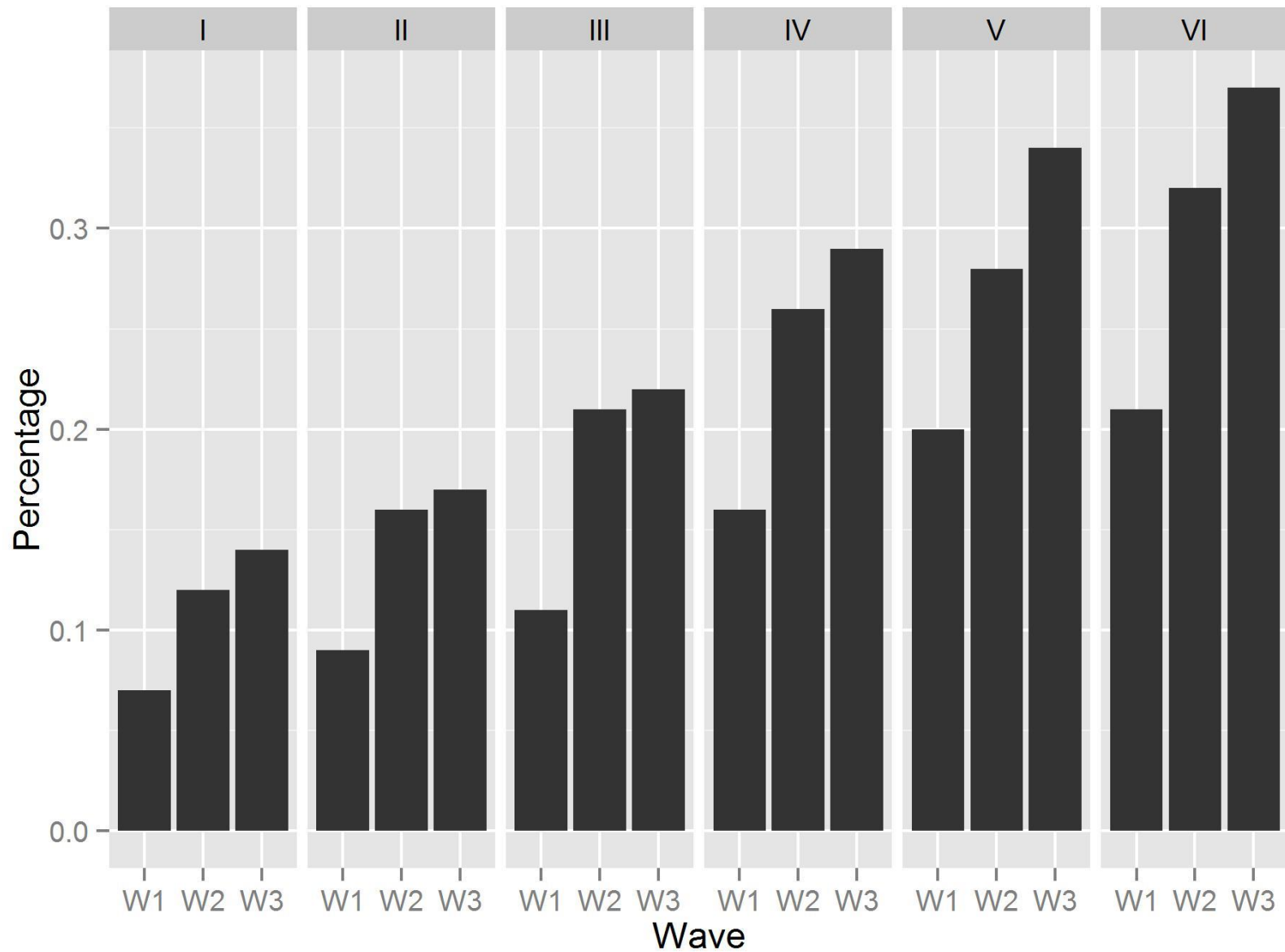
Variation Between Classes by Family Background
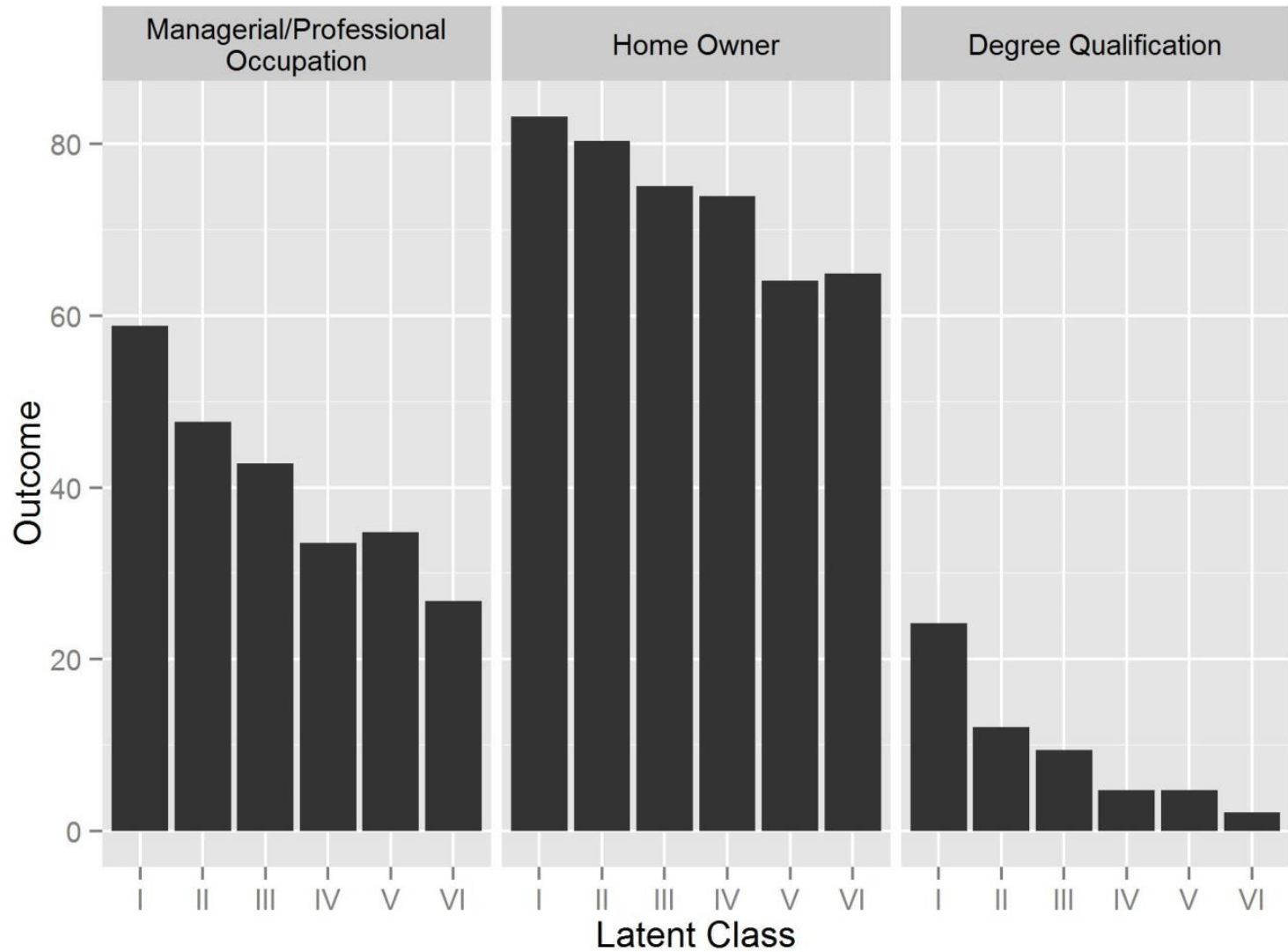
Variation Between Classes by Gender and Ethnicity

Conclusions

- Identify six trajectories in aspirations
- Trajectories strongly patterned by behavioural and family background characteristics
- Less than 40 percent of young people who reported themselves fairly likely to go to university actually went to university
- Highlights limitations of aspirations in raising participation in higher education

Tea/coffee break and poster session

15:20-15:50

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Inequality in Attainment from Preschool to Primary

Longitudinal Evidence from Ethiopia, India, Peru and Vietnam

CLOSER Conference – 30 Nov 2015

Milo Vandemoortele
Centre for Analysis of Social Exclusion (CASE)
London School of Economics (LSE)

Motivation

- Intergenerational transmission of inequality in low- and middle-income countries

- A driver of intergenerational inequality is gaps in attainment

- Gaps usually emerge at young ages and widen over time

- Preschool education* is a relevant policy area

Why focus on low- and middle-income countries?

- There is a lot of evidence from high-income countries

- Limited information from low- and middle-income countries

- There are several reasons to believe there would be a difference in the relationship between preschool and attainment in low- and middle-income countries

High income vs low- and middle-income countries

- Malnutrition

- Early childhood education infrastructure and quality of instruction

- The conditions in which children grow up are for the most part vastly different (e.g. child work, access to quality educational resources)

What do we know from high-income countries?

- Quality is key
- Disadvantaged children benefit most
- Improves school readiness, reduces repetition rates and avoids dropout
- Cost–benefit analyses make a strong case for early childhood interventions (Heckman & co-authors)
- Enables higher female workforce engagement
- Some evidence shows that the long-term effects are weak

Research questions

1. Who typically attends preschool?
2. Does attending preschool offer advantages in terms of attainment?
3. How does the role played by preschool in attainment evolve over time?
4. How does this differ across countries, and why?

Data

- Young Lives data set
- Ethiopia, India (Andhra Pradesh & Telangana) , Peru and Vietnam
- ~2,000 children per country
- Young Cohort: born in 2001/02
- Ages one, five, eight and 12 years

Sample design

- **Stage 1:** Ethiopia, India and Vietnam
  - Non-probability sampling of 20 sites per country
  - Chosen to capture each country's regional, geographic, ethnic and other diversity

- **Stage 1:** Peru
  - Probability sampling of 20 sites (districts)
  - Excluding the wealthiest 5 percent of districts

- **Stage 2:** All
  - Random selection of 100 children within each site.

Population of inference

Children born at the beginning of the millennium…

- …in **Ethiopia** from the 20 selected villages and *kebeles* (urban neighbourhoods) that have higher levels of food deficiency and relatively good road access

- …in **India** from the 20 selected *mandals* (akin to a county) from six (out of 23) districts of the states of Andhra Pradesh and Telangana

- …in **Peru**, excluding those from the wealthiest 5 per cent of districts in 2000

- …in **Vietnam**, from 20 selected *communes* (akin to a council) selected from a district in one of five (out of nine) regions

Definitions

- **Preschool:** when child was ~5 years old, caregiver was asked:

  "Since the age of 36 months, has the Young Lives child regularly attended a formal or informal pre-school?"

- **Preschool type:** *"Who runs/ran this pre-school?"*
  - Grouped into None, Public and Private*

- **Preschool quality:** No information on this*

- **Attainment:** Maths test scores, standardised (z-scores)
  - Test given at five, eight and 12 years old

Key descriptives

	Ethiopia	India	Peru	Vietnam
Preschool attendance, by type (%)				
None	75.1	13.1	16.5	9.3
Private	19.4	29.6	11.8	9.8
Public	1.4	57.1	70.6	78.0
Other	4.1	0.2	1.1	2.9
n	*1912*	*1950*	*1963*	*1969*
Days per week in preschool				
Average	5.0	5.7	4.9	5.3
n	*476*	*1693*	*1639*	*1784*
Hours per day in preschool				
Average	6.8	5.0	4.3	6.0
n	*476*	*1692*	*1639*	*1784*

Methods

The model for child i in household j at age a is as follows:

$$Y_{ij,a} = b_0 + \beta_1 P_{ij,5} + \beta_2 X_{ij,a} + \beta_2 Z_{ij,a-1} + \alpha_{j,a} + \varepsilon_{ij,a}$$

Where:

$Y_{ij,a}$ is the Maths test score (z-score) measured at ages five, eight and 12 years;

$P_{ij,5}$ is a preschool variable measured at age five years;

$X_{ij,a}$ is a vector of child-, household- and schooling-level characteristics;

$Z_{ij,a}$ is a vector of household resources and h-f-a lagged one time period;

$\alpha_{j,5}$ represents the site-level fixed effects at age five years;

$\varepsilon_{ij,a}$ is the error term

I run three sets of regressions per country at each age: five, eight and 12

Controls

Child level: height-for-age (lagged one time period); gender, minority (5 years old); language of maths test and age in months (at each age)

Household level: caregiver's education, maternal employment, parental expectations (5 years old); household size (at each age); wealth and expenditure quintile group (lagged one time period)

Schooling level: primary school type, highest grade completed (at 8 and 12 years old)

Possible Unobserved Factors

- Parenting ability
- Child ability (both cognitive and non-cognitive)
- Access to learning material (e.g. books, libraries, toys)
- Learning disabilities
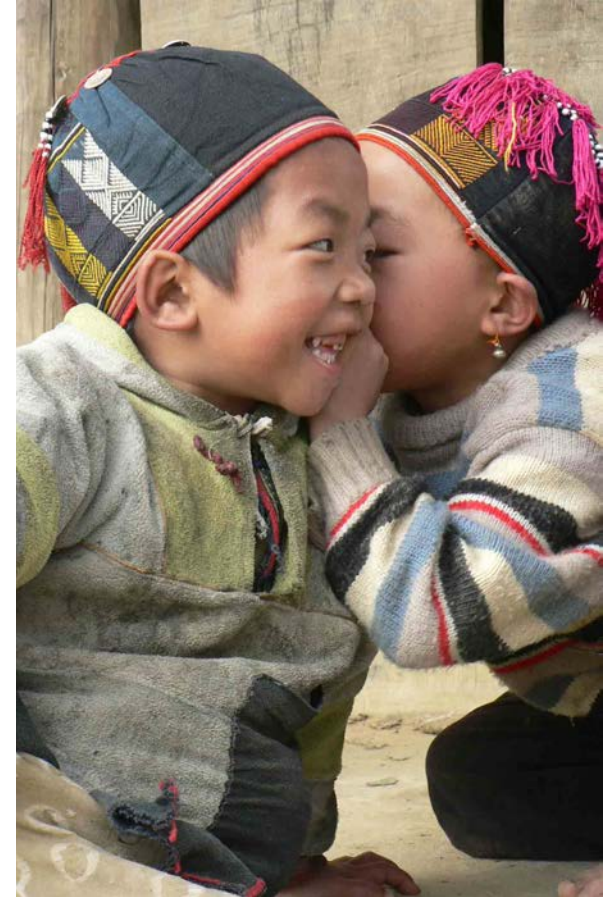
Findings

1. Association* is strong in all countries at 5 years old, and fades as the child gets older

2. Association is usually stronger with private preschool (vs no) attendance, than public preschool (vs no) attendance, except in Vietnam

3. Schooling-level variables' association with maths scores get progressively stronger with time, relative to preschool

4. Preschool attendance is a strong predictor of years of schooling completed, except in India

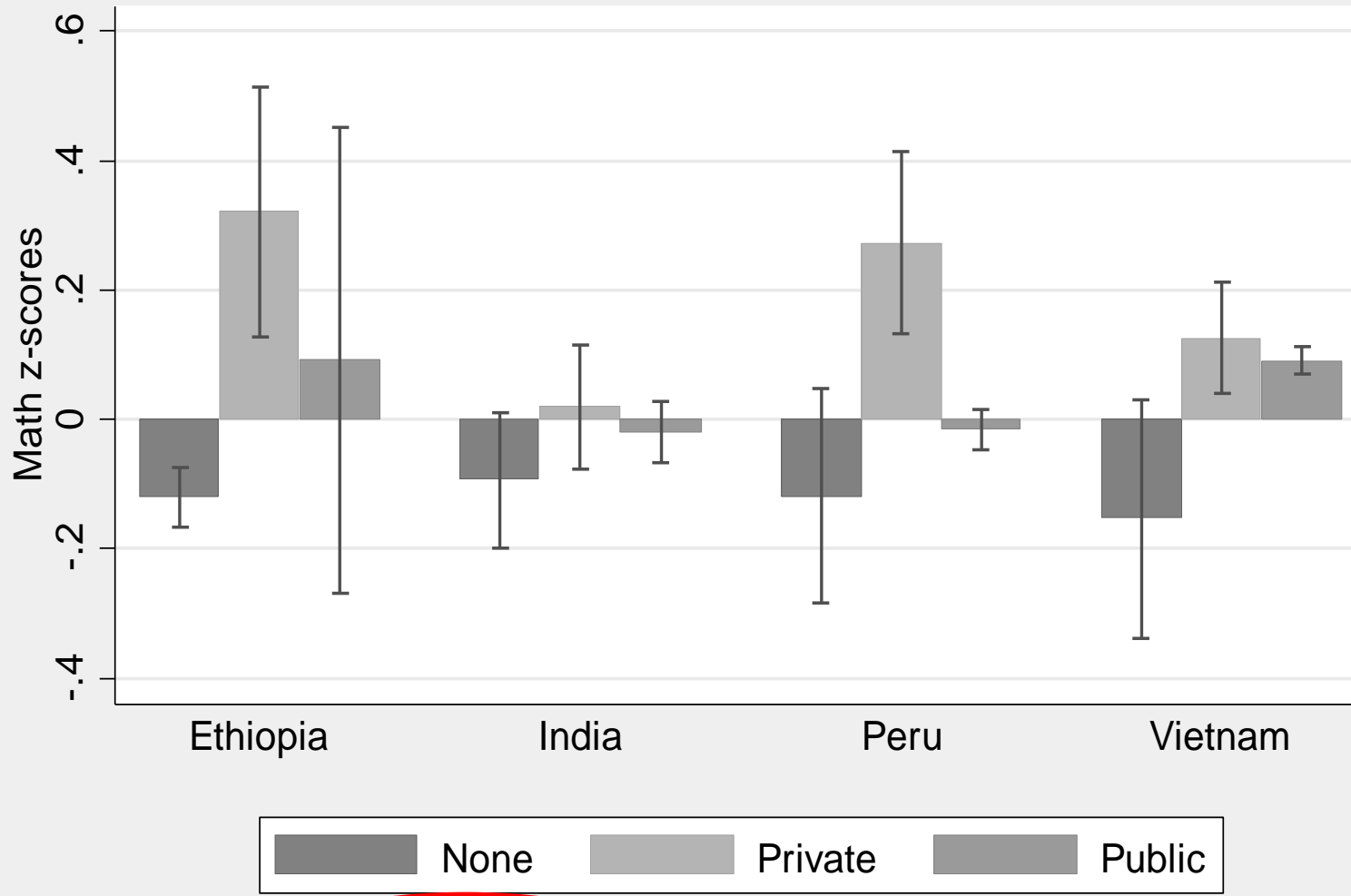Math z-scores at 5yrs years old
By preschool attendance
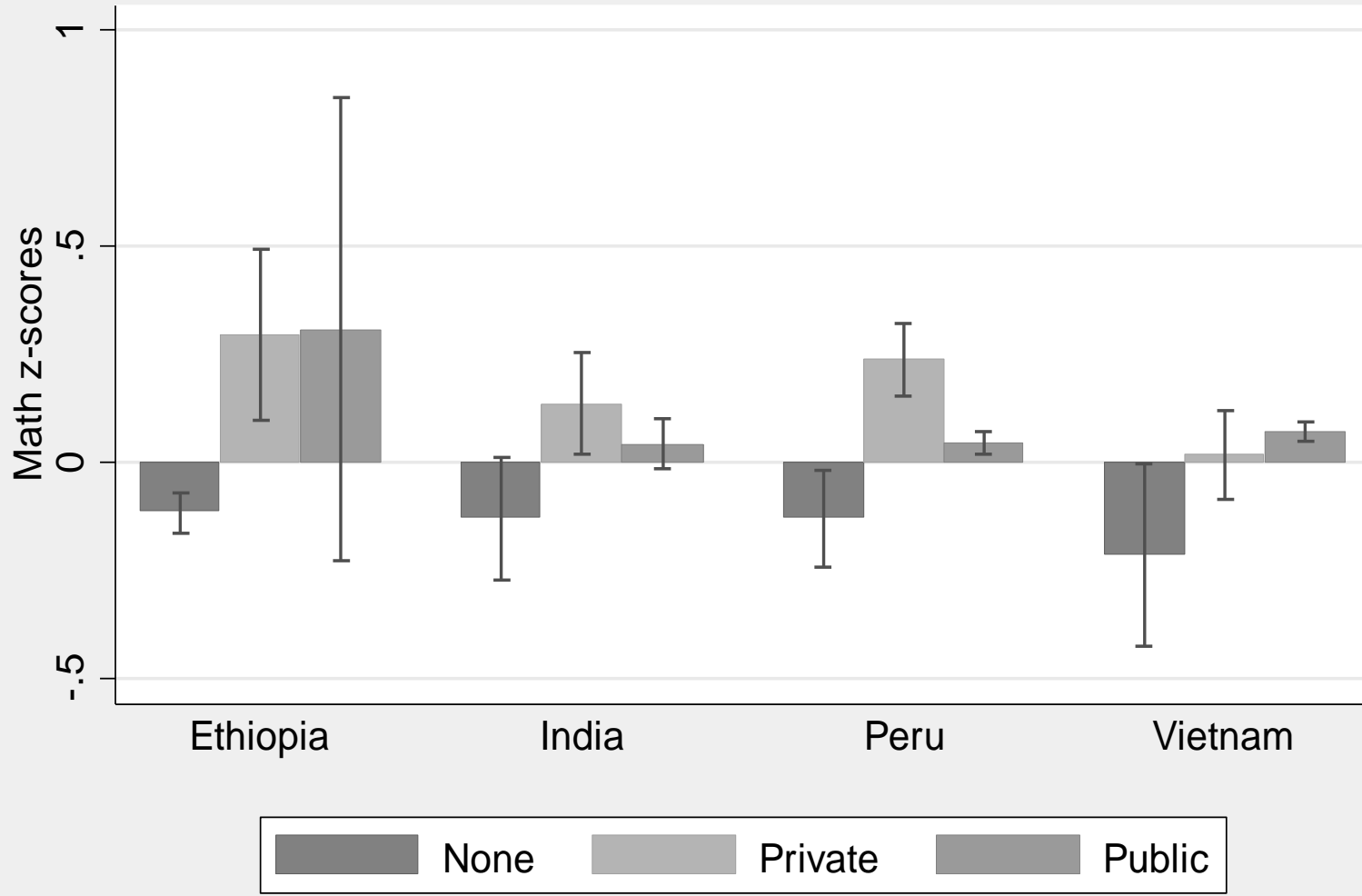
Controlling for child- household-level variables and site level fixed effects

Strong association between preschool* and maths scores at 5 years old.

Caregiver's education is associated with 0.04 SD boost in math scores across the countries and rounds.

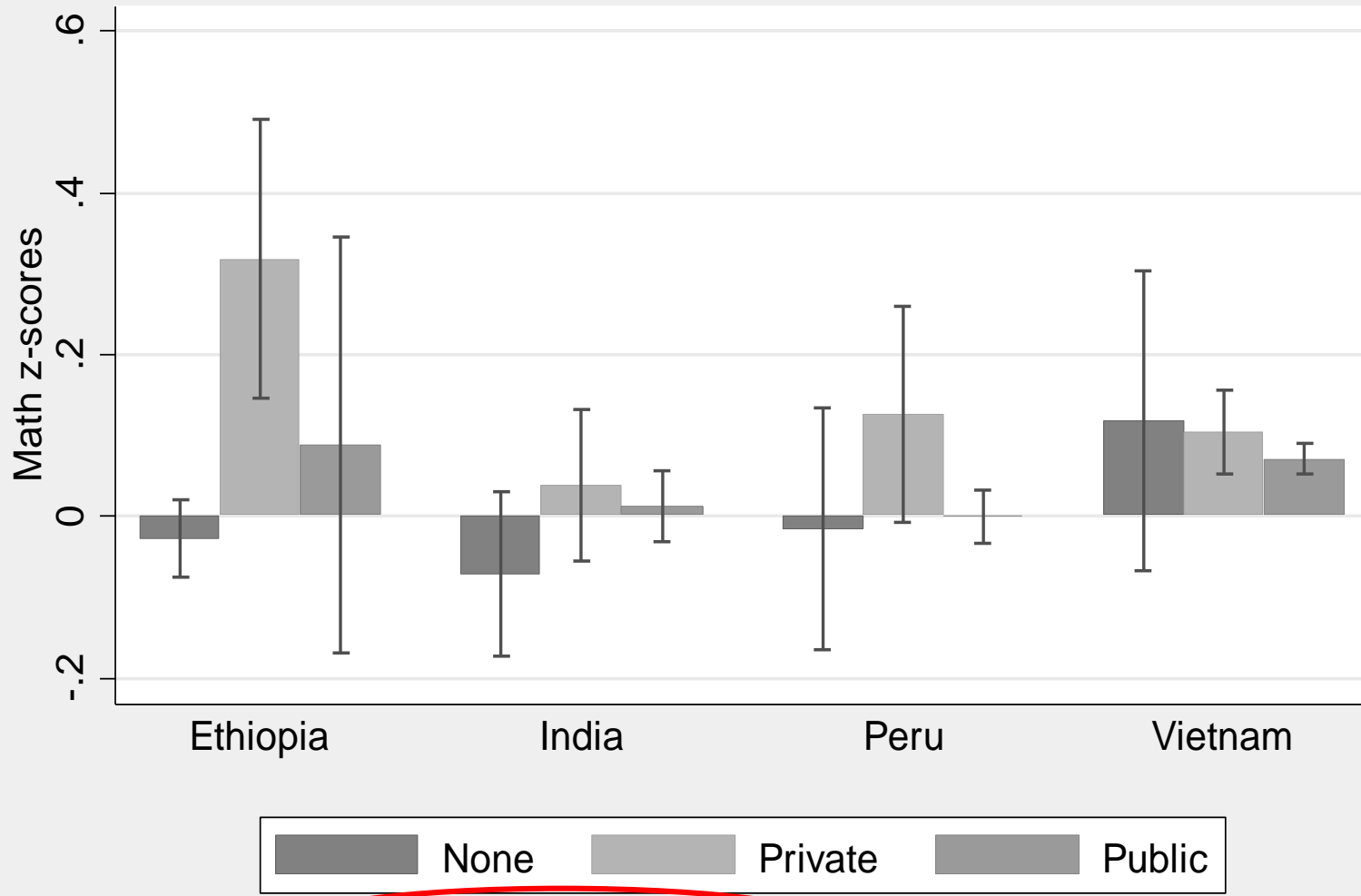Math z-scores at 8yrs years old

By preschool attendance

Controlling for child- household-level variables and site level fixed effects

At 8 years old, the advantage of attending a private preschool persists in all countries except India.

In Vietnam public preschool attendance also offers an advantage.

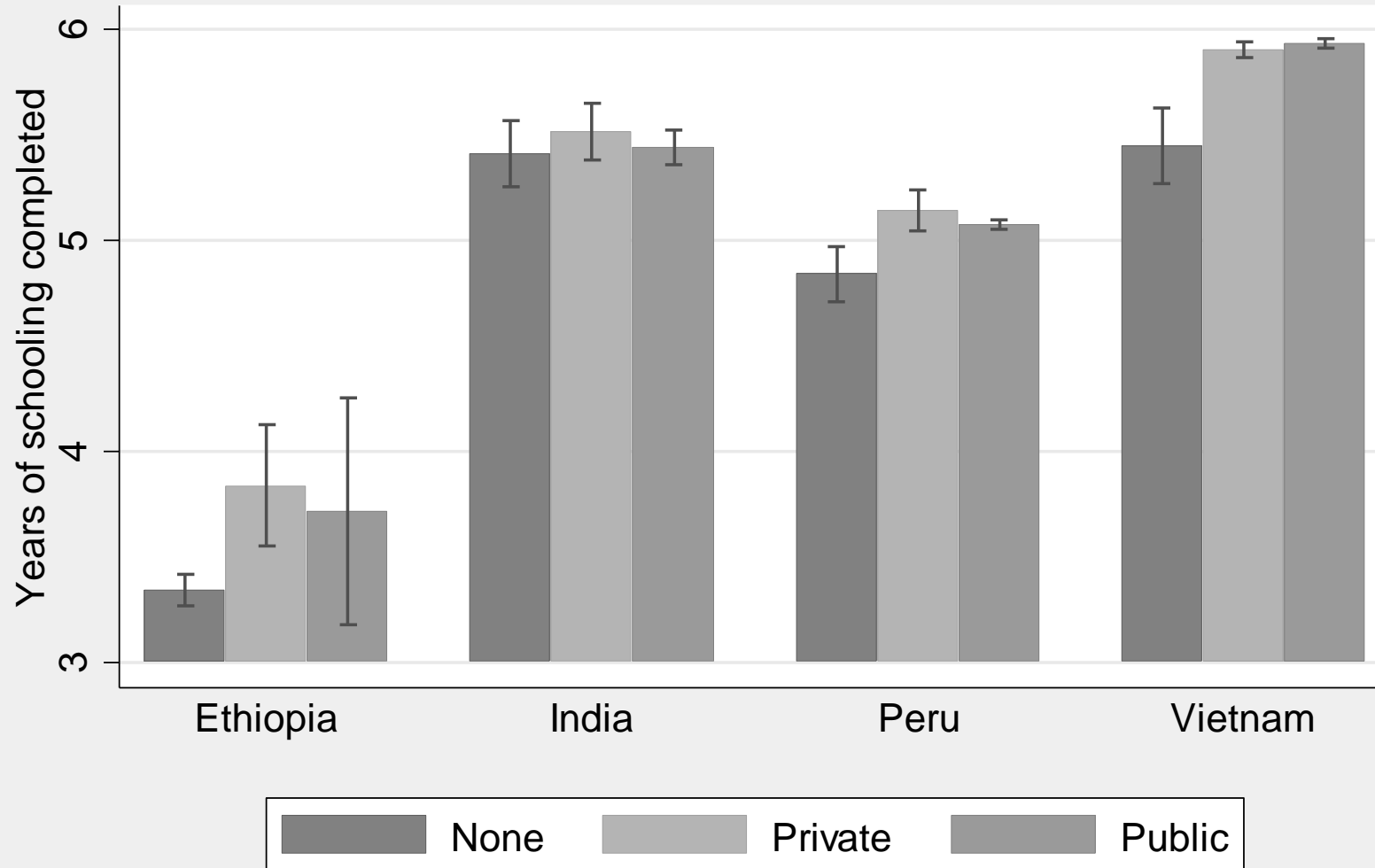Math z-scores at 8yrs years old
By preschool attendance

When you account for schooling-level variables*, this advantage disappears in all countries, except Ethiopia.

At 12 years old*, when accounting for schooling-level variables the association fades across all countries.

Years of schooling completed at 12yrs years old
By preschool attendance

Controlling for child- household and schooling-level variables and site level fixed effects

Preschool is an important predictor of schooling, except in India.

Conclusion

- Preschool attendance appears to have a direct and an indirect association, through schooling, with maths scores, except in India

- In India, there is only a direct association at five years old. While years of schooling becomes a more important predictor of math scores, preschool does not predict it. Rather gender is a strong predictor of years of schooling, unlike any of the other countries.

- If private preschools are a rough proxy for better quality preschool education, then it appears that in all countries (except for India) better quality preschool education is associated with higher attainment at 5 years old

Comments welcome!

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