Student Paper

Young Lives

Far From the Tree: How do parents contribute to their children's psychosocial competencies throughout childhood?

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The data used come from Young Lives, a longitudinal study of childhood poverty that is tracking the lives of 12,000 children in Ethiopia, India (in the states of Andhra Pradesh and Telangana), Peru and Vietnam over a 15-year period. www.younglives.org.uk

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The views expressed here are those of the author. They are not necessarily those of the Young Lives project, the University of Oxford, DFID or other funders.

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Abstract

This paper analyses the socioeconomic gaps in two domains of children's psychosocial competencies, self-esteem and self-efficacy, in mid-childhood (7-8 years old) and early adolescence (12-13 years old). It then examines the role of parents, more specifically mothers, in closing and reducing these gaps. Non-parametric analysis is used to first establish the trends in psychosocial gaps by socioeconomic status. These gaps are consistent through the mid-childhood period, but begin to close in early adolescence, especially after a child turns 12. A parametric approach, using a value-added production function, complements the non-parametric analysis by estimating associations between a child's socioeconomic status and their own psychosocial competencies. The results show that socioeconomic status predicts approximately 0.1 standard deviations of children's self-esteem and self-efficacy. The addition of maternal inputs show that caregiver's education plays an important role in reducing the impact of socioeconomic status in the mid-childhood while having a smaller direct effect. Maternal self-esteem modestly predicts child's self-esteem in the mid-childhood more so than the early adolescence, but in the latter period, reduces the association of socioeconomic status by 21%. These results do not hold for self-efficacy, where only the value-added measure of past child self-efficacy is significant. There again is evidence of mother's reducing the association of socioeconomic status however. The results show that parents, play an important role in predicting their children's psychosocial competencies above and beyond the role of socioeconomic status. On top of this, mothers act as a partial shield from the effects of socioeconomic deprivation. The results promote the efficacy of parental interventions which can boost children's outcomes beyond raising their socioeconomic status, as well as the importance of consistent investment in children to improve future outcomes.

Keywords: Psychosocial competencies, household environment, socioeconomic status, Peru

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1. Introduction

Poverty is pervasive in the way in which it affects all facets of a household's wellbeing. The impacts on children can be considered as a greater concern because material deprivations in the key stages of their development can limit their ability to compete against children from higher income households. As a result of their socioeconomic status, children lag behind their counterparts as they lack necessary inputs which serve as the cornerstone for future skills development and economic success. Studies in the past (Lopez-Boo [2016], Schady et al. [2015] for Latin America based examples) have focused on cognitive skill gaps which develop early in life and persist into mid and late childhood as a result of socioeconomic status. In addition, the literature has highlighted potential channels through which deprivation travels in low income households to cause these gaps, such as malnourishment, food insecurity and other shocks which leading to worse developmental outcomes (see Howard [2011], Crookston et al. [2011], Crookston et al. [2013]). The literature has not, however, identified if these trends are also seen in the other components of a child's development such as a child's psychosocial competencies.

The term psychosocial competencies can comprise of multiple different domains of "skill" per se, and they are also classified at times as "soft skills" and "non-cognitive" skills. They are a set of ideas, beliefs or traits which enable individuals to tap into their cognitive skills and build a framework for success. These competencies include, but are not limited to an individual's self-esteem, self-efficacy, locus of control, and their Big 5 personality traits (agreeableness, conscientiousness, neuroticism, openness to experience and extraversion). This paper focuses on two of these; self-esteem and self-efficacy. Self-esteem and self-efficacy are important psychological constructs with regards to an individual's future beliefs, which in turn help them to be more effective when it comes to completing tasks and being present in society. As a result, individuals with higher levels of these competencies have higher probabilities of labour market success (Cubel et al. [2014]) . Self-esteem can be described in terms of one's feelings on their own worthiness and competency in skills (Mruk [2009]) not on their ability to complete tasks. It is one's level of pride of their lives, in terms of their possessions and their place in their surrounding environment. Self-efficacy is described as an individual's belief in their own abilities to complete a task. Bandura (1993, 1994) associates self-efficacy with work-ethic, self-confidence and conscientiousness. Individuals who have high self-efficacy are able to keep at difficult activities, showing qualities of persistence and determination. When their actions do not work out, they recover quickly and are able to build on the experiences from the setback (Bandura [1994], p. 1). Individuals with high self-efficacy generally have higher goals and aspirations because they believe in their abilities to reach whatever is set out in front of them.

This paper aims to explain and describe the role of socioeconomic status in children's psychosocial competencies and how it evolves between the mid-childhood (7-8 years old) and early adolescence (11-12 years old) in the younger cohort of the Peruvian Young Lives country study. It then focuses on how much of the level of self-esteem and self-efficacy in the child is predicted by maternal levels of the same psychosocial competencies, and how much they reduce the importance of socioeconomic status. This point is particularly important for the

analysis of the findings in the paper. Finally, it examines the persistence of child's psychosocial abilities between the two periods to determine how much does psychosocial levels. The time periods being studied in this paper are not heavily studied in the previous literature. The mid-childhood is important because it is near the time where children transition into primary education. The early adolescent period is important because it captures entry into middle-school and the time when children are maturing and experiencing new pressures which stem from their ability to fit in with their peers. The results of the study emphasise that poverty causes significant effects on children's psychosocial development beyond the first 1000 days of life.

The paper has three key findings. First, the paper uses non-parametric methods to highlight the psychosocial gaps which exist between children of high and low socioeconomic class. These gaps persist from mid-childhood into the early adolescence where they begin to close beyond the age of 12. The presence of socioeconomic gaps in skills and competencies is consistent with the previous research with Young Lives and across the Latin America and Caribbean region (Lopez-Boo [2016] and Schady et al. [2015]). This result is novel, as it considers part of the developmental cycle of the child that has not been studied previously.

The second finding comes from the parametric analysis which illustrates the importance of maternal psychosocial competencies and caregiver's education on the development of children's psychosocial competencies in the mid-childhood and early adolescence. Looking across the two periods of time, it seems that self-esteem is partially derived from the interactions between the child and their parents. Maternal self-esteem predicts approximately 10 percent of a child's self-esteem on average in the two age ranges. The measure also acts as a buffer to socioeconomic status in the early adolescence, reducing the association between socioeconomic status and self-esteem by approximately 23%. On the other hand, maternal self-efficacy is an important predictor only in the mid-childhood and does not play much of a role in reducing the associations between socioeconomic status and children's self-efficacy. Caregiver education plays an important role in both domains as a direct predictor and a mediator in the mid-childhood. This highlights the importance of parent's past education, and by extension, their socioeconomic status. In the early adolescence however, this effect diminishes showing that as children begin to experience more, especially in terms of more education than their parents, they rely less on their parents in deriving their self-esteem and self-efficacy.

Finally, the value-added measure in the production function takes advantage of the longitudinal research design of the Young Lives study and allows for a test of the level of malleability in children's psychosocial competencies at age 11-12. Cunha and Heckman (2007) and associated research has touched on the importance of this feature in relation to psychosocial competencies. The findings presented here support the conclusion of malleability, with past stocks of competencies only predicting 8% of their current level. This is evidence which supports the idea that after-school programmes later in the schooling ages could be key policy interventions in improving key competencies in children.

Overall, the results show that parents and the household environment play an important role in the development of their child. This role extends beyond the first five years of life, as maternal psychosocial competencies modestly predict their children's competencies, while also shielding their children from the negative effects stemming from socioeconomic status. The small amount of persistence between the value-added measure and the present level of competency indicates that later investment is an important channel for policymakers to explore in boosting the self-esteem and self-efficacy of their children.

The paper continues as follows. Section 2 takes a more thorough look at the previous literature in the field on the development of psychosocial competencies and their impact on future outcomes. Section 3 contains a more thorough discussion of the data, discussing the makeup of the sample and how the psychosocial measures are created. Section 4 focuses on the non-parametric analysis while section 5 contains the parametric analysis. The paper ends with the discussion of the results, their place in the literature as a whole, and concluding thoughts.

2. Literature Review

The previous literature has shown that higher levels of these competencies have positive economic consequences. Higher levels of conscientiousness, self-esteem, and self-efficacy predict higher achievement and wages, lower probabilities of risky behaviors, and overall better well-being over the life cycle as a whole (See Borghans et al. [2011], Drago [2009], Flippin & Paccagnella [2012], Lindqvist and Vestman [2009], and Krishnan and Kruitkova [2013], among many others). In particular, Heckman and Rubenstein (2001) show that equally qualified students have different employment outcomes as a result of how they earned their high school qualifications (either through high school or GED completion). Those who had GED's (and by extension had likely dropped out of high school), had lower earnings than those who did complete high school. Jackson (2012) and Favara and Sanchez (2016) using similarly aged teenagers in the US and Peru respectively, both show that teenaged children with higher stocks of psychosocial competencies report lower rates of smoking and drinking. Bernard et al. (2011) shows reduced activity by individuals in credit markets as a result of lower self-efficacy and fatalistic outcomes of life, which, in turn, can have consequences on investment into the development of children.

In addition to economic consequences, recent research has shown that these psychosocial competencies, like cognitive skill, can be affected by poverty in terms of the level of self-esteem and self-efficacy of the different members in the household. Dercon and Krishnan (2009) and Dercon and Sanchez (2011) are two examples which both highlight how poverty can diminish the self-esteem and self-efficacy of children. Dercon and Krishnan (2009) show that material deprivations, in terms of fewer toys, or less stimulating material, are associated with lower stocks of self-esteem and self-efficacy in 12-year-old children across four different countries. In the latter, Dercon and Sanchez (2011) focus on malnutrition has the

channel which poverty travels through, showing that stunting in children predicts lower amounts of self-esteem and self-efficacy.

Research in the neurological science literature have shown that psychosocial competencies are able to be changed for longer periods than cognitive skills because of the development of the prefrontal cortex (Dahl [2004] and Knudsen [2004]). While one's rank in the cognitive skill spectrum is assumed to be set by the time a child reaches 10 years old, a child's psychosocial competency may be developed more beyond this age. This means that while deficiencies may form early, there is a possibility that they can be ameliorated them at later points in the development cycle of the individual child. Krishnan and Krutikova (2013) provide an example of this, showing improved self-esteem and self-efficacy in adolescents as a result of an after school programme which increased participation in extracurricular activities such as sport and drama.

Socioeconomic status plays an important role in the development of psychosocial competencies. The question then is; which factors can reduce the impact of poverty on children's self-esteem and self-efficacy? One factor is parents, and by extension, the home environment. Home is the base camp for all of us, good or bad. Early in life, the home is where we learn fundamental learning and social skills which are built on in the future. Later in life, home should be the protective unit from the outside stressors of life, be it schooling, jobs, or relationships with others. Socioeconomic status plays a role in shaping the characteristics of this environment, but it is not a necessary condition for a good household. Poor households can practice good parenting while rich households can have parents who are not present in their children's lives. One way which we can proxy the home environment is through the psychosocial competencies of mothers. These measures for mothers are important for two reasons; one, they indicate a mother's pride and belief in their abilities, and two, they can proxy for the home environment (Dercon and Sanchez [2011]). A proud and confident household environment allows children to flourish because it gives children an example to learn from; of being appreciative of what you have, and striving to do better each day. In this sphere, the previous literature has shown that parents and the home environment do play a role throughout childhood. In the early childhood, Fernald et al. (2012) show that socioeconomic gaps in early childhood development indicators in young children (age 2) can be mediated by home stimulation (as measured by a home score). Additionally, Rubio-Codina et al. (2016) show that the home score (based upon the stimulating environment of the household) mediates 38% of the socioeconomic gap in 6-42 month old children. Moving into the mid-childhood and early adolescence, Anger (2012), Loehlin (2011) and Duncan (2005) all show intergenerational correlation coefficients of around 0.11-0.24 standard deviations between parent's psychosocial competencies and their adolescent children's in different settings in the developed world. The research is consistent in concluding that parents play a modest but important effect in the development of psychosocial competencies in their children.

3. Data

The data used in this study comes from the younger cohort of the Young Lives Peruvian country study. The younger cohort children have been followed from when they were 6 to 18 months old, up to age 12-13 years old.[3] The sample comes from 20 sentinel sites (communities) that were selected at random. For the first three rounds of the survey, there are 2,052 children who were interviewed in each of the rounds. Attrition from the first three rounds to round 4 is 7.3%, dropping the total number of children to 1,902 (Azubuike and Briones [2016]). Children who do not have full responses of their psychosocial statements, both in terms of their caregivers and their own, are removed. This pares the sample down to 955 children. Group analysis shows that the removed group of children is largely the same in terms of wealth, expenditure, location, and caregiver education level. The only difference is in the household size[4]. Peru is an important case to study because of its high levels of economic inequality, in spite of large reductions in poverty within the country in the last 15 years. With a Gini index of 0.44, Peru is the 44th most unequal country in the world and 15th amongst Latin American countries according to World Bank estimates (World Bank [2013]).

The questionnaires contain statements to measure parent's and children's psychosocial competencies which are built on the Rosenberg (1965) self-esteem scale and the literature from Bandura (1993) focusing on indicators of self-efficacy or agency. Mothers are asked their level of agreement on a number of different statements in each domain. These statements are listed in table 1 for each psychosocial competency. Self-esteem and self-efficacy are made up of four and three statements respectively for round 3 and round 4. Negative statements (for example, "I can do little to help my child do well in school, no matter how hard I try") have their scaling reversed to ensure consistency amongst the statements for comparison and in the combined score.

Table 1**:** *Mother's Psychosocial Statements*

Self Esteem	**Self-Efficacy**
"I am proud of my clothes"	"If I try hard, I can improve my situation in life"
"I feel proud of the job done by the household head"	"I like to make plans for my future"

[3] There are 11 additional children who are not considered in the survey because their age range is outside of the expected value of the Young Lives study. The results section discusses the consequences of adding these children to the sample.

[4] Results available on request.

"The job I do makes me feel proud"	"I can do little to help my child do well in school, no matter how hard I try"
"I feel proud of my children"	"I can have a choice on what school to send my child to" **(Not in Round 4)**
"I feel proud to show my friends or other visitors where I live" **(Not in round 4)**	"If my child gets really sick, I can do little to help him/her get better" **(Not in Round 4)**

Children's psychosocial skills are measured from round 3 of the survey, when the children were 7-8 years old, onwards. The scaling of agreement to the statements follows the same convention as the mothers and the statements are the same for round 3 and round 4.

Table 2**:** *Child Psychosocial Statements*

Self-Esteem	**Self-Efficacy**
"I am proud of my clothes,"	"If I try hard, I can improve my situation in life"
"I am never embarrassed because I do not have the right books, pencils or other equipment for school,"	"If I study hard at school I will be rewarded with a better job in the future"
"I am proud of my achievements at school,"	"Other people in my family make all of the decisions about my actions"
"I am proud by/ashamed of the work I have to do,"	"I have no choice about the work that I do – I must do this"
"I am proud of my shoes,"	"I like to make plans for my future studies and work"
"I am proud that I have the correct uniform,"	

Each measure is standardised mean 0 and variance 1, summed together, and averaged to make a standardised index for self-esteem and self-efficacy. This aims to approximate a measure which is associated with higher values of the included psychosocial competencies (Dercon and Krishnan [2009]). Cronbach's Alpha, which measures the interrelatedness of the scales for the psychosocial competencies (Cronbach [1951]), is calculated to measure the internal validity of these statements. The alpha measures how much of all of the included statements are related to a specific concept or idea. A valid Cronbach's alpha generally is above

0.7 whereas in the working sample[5], the alpha's range for both mother and child's competencies around 0.5. As is the case in Dercon and Krishnan (2009)[6], the values for Peru are lower than what is generally accepted as an internally valid measure. Dercon and Krishnan (2009) state a few reasons for this. For one, there could be a lack of understanding of the value of these concepts in the Peruvian context. In another sense, the multidimensionality of the measures in terms of the statements measuring many different concepts rather than just one specific concept. The index score of all of the psychosocial statements lessens the concern somewhat as it captures the possible multidimensionality much better than each individual measure.

3.1 Descriptive Statistics:

This study follows the convention set by Deaton (1997) in using total expenditure as a measure of socioeconomic status. Total expenditure in this dataset includes all household expenditures on food, transportation, education, safety, household services (such as water supply, electricity, etc.). Another measure of socioeconomic status in the Young Lives data is the wealth index which is the weighted average of consumer durables in the household, household services, and household quality. The appendix contains figures which show the distribution of wealth and expenditure for the households in the study.

The descriptive statistics are seen in Table 3. Children's psychosocial characteristics improve from round 3 to 4, while mother's drop in the same time period. In each case, the average raw score is approximately 3.5 or above, indicating that the individuals are reporting higher levels of self-esteem and self-efficacy. Household wealth and expenditure increases substantially across the most recent two rounds of the survey, in line with the trends of the country as a whole. Half of caregivers in the sample have only a primary education, while the other half have either a secondary or tertiary level of education. Lastly, 30% of the households are located in rural areas.

[5] Cronbach's Alpha for the measures not accounting for the missing values is much more acceptable, with all values having an approximate alpha of 0.9

[6] Dercon and Krishnan (2009) provide a much more thorough analysis of the strengths and weakness of this measure in relation to their use in this sort of research

Table 3: *Descriptive Statistics by Round*

	(1) Round 4 Mean	sd	(2) Round 3 Mean	sd
YL Child Self-Efficacy, Raw Score	3.56	0.39	3.48	0.36
YL Child Self-Esteem, Raw Score	4.00	0.48	3.96	0.48
Caregiver Self-Efficacy, Raw Score	3.43	0.47	3.96	0.40
Caregiver Self-Esteem, Raw Score	4.07	0.44	4.10	0.40
Age of child in months	142.98	3.60	95.43	3.57
Wealth index	0.59	0.19	0.54	0.20
Total nominal consumption per month per capita R4	1513.17	1357.06	972.97	654.24
Housing Quality	0.45	0.25	0.42	0.24
Consumer Durables	0.48	0.21	0.42	0.22
Housing Services	0.83	0.22	0.78	0.25
Female	0.49	0.50	0.49	0.50
Household size	5.30	1.70	5.45	1.80
Rural	0.28	0.45	0.30	0.46
Caregiver has completed up to primary education	0.51	0.50		
Caregiver has completed up to the secondary education	0.10	0.30		
Caregiver has completed up to tertiary education	0.39	0.49		
Shock	0.66	0.47	0.64	0.48
Stunted	0.18	0.39	0.20	0.40
Native language Quechua	0.13	0.34		

In addition to Table 3, Table 4 distinguishes the sample by upper and lower quintiles of socioeconomic status for the key variables in the study, namely the maternal and child psychosocial measures. Starting with those, there are significant differences between upper and lower quintiles for all of the psychosocial measures, with the upper quintiles having higher values of each as expected. Other notable differences in the groups include household quality,

consumer durables, and housing services[7] and caregiver education. The differences in caregiver education are especially important, because they are measures of an intergenerational transfer in socioeconomic status in their own right. In the working sample, the majority of lower quintile socioeconomic caregivers have only a primary school education. This is both a cause and an effect of being in the lowest socioeconomic class, and as a result, can limit the prospects of upward mobility in children. Parents lack the educational and life experience which can help their children move forward.

Lastly, Table 5 shows the correlation coefficients of socioeconomic status on the children and caregiver psychosocial measures. In both round 3 and round 4, expenditure is significantly correlated to children and maternal psychosocial measures. In addition to expenditure, caregiver education has higher correlations than socioeconomic status for all of the measures. Specifically, for children, there are significant correlations between children's health and psychosocial competencies. Table A2 of the appendix shows the correlations between the psychosocial competencies and cognitive achievement scores in each of the two rounds. The results in these tables show evidence of a greater scale of malleability in psychosocial competencies than for cognitive skill. There are higher correlations between past and present cognitive skill than for past and present psychosocial competencies.

[7] Housing quality is the simple average of sleeping rooms per person, and construction material of the walls, roof and floor of the house. Access to services is the average of access to electricity, clean water, sanitation, and adequate sources of cooking. Consumer durables is the average of a household having a radio, TV, bicycle, motorcycle, car, landline or mobile phone, refrigerator, stove, blender, iron, and record player (Azubuike and Briones 2016)

Table 4*: *Descriptive Statistics By Round and Expenditure Quintile

	(1) R4 Top Quintile		(2) R4 Bottom Quintile		(3) R3 Top Quintile		(4) R3 Bottom Quintile	
	mean	sd	mean	sd	mean	sd	mean	sd
YL Child Self-Efficacy, Raw Score	3.67	0.38	3.46	0.40	3.58	0.34	3.45	0.34
YL Child Self-Esteem, Raw Score	4.13	0.47	3.93	0.48	4.10	0.44	3.82	0.47
Caregiver Self-Efficacy, Raw Score	3.52	0.48	3.31	0.45	4.00	0.39	3.86	0.41
Caregiver Self-Esteem, Raw Score	4.21	0.42	3.91	0.44	4.14	0.41	4.05	0.38
Age of child in months	142.73	3.52	143.17	3.70	95.58	3.43	95.56	3.56
Wealth index	0.75	0.11	0.40	0.15	0.74	0.12	0.39	0.15
Total nominal consumption per month per capita R4	3284.36	2124.12	528.93	123.46	1975.14	812.32	381.40	84.34
Housing Quality	0.63	0.20	0.28	0.19	0.61	0.22	0.31	0.17
Consumer Durables	0.66	0.15	0.29	0.16	0.64	0.15	0.23	0.15
Housing Services	0.97	0.09	0.62	0.24	0.95	0.12	0.62	0.26
Female	0.47	0.50	0.50	0.50	0.49	0.50	0.46	0.50
Household size	5.29	1.78	5.26	1.73	5.57	2.01	5.44	1.70
Rural	0.05	0.21	0.62	0.49	0.03	0.16	0.50	0.50
Caregiver has completed up to primary education	0.23	0.42	0.81	0.39				
Caregiver has completed up to the secondary education	0.07	0.26	0.10	0.29				
Caregiver has completed up to tertiary education	0.70	0.46	0.09	0.29				
Shock	0.63	0.49	0.64	0.48	0.52	0.50	0.66	0.47
Stunted	0.09	0.28	0.32	0.47	0.15	0.35	0.47	0.50
Quechua	0.03	0.16	0.18	0.39				

Table 5: *Correlations for Psychosocial Measures*

Panel A: Round 4

	(1) Caregiver Self-Esteem	(2) Caregiver Self-Efficacy	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy
Quintile of Expenditure	0.217***	0.142***	0.133***	0.171***
Caregiver's level of education	0.203***	0.239***	0.159***	0.179***
Height-for-age z-score			0.118***	0.139***

Panel B: Round 3

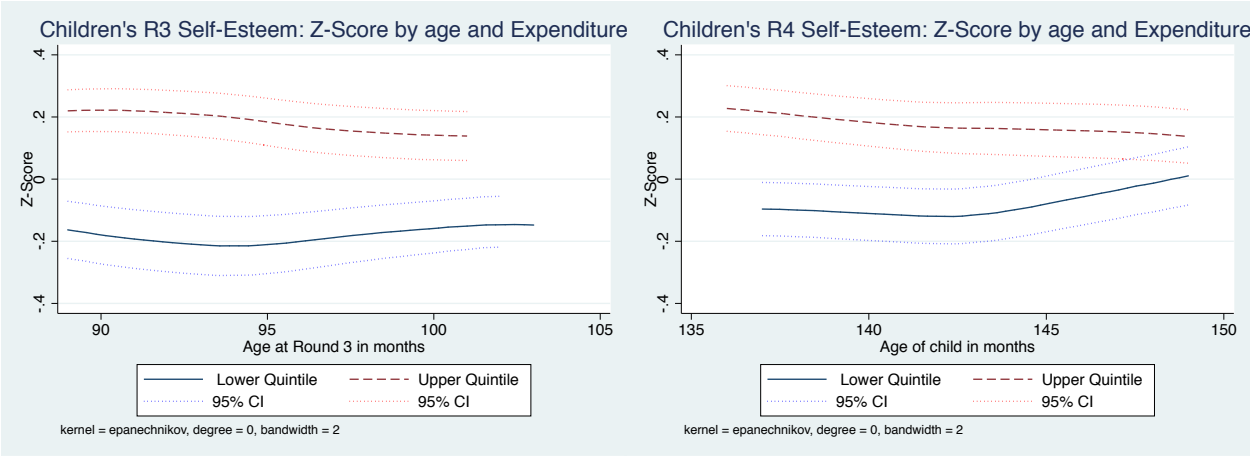
	(1) YL Mother Self-Esteem Round 3	(2) YL Mother Self-Efficacy Round 3	(3) YL Child Self-Esteem Round 3	(4) YL Child Self-Efficacy Round 3
Quintile of Expenditure, R3	0.0928**	0.109***	0.217***	0.149***
Caregiver's level of education	0.186***	0.181***	0.291***	0.165***
Height-for-Age Z-score, R3			0.185***	0.128***

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4. Non-parametric analysis:

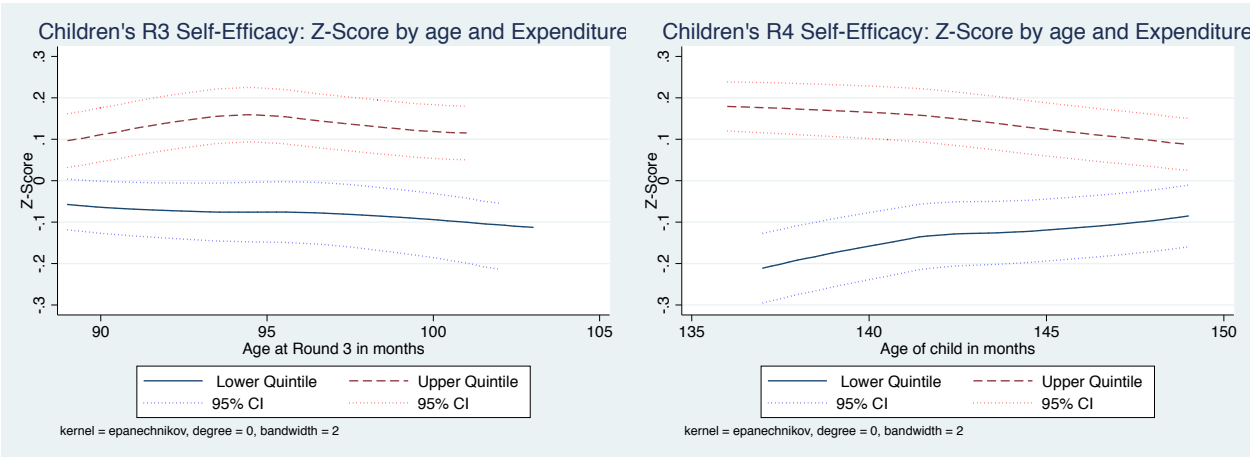
The next step in the analysis is to illustrate the trends in children's psychosocial competencies by socioeconomic status. Kernel local polynomial regressions are used to show how these skills fluctuate as children grow older. The longitudinal component of the study means that children can be studied at two important periods of childhood; 7-8 years old and 12-13 years old. Figure 2 shows self-esteem and Figure 3 shows self-efficacy.

***Figure 1**: Children's Self-Esteem gaps in Round 3 and Round 4*



Focusing first on self-esteem gaps, it is apparent from the non-parametric analysis that there are significant gaps in children's self-esteem dependent on expenditures, and they are stable up to the age of 12. Beyond age 12, the gaps begin to close[8]. At this age, children are gain experience from many different sources, and are beginning to better understand their environments and how they fit into them. As time goes on, the socioeconomic gap begins to reduce. Possible reasons for this is that children are deriving their self-esteem from their own unique sources or that parents or past beliefs are playing a role and reducing the impact of socioeconomic status.

***Figure 2:** Children's Self-Efficacy gaps in Round 3 and Round 4*



[8] Note that there are 11 children in the tails which cause them to run off slightly in either direction. These observations are from children who are above the age of 150 months as a result of late interviews. Because of this, these observations fall out of comparison with the rest of the sample because they are outside of the window of the study in round 4, and they are dropped accordingly. Results with these values included are available by request.

The results in figure 2 paint a similar picture for self-efficacy, with more or less stable gaps up into the early adolescence. It seems that at the age of 13 children are beginning to understand their own capabilities independent of their socioeconomic status. This could be as a result of continued experience with their environment around them as they continually take on more responsibility and have to act to stay in school, or be successful in any sort of labour activity. The appendix includes robustness checks of the non-parametric results using the Young Lives wealth index as the indicator of socioeconomic status. In addition, the socioeconomic status of the household is held constant from the initial values of each indicator. The results are similar to the above in both cases.

5. Parametric Analysis:

The above analysis has illustrated the presence of significant gaps in children's self-esteem and self-efficacy as a result of socioeconomic status. The gaps are stable up until the early adolescence where they begin to close. This trend in the data motivates a parametric analysis which hopefully can provide some insight to this trend. This analysis complements the non-parametric analysis in three ways. Firstly, it is possible to estimate the association between socioeconomic status and children's psychosocial competencies and determine how much do household and individual controls constrain this association. Next, it is possible to see, holding all things equal, the estimated predictive effect of caregiver education and psychosocial competencies on the same competencies in children. This informs of the impact of mothers on their children's socioemotional development and describes how improvements in maternal psychosocial competencies can improve children's psychosocial outcomes holding socioeconomic status equal. Finally, the use of a value-added production function (which is described in the following subsection) means that it is possible to test the malleability of children's psychosocial competencies between the mid-childhood and early adolescence.

5.1 Empirical Specification, Value Added Production Function:

A value-added production function of skills is used to estimate how socioeconomic status can affect children's psychosocial skills at ages 7-8 and 12-13. This specification builds on Dercon and Sanchez (2011) and is chosen because it takes into account previous iterations and investments into a child's psychosocial competencies and relates them to a present measure. In addition, the structure of the production function allows for identification of channels which socioeconomic status travels through to affect outcomes. For example, Dercon and Sanchez (2011) identifies malnutrition as a channel which socioeconomic status, while Walker et al. (2011) illustrates the impacts of early life stimulation (or lack thereof) that necessitated the West Indies intervention programmes.

A value-added measure, such as the past psychosocial measurement for children, then can be a proxy (albeit imperfect) for the past information which was not collected in the past rounds of the Young Lives survey. It also acts as a test of the malleability of psychosocial competencies from the mid-childhood to early adolescence. Equation 1 illustrates this production function, while equation 2 shows the linear empirical specification.

$$\theta_{it}^{C} = f(\theta_{it-1}^{C}, \theta_{it}^{M}, X_{it}, \mu_i) \quad (1)$$

$$\theta_{it}^{C} = \alpha + \beta_1\theta_{it-1}^{C} + \beta_2\theta_{it}^{M} + \beta_3 caredu + \beta_4 X_{it} + \mu_i \quad (2)$$

$$C, M \in \textit{Self-Esteem, Self-Efficacy}$$

Here, θ_{it}^{C} is the child's self-esteem or self-efficacy score when they are 12-13 years old. θ_{it}^{P} is the contemporaneous parent's psychosocial competency. For theoretical simplicity, the competencies are the same for parent and child. X_{it} includes the household and individual level controls such as caregiver's education, household size, gender, locality, whether the household experienced a shock, age, birth order of the child, and the child's height and any health problems experienced. Also contained within X_{it} is the score on the child's PPVT score from the same period of time as the psychosocial competency. Here, the addition of the present cognitive score acts as a control for the rank of the intelligence of the child amongst its peers in the study. Lastly, μ_i is the error term which would include the genetic endowment that a child has from birth as well as the unobservable factors such as interactions in the household on a consistent basis and detailed information on how the child interacts with others at school and in their community.

The empirical specification in equation 2 is the linear form of the production function in equation 1. Caregiver's education is extracted from X_{it} because of its high correlation with the measures of interest as well as the fact that it is an indicator of the intergenerational transfer of poverty. Constraining β_1 to zero leads to a contemporaneous specification, where all inputs are from the same time period (which is Round 4). The results from this specification are consistent if the unobserved factors (such as many components of the household environment) are orthogonal to the included inputs (Todd and Wolpin [2007]). This is a strong assumption because the household environment may be different for some children depending on their perceived level of skill in comparison to their siblings or their birth order. As a result of these intricacies, parental focus can be more concentrated on one child than the other, therefore meaning that the maternal psychosocial characteristics may predict more or less of the child's depending on the quality of time spent with the child. The extensive nature of the Young Lives survey means that these concerns can be somewhat limited with the inclusion of many different controls for the individual (such as previous cognitive ability and birth order).

The value-added model includes a lagged value (mid-childhood in this case) of children's psychosocial competencies to proxy for the stock of all previous inputs into a child's mental wellbeing. β_1 then denotes the level of predicitve persistence of psychosocial competencies from the past to the future. If β_1 is equal to 1, then there is perfect persistence, where the past predicts all of the current level of competencies. In the opposite case, β_1 being equal to zero would mean perfect malleability, where the past level of psychosocial competency does not matter at all. Consistent estimation with the inclusion of the value-added measure is dependent on the previous iteration of the psychosocial competency being assumed to take into account all of the previous inputs which could affect a child's development. In addition to this main identifying assumption, the previous inputs must have a geometrically declining impact over

time, such that the earliest inputs, both observed and unobserved, have the smallest impact on the present outcome. In addition, contemporaneous omitted inputs must be uncorrelated with the past value of children's psychosocial competencies.

Any conclusions with regards to the value-added measure must be treated with caution. Firstly, a strict value-added model is restrictive in terms of the geometrically declining impacts and the correlation between unobservable inputs and the lagged measurement variable. In the first case, the literature has consistently focused on the importance of the first 1000 days of life, and by extension the first five years of life as a whole (please see the literature review for examples). While the literature has not focused directly on how this works for psychosocial competencies, the fact that it could be the same causes some concern. Critical and sensitive periods of development indicate that rates of development are quicker in some periods than in others. In terms of the correlation of the contemporaneous unobserved effects and the lagged measurement, there are many anecdotal stories that one could tell which immediately calls the assumption into question. For example, a mother sees that her child is feeling down for whatever reason, and looks to boost her self-esteem by focusing more on her well-being than that of other children in the household, and as a result, there is a correlation. The second concern stems from Andrabi et al. (2011), and mainly concerns heterogeneity in the rates of development of children's scores and measurement error. In the first case, some children will 'learn' quicker than others, which will upwardly bias the estimates. In terms of mismeasurement, there will be a downward bias as a result of noise.

A weakness of this paper is that it is unable to adequately test the validity of the value-added model. The nature of psychosocial competencies, namely their flexibility in the early stages of life should eliminate some concern over the measure. In the case of the pure "education production function", test scores are used to act as measures of cognitive ability, which is learned. Cunha and Heckman (2007) and others explicitly note that psychosocial competencies are not learned or taught, but gathered through experience and environment. As such, it is hard to make an argument that some individuals move to higher levels of self-esteem than others, and therefore should limit the concern of an upward bias. There is however, a strong likelihood that mismeasurement is present in the psychosocial measures. While the statements to measure the two competencies are anchored in good practice, self-reported measures have an inherent error component to them. Overall, the results of the paper are meant to be associations and predictions rather than causal effects, and are to be seen as the next best alternative with the inclusion of the wealth of controls. The estimates presented in the paper, in the non-value added and value added model, are likely to be lower bound estimates of the effects of socioeconomic status and maternal psychosocial competencies on the same competencies. The findings are meant to highlight trends in the data for an important part of a child's development, and to estimate predicted impacts of socioeconomic status and the impacts of parents.

5.2 Non-Value-Added Results

The structure of the tables is as follows. In each table, columns 1 to 3 focus on self-esteem, while columns 4-6 are for self-efficacy. Within each competency, the first column is the specification which contains socioeconomic status and the collection of individual and household level controls listed in the notes of each table. The next column adds caregiver's education, as it is an indicator of the intergenerational transfer of socioeconomic status, and finally the last column adds the maternal psychosocial competencies.

Table 6 displays the results for the mid-childhood period. Focusing first on self-esteem, there is a statistically significant gap as a result of being from a household of high socioeconomic status. The addition of caregiver's education predicts a small amount of children's self-esteem at this age, but more importantly, reduces the effect of socioeconomic status by nearly 30%. As a result, socioeconomic status is no longer statistically different than zero. While socioeconomic status is no longer statistically significant, it's relationship with caregiver's education means socioeconomic status is still economically. Caregiver's education is a longer term indicator of socioeconomic status, and transmits the intergenerational characteristic of socioeconomic status. Mother's self-esteem is positively associated with her children's self-esteem predicting 12% of their child's level of self-esteem. Holding socioeconomic status constant, this estimated association makes up the gap created by socioeconomic status when considering economic significance instead of economic significance. In contrast to caregiver's education, it reduces the coefficient on socioeconomic status only slightly.

The story is different for self-efficacy. Throughout each specification, socioeconomic status is not responsible for the gap in children's skill. Looking at Table A3 in the appendix, the main predictor of self-efficacy in children is whether they live in a rural or urban area. Additionally, column 6 shows that maternal self-efficacy plays a significant role in predicting their children's self-efficacy, but it and caregiver education do not play much of a mediatory role. The model predicts only a small amount of the data, suggesting that the development of self-efficacy is a much more complicated process compared to self-esteem.

Table 6: *Predicting Child's Psychosocial Competencies at age 7-8*

	(1) YL Child Self-Esteem Round 3	(2) YL Child Self-Esteem Round 3	(3) YL Child Self-Esteem Round 3	(4) YL Child Self-Efficacy Round 3	(5) YL Child Self-Efficacy Round 3	(6) YL Child Self-Efficacy Round 3
Top Quintile of Expenditure at Round 3	0.14**	0.098	0.095	0.087	0.084	0.080
	[0.02,0.3]	[-0.03,0.2]	[-0.03,0.2]	[-0.03,0.2]	[-0.04,0.2]	[-0.04,0.2]
Caregiver's Education		0.013**	0.011*		0.0013	-0.00012
		[0.002,0.03]	[-0.001,0.02]		[-0.005,0.008]	[-0.006,0.006]
YL Mother Self-Esteem Round 3			0.12***			
			[0.04,0.2]			
YL Mother Self-Efficacy Round 3						0.082**
						[0.02,0.1]
Observations	955	955	955	955	955	955
R-squared	0.14	0.14	0.16	0.073	0.073	0.084

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites
Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7 shows the results for children in the early adolescent period. As was the case before, socioeconomic status plays in an important role in the formation of self-esteem gaps. In contrast to the mid-childhood, caregiver's education plays less of a mediatory role (and no direct role) in the prediction of self-esteem. The addition of maternal self-esteem is again important, albeit predicting less of a child's self-esteem than was the case in the mid-childhood. The mediatory effect is greater in this period, suggesting that mother's and the household as a whole act more as a buffer for children in this period compared to in the mid-childhood. Again, socioeconomic status is statistically insignificant in this period once all controls and explainers are included, showing that other factors can help improve children's self-esteem.

In terms of self-efficacy, socioeconomic status plays a significant predictive role throughout the three specifications. Caregiver's education again plays a role in reducing the impacts of class at a much higher magnitude than before, but it no longer has a direct effect. Interestingly, maternal self-efficacy plays no significant role either in predicting children's self-efficacy or reducing the socioeconomic gap. These findings suggest that children are developing

their work ethic and belief in themselves from their innate abilities as well as the environment around them. No firm conclusion can be made as to why this is the case.

Table 7: *Predicting Child's Psychosocial Competencies at age 12-13*

	(1) YL Child Self-Esteem	(2) YL Child Self-Esteem	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy	(5) YL Child Self-Efficacy	(6) YL Child Self-Efficacy
Top Quintile of total expenditure	0.17*** [0.05,0.3]	0.14** [0.02,0.3]	0.11 [-0.03,0.2]	0.12* [-0.01,0.3]	0.12* [-0.01,0.3]	0.12* [-0.02,0.3]
Caregiver's Education		0.0092 [-0.002,0.02]	0.0075 [-0.004,0.02]		0.00013 [-0.010,0.010]	-0.00069 [-0.01,0.009]
Maternal Self-Esteem			0.084** [0.01,0.2]			
Maternal Self-Efficacy						0.037 [-0.02,0.09]
Observations	955	955	955	955	955	955
R-squared	0.040	0.044	0.051	0.088	0.100	0.10

95% confidence intervals in brackets Standard-errors clustered by 20 sentinel sites.
Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 8 considers a preliminary measure of the parent child relationship which is unique to the Young Lives data. The score consists of 7 statements[9] which are then standardised in the same manner as the psychosocial competencies and replaces the measure of psychosocial competency score[10]. Because the measure is only taken in Round 4 of the survey, only early adolescent outcomes can be considered.

[9] The statements are; "I like my parents", "My parents like me", "My parents and I spend a lot of time together", "I get along well with my parents", "My parents understand me", "My parents are easy to talk to", "My parents and I have a lot of fun together".

[10] Regressions that use both measures removes the significant effect of parental competencies. These are available upon request, but not included because of the uncertainty of the relationship between the two variables.

***Table 8**: Using Parent Score for Outcomes at Age 12-13*

	(1) YL Child Self-Esteem	(2) YL Child Self-Esteem	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy	(5) YL Child Self-Efficacy	(6) YL Child Self-Efficacy
Top Quintile of total expenditure	0.14**	0.11	0.070	0.12*	0.12*	0.098
	[0.02,0.3]	[-0.03,0.2]	[-0.04,0.2]	[-0.01,0.3]	[-0.02,0.3]	[-0.04,0.2]
Caregiver's Education	0.0091	0.0074	0.0075	0.000023	-0.00079	-0.00047
	[-0.002,0.02]	[-0.004,0.02]	[-0.003,0.02]	[-0.010,0.010]	[-0.01,0.009]	[-0.01,0.010]
Maternal Self-Esteem		0.084**				
		[0.01,0.2]				
Parent/Child relationship score			0.39***			0.12***
			[0.3,0.5]			[0.06,0.2]
Maternal Self-Efficacy					0.036	
					[-0.02,0.09]	
Observations	955	955	955	955	955	955
R-squared	0.044	0.051	0.21	0.10	0.10	0.12
F-Stat	12.3	49.7	280.0	55.5	256.8	40.4

95% confidence intervals in brackets
Standard-errors clustered by 20 sentinel sites
Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's health, past age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results of these regressions are similar to those which use maternal psychosocial competencies as the proxy for the home environment. The main difference arises from the fact that the effect sizes increase substantially for the parent score. Children who have a better relationship with their parents are predicted on average to have much higher levels of self-esteem and self-efficacy. The effect is much larger for self-esteem than for self-efficacy. For self-efficacy though, the effect is significant. This table is important for the research because it illustrates the importance of the relationship children have with their parents. It is also important because it shows that the results (albeit not in effect size) are robust to changes in the way the parent child relationship is measured.

5.3 Value-Added Results:

The next step in the analysis is to use the previous score of children's psychosocial competencies in the value-added model. Table 8 presents these results in columns 3 and 6 conjunction with the results from the previous contemporaneous specifications for 12 to 13 year olds in the preceding columns. Tables A8 and A9 in the appendix breaks the sample down into male and female and urban and rural groupings.

Table 9: *Value-Added Model Results*

	(1) YL Child Self-Esteem	(2) YL Child Self-Esteem	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy	(5) YL Child Self-Efficacy	(6) YL Child Self-Efficacy
Top Quintile of total expenditure	0.14**	0.11	0.098	0.12*	0.12*	0.11*
	[0.02,0.3]	[-0.03,0.2]	[-0.03,0.2]	[-0.01,0.3]	[-0.02,0.3]	[-0.02,0.2]
Caregiver's Education	0.0092	0.0075	0.0064	0.00013	-0.00069	-0.00089
	[-0.002,0.02]	[-0.004,0.02]	[-0.004,0.02]	[-0.010,0.010]	[-0.01,0.009]	[-0.01,0.008]
Maternal Self-Esteem		0.084**	0.080**			
		[0.01,0.2]	[0.007,0.2]			
YL Child Self-Esteem Round 3			0.084**			
			[0.01,0.2]			
Maternal Self-Efficacy					0.037	0.037
					[-0.02,0.09]	[-0.02,0.09]
YL Child Self-Efficacy Round 3						0.054
						[-0.02,0.1]
Observations	955	955	955	955	955	955
R-squared	0.044	0.051	0.057	0.100	0.10	0.10

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites
Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In this case, past child's self-esteem is a significant predictor of current self-esteem, and only slightly reduces the coefficient on socioeconomic status. Past self-esteem predicts only 8% of current self-esteem, which means that there is still a high level of malleability of self-esteem

in early adolescent children. In the case of self-efficacy, the lagged value is statistically insignificant, indicating that there is perfect malleability in this case.

5.4 Robustness Checks:

There are a few additional regressions that were completed as robustness checks. Firstly, the above specifications are run with the 11 children who were dropped from the sample as a result of being outside of the accepted Young Lives age range. The results, available upon request, are largely the same outside of caregiver's education reducing the coefficient on socioeconomic status by a larger amount than above. Next, the above tables are replicated using the Young Lives wealth index as the indicator of socioeconomic status. In the mid-childhood, wealth has a larger association with children's psychosocial competencies which is significant in each specification. In the early adolescence and value-added model, the estimates are again slightly larger, but statistical significance follows the same trends. Total expenditure and wealth both seem to be adequate measures of socioeconomic status. Lastly, the specifications are cut into subsamples by gender and location of residence. These results indicate that the associations for self-esteem are stronger for females than males, but the opposite holds for self-efficacy. In terms of urban/rural location, it seems that there is a stronger persistence in children's skills. This is an interesting result, because it suggests that lack of connectivity that is characteristic of rural areas means that children derive more of their psychosocial competencies from themselves.

6. Discussion and Conclusions:

The findings shown above contribute to the literature by exploiting a life course analysis which allows for research into children's development beyond the early childhood. With the existing research focusing on the early childhood and later life outcomes, this study provides evidence which can serve as a connector between the two periods of life. The mid-childhood and early adolescent periods are important in the child's developmental cycle as they cover key points in the child's life when they are exposed to new environments (entry into primary school and movement into more socially demanding peer groups). The study comes to three distinct and important conclusions. Firstly, the non-parametric analysis presents evidence of gaps in children's level of self-esteem and self-efficacy based on the socioeconomic status of their household. These gaps extend from before the mid-childhood until the early adolescent period where they begin to close as children mature into teenagers. In addition to this, the evidence of the gaps closing is important because it supports the malleability of psychosocial competencies into the later stages of childhood development.

The gaps that are found in the non-parametric analysis serve as the motivation for the parametric analysis. A production function of skills is used to estimate associations between socioeconomic status and children's psychosocial competencies. The addition of maternal psychosocial characteristics illustrates the role parents and the home environment play in either supporting or reducing these socioeconomic gaps and how it evolves over time. In the mid-childhood, caregiver education plays a large role in reducing the impacts of socioeconomic

status while playing only a small direct role. A potential reason for this is hypothesised to be that caregiver's education is an indicator of past socioeconomic status in the household. Younger children are still feeling the effects of this as they spend a fair share of their time at home still. The actual schooling attainment has a low association with children's competencies because what is learned at school does not directly translate into better self-esteem or self-efficacy. In the case of maternal self-esteem, there is a modest association between maternal self-esteem and their children's self-esteem. Mothers, and the environment that they foster, have an important connection to their children's psychosocial well-being which is important in the future. At this age, children still are spending a large amount of their time outside of school at home, so their parents may "rub off" more than what may be the case in the future. It is important that the conditions for them when they are home are conducive to their development, and this measure captures that slightly. The inclusion of maternal self-esteem only slightly reduces the impact of socioeconomic status, showing that it has a larger direct impact in the mid-childhood than as a buffer.

The story changes once the early adolescence is considered. Socioeconomic status is now a larger predictor of a child's self-esteem, potentially because children are using their own socioeconomic class as a measure of comparison with other children. Middle school is a stressful time in a child's life, and fitting in with peers depends on many factors outside of a child's control (such as their household's income, the things they have, and their body image). The association is weakened again with the inclusion of the caregiver's education and maternal self-esteem. Caregiver's education is no longer a significant predictor of a child's psychosocial competency level, but it does play a role (albeit smaller) in reducing the effect of socioeconomic status by approximately 18%. Here, the intergenerational transfer of poverty is still in play, as more educated caregivers have the knowledge and experience which can help the child independently of socioeconomic status. Maternal self-esteem seems to drive both the direct and indirect effects, with the measure reducing the coefficient on socioeconomic status by 21% and predicting 8% of a child's self-esteem. The evolution of the role mothers and the home environment plays as a child matures is interesting, and highlights one way that interventions and policy can adapt through the life cycle. The reduction of the direct association indicates that mothers and their households are playing less of a role in the lives of their children. Children are becoming more independent as they mature, and they are beginning to derive their self-esteem from sources other than the home. However, the home environment still plays an important role as a buffer, with prouder mothers protecting children from the impacts of socioeconomic status.

The addition of lagged child's self-esteem adds more colour to the results by controlling for the impact of past inputs as well as allowing for persistence between periods. The results of this specification support the conclusion of malleability from the non-parametric results because the estimate of the association between past and present competencies is small. In short, the past matters only a small amount. In fact, this association is not significantly different from that of maternal self-esteem, showing the complementarity of past and current inputs over time. Boosting the home environment early in life will predict a small amount of a child's self-esteem in the future, and continued investment will bring even further gains. This provides

support for interventions to step in and boost children's self-esteem both early and later in life, but is also dependent on having a better understanding of what all of the determinants of self-esteem are.

Children's self-efficacy seems to develop in a much different way compared to self-esteem. In the mid-childhood, socioeconomic status does not play a significant role in the development of self-efficacy, nor does caregiver's education. Maternal self-efficacy is a statistically significant predictor of skill, but does little to reduce the (insignificant) effect of socioeconomic status. In fact, the largest predictor of self-efficacy seems to be children's performance on the PPVT test, standardised by their age. This suggests that children derive their self-efficacy from their past performance, and perhaps the examples of mentors and others around them, rather than what they are experiencing in their home lives.

The early adolescent results support this conclusion with the PPVT score once again being the largest predictor. In this case however, expenditure plays a more significant and important role while caregiver's education and maternal self-efficacy no longer have any significant effect. Even the addition of the lagged value of child's self-efficacy is statistically insignificant. In this period, the past does not matter at all. A significant association between socioeconomic status and a child's work ethic shows that richer children have a higher belief in their abilities than their poorer counterparts. The importance of the cognitive test in predicting these abilities suggests that poverty is working through achievement, rather than through what parents are doing. Children with higher cognitive scores usually are richer, and may have access to better schools (for longer) and better classroom environments. Children in these environments then have higher self-efficacy because they are exposed to individuals with higher belief, which is not the case for poorer children. Because self-efficacy seems to be more innate and derived from performance, the home environment can do little to reduce these effects.

These results show that, at least in the case of self-esteem, parents play an important role in reducing the impacts of socioeconomic status on children's outcomes beyond the first 1000 days of life through their level of pride and the environment they create through these values. In the mid-childhood, they predict a modest share of their children's self-esteem which is understandable because children are still spending more time at home. In the early adolescence, they act as a buffer to socioeconomic status. These conclusions support and add to the evidence which shows the importance of interventions which target improvements in parental practices and maternal well-being (Walker et al. [2011]), even beyond the early childhood phase of development. The low persistence of skills sounds a note of caution however. Children are still developing their level of self-esteem from factors which affect them in the present time, which shows that children's psychosocial competencies are still flexible in the early adolescence. The expected return of any intervention programme is dependent on consistent investment throughout the developmental life cycle, rather than enlisting all of the focus at one period of the developmental cycle. Gains made in one period can be losses in the next without careful planning.

The findings of the paper fall into line with the estimates presented in the existing literature. In terms of intergenerational parental transfers, correlations of approximately 0.11 are similar (if not slightly lower) than what is seen in Anger (2012), Loehlin (2011) and Duncan (2005). In terms of closing socioeconomic gaps, the effects of maternal self-esteem in the mid-childhood are similar to what is seen in the previous literature from Latin America and other developing countries in the early childhood (Rubio-Codina et al. [2016] shows an effect of 0.11 sd; Fernald et al. [2012] shows an effect of 0.12 sd). The associations between socioeconomic status and children's development are less than what is seen in Rubio-Codina et al. (2016) which repots mediation effects of 38% in Colombia, but similar to Fernald et al. (2012) which reports 20% in Peru. Future research can further examine the evolution of the impacts of maternal self-esteem and self-efficacy on their children's psychosocial competencies. In addition to this, it would be interesting to see if the varying results though the region are a consequence of the developmental stage being studied or larger scale trends in these Latin American countries.

There are a few weaknesses which the paper cannot address and should be expanded on for further research on top of the points that were made previously. Firstly, the research would benefit from a cross-county comparison with children of the same age cohort. These comparisons could start with the other countries in the Young Lives survey[11], or in the Latin America and Caribbean region as a whole. A cross-country comparison would determine the level of generalizability in the results and would be informative on how different environments may contribute to the determination of these competencies.

Next, while the Young Lives data in the paper is useful for study of psychosocial competencies in the studied periods, it is not useful in determining how economic outcomes can be predicted by different levels of self-esteem and self-efficacy in these periods. Linking these competencies with outcomes is important because it gives more economic credibility to the results. The study would also benefit from having psychosocial information on children when they enter school. This would be informative of how trends at school entry perpetuate over time. Lastly the paper struggles to come to a conclusion on whether the choice of the value-added production function is correct in this setting. While it is convenient to use and understand, it lacks the flexibility to delve deeper into the connections between parents and children to fully understand how these competencies are transferring between the two.

Lastly, the research area still lacks a fundamental theoretical framework of how these psychosocial competencies are developed. The production function, in both value added and non-value added functional form, provide a structural form which allows for estimates to be produced regarding key inputs into children's psychosocial competencies. On the more theoretical side, previous research has focused on the interaction between parents and children (Benabou and Tirole [2003] and Darolia and Wydick [2011] to name a few). But altogether, the field still lacks the adequate framework which can help extend the research in towards a more conclusive theory. It is the hope that the findings contained in this paper can

[11] Ethiopia, Vietnam, India (Telangana and Andhra Pradesh)

help provide a more comprehensive description of the data and the trends in the development of psychosocial competency as children mature into the adults. Observing trends in the data is the key cornerstone of forming a more thorough economic model for these competencies.

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A. Appendix

Figure A1: *Expenditure and Wealth Distribution*

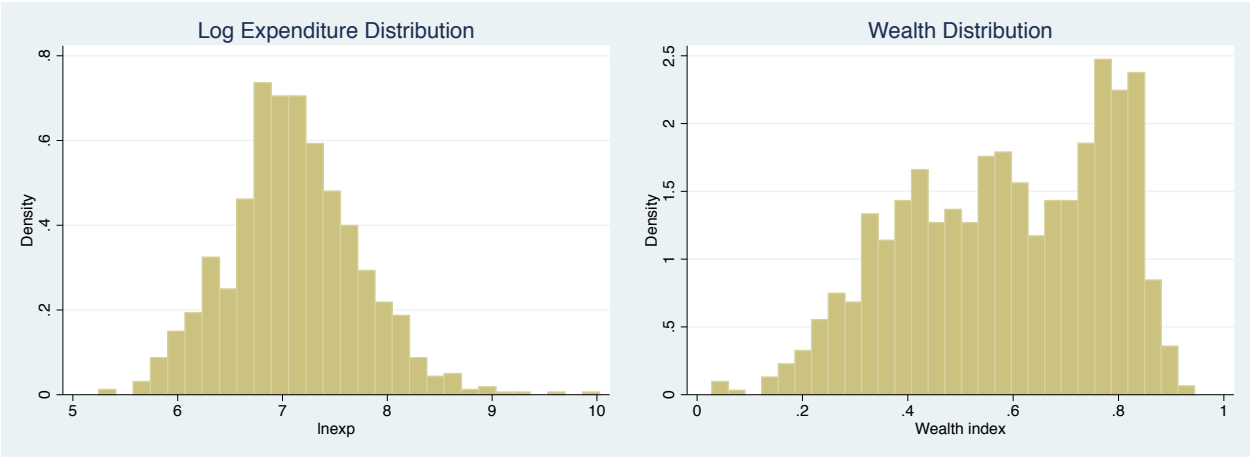


Figure A2: *Non-Parametric Gaps by Round 2 Expenditure*

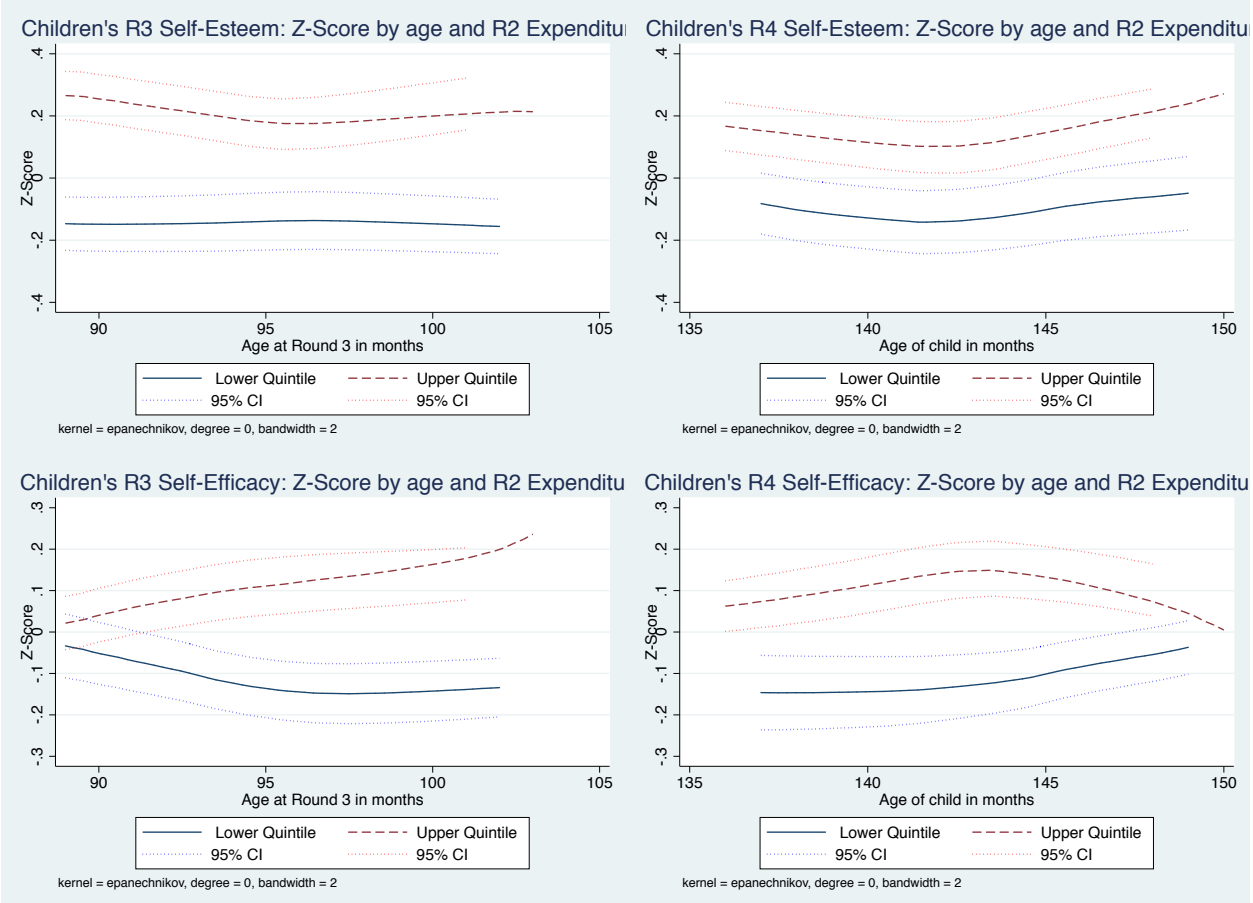


Figure A3: Non-Parametric Self-Esteem Gaps by Wealth

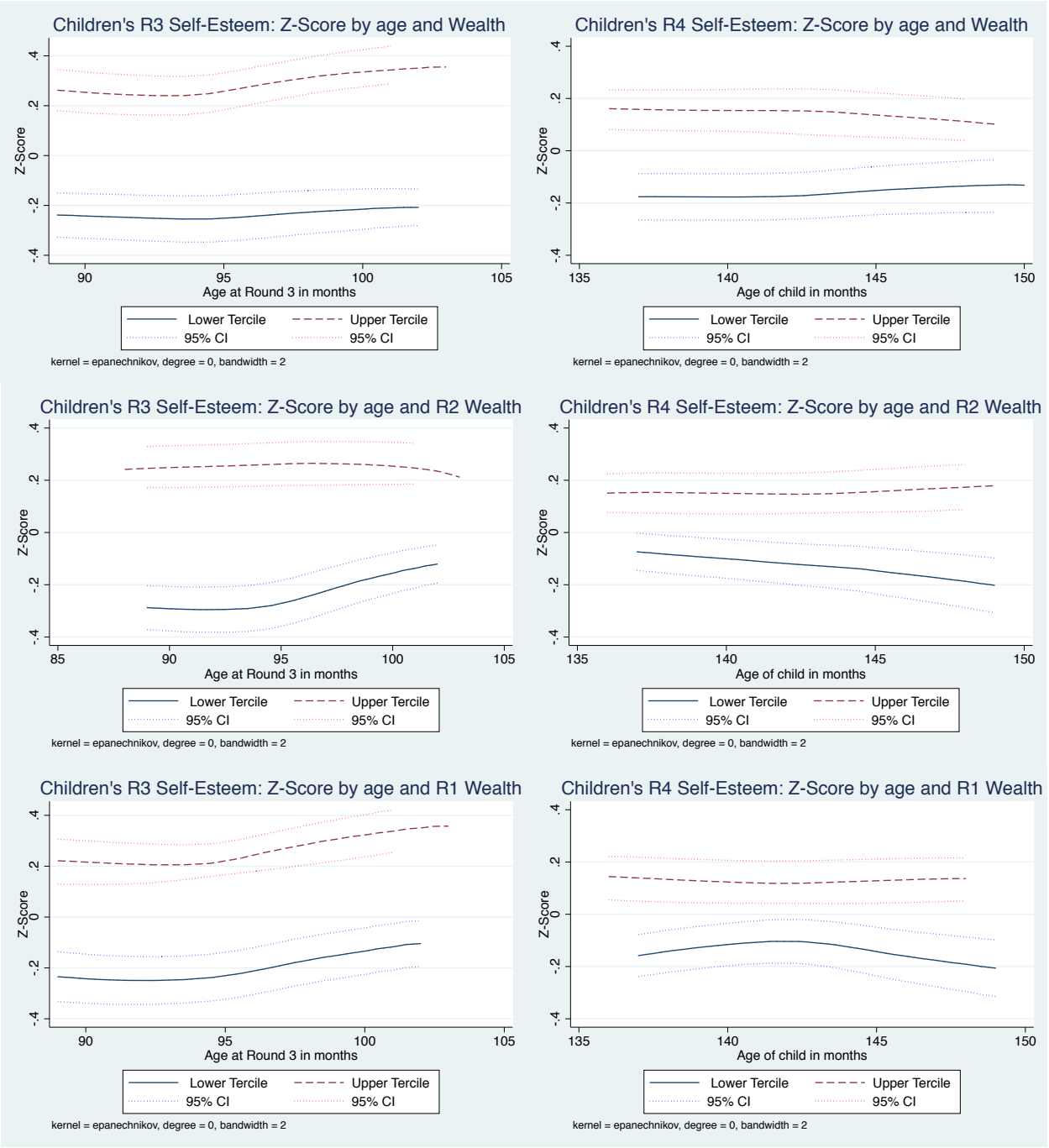


Figure A4: *Non-Parametric Self-Efficacy Gaps by Wealth*

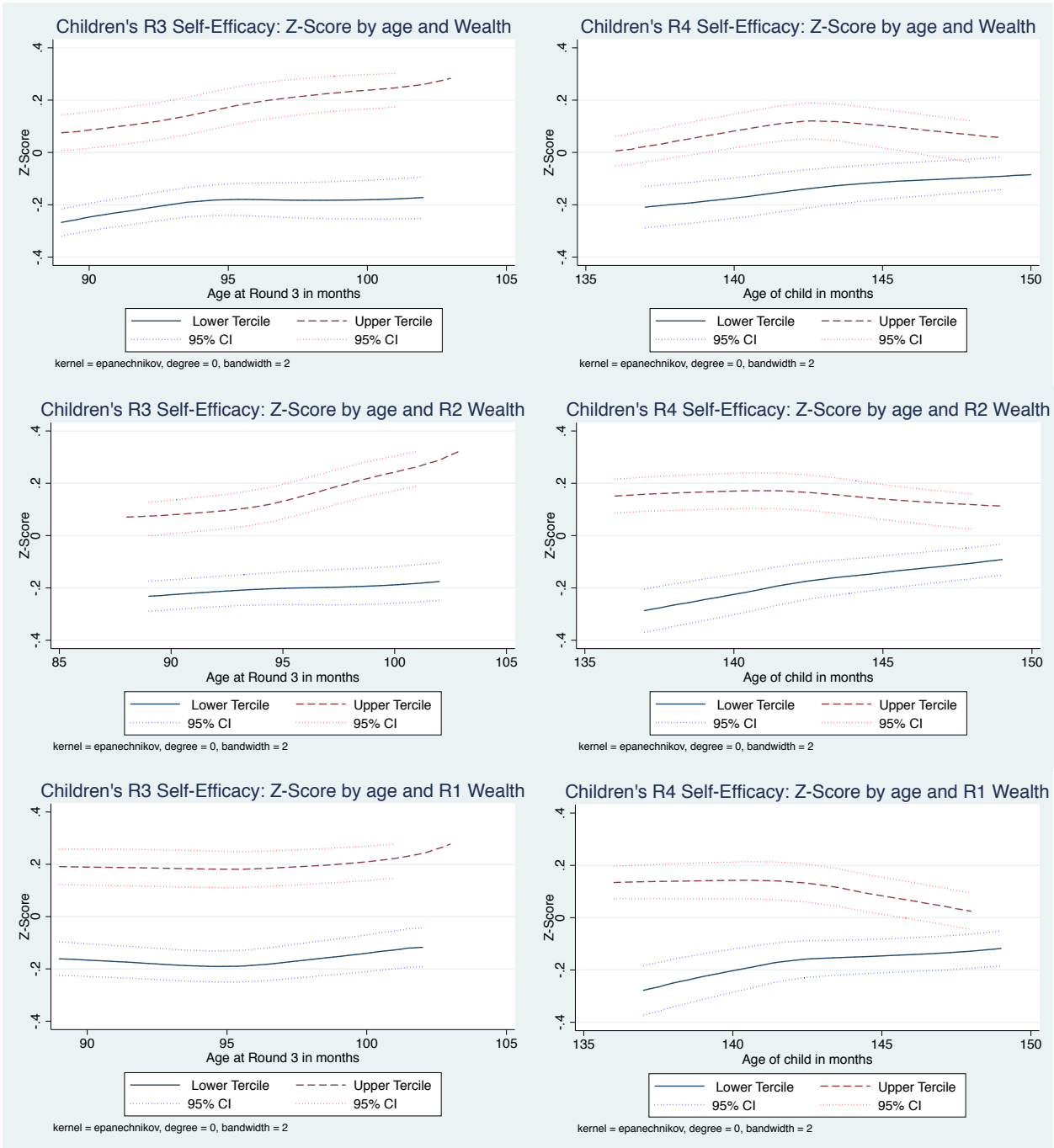
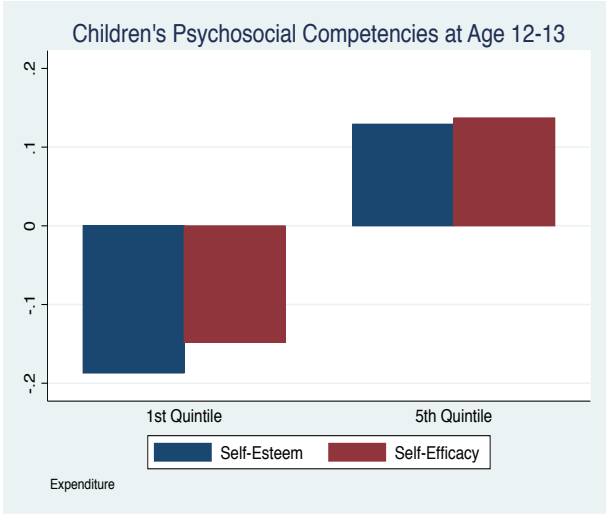


Figure A5: *Bar Graphs in Children's Psychosocial Competencies by socioeconomic status*



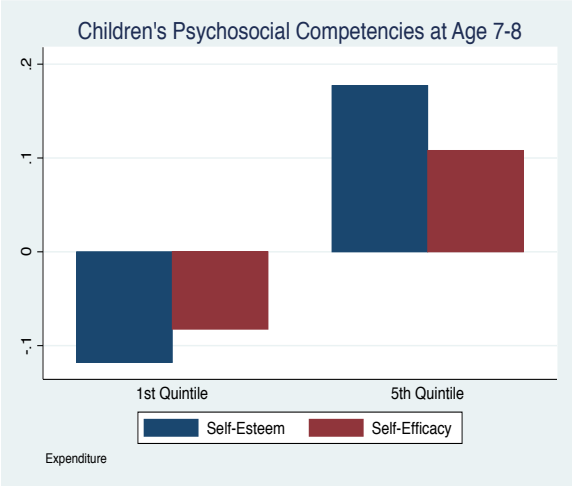


Figure A6: *Maternal Psychosocial Competencies by Expenditure*

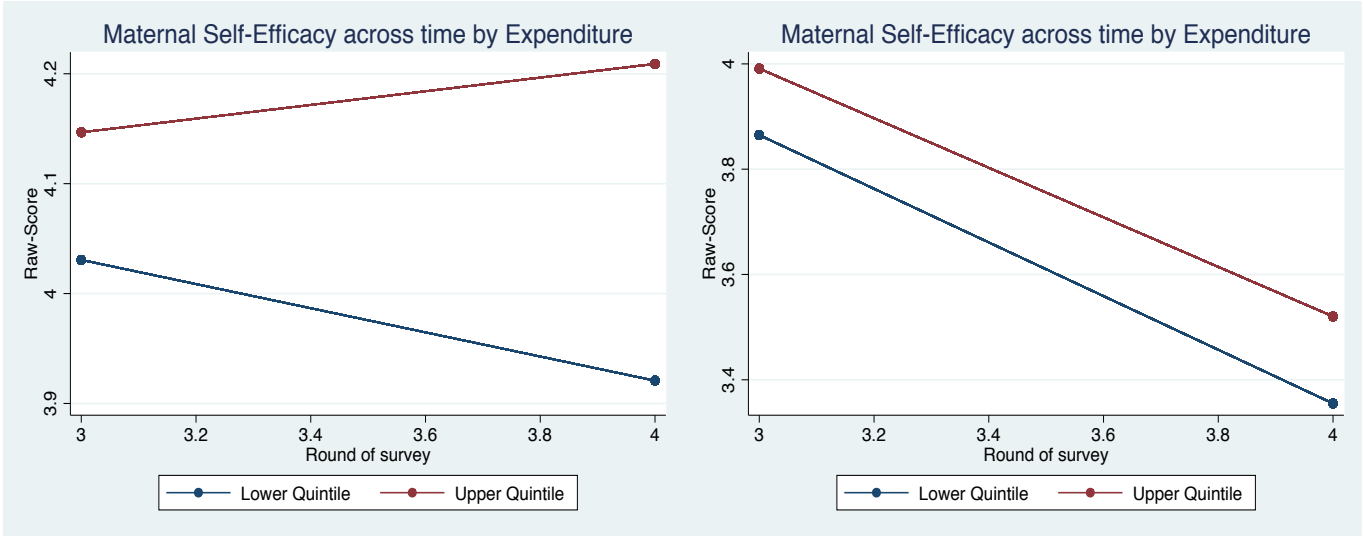


Table A1**:** *Differences in means by Expenditure and Wealth*

Panel A: *Expenditure Quintiles*

	(1) Round 3 Difference	(2) Round 4 Difference
YL Child Self-Efficacy	0.216***	0.280***
	(0.048)	(0.052)
YL Child Self-Esteem	0.369***	0.263***
	(0.060)	(0.064)

Panel B: *Wealth Terciles*	(1)	(2)
YL Child Self-Efficacy	0.209***	0.172***
	(0.051)	(0.051)
YL Child Self-Esteem	0.208***	0.159**
	(0.062)	(0.064)

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A2: *Correlations between competencies*

	(1) YL Child Self-Efficacy	(2) YL Child Self-Esteem	(3) Age standardised PPVT score
YL Child Self-Efficacy Round 3	0.118***		
YL Child Self-Esteem Round 3		0.135***	
Age-Standardised PPVT Round 3			0.671***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A3: *Full results for psychosocial competencies at age 7-8*

	(1) YL Child Self-Esteem Round 3	(2) YL Child Self-Esteem Round 3	(3) YL Child Self-Esteem Round 3	(4) YL Child Self-Efficacy Round 3	(5) YL Child Self-Efficacy Round 3	(6) YL Child Self-Efficacy Round 3
2nd Quintile of Expenditure at Round 3	0.075	0.070	0.067	0.019	0.020	0.010
	[-0.03,0.2]	[-0.04,0.2]	[-0.03,0.2]	[-0.06,0.10]	[-0.06,0.10]	[-0.07,0.09]
3rd Quintile of Expenditure at Round 3	0.13**	0.12**	0.11*	-0.024	-0.022	-0.032
	[0.01,0.2]	[0.003,0.2]	[-0.0010,0.2]	[-0.1,0.07]	[-0.1,0.08]	[-0.1,0.07]
4th Quintile of Expenditure at Round 3	0.14**	0.12*	0.11*	0.029	0.033	0.025
	[0.006,0.3]	[-0.02,0.3]	[-0.02,0.2]	[-0.08,0.1]	[-0.07,0.1]	[-0.08,0.1]
Top Quintile of Expenditure at Round 3	0.15**	0.10	0.098	0.068	0.072	0.069
	[0.02,0.3]	[-0.03,0.2]	[-0.03,0.2]	[-0.04,0.2]	[-0.04,0.2]	[-0.04,0.2]
Age at Round 3 in months	0.013**	0.012**	0.012*	0.0082**	0.0082**	0.0075*
	[0.001,0.02]	[0.000010,0.02]	[-0.000009,0.02]	[0.00010,0.02]	[0.0004,0.02]	[-0.0004,0.02]
Birth Order	-0.0069	0.00018	-0.0044	0.018	0.017	0.017
	[-0.04,0.03]	[-0.04,0.04]	[-0.04,0.03]	[-0.01,0.05]	[-0.01,0.05]	[-0.01,0.05]
Household Size Round 3	-0.032***	-0.029***	-0.025**	-0.016	-0.016	-0.015
	[-0.05,-0.010]	[-0.05,-0.007]	[-0.05,-0.004]	[-0.04,0.005]	[-0.04,0.005]	[-0.04,0.005]
Female	0.076**	0.077**	0.075**	0.013	0.013	0.0098
	[0.004,0.1]	[0.001,0.2]	[0.0002,0.1]	[-0.04,0.07]	[-0.04,0.07]	[-0.04,0.06]
Rural	-0.18***	-0.16**	-0.16**	-0.16***	-0.17***	-0.17***
	[-0.3,-0.05]	[-0.3,-0.02]	[-0.3,-0.03]	[-0.2,-0.09]	[-0.2,-0.09]	[-0.2,-0.09]
Shock	0.011	0.014	0.021	-0.024	-0.026	-0.022
	[-0.09,0.1]	[-0.08,0.1]	[-0.07,0.1]	[-0.08,0.03]	[-0.08,0.03]	[-0.07,0.03]
Child's Height at R3	0.0029	0.0017	0.0015	0.0017	0.0019	0.0015
	[-0.004,0.010]	[-0.005,0.008]	[-0.005,0.008]	[-0.003,0.006]	[-0.003,0.007]	[-0.003,0.006]
Age Standardised PPVT at R2	0.12***	0.10***	0.10***	0.077***	0.078***	0.077***
	[0.09,0.1]	[0.08,0.1]	[0.08,0.1]	[0.04,0.1]	[0.04,0.1]	[0.04,0.1]
Health Problem	0.028	0.029	0.033	-0.033	-0.032	-0.032
	[-0.06,0.1]	[-0.06,0.1]	[-0.05,0.1]	[-0.09,0.03]	[-0.09,0.03]	[-0.09,0.03]
Caregiver's Education		0.013**	0.011*		-0.00068	-0.0022
		[0.001,0.03]	[-0.001,0.02]		[-0.008,0.006]	[-0.009,0.004]
YL Mother Self-Esteem Round 3			0.12***			
			[0.04,0.2]			
YL Mother Self-Efficacy Round 3						0.081**
						[0.02,0.1]
Observations	955	955	955	955	955	955
R-squared	0.14	0.14	0.16	0.083	0.084	0.095

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites. Regional fixed effects are insignificant and not included.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A4: *Full results for psychosocial competencies at age 12-13*

	(1)	(2)	(3)	(4)	(5)	(6)
	YL Child Self-Esteem	YL Child Self-Esteem	YL Child Self-Esteem	YL Child Self-Efficacy	YL Child Self-Efficacy	YL Child Self-Efficacy
Quintile 2 of total expenditure	-0.0084	-0.011	-0.030	0.046	0.046	0.044
	[-0.1,0.1]	[-0.1,0.1]	[-0.2,0.1]	[-0.07,0.2]	[-0.07,0.2]	[-0.07,0.2]
Quintile 3 of total expenditure	0.018	0.0087	-0.0070	0.053	0.053	0.050
	[-0.07,0.1]	[-0.07,0.09]	[-0.09,0.07]	[-0.04,0.1]	[-0.04,0.1]	[-0.05,0.1]
Quintile 4 of total expenditure	0.020	0.00010	-0.022	0.054	0.054	0.051
	[-0.1,0.2]	[-0.2,0.2]	[-0.2,0.1]	[-0.1,0.2]	[-0.1,0.2]	[-0.1,0.2]
Top Quintile of total expenditure	0.17***	0.14**	0.11	0.12*	0.12*	0.12*
	[0.05,0.3]	[0.02,0.3]	[-0.03,0.2]	[-0.01,0.3]	[-0.01,0.3]	[-0.02,0.3]
Age of child in months	-0.00092	-0.00054	-0.00093	0.0055	0.0055	0.0053
	[-0.01,0.01]	[-0.01,0.01]	[-0.01,0.010]	[-0.001,0.01]	[-0.001,0.01]	[-0.002,0.01]
Birth Order	-0.0041	0.00094	0.00037	-0.0010	-0.00094	-0.00058
	[-0.03,0.02]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]
Household size	-0.0064	-0.0045	-0.0051	-0.011	-0.011	-0.010
	[-0.03,0.02]	[-0.03,0.02]	[-0.03,0.02]	[-0.03,0.01]	[-0.03,0.01]	[-0.03,0.01]
Female	-0.012	-0.011	-0.0074	0.033	0.033	0.033
	[-0.07,0.05]	[-0.07,0.04]	[-0.06,0.05]	[-0.02,0.09]	[-0.02,0.09]	[-0.02,0.09]
Rural	-0.098	-0.085	-0.085	-0.028	-0.027	-0.028
	[-0.2,0.04]	[-0.2,0.06]	[-0.2,0.06]	[-0.1,0.09]	[-0.1,0.09]	[-0.1,0.09]
Shock	-0.041	-0.036	-0.039	0.047	0.047	0.047
	[-0.1,0.03]	[-0.1,0.04]	[-0.1,0.04]	[-0.04,0.1]	[-0.04,0.1]	[-0.04,0.1]
Child height (cm)	0.0045	0.0037	0.0040	0.00094	0.00093	0.00078
	[-0.003,0.01]	[-0.004,0.01]	[-0.004,0.01]	[-0.005,0.007]	[-0.005,0.007]	[-0.005,0.007]
Age standardised PPVT score	0.030	0.018	0.017	0.11***	0.11***	0.11***
	[-0.01,0.07]	[-0.02,0.06]	[-0.02,0.06]	[0.08,0.1]	[0.08,0.1]	[0.08,0.1]
Health Problem	-0.068*	-0.069*	-0.074*	0.019	0.019	0.021
	[-0.1,0.01]	[-0.1,0.009]	[-0.2,0.006]	[-0.06,0.09]	[-0.06,0.09]	[-0.06,0.10]
Mountain	0.030	0.036	0.033	-0.0010	-0.00093	-0.00024
	[-0.09,0.2]	[-0.08,0.2]	[-0.09,0.2]	[-0.09,0.09]	[-0.09,0.09]	[-0.09,0.09]
Jungle	0.070	0.072	0.062	-0.15***	-0.14***	-0.14***
	[-0.05,0.2]	[-0.04,0.2]	[-0.05,0.2]	[-0.2,-0.05]	[-0.2,-0.05]	[-0.2,-0.05]
Caregiver's Education		0.0092	0.0075		0.00013	-0.00069
		[-0.002,0.02]	[-0.004,0.02]		[-0.010,0.010]	[-0.01,0.009]
Maternal Self-Esteem			0.084**			
			[0.01,0.2]			
Maternal Self-Efficacy						0.037
						[-0.02,0.09]
Observations	955	955	955	955	955	955
R-squared	0.041	0.044	0.051	0.100	0.100	0.10

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A5**: Value-Added Model Results, full controls*

	(1) YL Child Self-Esteem	(2) YL Child Self-Esteem	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy	(5) YL Child Self-Efficacy	(6) YL Child Self-Efficacy
Quintile 2 of total expenditure	-0.011	-0.030	-0.041	0.046	0.044	0.041
	[-0.1,0.1]	[-0.2,0.1]	[-0.2,0.09]	[-0.07,0.2]	[-0.07,0.2]	[-0.08,0.2]
Quintile 3 of total expenditure	0.0087	-0.0070	-0.015	0.053	0.050	0.048
	[-0.07,0.09]	[-0.09,0.07]	[-0.10,0.07]	[-0.04,0.1]	[-0.05,0.1]	[-0.05,0.1]
Quintile 4 of total expenditure	0.00010	-0.022	-0.038	0.054	0.051	0.046
	[-0.2,0.2]	[-0.2,0.1]	[-0.2,0.1]	[-0.1,0.2]	[-0.1,0.2]	[-0.1,0.2]
Top Quintile of total expenditure	0.14**	0.11	0.098	0.12*	0.12*	0.11*
	[0.02,0.3]	[-0.03,0.2]	[-0.03,0.2]	[-0.01,0.3]	[-0.02,0.3]	[-0.02,0.2]
Caregiver's Education	0.0092	0.0075	0.0064	0.00013	-0.00069	-0.00089
	[-0.002,0.02]	[-0.004,0.02]	[-0.004,0.02]	[-0.010,0.010]	[-0.01,0.009]	[-0.01,0.008]
Age of child in months	-0.00054	-0.00093	-0.0012	0.0055	0.0053	0.0052
	[-0.01,0.01]	[-0.01,0.010]	[-0.01,0.010]	[-0.001,0.01]	[-0.002,0.01]	[-0.002,0.01]
Birth Order	0.00094	0.00037	0.0012	-0.00094	-0.00058	-0.0012
	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]	[-0.03,0.03]
Household size	-0.0045	-0.0051	-0.0030	-0.011	-0.010	-0.0100
	[-0.03,0.02]	[-0.03,0.02]	[-0.03,0.02]	[-0.03,0.01]	[-0.03,0.01]	[-0.03,0.01]
Female	-0.011	-0.0074	-0.015	0.033	0.033	0.033
	[-0.07,0.04]	[-0.06,0.05]	[-0.07,0.04]	[-0.02,0.09]	[-0.02,0.09]	[-0.02,0.09]
Rural	-0.085	-0.085	-0.074	-0.027	-0.028	-0.020
	[-0.2,0.06]	[-0.2,0.06]	[-0.2,0.07]	[-0.1,0.09]	[-0.1,0.09]	[-0.1,0.10]
Shock	-0.036	-0.039	-0.041	0.047	0.047	0.044
	[-0.1,0.04]	[-0.1,0.04]	[-0.1,0.03]	[-0.04,0.1]	[-0.04,0.1]	[-0.04,0.1]
Child height (cm)	0.0037	0.0040	0.0041	0.00093	0.00078	0.00069
	[-0.004,0.01]	[-0.004,0.01]	[-0.004,0.01]	[-0.005,0.007]	[-0.005,0.007]	[-0.005,0.007]
Age standardised PPVT score	0.018	0.017	0.0081	0.11***	0.11***	0.11***
	[-0.02,0.06]	[-0.02,0.06]	[-0.03,0.05]	[0.08,0.1]	[0.08,0.1]	[0.08,0.1]
Health Problem	-0.069*	-0.074*	-0.073*	0.019	0.021	0.021
	[-0.1,0.009]	[-0.2,0.006]	[-0.2,0.004]	[-0.06,0.09]	[-0.06,0.10]	[-0.05,0.10]
Mountain	0.036	0.033	0.031	-0.00093	-0.00024	-0.0012
	[-0.08,0.2]	[-0.09,0.2]	[-0.09,0.1]	[-0.09,0.09]	[-0.09,0.09]	[-0.09,0.09]
Jungle	0.072	0.062	0.066	-0.14***	-0.14***	-0.14***
	[-0.04,0.2]	[-0.05,0.2]	[-0.05,0.2]	[-0.2,-0.05]	[-0.2,-0.05]	[-0.2,-0.05]
Maternal Self-Esteem		0.084**	0.080**			
		[0.01,0.2]	[0.007,0.2]			
YL Child Self-Esteem Round 3			0.084**			
			[0.01,0.2]			
Maternal Self-Efficacy					0.037	0.037
					[-0.02,0.09]	[-0.02,0.09]
YL Child Self-Efficacy Round 3						0.054
						[-0.02,0.1]
Observations	955	955	955	955	955	955
R-squared	0.044	0.051	0.057	0.100	0.10	0.10

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A6**: Predicting Child's Psychosocial Competencies at age 7-8, full results with wealth*

	(1) YL Child Self-Esteem Round 3	(2) YL Child Self-Esteem Round 3	(3) YL Child Self-Esteem Round 3	(4) YL Child Self-Efficacy Round 3	(5) YL Child Self-Efficacy Round 3	(6) YL Child Self-Efficacy Round 3
Top Quintile of Wealth at Round 3	0.22***	0.18**	0.18**	0.36***	0.24***	0.23***
	[0.09,0.4]	[0.04,0.3]	[0.04,0.3]	[0.3,0.5]	[0.1,0.4]	[0.1,0.3]
Caregiver's Education		0.010*	0.0078		-0.0015	-0.0027
		[-0.002,0.02]	[-0.004,0.02]		[-0.008,0.005]	[-0.009,0.003]
YL Mother Self-Esteem Round 3			0.12***			
			[0.04,0.2]			
YL Mother Self-Efficacy Round 3						0.077**
						[0.01,0.1]
Observations	955	955	955	955	955	955
R-squared	0.14	0.15	0.16	0.062	0.081	0.092

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites

Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A7**: Predicting Child's Psychosocial Competencies at age 12-13, full controls with wealth*

	(1)	(2)	(3)	(4)	(5)	(6)
	YL Child Self-Esteem	YL Child Self-Esteem	YL Child Self-Esteem	YL Child Self-Efficacy	YL Child Self-Efficacy	YL Child Self-Efficacy
Top Quintile of wealth	0.20**	0.17*	0.15	0.054	0.053	0.052
	[0.02,0.4]	[-0.006,0.3]	[-0.03,0.3]	[-0.09,0.2]	[-0.09,0.2]	[-0.09,0.2]
Caregiver's Education		0.0094	0.0075		0.00034	-0.00043
		[-0.002,0.02]	[-0.003,0.02]		[-0.009,0.009]	[-0.009,0.008]
Maternal Self-Esteem			0.085**			
			[0.02,0.2]			
Maternal Self-Efficacy						0.035
						[-0.02,0.09]
Observations	955	955	955	955	955	955
R-squared	0.039	0.041	0.049	0.11	0.11	0.11

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites

Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A8**: Value-Added Model Results, full controls with wealth*

	(1) YL Child Self-Esteem	(2) YL Child Self-Esteem	(3) YL Child Self-Esteem	(4) YL Child Self-Efficacy	(5) YL Child Self-Efficacy	(6) YL Child Self-Efficacy
Top Quintile of wealth	0.17*	0.15	0.13	0.053	0.052	0.044
	[-0.006,0.3]	[-0.03,0.3]	[-0.04,0.3]	[-0.09,0.2]	[-0.09,0.2]	[-0.10,0.2]
Caregiver's Education	0.0094	0.0075	0.0066	0.00034	-0.00043	-0.00048
	[-0.002,0.02]	[-0.003,0.02]	[-0.004,0.02]	[-0.009,0.009]	[-0.009,0.008]	[-0.009,0.008]
Maternal Self-Esteem		0.085**	0.081**			
		[0.02,0.2]	[0.01,0.1]			
YL Child Self-Esteem Round 3			0.078**			
			[0.006,0.1]			
Maternal Self-Efficacy					0.035	0.036
					[-0.02,0.09]	[-0.02,0.09]
YL Child Self-Efficacy Round 3						0.047
						[-0.02,0.1]
Observations	955	955	955	955	955	955
R-squared	0.041	0.049	0.054	0.11	0.11	0.11

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites

Controls include additional quintiles of SES, age of child in months, birth order of the child, gender, household size, whether the household is an urban or rural area, whether the household has experienced an exogenous shock in the past, child's height, age-standardized score on the PPVT test, if the child has had a major health problem, and regional fixed effects based on living in the mountainous, jungle or coastal (baseline) region

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A9**: Value-Added Model Results, by gender*

	(1) Female Self-Esteem	(2) Male Self-Esteem	(3) Female Self-Efficacy	(4) Male Self-Efficacy
YL Child Self-Esteem Round 3	0.13***	0.058		
	[0.06,0.2]	[-0.04,0.2]		
Maternal Self-Esteem	0.10**	0.064*		
	[0.01,0.2]	[-0.01,0.1]		
Quintile 2 of total expenditure	0.032	-0.084	0.061	0.013
	[-0.2,0.2]	[-0.2,0.05]	[-0.09,0.2]	[-0.1,0.2]
Quintile 3 of total expenditure	-0.015	0.0046	0.034	0.037
	[-0.2,0.2]	[-0.2,0.2]	[-0.1,0.2]	[-0.1,0.2]
Quintile 4 of total expenditure	-0.090	0.016	0.049	0.024
	[-0.2,0.05]	[-0.2,0.3]	[-0.1,0.2]	[-0.1,0.2]
Top Quintile of total expenditure	0.037	0.14	0.031	0.16*
	[-0.1,0.2]	[-0.07,0.4]	[-0.1,0.2]	[-0.02,0.3]
Caregiver's Education	0.011	0.0050	0.0049	-0.0038
	[-0.005,0.03]	[-0.007,0.02]	[-0.008,0.02]	[-0.01,0.007]
Age of child in months	-0.0084	0.0045	0.0058	0.0062*
	[-0.03,0.01]	[-0.008,0.02]	[-0.008,0.02]	[-0.0005,0.01]
Birth Order	0.031**	-0.024	-0.017	0.0071
	[0.003,0.06]	[-0.07,0.03]	[-0.05,0.01]	[-0.03,0.05]
Household size	-0.0073	-0.0022	0.0058	-0.021
	[-0.04,0.02]	[-0.04,0.04]	[-0.03,0.04]	[-0.05,0.008]
Rural	-0.13	-0.029	-0.032	-0.042
	[-0.3,0.05]	[-0.2,0.2]	[-0.2,0.1]	[-0.2,0.1]
Shock	-0.045	-0.050	-0.0079	0.083*
	[-0.2,0.09]	[-0.1,0.05]	[-0.2,0.1]	[-0.008,0.2]
Child height (cm)	0.0051	0.0036	0.00079	0.0012
	[-0.003,0.01]	[-0.007,0.01]	[-0.006,0.007]	[-0.007,0.009]
Age-Standardised PPVT Round 3	-0.015	0.0079	0.093***	0.071**
	[-0.09,0.06]	[-0.05,0.07]	[0.05,0.1]	[0.008,0.1]
Health Problem	-0.17***	-0.0044	0.025	0.020
	[-0.3,-0.07]	[-0.1,0.1]	[-0.07,0.1]	[-0.08,0.1]
YL Child Self-Efficacy Round 3			0.069	0.058
			[-0.05,0.2]	[-0.02,0.1]
Maternal Self-Efficacy			0.020	0.068*
			[-0.05,0.09]	[-0.007,0.1]
Observations	466	489	466	489
R-squared	0.080	0.062	0.089	0.12

95% confidence intervals in brackets Standard-errors clustered by 20 sentinel sites. Regional fixed effects are insignificant and not included.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

***Table A10**: Value-Added Model Results, by Urban and Rural*

	(1) Urban Self-Esteem	(2) Rural Self-Esteem	(3) Urban Self-Efficacy	(4) Rural Self-Efficacy
YL Child Self-Esteem Round 3	0.075*	0.13***		
	[-0.010,0.2]	[0.06,0.2]		
Maternal Self-Esteem	0.10***	-0.0041		
	[0.03,0.2]	[-0.1,0.1]		
Quintile 2 of total expenditure	-0.061	-0.035	0.042	0.060
	[-0.2,0.1]	[-0.2,0.1]	[-0.1,0.2]	[-0.07,0.2]
Quintile 3 of total expenditure	-0.035	-0.014	0.097	0.0062
	[-0.2,0.1]	[-0.2,0.1]	[-0.03,0.2]	[-0.1,0.1]
Quintile 4 of total expenditure	-0.096	0.17	0.063	0.059
	[-0.3,0.08]	[-0.1,0.5]	[-0.1,0.2]	[-0.2,0.3]
Top Quintile of total expenditure	0.074	0.10	0.13*	0.034
	[-0.1,0.2]	[-0.3,0.5]	[-0.01,0.3]	[-0.3,0.4]
Caregiver's Education	0.0025	0.022**	-0.0040	0.0070
	[-0.009,0.01]	[0.002,0.04]	[-0.01,0.004]	[-0.008,0.02]
Age of child in months	0.0048	-0.017	0.0093**	0.0031
	[-0.005,0.01]	[-0.05,0.01]	[0.002,0.02]	[-0.01,0.02]
Birth Order	-0.021*	0.037	-0.0094	0.016
	[-0.04,0.003]	[-0.01,0.09]	[-0.04,0.02]	[-0.03,0.06]
Household size	0.0048	-0.0065	0.0078	-0.043***
	[-0.02,0.03]	[-0.05,0.04]	[-0.02,0.03]	[-0.07,-0.02]
Female	0.00028	-0.042	0.032	-0.023
	[-0.06,0.06]	[-0.2,0.1]	[-0.01,0.07]	[-0.2,0.1]
Shock	-0.047	-0.021	0.068	-0.021
	[-0.2,0.06]	[-0.2,0.1]	[-0.03,0.2]	[-0.2,0.1]
Child height (cm)	0.0043	0.0067	-0.00090	0.0072
	[-0.003,0.01]	[-0.01,0.02]	[-0.008,0.006]	[-0.002,0.02]
Age-Standardised PPVT Round 3	0.0033	-0.015	0.13***	0.0010
	[-0.06,0.07]	[-0.06,0.03]	[0.07,0.2]	[-0.03,0.03]
Health Problem	-0.060	-0.16**	0.050	-0.10
	[-0.1,0.03]	[-0.3,-0.02]	[-0.04,0.1]	[-0.3,0.10]
YL Child Self-Efficacy Round 3			0.073*	0.021
			[-0.01,0.2]	[-0.1,0.1]
Maternal Self-Efficacy			0.034	0.077
			[-0.05,0.1]	[-0.02,0.2]
Observations	687	268	687	268
R-squared	0.051	0.063	0.11	0.069

95% confidence intervals in brackets. Standard-errors clustered by 20 sentinel sites. Regional fixed effects are insignificant and not included.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$