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Smooth, staggered or stopped?

Educational transitions in SAYPS

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Labour Market Intelligence Partnership (LMIP)



- The HSRC led consortium is commissioned by DHET to build a credible skills planning mechanism for the country
- It is important so anticipate the demand for skills for economy and to use this information to inform policy, programmes and resources for post-school education and training programmes.
- LMIP consists of a number of research themes and projects
- www.lmip.org.za

Overview: Smooth, Staggered or Stopped?

- The report uses SAYPS to examine educational transitions in the post-compulsory phase of school
- We analyse characteristics of learners making different transitions and explore key predictors of these pathways
- We report on four distinct groups of learners:
 - Smooth; Staggered; Stuck; Stopped
- Our results are twofold:
 - Confirmatory story re. advantage and prior achievement
 - New story: Beating the odds and a significant role for individual's own academic attitudes and expectations

Research Background

- SA performs poorly in international comparisons
 - Only 25% learners reach lowest levels of TIMSS benchmarks
 - Just 1% reaching advanced levels
- Early school exit and high levels of grade repetition exacerbates a system with already low levels of schooling and high educational inequalities
- The current study develops previous work in the area by:
 - Using a longitudinal dataset, not a quasi-panel one
 - Considering national, rather than regional, data
 - Exploring school progression and the determinants of different educational pathways in more depth

What are longitudinal studies?

- Longitudinal studies provide data about the same individual at different points in time
- This allows the researcher to track change at the individual level
- In contrast to a single snapshot at any one time, they are analogous to a photo album showing how individuals have changed over their life course



Why the need for a longitudinal panel study?

- These studies provide an understanding of social change, of the trajectories of individual life histories and of the dynamic processes that underlie social and economic life.
- Evidence from different time points can help to unscramble causes and effects. For example:
 - Disentangling the effects on children of school and family background
 - To identify the key points for intervention
 - Highlighting the characteristics of people who experience repeated spells of unemployment and understanding its long term 'scarring' effects

South African Youth Panel Study (SAYPS)

A five year, longitudinal panel study of Grade 9 learners in South Africa starting in 2011

2011: Wave 1

2012: Wave 2

2013: Wave 3

2014: Wave 4

2015: Wave 5

TIMSS 2011

- Grade 9 learner assessments in maths & science
- Learner qu'naire
- Parent qu'naire
- Teacher qu'naire
- Head qu'naire

At baseline, when learners were in Grade 9, their median age was 15.7 years

In the original sample, the sex split is equal: males = 50.7%

In 2013, learners were asked about their current activities and retrospectively about those for 2012

In the wave 4 data, the sample slightly over represents females (53.3%)

SAYPS:
Learner qu'naire

Achieved sample

SAYPS:
Learner qu'naire

SAYPS:
Learner qu'naire

SAYPS:
Learner qu'naire

11,898

5,946

5,872

3,616

2,224

Research Questions

- What are the main activity choices of young people over time and how do learners move through the education system?
 - Transition matrices
- What are the characteristics of young people following different pathways through school?
 - Descriptive statistics & correlations
- How do individual characteristics, family background and school factors predict educational pathways?
 - Logistic regression

SAYPS Data

	Wave 1: 2011	Wave 2: 2012	Wave 3: 2013	Wave 4: 2014
N (complete cases)	11,898	5,946	5,872	3,616
% of Wave 1 sample		50.0	49.4	30.4

- Analysis of missing data:
 - Attrition is non-random and cannot be ignored
 - Missing are more likely to be:
 - Male; more disadvantaged; attend poorer schools; lower achievement
- Focus on the core longitudinal component
 - Caveat that our estimates are an upper bound
 - But nevertheless, best data to answer our RQs

Main activities at each wave of SAYPS

	Wave 1: 2011	Wave 2: 2012	Wave 3: 2013	Wave 4: 2014
Still at school	100	98.0	96.2	92.3
Moved to FET college		0.7	1.4	1.1
Working		0.2	0.5	1.0
Not studying and not working		1.2	1.9	5.6

- Provides a snapshot of what the sample of learners are doing at any one point in time
- But doesn't tell us anything about movement between these activities

Activity transitions: Wave 3 to 4

		School	→FET college	Working	Not studying	Total
		Wave 4: 2014:				
Wave 3: 2013:	<i>% at W3</i>					
Still at school	3,477	3,297	28	20	132	3,477
	96.2	94.8	0.8	0.6	3.8	100
Moved to FET college	50	26	9	4	11	50
	1.4	52.0	18.0	8	22.0	100
Working	19	0	0	8	11	19
	0.5	0	0	42.1	57.9	100
Not studying/working	70	13	2	5	50	70
	1.9	18.6	2.9	7.1	71.4	100
Total		3,336	39	37	204	3,616
	100	92.3	1.1	1.0	5.6	100

Grade transitions: Wave 3 to 4

		Grade 9	Grade 10	Grade 11	Grade 12	Total
		Wave 4: 2014:				
Wave 3: 2013:	<i>% at W3</i>					
Grade 9	124	31	64	0	0	95
	3.6	32.6	67.4	0	0	100
Grade 10	1,079	0	289	718	0	1,007
	31.1	0	28.7	71.3	0	100
Grade 11	2,264	0	0	496	1,699	2,195
	65.3	0	0	22.6	77.4	100
Total		31	353	1,214	1,699	3,297
	100	0.9	10.7	36.8	51.5	100

Grade transitions: Wave 1 to 4

	Grade 9	Grade 10	Grade 11	Grade 12	Total
	Wave 4: 2014:				
Wave 1: 2011:					
Grade 9	33	360	1,230	1,713	3,336
	1	10.8	36.9	51.4	100

- High levels of grade retention as observed by others
- Using the full, core longitudinal sample, N = 3,616, just under half, 47%, have a “smooth” transition
 - Overestimate: NIDS suggests this figure ~ a third of learners

Young people's transitions



Smooth	Staggered	Stuck	Stopped
Neat, year-on-year grade progression through school.	Learners in school for all 4 waves of SAYPS, but have at least one episode of grade repetition or a move to FET college; Individuals who return to school in Wave 4 but are out of education (either working or NEET) for at least one wave.	Learners in school for all four waves of SAYPS, but stuck in grade 9 or 10 for three or more periods	Individuals who leave school before Wave 4 and do not return
47%	39%	7%	7%

Characteristics of different transition groups

		Girl	Age (in 2011)	TIMSS Maths	TIMSS Science
All		.58	15.7	366.8	351.2
Smooth	47% (1, 697)	.63	15.4	408.6	406.5
Staggered	39% (1, 425)	.54	15.8	343.3	321.2
Stuck	7% (250)	.54	16.1	318.4	286.0
Stopped	7% (244)	.43	17.0	309.2	271.0

- *Smooth* group come from most advantaged households: highest education, social ladder etc.
- Note that even *smooth* only just reaches bottom of international “low” benchmark

Key findings:

Predicting who has which transition?

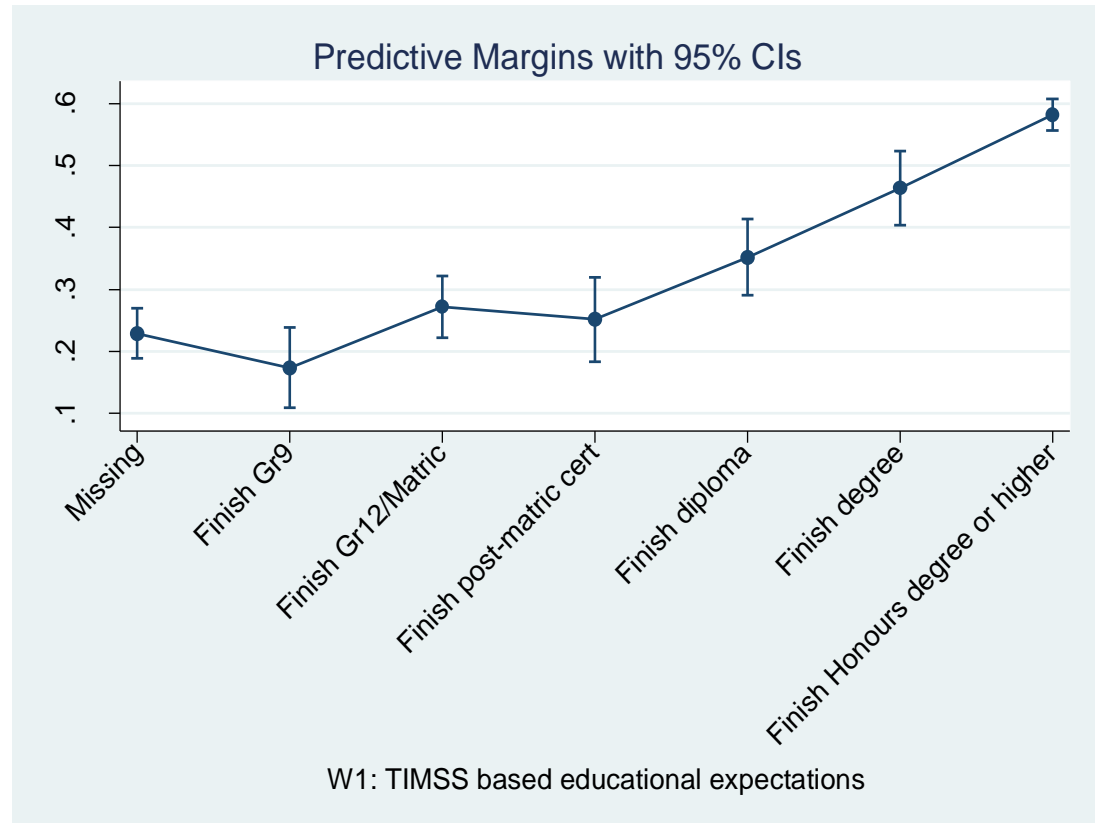
- Girls fair better than boys
- Particular importance of prior achievement
- Those in better-off schools more likely to have smooth transitions

However...

- Social background does not significantly differentiate educational transitions
 - Note absence of parents' education “effect”
- More salient are academic attitudes and expectations
 - Parents' education having its impact through educational expectations

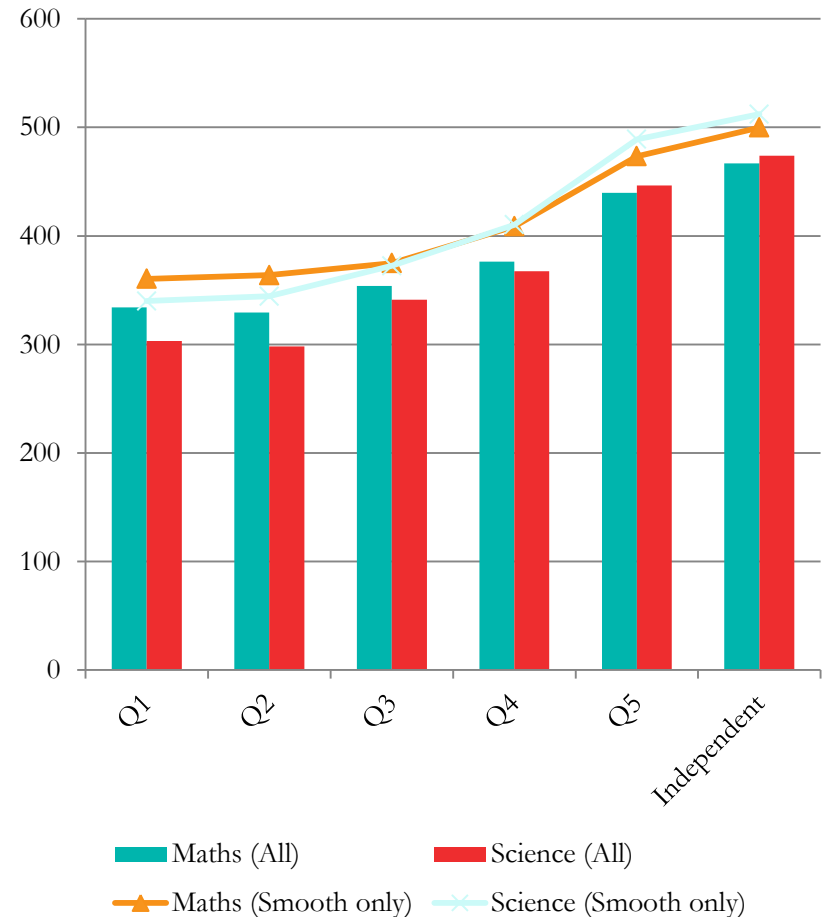
The predictive power of expectations

- Those with higher educational expectations are more likely to have a “smooth” pathway through school
- Similarly, those with more positive attitudes and beliefs about maths and those who aren’t bullied are also more likely to progress smoothly



A good news story?

- Learners with even very low TIMSS scores are following “smooth” pathways
 - Even from the least well-off schools
- 57% of the “smooth” group come from fee-paying or independent schools
 - Meaning 43% come from non-fee paying schools



Beating the odds...



	School quintile					Indep	Total
	Non-fee paying			Fee paying			
<i>Transition group:</i>	1	2	3	4	5		
Smooth	188	269	275	306	424	235	1,697
	11.1	15.9	16.2	18.0	25.0	13.9	100
Staggered	228	311	354	296	152	84	1425
	16.0	21.8	24.8	20.8	10.7	5.9	100
Stuck	56	70	59	41	14	10	250
	22.4	28	23.6	16.4	5.6	4	100
Stopped	47	58	68	50	16	5	244
	19.3	23.8	27.9	20.5	6.6	2.1	100
Total	519	708	756	693	606	334	3616
	14.4	19.6	20.9	19.2	16.8	9.2	100

Key findings

- Our study provides a more nuanced picture of continuities & discontinuities in educational transitions
- Around half the sample achieves a “smooth” transition
 - 47%
- Achievement begets achievement
 - but it is possible to succeed academically despite disadvantage
- Learners stay in school even if they are not progressing to the next grade
 - Possible stagnation effects
- Significant role of individual’s own academic attitudes and beliefs not previously demonstrated in South African data
- Very high educational expectations across all learners
 - Sustainable?

Conclusions:

The predictable story vs. a new one...

- The predictable story
 - Increasingly staggered progression
 - Clear patterns of advantage
 - Achievement begets achievement
- A new one: Beating the odds...
 - Young people from lowest ranking schools making “desired” rate of progress
 - Learners with very low TIMSS achievement also making smooth progress
 - Positive role of attitudes, belief and expectations

Policy implications

- Schools matter
 - Invest early, yes, but don't give up!
- Parents are important irrespective of their own education
 - Promoting positive attitudes towards education
- Role of positive attitudes, but need for realistic expectations
- Gender and male disadvantage
- Progression policy
 - “Quick win” for poor performing Q4 & Q5 learners?
- Importance of multiple routes post grade 9
 - Transitions should be seen more like revolving doors than dead ends
- Interpreting role of international studies in context

Taster of what happens next...

	Wave 4: 2014	Wave 5: 2015
Still at school	92.3	45.6
Moved to FET college	1.1	-
Post-school institution	-	24.5
Learnership / Apprenticeship / Traineeship	-	1.4
Working	1.0	6.5
Not studying and not working	5.6	21.9

- Nearly a quarter have moved into a post-school institution
- Nearly half remain in school
- More than one in five is not studying or working

But...



		Post-school	School	Learnership etc.	Working	NEET	Total
	% W4						
W1-W4 Transition Group:							
Smooth		508	131	22	86	333	1,080
	48.6	47.0	12.1	2.0	8.0	30.8	100
Staggered		29	736	5	21	65	856
	38.5	3.4	86.0	0.6	2.5	7.6	100
Stuck		2	119	0	5	17	143
	6.4	1.4	83.2	0	3.5	11.9	100
Stopped		6	29	4	33	73	145
	6.5	4.1	20.0	2.8	22.8	50.3	100
Total		545	1,015	31	145	488	2,224
		24.5	45.6	1.4	6.5	21.9	100

Thank you



Isdale, K., Reddy, V., Winnaar, L. & Zuze, T.L. (2016). *Smooth, Staggered or Stopped: Educational Transitions in the South African Youth Panel Study*. An LMIP Publication. Human Sciences Research Council

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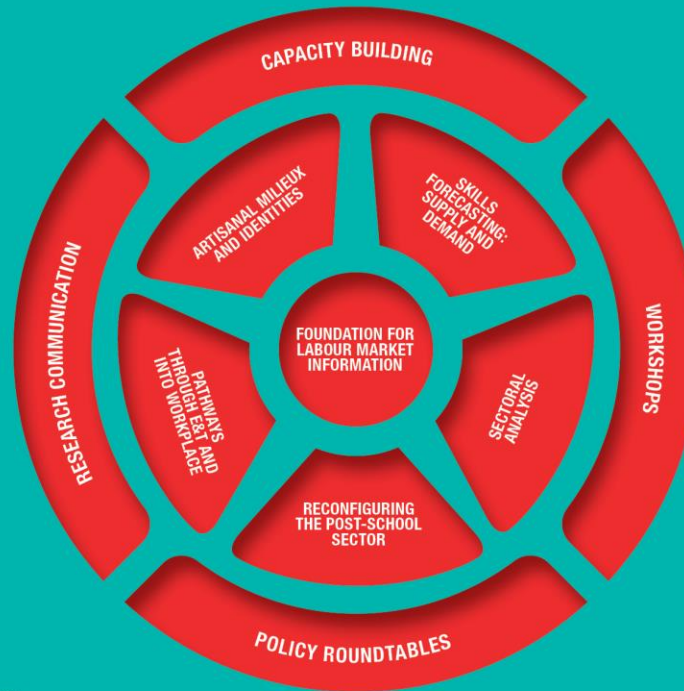
Policy brief also available on the TIMSS-SA website:

http://www.timss-sa.org.za/?wpfb_dl=66

Any further questions?

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