



UNIVERSITY OF
OXFORD

Young Lives 
An International Study of Childhood Poverty

Parental Background and Children's Human Capital Development Throughout Childhood and Adolescence: Evidence from Four Low- and Middle- Income Countries

Andreas Georgiadis

Young Lives Study

Department of International Development

University of Oxford

CSAE Conference

19 March 2012

Overview

- My paper asks the following questions:
 - 1) What is the association of different markers of parental background with children's human capital in low- and middle-income country contexts?
 - 2) How do these associations differ across children of different ages and across different national and cultural contexts?
- This is important in order to understand:
 - the channels of the intergenerational transmission of poverty and inequality over the individuals' life-course in developing countries

Overview

- There are the following gaps in existing work:
 - 1) there is not much evidence on the association of SES with child's cognitive and non-cognitive skills
 - 2) the vast majority of empirical studies consider parental background factors in isolation that makes the interpretation of results uncertain
 - 3) evidence on the evolution of the association between parental background factors and child's human capital over the child's life-course are almost non-existent

Overview

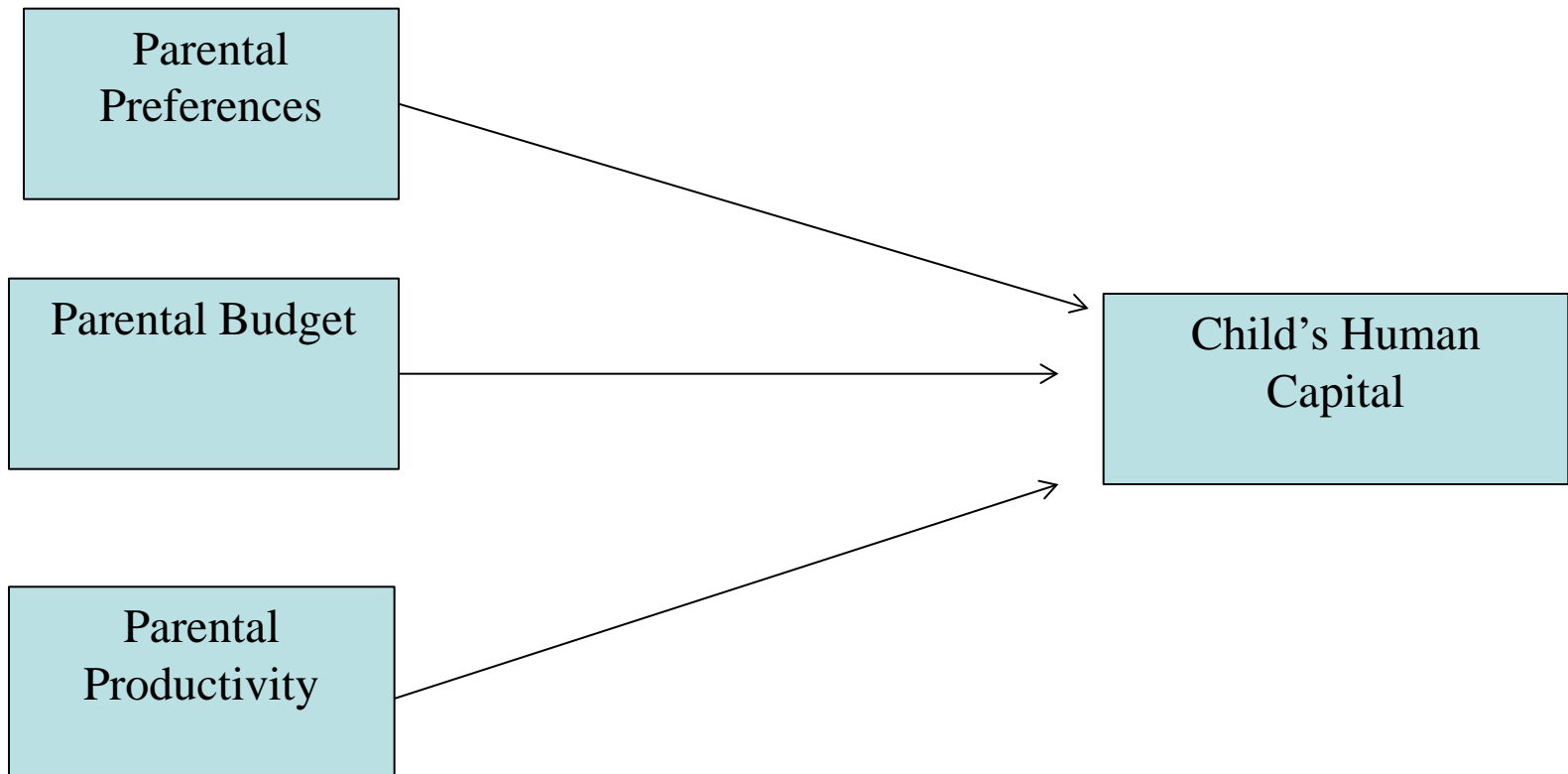
- We address the gaps in existing work by:
 - 1) using data from the Young Lives cohort study in Ethiopia, India, Peru and Vietnam
 - 2) considering, simultaneously, the association of a wide-range of parental background dimensions with measures of children's human capital at different ages of the child's life-course

Overview

- We find evidence that:
 - parental income is the most important predictor of child's nutritional status and cognitive achievement across countries and at all stages of childhood
 - parental education has a weak or no association with children's human capital measures
 - mother's personality traits are the most important predictors of children's noncognitive skills across countries and at all stages of childhood
 - the association of mother's aspirations for child's education with the child's cognitive and noncognitive skills increases with children's age

Conceptual Framework

-Mechanisms via which parental background may impact child's human capital as postulated by economic theory



Conceptual Framework

- Under self-productivity and dynamic complementarity (Cunha and Heckman, 2007) in the child's human capital production technology, the associations of parental background markers with child's human capital measures are expected to increase with child's age
- Child development literature suggests that as the child grows old the importance of home environment diminishes

Data

- We use data on two cohorts of children in the 2006 and 2009 survey rounds of the Young Lives cohort study from Ethiopia, India (Andhra Pradesh), Peru and Vietnam
- In 2006 the two cohorts were around 5 and 12 years old
- In 2009 the two cohorts were around 8 and 15 years old

Dependent Variables

- Our dependent variables are:
 - children's height-for-age Z score
 - children's Peabody Picture Vocabulary Test (PPVT) test score
 - children's noncognitive skills index (a composite indicator combining items measuring self-efficacy and self-esteem of the child)

Independent Variables

- Independent variables include:
 - child characteristics: age, birth order
 - parental background dimensions such as:
 - mother's demographics: age, ethnicity/caste
 - household wealth (wealth index)
 - mother's and father's education (years of schooling)
 - mother's height (in centimetres)
 - mother's non-cognitive skills index (a composite indicator combining items capturing self-esteem, self-efficacy and feelings of stigma/discrimination)

Independent Variables

- mother's subjective well-being (a composite of 1-9 ladder of life satisfaction and expected 1-9 life satisfaction in the future)
- mother's bargaining power (a composite of items measuring mother's control over a range of household resources (land, livestock, wages, etc.))
- mother's social capital (a composite of items capturing information on mother's memberships and leading position in organisations, mother's trust in people and government organisations and extent of social networks i.e. number of friends, etc.)
- mother's aspirations for child's future education (in years of schooling)
- community characteristics such as: region of the community and whether community is urban/rural

Results: HAZ Score

Table 2: Regressions for HAZ-score Across countries and Age groups

	Age 5				Age 8			
	Ethiopia	India	Peru	Vietnam	Ethiopia	India	Peru	Vietnam
Wealth index	0.169*** (0.038)	0.105*** (0.033)	0.144*** (0.031)	0.049 (0.033)	0.224*** (0.036)	0.163*** (0.035)	0.165*** (0.030)	0.116*** (0.037)
Mother's education	0.022** (0.009)	0.003 (0.007)	0.018*** (0.007)	0.028*** (0.007)	0.008 (0.008)	0.018** (0.007)	0.010 (0.006)	0.017** (0.008)
Father's education	0.011 (0.008)	0.012** (0.005)	0.008 (0.007)	0.022*** (0.007)	-0.005 (0.008)	0.004 (0.006)	0.015** (0.007)	0.018** (0.008)
Mother's height	0.047*** (0.004)	0.042*** (0.005)	0.063*** (0.004)	0.050*** (0.004)	0.039*** (0.004)	0.041*** (0.004)	0.059*** (0.004)	0.047*** (0.004)
Mother's bargaining power	0.010 (0.025)	0.025 (0.023)	-0.050** (0.020)	-0.018 (0.019)	0.010 (0.026)	0.022 (0.023)	-0.044** (0.020)	-0.014 (0.021)
Mother's noncognitive skills	-0.014 (0.028)	0.043** (0.022)	0.003 (0.022)	-0.014 (0.021)	-0.004 (0.025)	-0.004 (0.025)	-0.011 (0.022)	0.031 (0.026)
Mother's subjective well-being	0.074*** (0.028)	0.065*** (0.025)	0.033 (0.021)	0.076*** (0.023)	0.034 (0.026)	0.005 (0.026)	0.023 (0.020)	0.042 (0.024)
Mother's social capital	-0.029 (0.033)	-0.003 (0.023)	0.026 (0.024)	0.004 (0.021)	-0.010 (0.033)	0.029 (0.023)	0.031 (0.054)	-0.001 (0.024)
Mother's aspirations for child's education	-0.002 (0.015)	0.012 (0.009)	0.042*** (0.013)	0.003 (0.011)	0.020 (0.012)	0.014** (0.007)	0.062*** (0.016)	0.002 (0.011)
R-squared	0.17	0.18	0.40	0.37	0.15	0.21	0.36	0.30
Observations	1908	1937	1950	1956	1881	1923	1937	1943

	Age 12				Age 15			
	Ethiopia	India	Peru	Vietnam	Ethiopia	India	Peru	Vietnam
Wealth index	0.191*** (0.052)	0.052 (0.043)	0.242*** (0.058)	0.093 (0.053)	0.124** (0.055)	0.043 (0.045)	0.137*** (0.041)	0.098** (0.043)
Mother's education	0.023 (0.014)	0.029*** (0.010)	0.000 (0.010)	-0.012 (0.011)	0.015 (0.013)	0.033*** (0.011)	0.011 (0.009)	-0.016 (0.010)
Father's education	0.001 (0.013)	-0.003 (0.008)	0.006 (0.012)	0.026** (0.012)	0.009 (0.013)	-0.007 (0.009)	-0.002 (0.010)	0.027*** (0.010)
Mother's height	0.034*** (0.007)	0.032*** (0.06)	0.062*** (0.007)	0.050*** (0.006)	0.040*** (0.007)	0.038*** (0.006)	0.059*** (0.006)	0.059*** (0.005)
Mother's bargaining power	-0.039 (0.040)	0.029 (0.034)	-0.017 (0.031)	-0.045 (0.033)	-0.064 (0.042)	0.010 (0.032)	0.012 (0.029)	-0.021 (0.029)
Mother's noncognitive skills	0.042 (0.041)	-0.003 (0.033)	0.053 (0.034)	0.020 (0.032)	-0.060 (0.043)	-0.016 (0.030)	-0.012 (0.034)	-0.054** (0.027)
Mother's subjective well-being	0.047 (0.040)	0.075** (0.034)	-0.012 (0.031)	0.062** (0.032)	0.006 (0.041)	0.041 (0.035)	0.045 (0.033)	0.032 (0.030)
Mother's social capital	-0.027 (0.044)	-0.020 (0.037)	-0.012 (0.037)	-0.095*** (0.034)	0.048 (0.075)	0.007 (0.036)	-0.102 (0.095)	-0.028 (0.031)
Mother's aspirations for child's education	-0.002 (0.016)	-0.010 (0.012)	0.021 (0.020)	0.058** (0.023)	-0.015 (0.017)	0.035*** (0.014)	0.025 (0.016)	0.032 (0.020)
R-squared	0.2	0.14	0.41	0.25	0.23	0.16	0.31	0.26
Observations	974	977	680	988	968	970	669	967

Results: PPVT SCORE

Table 3: Regressions for PPVT Across Countries and Age Groups

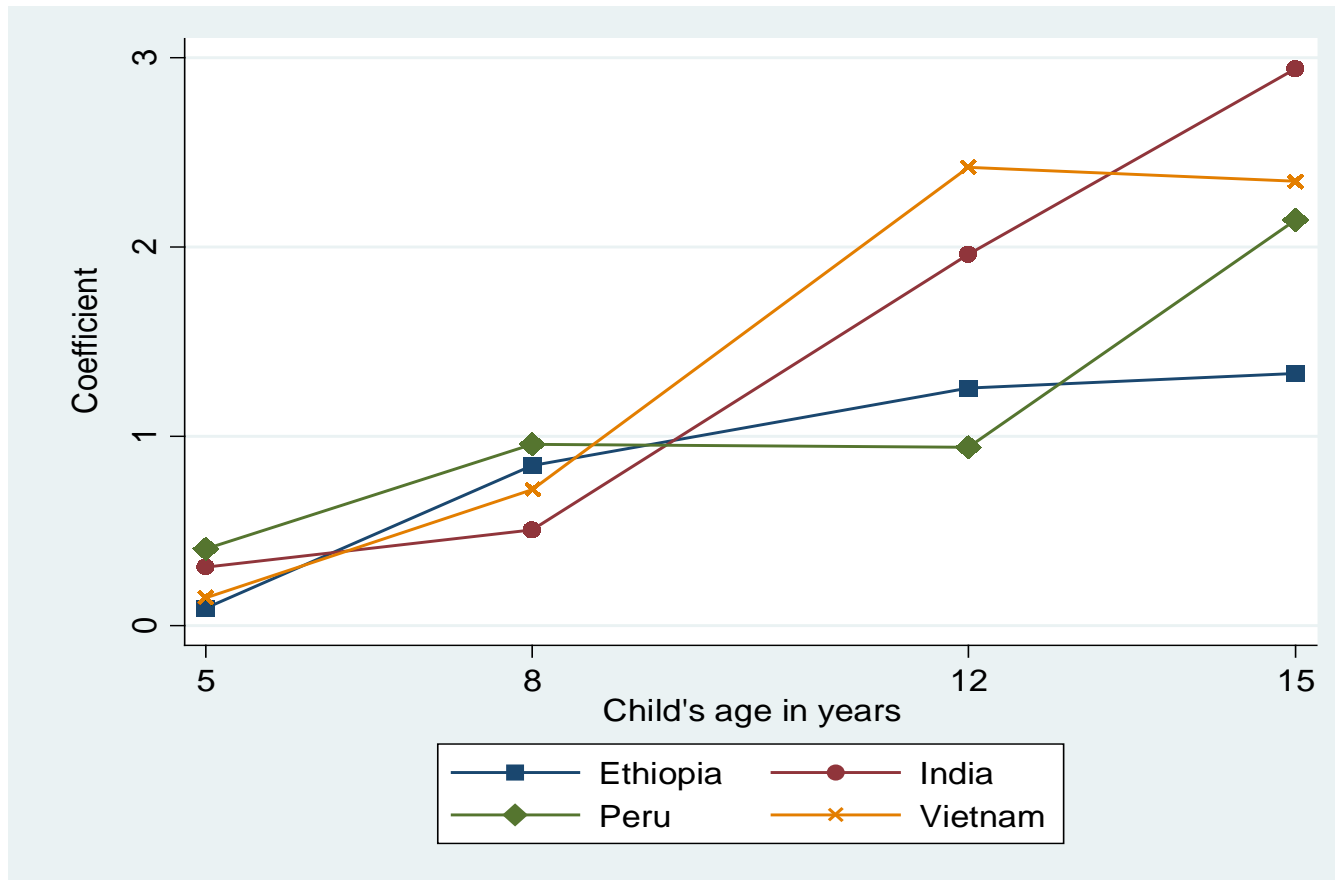
	Age 5				Age 8			
	Ethiopia	India	Peru	Vietnam	Ethiopia	India	Peru	Vietnam
Wealth index	1.284*** (0.467)	1.380** (0.701)	2.701*** (0.561)	2.310*** (0.618)	5.688*** (1.046)	3.083*** (0.780)	3.297*** (0.363)	2.263*** (0.689)
Mother's education	0.535*** (0.113)	1.097*** (0.145)	0.172 (0.125)	0.370** (0.146)	0.783*** (0.274)	0.727*** (0.197)	0.421*** (0.085)	0.860*** (0.179)
Father's education	0.130 (0.092)	0.361*** (0.121)	0.276** (0.136)	0.551*** (0.135)	0.626** (0.243)	0.394*** (0.148)	0.506*** (0.087)	0.544*** (0.166)
Mother's height	0.058 (0.045)	-0.037 (0.071)	-0.121 (0.069)	0.089 (0.062)	0.072 (0.109)	-0.028 (0.088)	-0.035 (0.047)	0.051 (0.080)
Mother's bargaining power	0.090 (0.275)	-0.306 (0.454)	-0.023 (0.368)	-1.207*** (0.370)	-0.093 (0.653)	-0.061 (0.618)	0.122 (0.248)	-0.277 (0.479)
Mother's noncognitive skills	-0.033 (0.274)	0.108 (0.429)	0.180 (0.383)	0.156 (0.384)	2.235*** (0.682)	2.643*** (0.665)	0.504** (0.255)	0.982 (0.585)
Mother's subjective well-being	0.322 (0.260)	1.910*** (0.522)	0.883** (0.352)	0.396 (0.425)	-0.616 (0.687)	-0.590 (0.616)	0.369 (0.264)	-0.309 (0.552)
Mother's social capital	0.585 (0.343)	0.253 (0.473)	-1.562*** (0.428)	-0.037 (0.377)	0.201 (0.915)	-0.412 (0.599)	-2.119*** (0.691)	-1.480*** (0.551)
Mother's aspirations for child's education	0.096 (0.104)	0.308* (0.173)	0.408** (0.192)	0.149 (0.168)	0.846*** (0.293)	0.506*** (0.172)	0.957*** (0.206)	0.721*** (0.220)
R-squared	0.3	0.26	0.3	0.36	0.47	0.23	0.45	0.32
Observations	1861	1851	1903	1747	1857	1901	1842	1848

	Age 12				Age 15			
	Ethiopia	India	Peru	Vietnam	Ethiopia	India	Peru	Vietnam
Wealth index	2.495** (1.133)	1.525 (0.965)	2.324*** (0.831)	4.543*** (1.090)	5.154*** (1.111)	4.834*** (1.220)	2.149*** (0.753)	5.147*** (1.047)
Mother's education	0.492 (0.253)	0.263 (0.208)	0.466*** (0.143)	0.541** (0.228)	0.314 (0.288)	0.924*** (0.265)	0.257 (0.143)	0.232 (0.211)
Father's education	0.274 (0.250)	0.259 (0.166)	-0.116 (0.185)	1.001*** (0.258)	0.386 (0.253)	0.178 (0.211)	0.543*** (0.188)	0.224 (0.234)
Mother's height	0.098 (0.127)	0.105 (0.117)	-0.066 (0.088)	0.254 (0.133)	0.131 (0.139)	0.186 (0.145)	0.010 (0.091)	0.041 (0.112)
Mother's bargaining power	0.953 (0.776)	-0.106 (0.703)	0.712 (0.502)	-1.616** (0.663)	-0.566 (0.914)	0.003 (0.902)	-0.487 (0.471)	-0.249 (0.632)
Mother's noncognitive skills	3.149*** (0.767)	0.729 (0.763)	0.804 (0.529)	-0.932 (0.720)	1.435 (0.942)	0.864 (0.924)	-0.045 (0.490)	0.063 (0.593)
Mother's subjective well-being	0.283 (0.807)	2.852*** (0.778)	-1.032 (0.540)	-1.191 (0.694)	0.104 (0.940)	0.379 (0.980)	-0.159 (0.543)	-0.703 (0.656)
Mother's social capital	-1.549 (0.821)	0.767 (0.724)	-0.473 (0.549)	0.303 (0.633)	0.770 (1.645)	1.963** (0.906)	-5.016*** (1.507)	0.554 (0.646)
Mother's aspirations for child's education	1.257*** (0.345)	1.961*** (0.292)	0.941** (0.388)	2.422*** (0.676)	1.333*** (0.415)	2.945*** (0.309)	2.146*** (0.416)	2.347*** (0.528)
R-squared	0.35	0.27	0.34	0.50	0.3	0.31	0.4	0.41
Observations	953	971	672	945	962	944	652	947

Results: PPVT Score

Figure 8

The Size of the Coefficient of Mother's Aspirations for Child's Education in Child's PPVT Score Regressions



Results: Noncognitive Skills Index

Table 4: Regressions for Child's Noncognitive Skills Across Countries and Age Groups

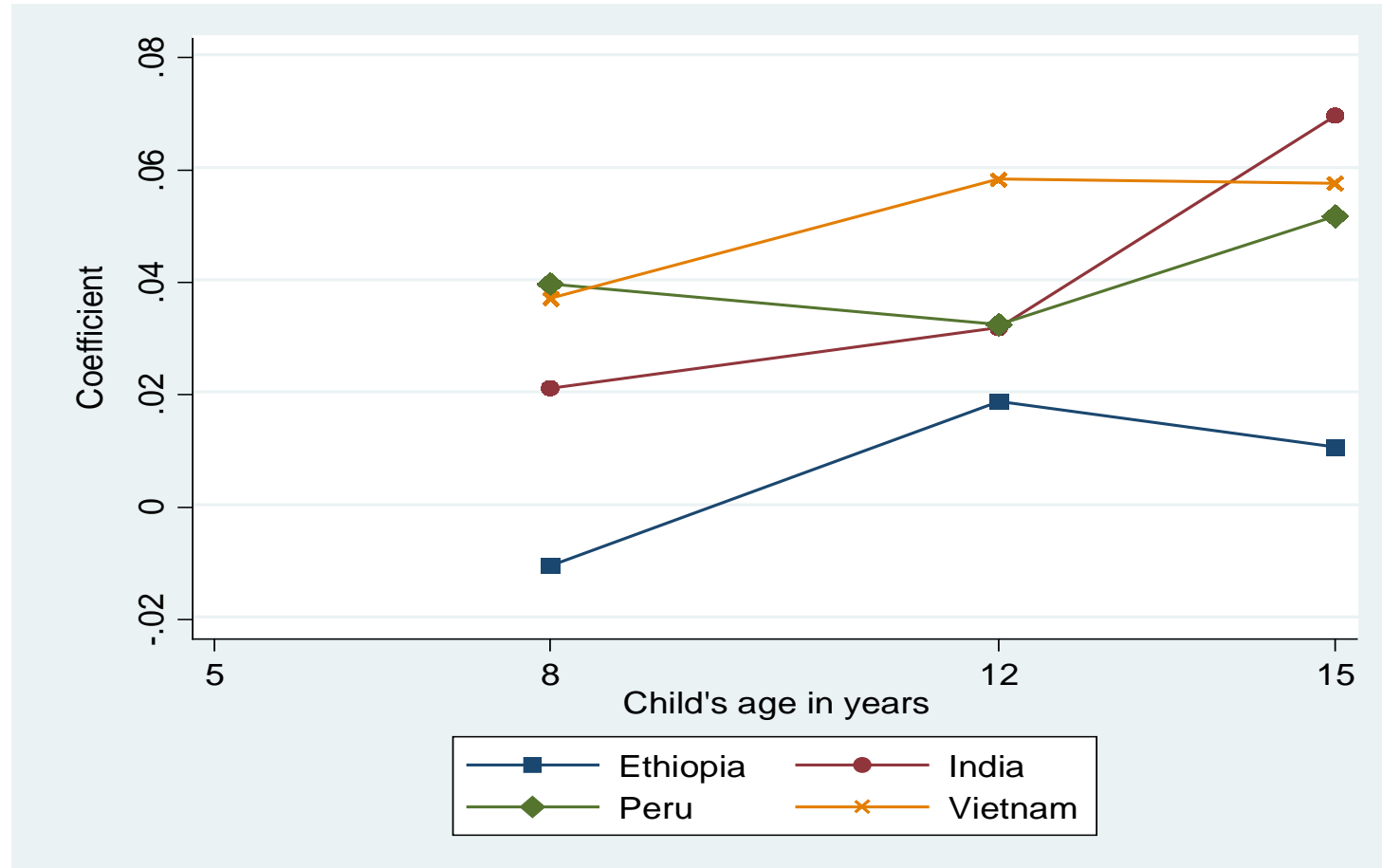
	Age 8				Age 12			
	Ethiopia	India	Peru	Vietnam	Ethiopia	India	Peru	Vietnam
Wealth index	0.150*** (0.030)	0.056 (0.030)	0.069** (0.032)	0.039 (0.036)	0.073 (0.040)	0.123*** (0.042)	0.166*** (0.055)	0.057 (0.056)
Mother's education	0.004 (0.008)	0.011 (0.006)	0.020*** (0.008)	0.010 (0.008)	-0.016 (0.010)	0.012 (0.009)	0.030*** (0.012)	0.017 (0.012)
Father's education	0.007 (0.007)	0.005 (0.005)	-0.002 (0.008)	-0.008 (0.007)	0.034*** (0.009)	0.018** (0.008)	0.010 (0.014)	0.026** (0.013)
Mother's height	-0.001 (0.004)	0.002 (0.003)	0.002 (0.004)	-0.001 (0.003)	0.002 (0.005)	0.007 (0.005)	0.006 (0.007)	0.001 (0.005)
Mother's bargaining power	-0.036 (0.024)	-0.039 (0.021)	0.003 (0.023)	-0.025 (0.022)	0.037 (0.029)	-0.012 (0.031)	-0.035 (0.036)	-0.063 (0.033)
Mother's noncognitive skills	0.145*** (0.025)	0.387*** (0.025)	0.081*** (0.027)	0.196*** (0.028)	0.381*** (0.033)	0.318*** (0.040)	0.129*** (0.043)	0.240*** (0.033)
Mother's subjective well-being	0.007 (0.024)	0.015 (0.023)	0.031 (0.023)	0.029 (0.026)	0.044 (0.029)	-0.044 (0.035)	-0.047 (0.041)	0.025 (0.034)
Mother's social capital	0.207*** (0.033)	0.074*** (0.021)	0.146** (0.062)	0.056** (0.024)	0.074** (0.035)	0.025 (0.033)	-0.038 (0.039)	-0.052 (0.034)
Mother's aspirations for child's education	-0.011 (0.011)	0.021*** (0.007)	0.040** (0.016)	0.037*** (0.012)	0.018 (0.014)	0.032** (0.012)	0.032 (0.026)	0.058*** (0.026)
R-squared	0.23	0.30	0.11	0.16	0.31	0.21	0.24	0.14
Observations	1877	1917	1921	1949	979	994	685	990

	Age 15			
	Ethiopia	India	Peru	Vietnam
Wealth index	0.135*** (0.046)	0.040 (0.044)	0.182*** (0.050)	0.111 (0.057)
Mother's education	0.009 (0.010)	0.012 (0.010)	0.049*** (0.011)	0.015 (0.012)
Father's education	0.014 (0.010)	0.021** (0.008)	-0.020 (0.014)	0.007 (0.013)
Mother's height	0.003 (0.005)	0.008 (0.005)	-0.005 (0.007)	-0.002 (0.006)
Mother's bargaining power	0.045 (0.034)	-0.058 (0.032)	-0.015 (0.037)	0.024 (0.035)
Mother's noncognitive skills	0.177*** (0.039)	0.000 (0.033)	0.143*** (0.041)	0.071** (0.034)
Mother's subjective well-being	0.016 (0.035)	0.027 (0.033)	0.010 (0.040)	0.030 (0.033)
Mother's social capital	0.259*** (0.069)	0.160*** (0.034)	0.082 (0.121)	0.092** (0.040)
Mother's aspirations for child's education	0.010 (0.013)	0.069*** (0.012)	0.052** (0.026)	0.058*** (0.022)
R-squared	0.24	0.15	0.12	0.11
Observations	973	974	672	970

Results: Noncognitive Skills Index

Figure 8

The Size of the Coefficient of Mother's Aspirations for Child's Education in Child's Noncognitive Skills Regressions



Summary of Results

- The most important predictors for height-for-age across countries and ages include:
 - household wealth
 - mother's height and
 - parental education
- no systematic pattern is found on the magnitude of these associations across age groups
- The most important predictors for cognitive achievement across countries and ages include :
 - household wealth
 - parental education and
 - mother's aspirations for the child's education
- The only systematic pattern in the magnitude of the associations across age groups is observed for mother's aspirations for the child's education

Summary of Results

- The most important predictors for noncognitive skills across countries and ages include:
 - mother's noncognitive skills
 - social capital
 - household wealth
 - mother's aspirations for the child's education
 - parental education
- The only systematic pattern in the magnitude of the associations across age groups is observed for mother's aspirations for the child's education

Conclusions

- There is a lack of studies in the development literature on that consider simultaneously the association of a wide range of parental background markers with children's human capital across countries and how these associations may change with children's age
- We address this gap by using data from the Young Lives cohort study in Ethiopia, India, Peru and Vietnam to investigate the association of parental background factors with indicators of child's human capital at ages 5, 8, 12 and 15 years
- Our key findings are that across countries and age groups:
 - parental income is the most important predictor of child's nutritional status and cognitive achievement across countries and at all stages of childhood
 - parental education has a weak or no association with children's human capital measures
 - mother's personality traits are the most important predictors of children's noncognitive skills across countries and at all stages of childhood
 - the association of mother's aspirations for child's education with the child's cognitive and noncognitive skills increases with children's age