



Effects of education on parenting

Evidence using the NCDS

Ricardo Sabates & Leon Feinstein

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Overview

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Introduction

- Within the family context, the importance of parenting on child development has been well documented
- Less well documented is the relationship between parental education and parenting.



Theoretical framework

- Definition of parenting

“Parenting encompasses different aspects of parent-child interactions that are essential for normal cognitive and social development (Ramey and Ramey, 2000)”

- Elements of parenting

1. Warmth and affection accompanied by discipline and control strategies.
2. Parental beliefs and skills contribute both to the application of teaching styles and to the enhancement of parental educational behaviours.
3. Accurate aspirations and expectations.
4. The provision of a cognitive stimulating home environment should not work in isolation.
5. Parental involvement in children’s activities is not bounded by the home context exclusively.



How does education affect parenting?

- By providing parents with important cognitive resources that enable them to better support and facilitate their children's learning
- By improving family contexts with subsequent impacts on parent-child relationships
- By facilitating parents' ability and willingness to seek out and process advice and information about rearing their children, also leading to better decision-making generally and greater efficiency in meeting goals.
- By improving the accuracy in rating children's school performance



Focusing on processes...

- Distal parent characteristics (education) → parents' beliefs and behaviours → developing children's skills, values, motivation, and self concepts → children's engagement in a wide variety of activities → children's educational attainment. (Eccles, 1994, 2004).
- Feedback effect from child outcomes to parent's cognitions and skills (Davis-Kean, 2005)
- Mediating and moderating roles of education



Empirical evidence

- Empirical evidence has found that more educated parents:
 - are more likely to show warmth,
 - to have teaching styles that promote children's development and encourage them to do well at school,
 - to provide cognitive stimulating environment and literacy activities in the home,
 - to read to their children than parents with low levels of education.
- However, this empirical evidence has not been able to establish causality.



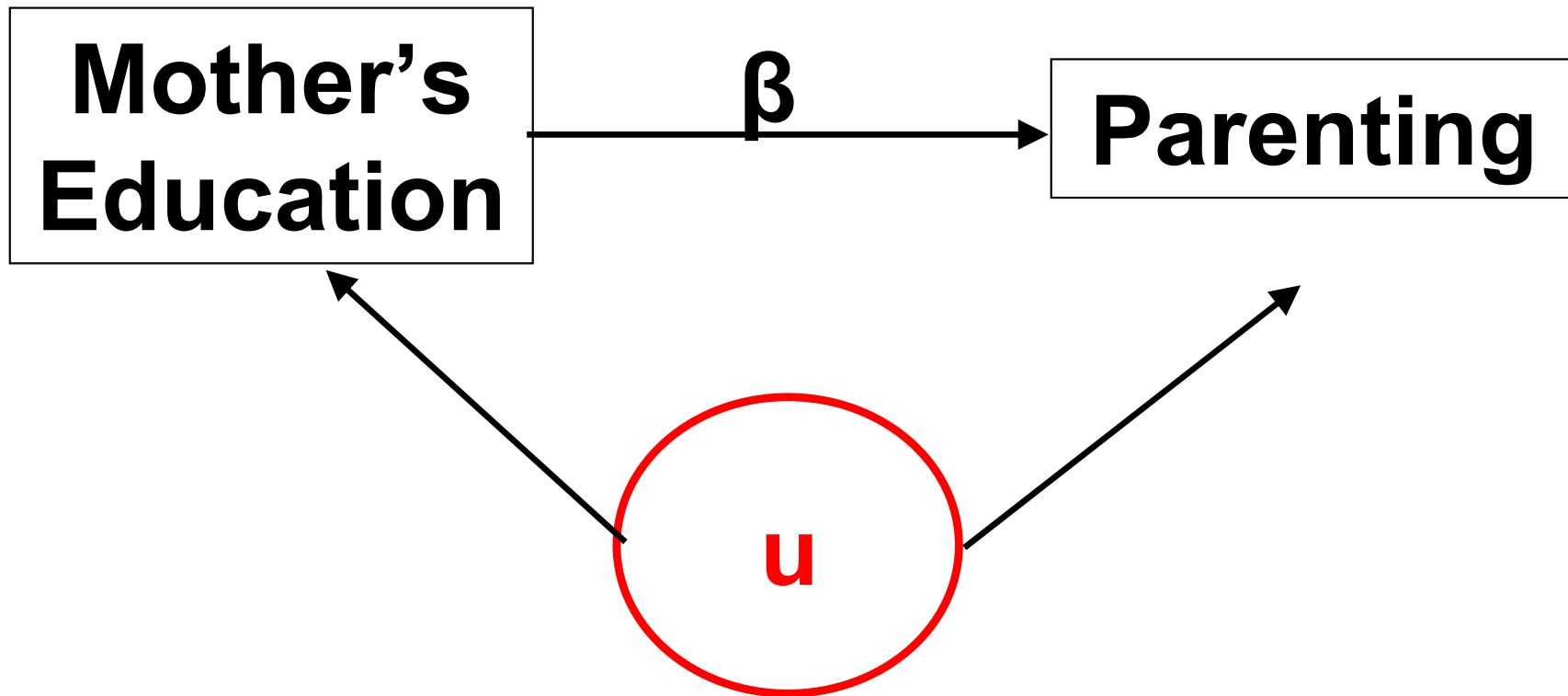
A more econometric approach

- Aim: to estimate the effect of parents' education on parenting.
- To do this:
 - Educational effects are identified using the increase in minimum school leaving age from 14 to 15 in 1947.
 - IV estimation techniques are used to deal with unobservable confounders in the relationship between parental education and parenting.
- The use of this instruments is not novel (Chevalier, Oreopolus et al, Harmon & Walker).
- The application to this context, however, is interesting.
- To our knowledge, only Magnuson (2003) has found evidence on the causal links between parental education and the provision of more stimulating home environments in the US

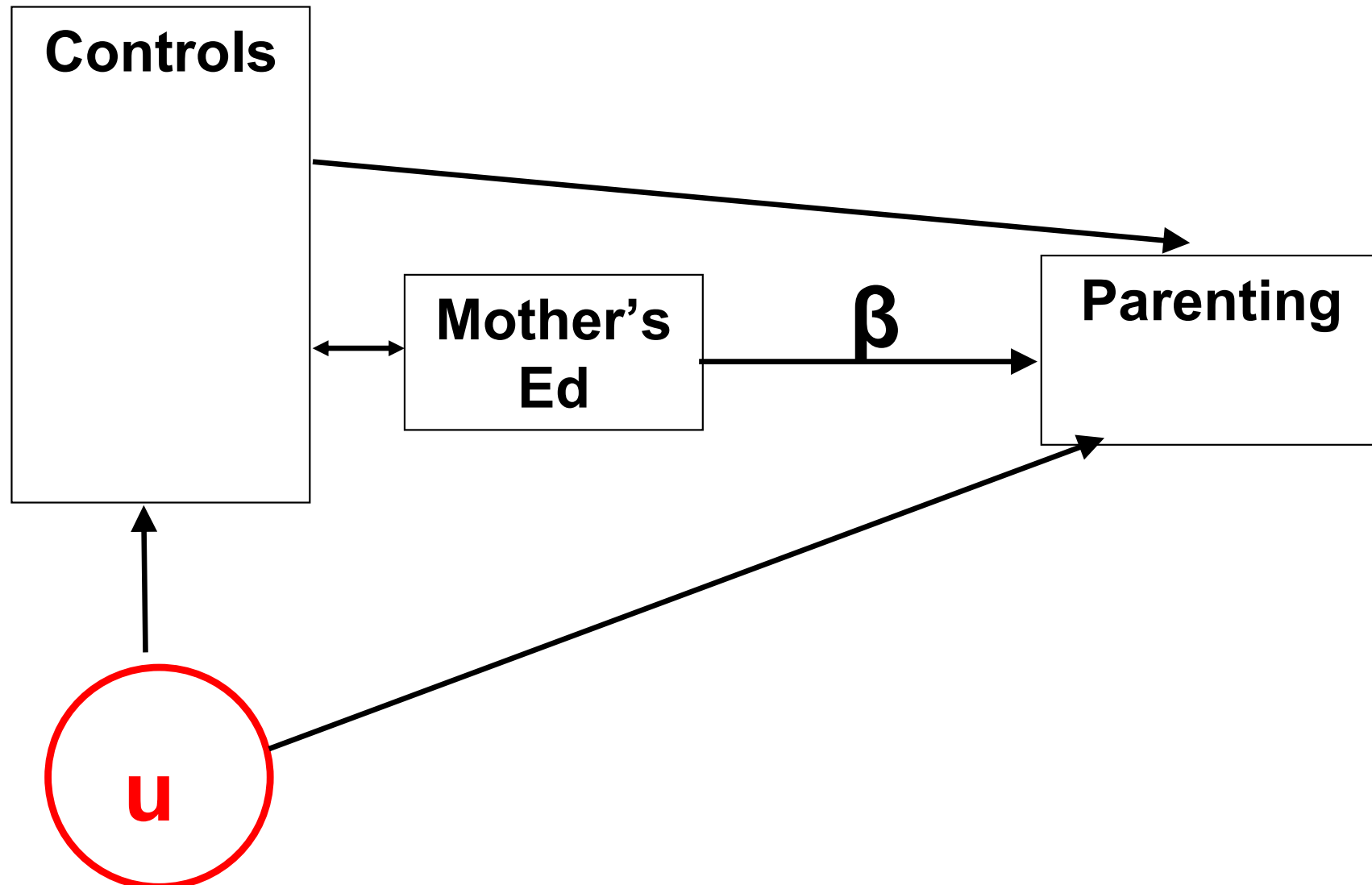


Estimation Issues

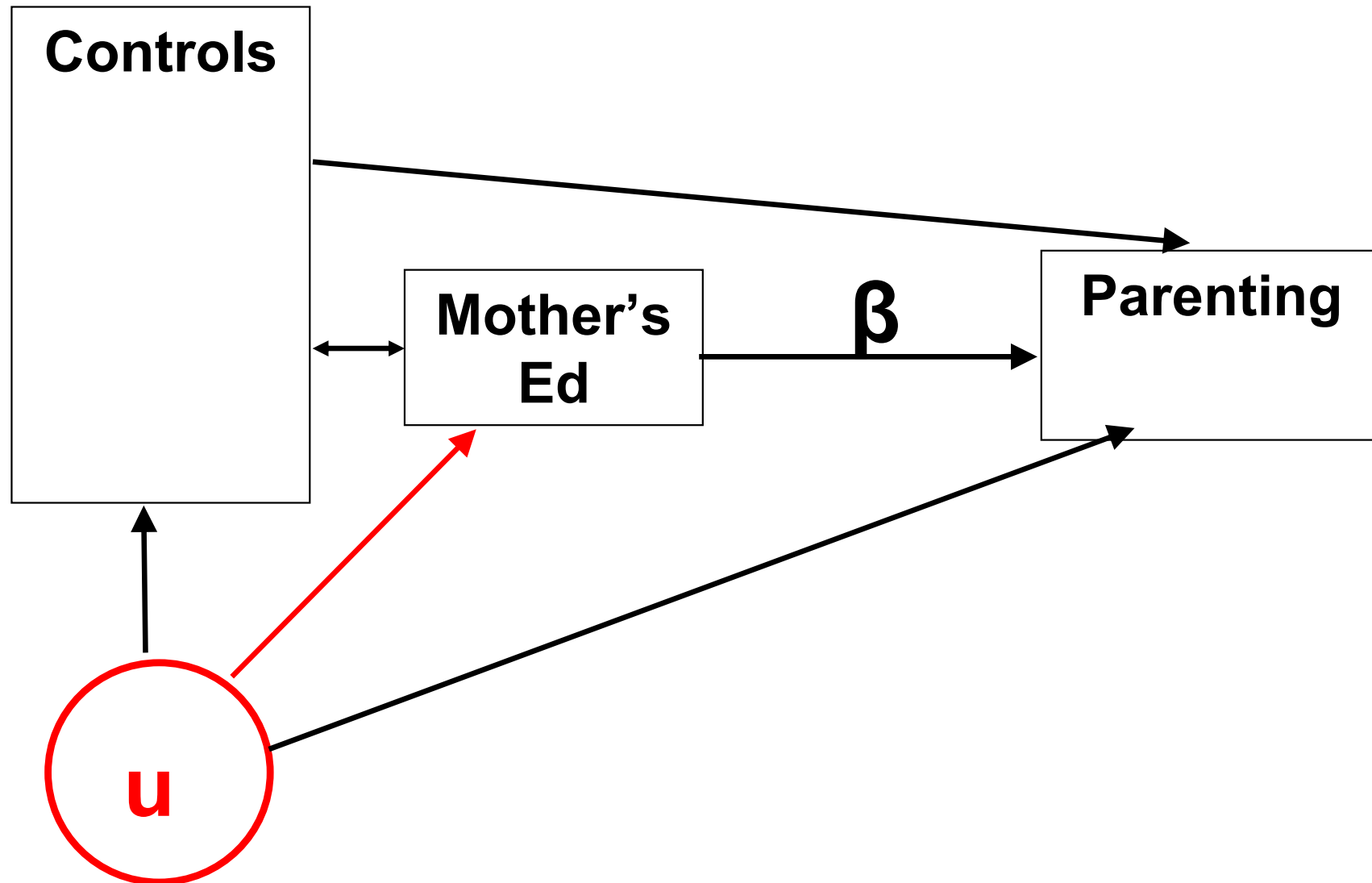
- Causality and unobservables



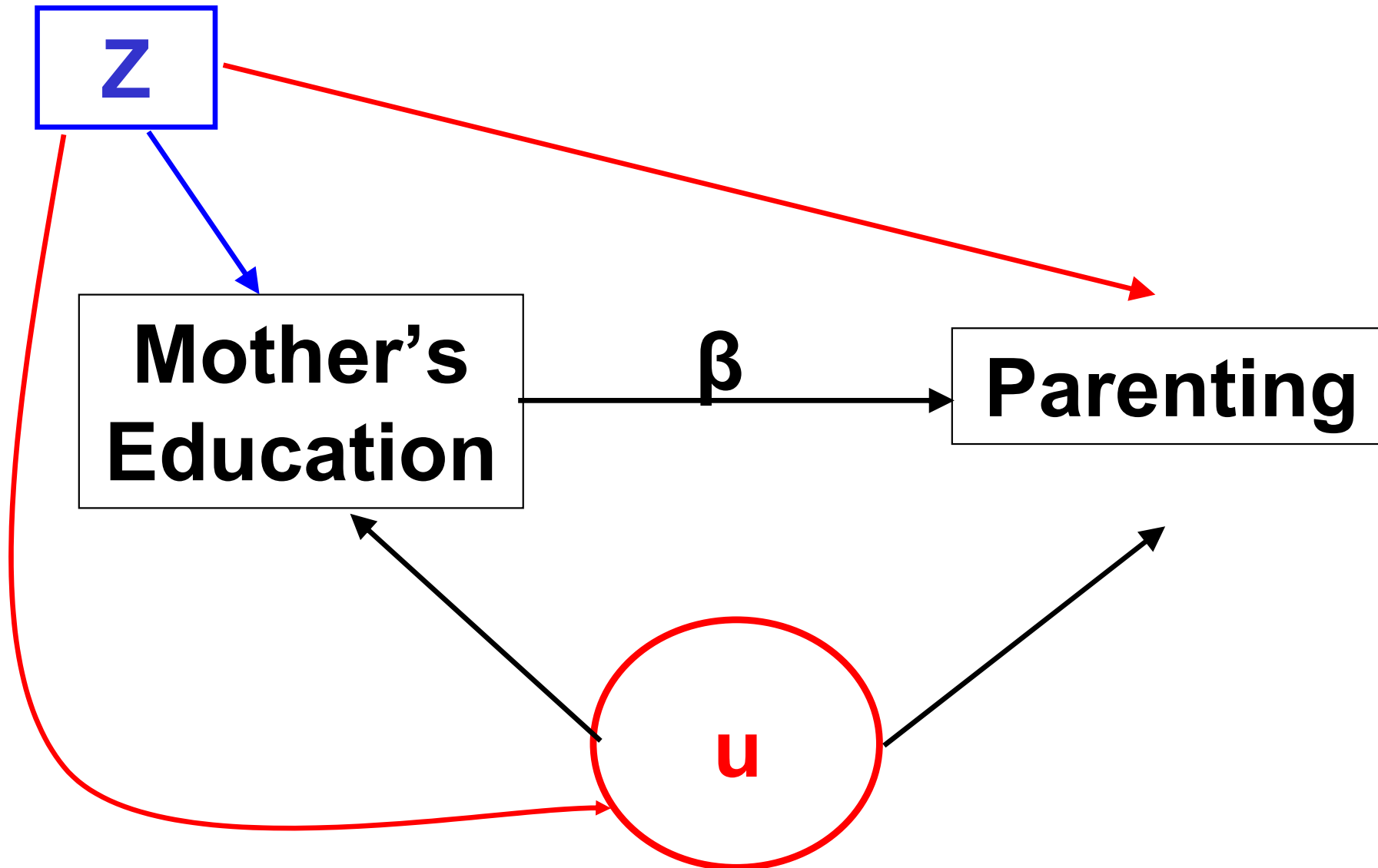
Dealing with unobservables with control variables



But...

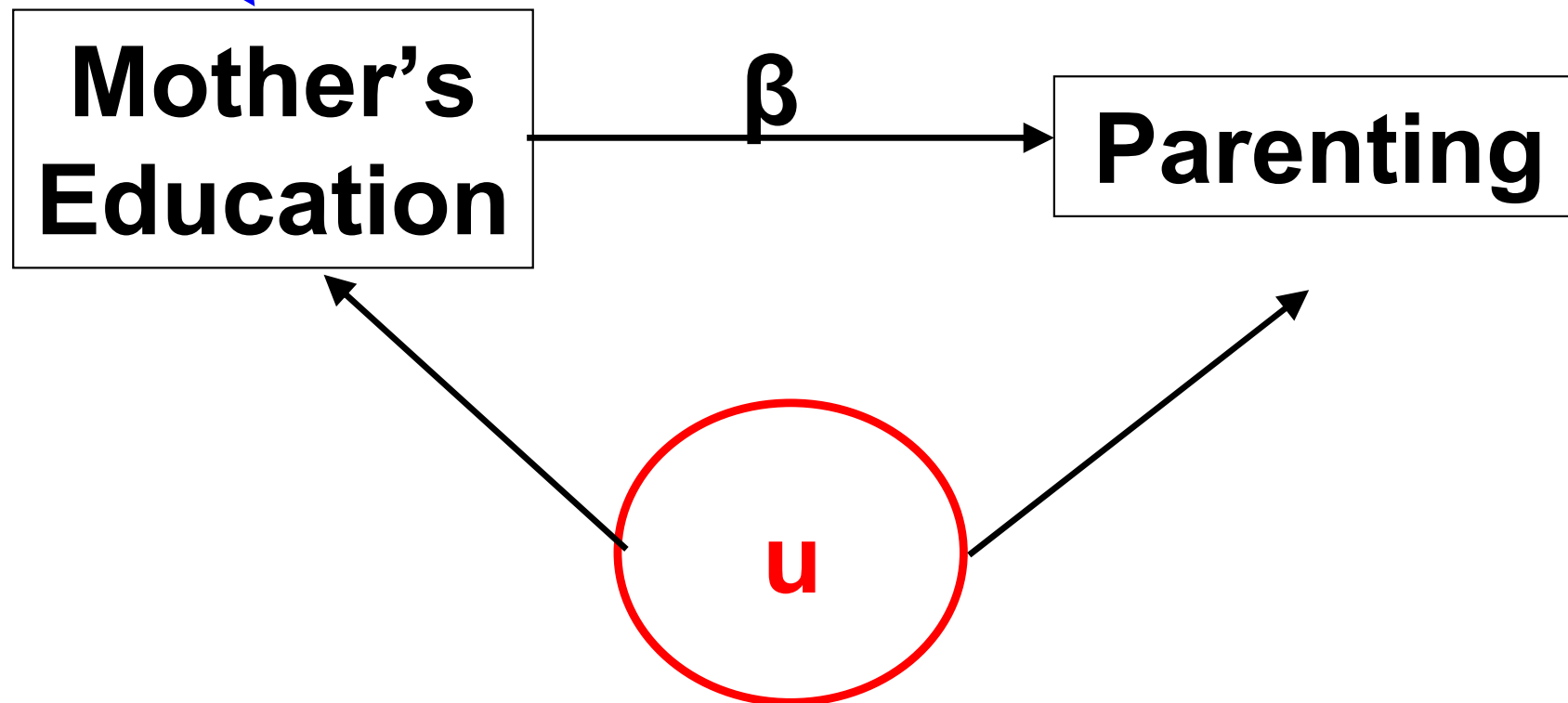


The IV solution



Our IV model for this paper

Z = Change in min leaving age



Equations for an IV estimation

$$Y_{ji} = X1'_j \alpha_1 + X2'_i \alpha_2 + \beta_m S_m + \beta_f S_f + e_{ji}$$

$$S_m = Z'_m \delta_m + X1'_m \alpha_3 + e_m$$

$$S_f = Z'_f \delta_f + X1'_f \alpha_4 + e_f$$

Y = parenting

S = schooling: mother and father

X1 = parental background factors known to affect education and parenting

X2 = children's characteristics

Z = Instrument: change in minimum school leaving age



Interpretation of IV estimates

- Estimates using these instruments are biased towards the group more affected by the policy and as such are interpreted as Local Average Treatment Effect.
- Chevalier (2004) proposes two possible groups.
 - The first group comprises pupils who wanted to leave school at the first opportunity.
 - The second group encompasses the first one plus those who through screening or positional ambition stay-on in schooling to maintain position in the educational scale.



Data

- NCDS
- Outcome: parenting (parents of cohort members)
- Parental education: school leaving age for mothers & fathers.
- Instrument: random variation induced by the change of minimum SLA legislation (1947)

Parents aged 25+ in 1958 → minimum SLA 14

Parents 24 or younger in 1958 → minimum SLA 15

- Other controls: parents' socio-economic & demographic characteristics, regional information, cohort member characteristics.



Outcome variable: parenting

- It is possible to obtain the following elements of parenting in the NCDS:
 - children experiences of educational behaviours,
 - Mother or father read to the child
 - Mother or father take the child out
 - parental educational behaviours,
 - Parents are active readers (newspapers or magazines; books or technical journals)
 - interest in child schooling
 - Teacher's report of parents interest on child schooling
 - Parents take initiative to discuss the child progress
 - parents' expectations on children's education
 - Parents expect the child to continue schooling after compulsory education
- Use factor analysis to generate an index of parenting



Validation: index of parenting & children's outcomes

	Educational				Behavioural & Emotional	
	Math	Reading	Drawing	Teacher's assessment	Teacher BSAG	Rutter parent scale
Parenting Style	0.061 (0.006)**	0.091 (0.006)**	0.051 (0.006)**	0.087 (0.006)**	-0.631 (0.057)**	-0.009 (0.0009)**
# obs.	10,934	10,947	10,770	11,006	10,928	11,007
R ²	0.072	0.161	0.052	0.158	0.062	0.053

Source: NCDS. Notes: All estimations control for gender, parental education, parental socio-economic status, age of the mother, single parenthood, overcrowding ratio and index of family difficulties. Standard errors in parenthesis. Asterisks (*, **) indicates significance at 5 and 1% level, respectively.

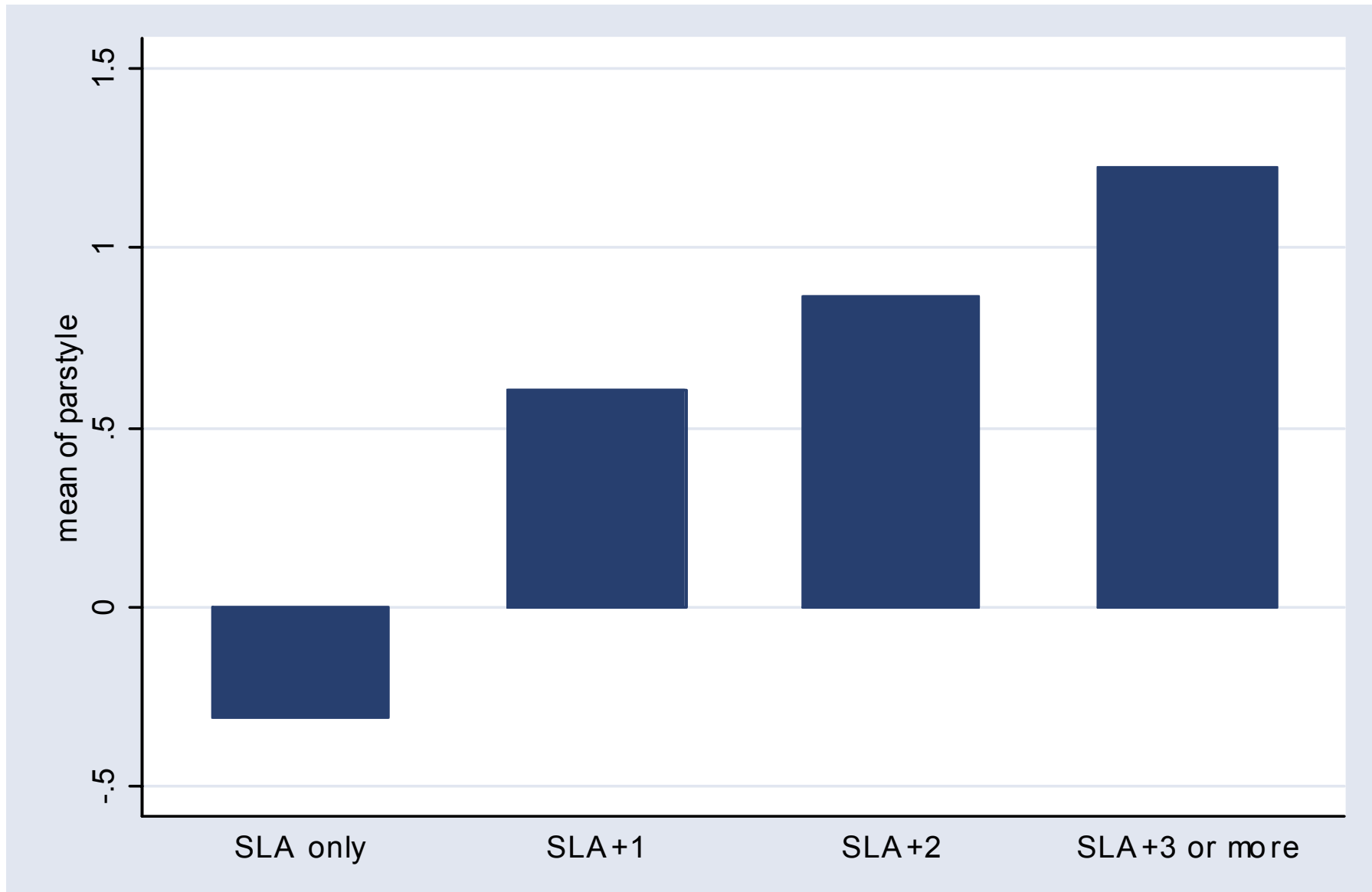


Parent's education: school leaving age

	Mothers		Fathers	
School leaving age	<i>SLA 14</i>	<i>SLA 15</i>	<i>SLA 14</i>	<i>SLA 15</i>
14	75.2	-	76.3	-
15	11.1	83.4	2.9	84.4
16	6.5	12.2	8.2	8.4
17	3.0	2.1	4.3	3.7
18	1.4	1.4	3.0	1.8
19-21	1.1	0.4	1.9	0.9
22+	1.7	0.4	3.1	0.8
<i># observations</i>	9,205	4,544	10,915	2,108
Source: NCDS-1.				



Parenting and mother's schooling



Results using OLS

	(Base Model)	(+ Social Background)	(+ child characteristics)
Mother's schooling	0.244	0.185	0.175
	(18.95)**	(13.97)**	(13.29)**
Father's schooling	0.259	0.213	0.200
	(26.58)**	(20.66)**	(19.47)**
Social Background	No	Yes	Yes
Child Characteristics	No	No	Yes

Notes: t-statistics in parenthesis. (*) (**) indicates significance at 5% & 1% level, respectively.

Controls: age of mother, age of father, regional variables, presence of father at home.

Social Background: mothers' father SES, fathers' father SES, mother's birth order & family size

Child Characteristics: disobedient, fights, wets bed, gender, ability, separated from mother.



Results using IV

	(+ Social Background)	(+ child characteristics)
Mother's schooling	0.021	0.043
	(0.83)	(0.79)
Father's schooling	-0.131	-0.128
	(0.102)	(0.97)
Social Background	Yes	Yes
Child Characteristics	No	Yes

Notes: t-statistics in parenthesis. (*) (**) indicates significance at 5% & 1% level, respectively.

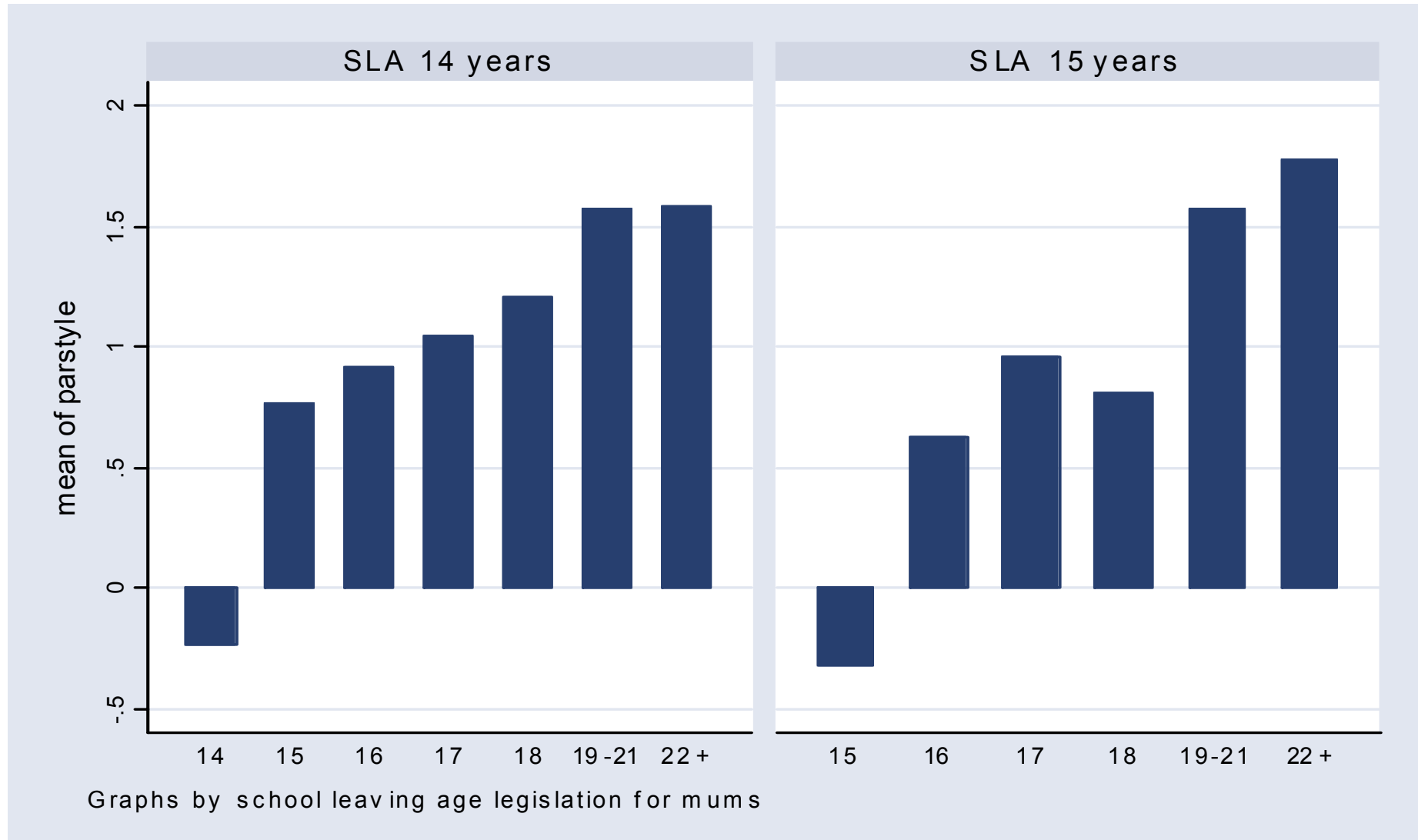
Controls: age of mother, age of father, regional variables, presence of father at home.

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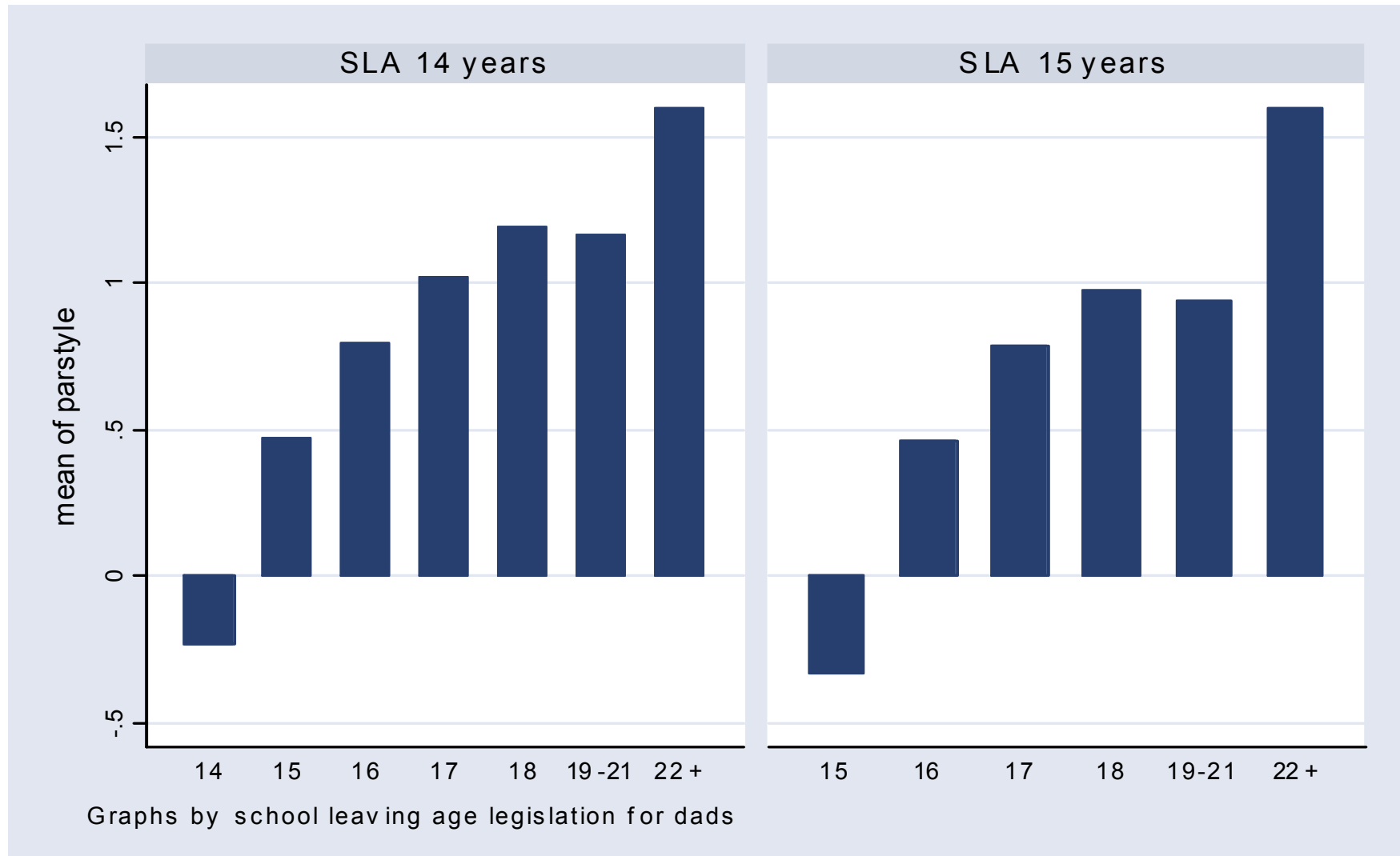
Child Characteristics: disobedient, fights, wets bed, gender, ability, separated from mother.



Parenting + mother's education, by SLA



Parenting + father's education, by SLA



Sensitivity Analysis (for mother's education only)

- Effects by mothers' social background
 - OLS: highest estimates for low class women
 - IV: no effects
- Labour market impact
 - OLS: highest estimates for working women
 - IV: no effects
- Age of the mother (20-29)
 - OLS: significant estimates
 - IV: no effects
- Different measures of parenting
 - Reading & educational behaviours
 - OLS significant; IV no effects
 - Parental interest in schooling & expectations
 - OLS significant; IV no effects



Conclusion

- Results suggest that an extra year of education of the quality provided does not have a causal effect on parenting
- Intergenerational transmission of educational advantage may not be channelled by parenting
- Selectivity bias seems to be large
- Ability and, more likely, positional ambition seem to be the main confounders in the relationship between education and parenting

