

If only they had a file on every pupil: Technical appendix

This technical appendix complements the paper: “*If only they had a file on every pupil*”: *On the mismatch between truancy policy and practice*. The empirical results of this paper are derived from the first large-scale project on truancy in Flanders [(Removed for review)]. This appendix offers a brief presentation of the project and describes the technical and methodological background in further detail.

The project: ‘*From occasional to regular truant: a study of the profile of truants and the influence of school and environment on truancy*’ was commissioned by the Department for Education and Training of Flanders. The central mission of this project consisted of a detailed identification, examination and analysis of truancy in Flanders. The research design consisted of four types of data collection: (1) the official registration data of problematically absent pupils from the Department of Education in Flanders, (2) a paper-and-pencil school survey (2013) of 4189 pupils enrolled in grade 9 to 12 (theoretical age: 15-18) and principals/care coordinators from a 62 stratified sample of Flemish schools, (3) 28 face-to-face in-depth interviews and (4) secondary analyses on 8 surveys gathered between 2002-2013. For the purpose of the current paper, only the first three data sources are relevant.

Data and methodology

The first data source comprises the official registration data of unauthorized school absenteeism from the Department for Education and Training of Flanders. Pupils are registered when they received at least 30 B-codes (i.e. 15 full days of unexcused absences). These data were pooled with the data available for *all* pupils enrolled in secondary education. A cross-sectional analysis was conducted on pupils enrolled in the school year 2010-2011 in grades 9 to 12 (theoretical age: 15-18) of full- and part-time secondary education (N: 293205). Pupils enrolled in special secondary education were not included in the analysis.

The second data source comprises a school survey specifically designed for our research project and was conducted in 2013. 4189 pupils following grades 9 to 12 in secondary education (theoretical age: 15-18) from 62 randomly selected secondary schools and classes filled out a paper-and-pencil questionnaire in a classroom setting. At the end of the fieldwork a net response rate at school level of 67.4% was achieved. Subsequent non-response analysis revealed no significant differences between the schools that were invited to participate but

refused and the schools that did participate in the survey. In addition, the principals (or a staff member responsible for the policy on truancy) of the 62 randomly selected secondary schools were asked to complete a web survey. In the end, a net response rate of 61.9% was achieved. Non-response analyses indicated no significant differences at the school level between principals that refused to participate and principals that participated.

The third data source consists of 28 in-depth interviews with non-truants, occasional truants and frequent truants conducted between April 2013-June 2013. Non-truants and occasional truants were selected from the 2013 survey data. At the end of the questionnaire respondents were asked whether they wanted to participate in a follow-up study. Eight non-truants (4 boys and 4 girls, 4 from general education and 4 from technical/vocational education) and 7 occasional truants were interviewed (4 boys and 3 girls, 3 from general education and 4 from technical/vocational education). In addition, the frequent truants were recruited from personal development trajectories (POT). POT's are programs developed to support and assist frequent truants from part-time vocational education. 13 frequent truants were interviewed (9 boys and 4 girls).

Analysis

In the paper we describe the social differences in the likelihood to truant. The research population concerns pupils enrolled in grades nine to twelve (theoretical age 15-18) of full-time and part-time secondary education. We refer both to the registration and survey data.

The conclusions regarding the registration data (i.e., the odds on being registered as Problematically Absent) are derived from (1) the bivariate associations between specific characteristics and the odds on being registered as Problematically Absent *and* (2) a multilevel logistic regression analysis based on a the population data of school year 2010-2011 (Table 4, cell entries are the exponentiated logit coefficients). The reason for this two-step procedure was that (1) several characteristics are very highly correlated and (2) we wanted to model different moderation effects. Under these conditions we had to combine different indicators in the multivariate analysis. Tables 1 to 3 report the bivariate associations which are not included in the multivariate analyses. Table 4 reports the results of the multivariate analyses. In these analyses we use gender, a combined factor gauging social deprivation (the educational level of the mother – getting a school allowance – foreign home language - living in a neighbourhood with a high degree of students with grade retention and

school allowance), school year and educational track to analyse the social profile of truants registered as Problematically Absent. The indicators of social deprivation are used by the Flemish government to grant additional (financial) resources to school.

The conclusions regarding the self-reported survey data are derived from the bivariate associations between specific characteristics and self-reported truancy. Table 5 reports the bivariate associations.

Table 1: Odds on being registered as Problematically Absent by gender and part-time versus full time education (school year 2011-2012)

	Fulltime education		Part-time education		Total	
	PA-registrations	% relative to total school population	PA-registrations	% relative to total school population	PA-registrations	% relative to total school population
Boys	1563	0,8	1323	36,4	3442	1,7
Girls	1425	0,8	711	39,7	2485	1,3
Total	2988	0,8	2034	37,5	5927	1,5

Source: Reports '*Wie is er (niet) als de schoolbel rinkelt?*' by AgODi.

Table 2: Odds on being registered as Problematically Absent by region from school years 2006-2007 until 2011-2012

Region	Urbanization rate	School year						Risk increase
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	Ratio[a]
Flemish region	Major city	2,9	3,1	3,3	3,8	3,9	3,9	1,3
	Regional city centre	1,2	1,5	1,5	1,5	1,7	1,8	1,5
	Small city	0,9	1,1	1,2	1,2	1,4	1,5	1,7
	Urban perimeter	0,7	0,8	0,8	0,9	0,9	0,5	0,7
	Transitional area	0,6	0,7	0,8	0,9	0,9	0,9	1,5
	Rural area	0,5	0,6	0,6	0,7	0,8	0,8	1,6
Brussels Capital region		2,3	2,6	4,2	4,4	4,7	4,2	1,8
Other		1,1	1,3	0,8	1,2	1,3	1,3	1,2
Total		1,0	1,2	1,2	1,4	1,5	1,5	1,5

[a] Odds ratio from school years 2006-2007 until 2010-2012.

[b] Data obtained from: *Wie is er niet als de schoolbel rinkelt* van AgODi.

Table 3: Odds on being registered as Problematically Absent by indicators of social deprivation

Indicators of social deprivation	% pupils tapping the indicator	% PA among the pupils tapping the indicator	% PA among the pupils not tapping the indicator
Mother with low educational level	24,7	5,0	1,0
Foreign home language	9,5	7,0	1,5
Neighbourhood	24,4	4,6	1,2
School allowance	25,9	2,1	2,0

*Pupils enrolled in special secondary education were not included in the analysis

Table 4: Multilevel logistic regression on being registered a Problematically Absent among pupils from regular secondary education in Flanders (N: 293204)

	Model 1 Odds ratio's	Model 2 Odds ratio's	Model 3 Odds ratio's	Model 4 Odds ratio's
Nationality (ref: Belgian)				
- Neighbouring country	1,481***	1,482***	1,484***	1,472***
- Turkish	1,288	1,289	1,299	1,365*
- Moroccan	1,239	1,242	1,244	1,292
- Refugee	1,547**	1,542*	1,563**	1,561**
- Middle en Eastern Europe	1,893***	1,893***	1,891***	1,879***
- North America	1,950***	1,957***	1,963***	1,902***
- Other	1,495***	1,494***	1,512***	1,436***
School year	0,806***	0,806***	0,807***	0,805***
Gender (ref: girl)	1,119***	1,019	1,059	1,073
Educational track (ref: general)				
- vocational	15,28***	15,33***	15,13***	11,25***
- technical	3,868***	3,887***	3,552***	2,756***
- art	5,410***	5,396***	4,058***	3,575***
- part time vocational	154,2***	154,6***	189,2***	133,7***
Social deprivation (0-4)	1,057***	1,044***	1,042***	1,193***
Interaction Gender*social deprivation		1,022*	1,026*	1,022*
Interaction Gender*vocational track			1,022	1,038
Interaction Gender*technical track			1,156	1,167
Interaction Gender*art education			1,813*	1,777*
Interaction Gender*part time vocational track			0,754*	0,759
Mean social deprivation at school level				1,911***
Mean % girls at school level (by 10%)				0,901
Mean % pupils with a foreign nationality at school level (per 10%)				1,353
Social deprivation* Mean social deprivation at school level				0,963***
N	293204	293204		293204
var(schoolr)	1,49	1,49		0,88
VPC ~ ICC	0,312	0,312		0,211

* p<0.05, ** p<0.01, *** p<0.001; Since these data concern population data (all pupils enrolled in regular secondary education) significance levels are strictly speaking not required. We use them here as an indicator of the stability of the parameter estimation.

Table 5: Self-reported truancy by gender, educational track and age (bivariate relationships)

Self-reported truancy	Never	Once	2-5 times	5-10 times	10-30 times	More than 30 times	Total
Gender							
Boys	80,9	9,3	6,6	2,1	0,7	0,4	2180
Girls	83,8	10,2	5,1	0,6	0,3	0,1	1934
							$X^2 = 33,125$ (df=5), $p < 0,001$
Educational track							
Vocational	76,9	12,5	7,1	2,2	0,9	0,5	1387
Technical	84,7	8,1	5,7	1,0	0,4	0,1	1596
General	86,6	8,2	4,3	0,6	0,1	0,2	1017
Art	80,8	12,1	6,1	1,0	0,0	0,0	99
Part time vocational	43,8	25,0	25,0	6,3	0,0	0,0	16
							$X^2 = 91,250$ (df=25), $p < 0,001$
Age							
15	91,6	5,2	2,7	0,3	0,1	0,0	730
16	84,6	9,4	4,5	0,9	0,3	0,3	1178
17	79,7	10,6	6,3	2,8	0,3	0,3	870
18	79,7	10,8	7,3	1,6	0,5	0,0	749
19 and older	71,8	14,3	10,3	1,3	1,7	0,6	532
							$X^2 = 128,641$ (df=20), $p < 0,001$
Educational level mother							
No education or lower secondary	76,3	12,4	8,5	2,1	0,4	0,4	532
Secondary education	81,4	10,8	6,0	1,2	0,6	0,1	1218
Upper secondary or University	81,1	10,5	6,3	1,4	0,5	0,1	3101
							$X^2 = 15,544$ (df=10), $p = 0,113$
Home language							
Dutch	85,0	8,7	5,0	0,7	0,4	0,2	2413
Foreign	77,4	11,7	7,8	2,2	0,5	0,3	1465
							$X^2 = 43,525$ (df=5), $p < 0,001$
Nationality							
Belgian	83,0	9,4	5,6	1,4	0,4	0,2	3596
Foreign	77,5	12,1	7,6	1,3	0,9	0,6	528
							$X^2 = 13,427$ (df=5), $p < 0,05$