Shocks and Children's Dropout from Primary School: Implications for Education Policy in Ethiopia

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Motivation

- The national data indicates net enrolment increases substantially for primary education, but for secondary education not as expected
- Look at the following two slides for the whole Ethiopia

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Net enrolment in primary education eliminate gender disparity

Net enrolment in primary education
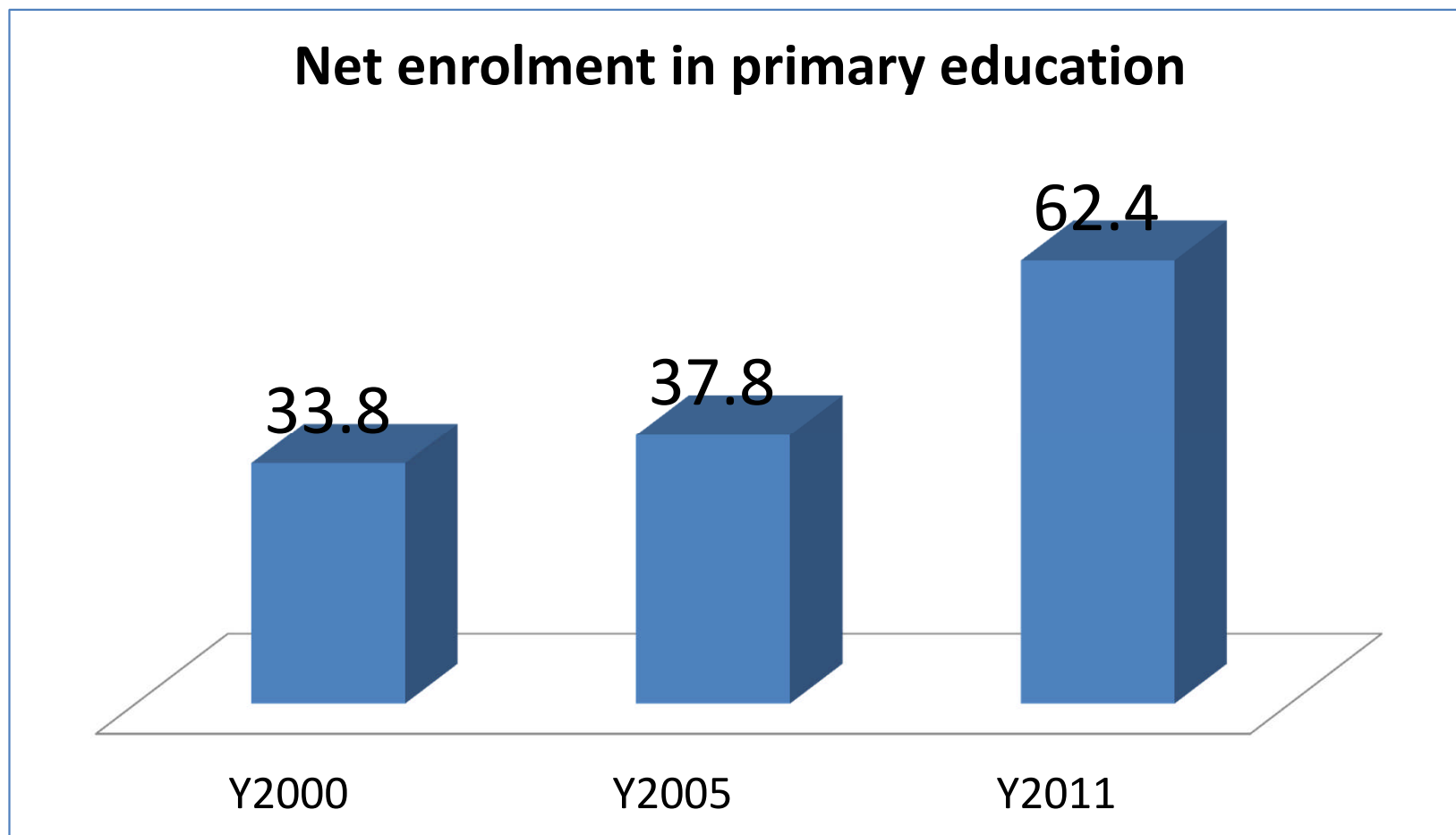
Net enrolment in secondary education
(gender inequality in rural areas)

Net enrolment rate in secondary school
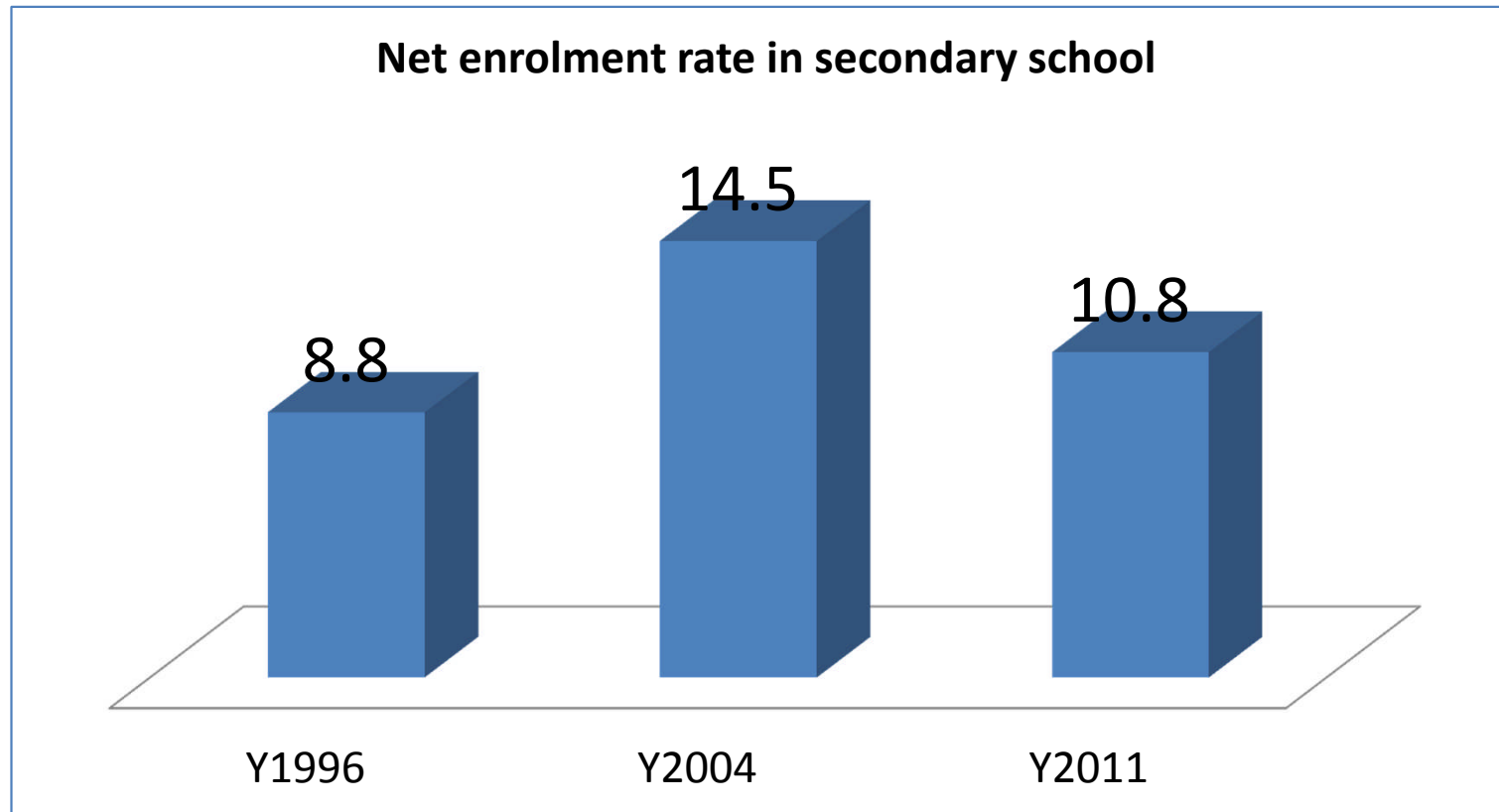
Motivation…

- The target set by the Ethiopian Government for drop-out rates of children from primary school was 8 per cent for the year 2010/11, but actual drop-out rate was 13 per cent

- completion rate or dropout rates are indicators of quality education

- Hence Ethiopian policy makers are worried about completion rate, dropout and quality of education

- Hence it is very important to identify key factors associated with dropouts and primary completion rate of school age children

- We know families in Ethiopia are subject to a variety of covariate and idiosyncratic shocks mainly the illness of family members, and in rural areas, drought (MOFED 2008)

- We also know that involvement of children in work is substantial to the extent that may affect the enrolment and children's' attention to education

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Objective

- The main objective of the paper is, therefore,
  - to analyse the impact of economic shocks on primary school drop-out rates,
    - drought, crop failure and pest infestation, the death of livestock and the death or illness of members of a household
  - Analyse the effect of child work (both paid and unpaid work) on dropout

Data and method

- This study paper used the Young Lives' Older Cohort survey data for Ethiopia
- The children were 12 years old in Round 2 (2006) and 15 years old in Round 3 (2009)
- If children start schooling at the age of 7 and progress one grade per year, they all must have completed primary education (8th grade) at the age of 15
- At this age, we found only 18 of the children completed primary education, which is quite very low

Data and method

- We estimated the likelihood of children dropping out of primary school conditional upon the child's current enrolment to primary school – survival function
- The dependent variable is generated from the highest grade the children have reached
- The children who are attending school are censored in contrast to the children who are not being enrolled in school at the age of 15
- Hence our failure cases for the Weibull regression are, therefore, the uncensored observations, i.e., the children who are not attending school
- Children who completed primary education are considered as those that have survived throughout primary school

Dropout from primary school

- First we estimate a non-parametric survival function (as function of time/schooling years) by incidence of shocks, girls/boys, rural/urban – with right censored

- We found that Survival of children from dropping out from primary school

  – Higher for urban compared to rural

  – Higher for girls than boys , (dropout is higher for boys than for girls)

  – Higher for HH without incidence of **illness or death in round 2** (at age of 12), drought and crop failure (in both rounds),

- This signifies that shocks (illness and death of parents and incidence of droughts) and location of residence (rural/urban) and gender) are key associates of dropout of children from school

Dropout from primary school

- Our regression results done separately for rural/urban and boys and girls show that the following:
  - The number of dependents (# of boys below the age of 7 and # of male members above 65 years of age) have significant negative effect on the likelihood of a child completing primary school (increase dropouts)
  - On the other hand, the # of boys age 7-17 was found to have a positive relationship with the likelihood of a child completing primary school (decrease dropout)
  - The higher the school starting age, the lower the likelihood of a child completing primary school for both boys and girls (also rural and urban)
    - However, the effect was stronger on girls than on boys

Dropout from primary school

– Parents' wealth has positive association with completion

– Child work has negatively associated with completion

– Incidence for death or illness of household members, and drought/ crop failure, pests and diseases negatively affect the primary completion

– While death of livestock increases completion (looks contrary but …..)

Drop-out from primary school

Determinants of Primary School completion rate (Weibull estimates)

	Urban	Rural	Boys	Girls
Boy dummy	−0.041	−0.076		
	(−0.39)	(−1.000)		
Dummy for Male headed HH			−0.002	0.07
			(−0.03)	-0.93
Number of boys aged 7 years or below (dependency)	−0.108**	−0.012	0.023	−0.076*
	(−2.23)	(−0.26)	-0.5	(−1.69)
Number of male family members age 65 years and more (dependency)	−0.176**	−0.008	0.038	−0.044
	(−1.99)	(−0.09)	-0.35	(−0.6)
School starting age	-0.053***	-0.101***	-0.073***	-0.131***
	(-2.72)	(-4.62)	(-3,26)	(-6.78)

Drop-out from primary school

- Wealth and child work were also one sources dropout of school

Table 1: Determinants of Primary School completion rate (Weibull estimates)

	Urban	Rural	Boys	Girls
Wealth index	0.606**	0.246	0.524**	0.487**
Hours child spent per typical day on domestic activities	−0.059**	−0.129***	−0.062***	−0.121***
Hours spent per typical day on unpaid activities	−0.069***	−0.131***	−0.118***	−0.100***
Hours spent per typical day on paid activities	−0.077***	−0.107***	−0.113***	−0.083***

Drop-out from primary school

shock type	Coef.
Incidence of death or illness of household members	−0.276**
	(−2.08)
Incidence of death of livestock	0.549***
	(3.09)
Incidence of drought, crop failure, pests and diseases	−0.321**
	(−2.05)

Conclusions

- There is a need to focus on reducing inequalities in the primary education completion between boys and girls and between rural and urban children

- Both area wide shock (drought) and idiosyncratic shock (death and illness) affect households' ability to make their children complete primary education

- Relatively speaking, area wide shocks are addressed by most social protection programs (Gov, WFP, Donors, etc.)

- Hence social assistance programmes should include not only covariate shocks but also idiosyncratic shocks if we want to tackle problem associated with children's education

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Conclusions

- Reducing school drop-out rates (improving primary education completion rates) is not only a question of in school factors, but a question of out of school factors

- hence important to address (instead of focusing only on school factors) other social and economic issues, which involves not only that the Ministry of Education, but also policymakers and officials in other sectors

- In this regard it is important to provide HHs incentives (e.g. conditional cash transfer) to make their children attend school instead of children being pushed to spend their time on paid and unpaid (Contras progress and PSNP)

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THANK YOU !