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Effective Childrearing of Young School-Aged Children: Evidence from College Enrolled Mothers

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Abstract

A large amount of research relates a mother's education and child academic achievement, but little has focused on the timing of a mother's college enrollment. Previous research (Estelle 2011) finds significant gains in children's reading scores when a mother is enrolled in college during the child's kindergarten year. The cause of those gains are unknown. This collaborative economic research project focuses on father involvement to determine if the presence of a father figure in the household affects child academic achievement. If so, and father involvement also increases during a mother's enrollment, we would consider fathers to be an important mechanism of the maternal enrollment benefit for children.

Introduction

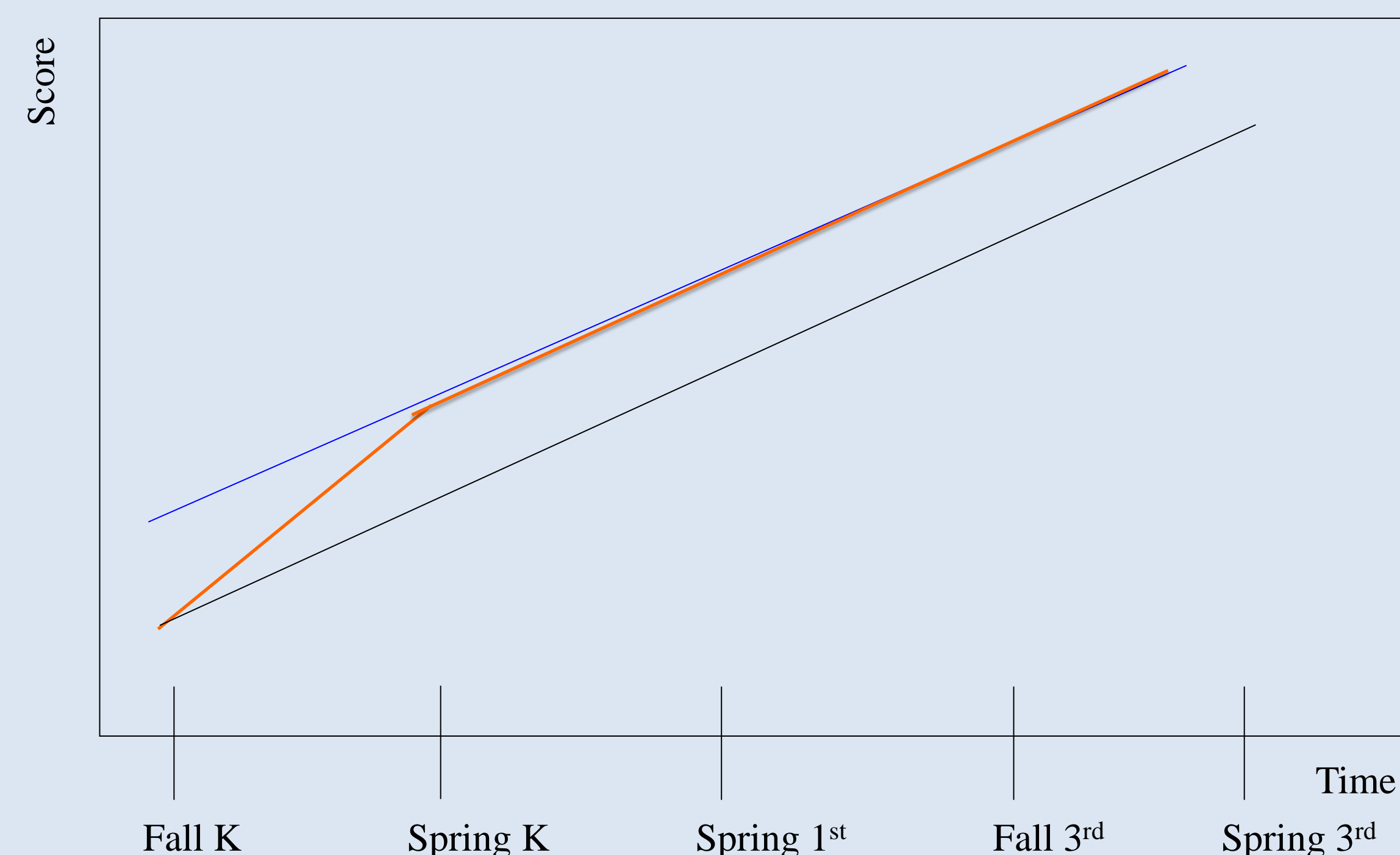
Research question: What is the effect of mother's college enrollment on her child's academic achievement?

Theory: A mother's college enrollment might entail:

- (-) Less time with child
- (+) More quality time with child
- (+) Role model effect
- (+) Education-friendly home environment
- (+) Specific human capital

Theory is not enough to produce answers because the net effect on child's outcomes is unclear. Because of this theoretical ambiguity, it is necessary to use data to test this question.

Reading Scores Over Time



Estelle (2011) finds that maternal college enrollment produces gains in kindergarten reading

Black line – child A's scores over time if mother did not enroll in college

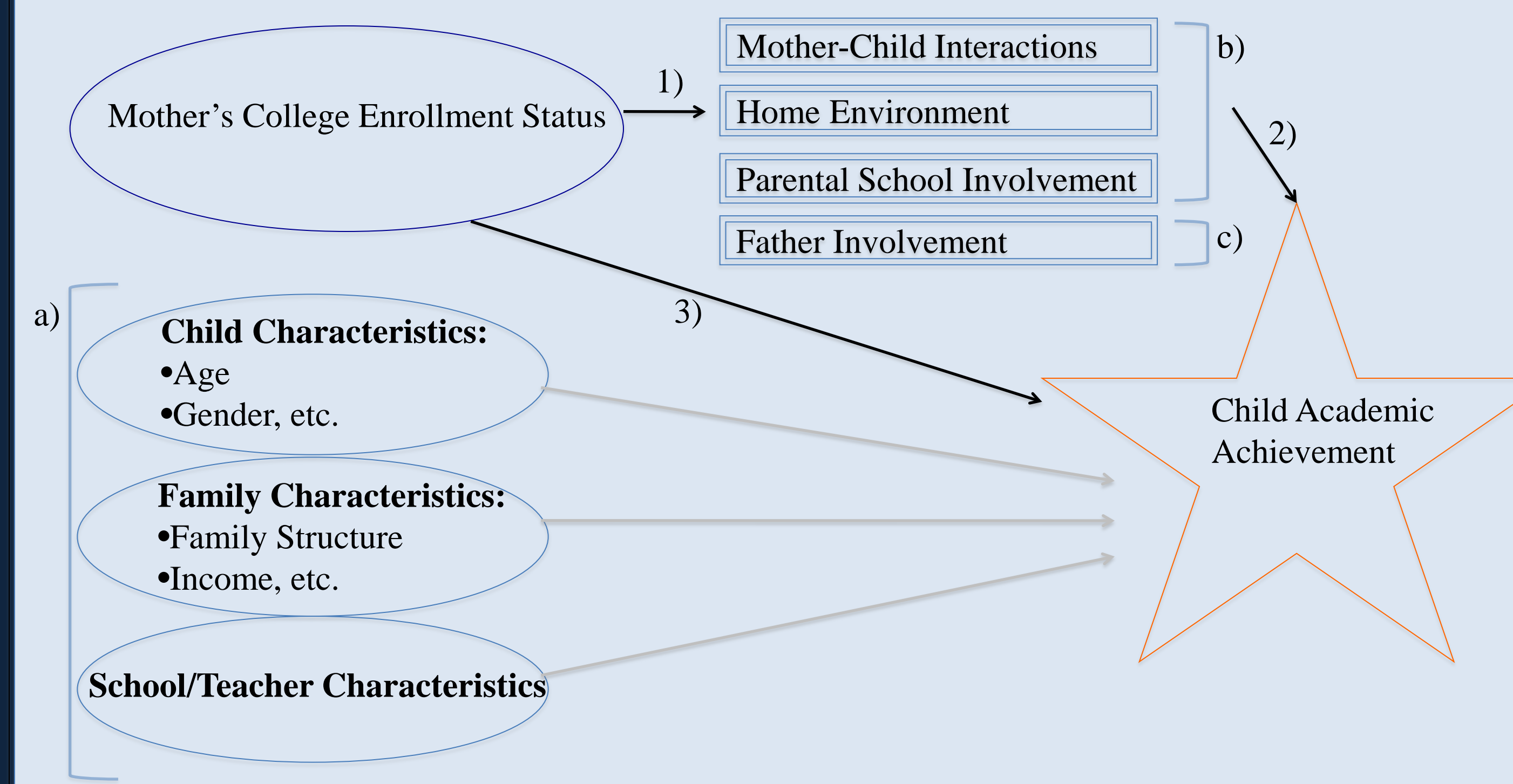
Orange line – child A's scores over time if mother did enroll in college during child's K year

Blue line – child B, who begins at a higher level of reading than child A, and whose mom does not enroll in college

Child A and child B begin at different reading levels in Fall kindergarten. Child A's mother enrolls in college and he/she experiences improvement in kindergarten reading scores, ending at the same score as child B in the beginning of 1st grade.

Child A experiences no continuous improvements, which leaves him/her on the trajectory of the child B, maintaining a higher level of achievement than initially.

Figural Model



Explanation

a) Estelle (2011) finds a positive relationship between mother's college enrollment and child academic achievement, by controlling for variables such as child characteristics, family characteristics, and school/teacher characteristics. Is this relationship because of something particular to mother's enrollment or other mechanisms?

b) Because college enrolled mothers may do things differently, Estelle (2011) tested to see if differences in measured parenting inputs diminish the enrollment effect on academic achievement

- 1) How does a mother's college enrollment affect parenting inputs?
- 2) How do parenting inputs then affect child's academic achievement?
- 3) If the indirect effect of maternal enrollment (mediated through parenting inputs by way of 1 and 2) diminish this direct relationship, then parenting inputs would explain the maternal enrollment benefit.

Results: maternal enrollment is correlated with some childrearing activities (1), but few measured parenting inputs affect reading and math gains (e.g. computer use) (2) - the indirect relationships *do not diminish the direct effect* (3).

c) Previously studied parenting inputs do not explain the maternal full-time enrollment benefit, motivating my study of other potential mechanisms and, in particular, leading to the **current focus: father involvement**

Motivation: why focus on fathers?

Child academic gains in light of a mother's enrollment have shown to be...

- Strongest when biological father is involved
- Still significant when there is any type of father figure present in the household

Do fathers mediate the maternal enrollment effect?



Methodology

- Exploration of literature in economics, psychology, and sociology
- Critically analyze the literature, formulate a hypothesis based on theoretical connections, and use empirical strategies to test whether father involvement is the key to maternal enrollment gains

Economic perspective on household/family behavior

Households aim to do the best they can with given resources

- Mother and father negotiate household activities- may look different if mother is enrolled in college
- Mother does not make decision to enroll in college randomly... Takes own preferences into account as well: mother's enrollment, employment, childrearing, leisure time, and child outcomes
- Father's availability/abilities may increase the attractiveness of these options

Theory

What influences father involvement?

- Father characteristics: motivation, skills, confidence, economic stability
- Mother characteristics: mother critical (sensitive), father less (more) likely to be involved
- Co-parental relationships: expectations for father's role
- Contextual factors: family poverty affects the amount of time spent with child, quality of time, and parenting style

How does father involvement impact children?

- Economic resources: additional/alternative source of income, allows for more educational materials in household (i.e. computers, books, etc.)
- Father's availability to work or work more- allowing mother to attend school
- Increased discipline and routine within the household (i.e. regular meal and bed times, rules for amount of television allowed)- less likely to enroll in alternative childcare (less beneficial to child's cognitive development and achievement than parental care).
- Father's engagement with child: quantity and quality of time, role model figure, child's psychological/emotional well-being

How relevant is it that it is the *biological father* who is involved? Biological father may...

- Allocate more resources to his child (e.g. income, time, etc.)
 - Have a closer relationship with his child, which could increase positive psychological impacts on the child
- Overall, the intensity of the father figure effect may be stronger if it is the biological father involved compared to non-biological father.

Data: Early Childhood Longitudinal Survey-Kindergarten

ECLS-K: Nationally representative survey of 21,000+ students, repeated K-8th grade

Our sample: Wave I (Fall '98 and Spring '99); limited to biological, college-eligible mother respondents, first-time kindergartners, family income less than \$150K; complete data for 4,310 mother-child pairs

Key Variables

Marital status:

- Married to biological father
- Married to non-biological father
- Person like father figure in household
- Living in marriage-type relationship
- Single mother

Father-specific inputs:

- Education level
- Employment status
- Amt. of time spent playing with child on weekdays/weekend days

Other Variables Correlated with Family Structure

Parent-child activities:

- Museum
- Library
- Zoo

Household discipline:

- Consistent meals
- Consistent bed time
- TV rules

Alternative childcare:

- Attend regular basis
- Hours per week

Outside of school activities:

- Organized clubs
- Music/art lessons
- Performing arts

Forthcoming Empirical Work

- Multivariate regression including more variables on the father
- Stratifying sample by marital status
- Conclusions

If fathers do have a significant impact on child academic achievement and those effects diminish the direct effect of mother enrollment, the resulting policy-relevant implication is that fathers play an important role in mediating the previously confirmed maternal enrollment benefit.

Works cited available upon request.