The effect of financial aid from UK Aid Girls' Education South Sudan programme and EU IMPACT programme to education in South Sudan in 2017

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30 October 2017

This note is an update to the previous Girls' Education South Sudan working paper that looked at the effect of financial interventions (capitation grants and girl's cash transfers) by Girls' Education South Sudan, a collaboration of UK Aid and the Ministry of General Education and Instruction, Government of the Republic of South Sudan, on school enrolment in South Sudan from 2014 to 2016. The focus here is on these two components of GESS as they are targeted at the school level, and are focused on raising enrolment as an outcome. Other components of GESS are either implemented at the community level, and hence not directly linkable to individual schools (community mobilization and media action), or are focused on improving the quality of schooling rather than increasing access.

The data suggest that the GESS financial interventions continue to have a positive effect, and that IMPACT, a new programme begun in 2017, with funding from the European Union, paying teacher incentives worth $40 for teachers in primary schools, is also increasing enrolments.

1. Results are robust

First, the addition of a third year of data on the effect of interventions allows us to estimate a new statistical model, providing an additional robustness check to earlier results. Previous analysis used a simple dynamic (lagged dependent variable) model without school fixed effects. The addition of a third year of data allows us to estimate the same model with school fixed effects, and also to instrument for the endogenous lagged dependent variable (GMM). Encouragingly, the results are broadly consistent across specifications. The preferred results are those from the natural experiment with a full set of control variables (column 6), which provides the most rigorous methodology but only makes use of 1 year of data (2016), and those from the GMM specification (column 3), which makes use of 3 years of data. Schools that received capitation grants in the prior year increased their enrolment the following year by between 7 and 8 percent. Schools that received cash transfers the prior year increased their enrolment by between 8 and 9 percent the following year.

Table 1: Effect of interventions on enrolment growth

	OLS	FE	GMM	NE	NE	NE
Prior enrolment (log)	0.66***	-0.01	0.30***		0.83***	0.81***
	(0.05)	(0.09)	(0.11)		(0.01)	(0.01)
Capitation Grant	0.11***	0.04*	0.08***	-0.00	0.12***	0.07**
	(0.03)	(0.02)	(0.03)	(0.04)	(0.02)	(0.03)
Cash Transfers	0.11***	0.18***	0.09***	0.53***	0.10***	0.08***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Conflict	0.06	-0.12***	-0.24***			-0.06*
	(0.04)	(0.04)	(0.08)			(0.03)
Non-State	-0.03					-0.07***
	(0.04)					(0.02)
Primary	0.16***					0.08**
	(0.06)					(0.04)
Hard To Reach	-0.03					-0.05**
	(0.03)					(0.02)
State FE	Yes					Yes
School FE		Yes	Yes			
N	1,593	1,593	1,062	1,826	1,815	1,815
Schools	531	531	531	1,826	1,815	1,815
Years	3	3	3	1	1	1
R-Squared	0.615	0.050		0.128	0.730	0.749

Notes: Prior enrolment is the log of enrolment at that school in the prior year. All remaining variables are dummy variables taking a value of 1 or 0 for whether that school received capitation grants in the prior year, received cash transfers for girls, was affected by conflict within 2km from the school, is a non-state school, is a primary school, and is in a "hard to reach" payam, respectively. The sample of schools in columns 1 – 3 is restricted to those that reported positive enrolment from 2014 to 2017, and had no missing data for any of the control variables. The sample of schools in columns 4 – 6 is those which either received grants in 2015, or were arbitrarily denied grants in 2015 due to administrative hold-ups, forming a natural comparison group.

2. Effects are consistent across years of the programme

Second, we look at effects by year. Here we use the simplest OLS model. This model comes close to the natural experiment and GMM results. The estimated effects are slightly biased upwards by 3-4 percentage points, but we are able to estimate this model with a single year of data at a time.

The coefficient on capitation grants is here not significant but this is likely driven by the smaller sample size within each year, and the magnitudes remain the same as previously. The effect of cash transfers appears to be larger in 2017 than 2016.

Table 2: Effect of interventions on enrolment growth, by year

	2017	2016	2015
Prior enrolment (log)	0.55***	0.80***	0.67***
	(0.09)	(0.03)	(0.07)
Capitation Grant	0.08	0.07	0.04
	(0.05)	(0.06)	(0.08)
Cash Transfers	0.17**	0.13***	-0.01
	(0.07)	(0.04)	(0.03)
Conflict	0.19***	-0.03	0.04
	(0.07)	(0.06)	(0.05)
Non-State	-0.01	-0.05	-0.01
	(0.07)	(0.05)	(0.05)
Primary	0.21**	0.10	0.13
	(0.10)	(0.08)	(0.10)
Hard To Reach	0.00	-0.02	-0.07
	(0.05)	(0.04)	(0.04)
State FE	Yes	Yes	Yes
N	531	531	531
R-Squared	0.538	0.677	0.696

Notes: Prior enrolment is the log of enrolment at that school in the prior year. All remaining variables are dummy variables taking a value of 1 or 0 for whether that school received capitation grants in the prior year, received cash transfers for girls, was affected by conflict within 2km from the school, is a non-state school, is a primary school, and is in a "hard to reach" payam, respectively. The sample is restricted to schools that reported positive enrolment from 2014 to 2017, and had no missing data for any of the control variables.

3. An effect of IMPACT?

The EU IMPACT programme is targeted at all primary schools across the country, meaning that the earlier approach can't be used. The best we can do is compare the change in enrolment growth between 2016 and 2017 for primary schools with secondary schools.

Table 2 above indicates that in 2017 primary schools grew by around 21 percent more compared with secondary schools, just as the new programme IMPACT came online. Whilst not definitive evidence, this is consistent with a positive boost to enrolment from the IMPACT programme.