

# Early school leaving in the Netherlands

## Policy and research

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# Problem statement

→ Lisbon European Council (2000):  
halve the year 2000 number of school dropouts by 2012



Extensive policy in the Netherlands organized by 'projectdirectie voortijdig schoolverlaten' within the Ministry of Education

→ National target: halve the number of *new* early school leavers from 71.000 in 2002 to 35.000 in 2012 (and 25.000 in 2016)

Note: denominator = all students in a given year

→ EU based target: 8% early school leavers by 2020

Note: denominator = all people younger than 23 years old

→ This presentation:

Dutch policy on early school leaving, *and* its effectiveness

## A. What happened in the Netherlands? -- Policy and effectiveness

1. National registration
2. Naming and shaming
3. Regional accountability
4. School accountability
5. Qualification Law

## B. Who are we targeting?

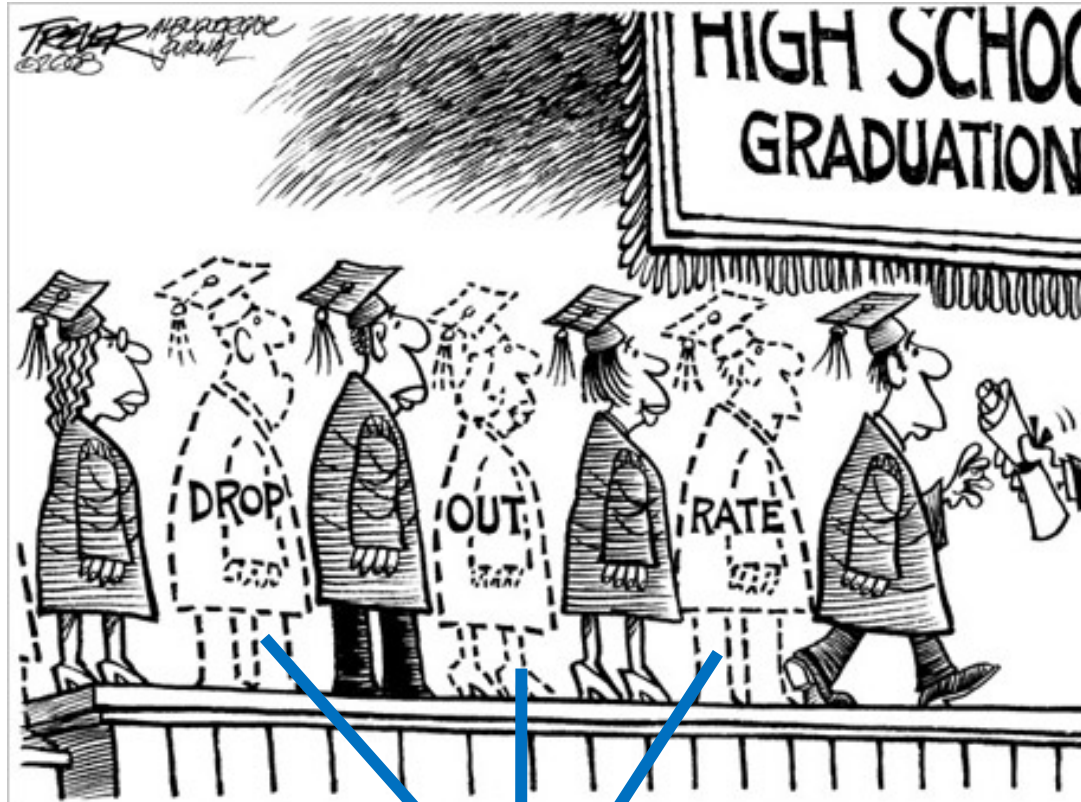
- Systematic literature review
- A typical pattern of dropout

## C. Is there scope for improvement in Belgium?

Belgium versus Luxembourg, the Netherlands and 9 other EU countries

# Dropout prevention

## Improved registration



How do you know whether they left school (without diploma)?  
→ Registration of students is start of policy

→ Basis Register Onderwijs Nummer (BRON)

- Data set of *all* Dutch students at secondary education
- Started in school year 2004/2005
- Includes postcode of pupil, school number ('brin'), parental information (e.g., one-parent family), social situation (e.g., living in poor area)
- Can be matched with data from Statistics Netherlands and municipal registration ('Gemeentelijke Basis Administratie')

→ Registration in BRON on October 1.

Early school leaver = A student younger than 23 who does not have a higher secondary diploma and is not enrolled in school on October 1, *while he/she was last year*

→ Note: still a lot of discussion on the definition, but at least a very good start

# Dropout prevention

## Naming and shaming

→ Using the BRON-data, the Ministry of Education applies 'naming and shaming'

- Everyone can observe the early school leaving rate and its change in his/her municipality and even neighborhood

[www.aanvalopschooluitval.nl](http://www.aanvalopschooluitval.nl)

- Regions receive a letter with their (absolute and relative) performance



Ministerie van Onderwijs, Cultuur en Wetenschap

### VSV-Verkenner *Zoom in op schooluitval*

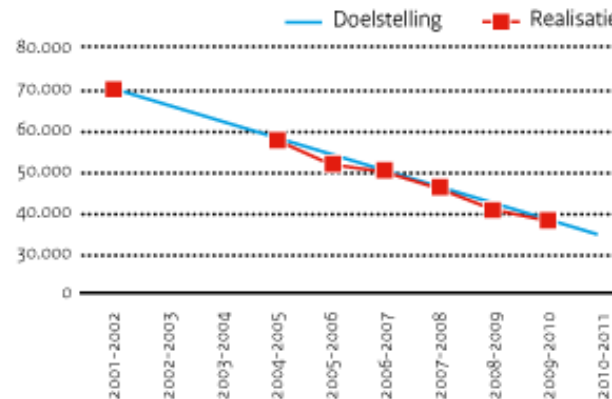
Home Landelijke cijfers RMC-regio's Gemeenten Scholen Vergelijken Help

Uitgebreid zoeken

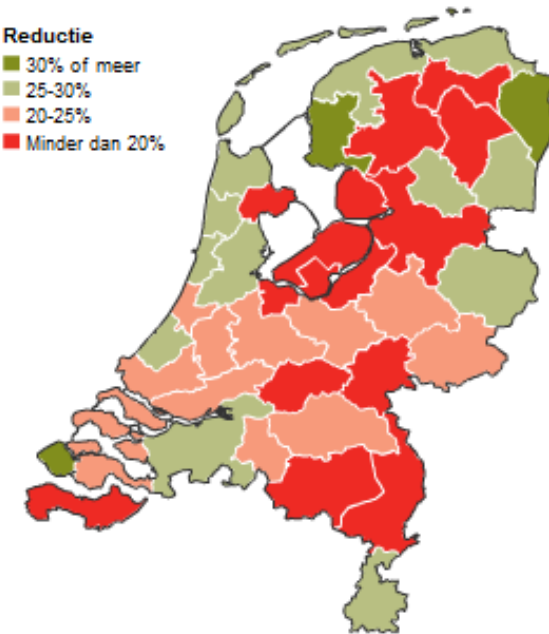
## Schooluitvalcijfers in beeld met de VSV-Verkenner

Jongeren mét een startkwalificatie op zak vergroten hun kansen op de arbeidsmarkt. Scholen, gemeenten en OCW gaan door met de 'Aanval op Schooluitval' zodat in 2012 het aantal nieuwe voortijdig schoolverlaters hooguit 35.000 bedraagt en in 2015 hooguit 25.000. We zijn op de goede weg, voor schooljaar 2009-2010 staat de teller op 39.557. Bekijk met de VSV-Verkenner de stand van zaken op landelijk niveau, per RMC-regio, gemeente of school, bekijk de resultaten van het voortgezet onderwijs en het middelbaar beroepsonderwijs, maak vergelijkingen tussen gemeenten en/of scholen en bekijk andere relevante informatie.



Reductie

- 30% of meer
- 25-30%
- 20-25%
- Minder dan 20%



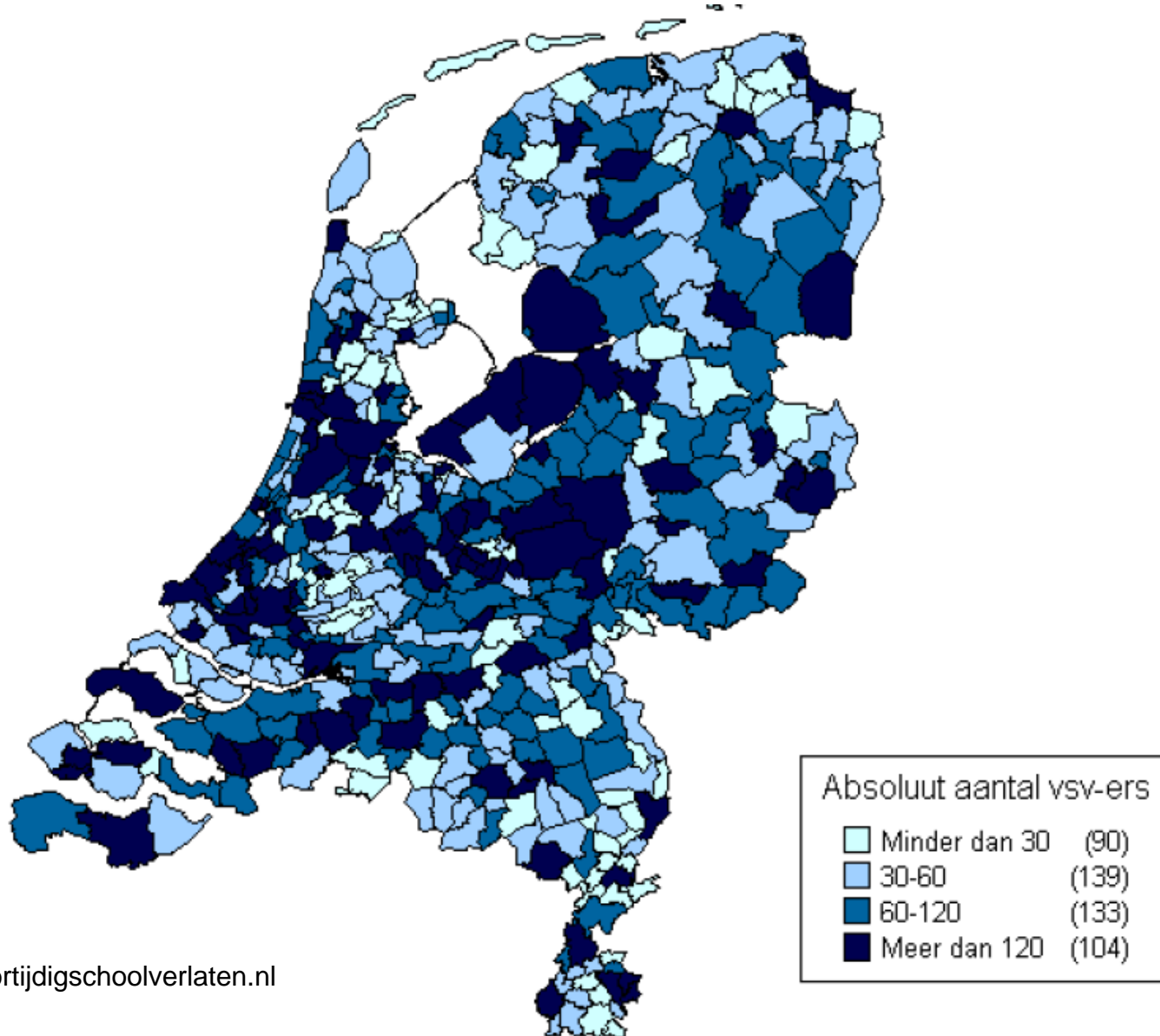
[Start de VSV-verkenner](#)

Ga naar [www.aanvalopschooluitval.nl](http://www.aanvalopschooluitval.nl) voor meer informatie over de 'Aanval op Schooluitval'.

7  
 Navigeer over de kaart om de reductie te zien van 2009-2010 t.o.v. 2005-2006.





# Dropout prevention

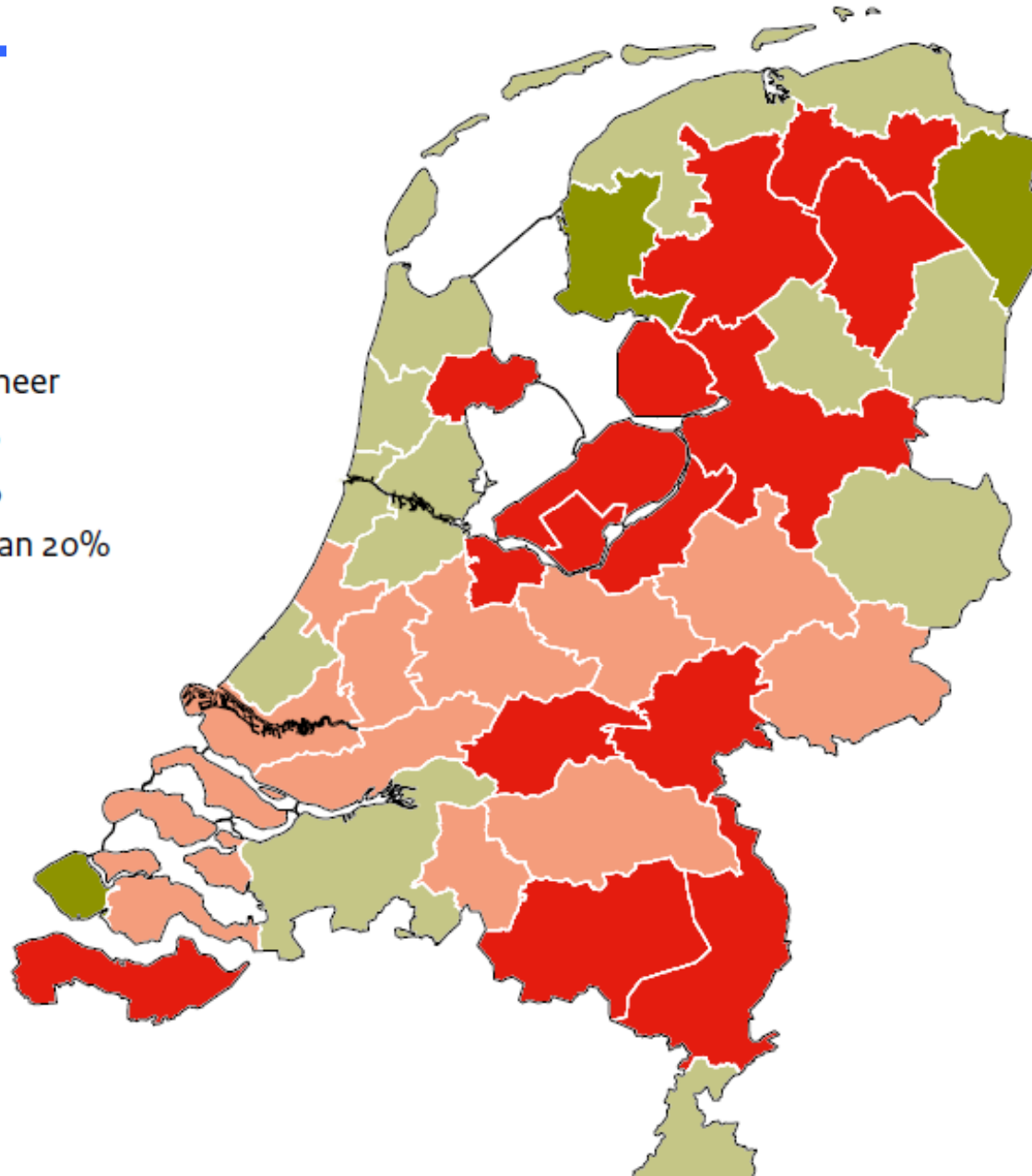
## Naming and shaming





**Reductie**

-  30 % of meer
-  25 - 30 %
-  20 - 25 %
-  minder dan 20%



# Dropout prevention

## Naming and shaming

→ 'Meten is weten' ('Measuring is knowing')

Having good data is the very start

- For policy
- For schools
- For policy evaluation

Despite discussions on the definition and despite the absence of stopouts, a national registration is important

→ note that stopouts are often registered in municipal datasets along with truancy (so-called 'absoluut verzuim')

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3. **Regional accountability**
4. School accountability
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## B. Who are we targeting?

- Systematic literature review
- A typical pattern of dropout

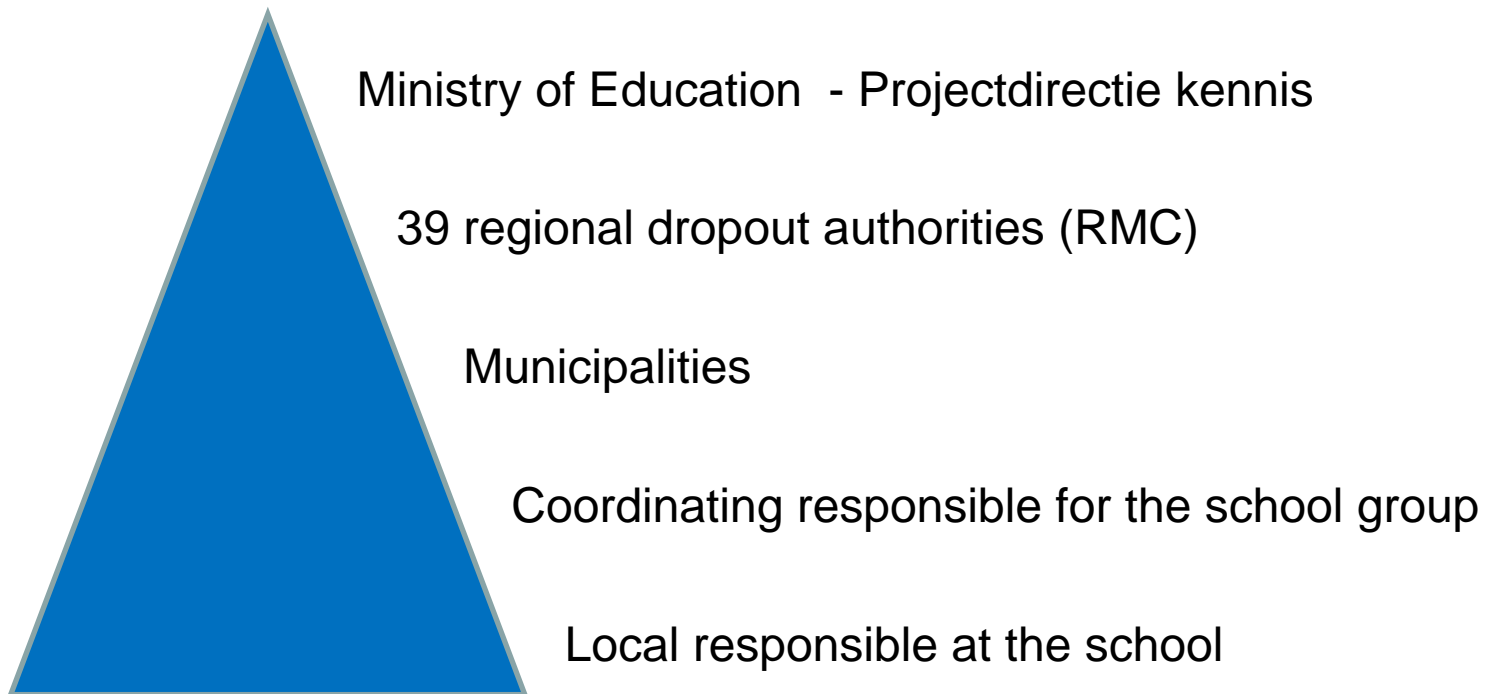
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Belgium versus Luxembourg, the Netherlands and 9 other EU countries

# Dropout prevention

## Regional accountability

- A decentralized implementation of policy
- Adapt policy to the local needs and student group
  - Combined with significant accountability (naming and shaming, 'effect rapportages', monetary incentive)



# Dropout prevention

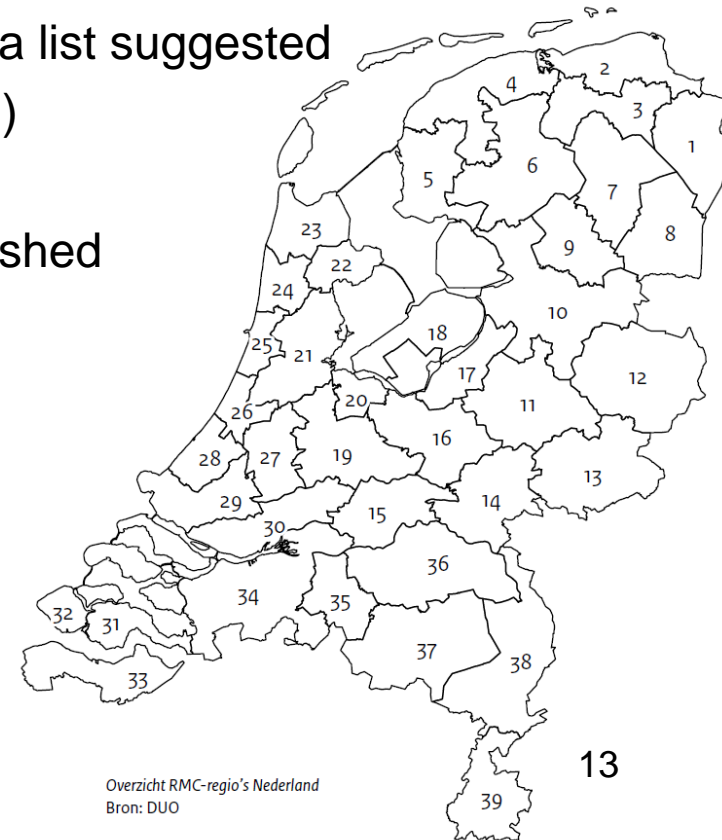
## Regional accountability

→ Dropout prevention in the Netherlands (total budget of 313 million euro in 2008)

### Regional accountability

- 39 regions to coordinate dropout prevention measures
- Regions can select policy measures out of a list suggested by the Ministry of education ('the covenant')

→ Chosen 'covenant items' are published on the website

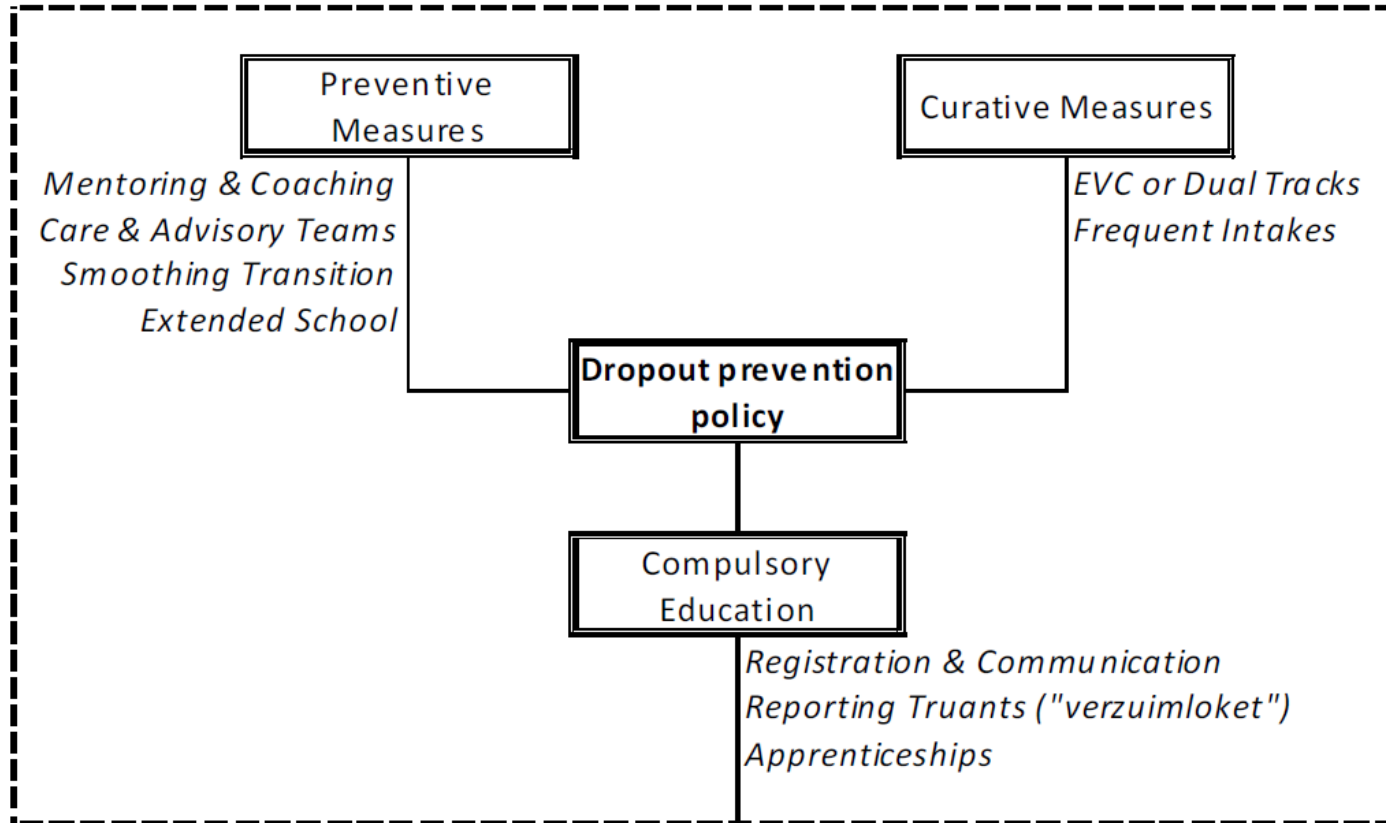


Overzicht RMC-regio's Nederland  
Bron: DUO

# Dropout prevention

## Regional accountability

→ Regional accountability: the 'covenant'



→ Which of the prevention measures go along with lower dropout?

→ Quantile regression controlling for regional fixed effects, a time trend, student and parental characteristics, neighborhood characteristics, and school type

Impact of dropout prevention	0.25 quantile			0.5 quantile			0.75 quantile		
Initial implementor	0.001	0.001		-0.001	0.001		0.000	0.001	0.962
Number of implemented prevention items	0.004	0.001	***	0.005	0.001	***	0.004	0.001	0.001 ***
Care and advisory team	0.000	0.004		0.000	0.005		0.002	0.004	0.683
Mentoring and coaching	-0.008	0.002	***	-0.008	0.003	***	-0.006	0.002	0.009 ***
Changing subject	-0.003	0.003		-0.006	0.004	*	-0.005	0.003	0.119
Optimal track or profession	-0.001	0.002		-0.003	0.002		-0.006	0.002	0.008 ***
Apprenticeship	-0.005	0.003	*	-0.005	0.003		-0.006	0.003	0.037 **
Frequent intakes	-0.007	0.003	**	-0.007	0.003	**	-0.003	0.003	0.298
Extended school	-0.011	0.003	***	-0.011	0.004	***	-0.010	0.003	0.003 ***
Reporting truants	-0.008	0.002	***	-0.005	0.002	*	-0.001	0.002	0.489
Curative projects	-0.005	0.002	*	-0.008	0.003	***	-0.010	0.003	0.000 ***
Time fixed effects	Yes			Yes			Yes		
Region fixed effects	Yes			Yes			Yes		

→ Main difficulty:

Due to the decentralization of policy implementation, and due to the variety of potential policy measures, only the local level knows which policy measures are implemented

→ Difficult for measuring policy effectiveness and follow-up



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Belgium versus Luxembourg, the Netherlands and 9 other EU countries

# Dropout prevention school accountability

→ Monetary incentive for school of 2,500 euro per dropout less in comparison to base year 2005-2006

Note that the incentive is unfair if

- Some schools had dropout prevention schemes before 2005
- Background characteristics of the students differ

→ We tested the latter for the difference in school dropout between Amsterdam and Rotterdam

→ Truancy, truancy reporting and truancy policy

- Based on Amsterdam data:

Truancy increases the probability of early school leaving by 3.9 percentage points

cfr. Early school leaving percentage in the municipality of Amsterdam amounts to 7.8% (2005-2006) and 6.8% (2007-2008)

- Improved truancy reporting does induce lower dropout, but not significantly different from 0

Only for better general schools (vo), we observe a significant effect

- An active policy on truancy reporting (e.g., visiting the truant and his parents at home for an extensive discussion) creates a lower school dropout

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→ Qualification law (2007):

→ Students have to obtain a 'starter qualification' (= higher secondary diploma)

→ In practice: increase in compulsory education age for vwo and mbo students

→ 'RMC verzuim' = Truancy reporting for students younger than 23 who did not obtain a qualification yet

# Dropout prevention Qualification law

## → Impact on early school leaving

Specification	Model 1 DiD	Model 2 DiD	Model 3 Fixed effects at school level	Model 4 Fixed effects at neighborhood
Treatment indicator ( $D_i$ )				
$\hat{\alpha}_1$	-0.0065 (-0.88)	-0.0108 (-1.48)	-0.0098 (-1.32)	-0.0139 (-1.83)
Time Indicator ( $T_1$ )				
$\hat{\alpha}_2$	0.0235 (-3.22)	0.0234 (-3.29)	0.0228 (-3.17)	0.0227 (-3.05)
Interaction Effect				
$\hat{\theta}$	-0.0252 (-2.38)	-0.0247 (-2.38)	-0.0241 (-2.3)	-0.0228 (-2.12)
Covariates ( $X_{ji}$ )		Individual, family and school type characteristics	Individual, and family characteristics	Individual, family, and school type characteristics
Constant	Yes	Yes	Yes	Yes
R-squared	0.0019	0.0521	0.0812	0.113
Observations ( $n$ )	12,849	12,784	12,784	12,784

(1) t-values between brackets.

(2) We use robust standard errors to control for heteroskedasticity. Chi-squared(1) = 81.93; Prob > chi<sup>2</sup> = 0.0000.

# Dropout prevention Qualification law

→ Thanks to qualification law:

Decrease of early school leaving by 2.52 percentage points,  
but effect is mainly driven by non-liable pupils leaving school (i.e., groenpluk)

Policy has adverse and unexpected effects

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## Student characteristics

### Exogenous

- Gender: McMillan & Marks, 2003; Stearns & Glennie, 2006
- Age: Roderick, 1994; Lee & Burkman, 2003; Wylie & Hunter, 1994
- Ethnicity: Goldschmidt & Wang, 1999; Rumberger & Larson, 1998; Crowder & South, 2003
- Ability: Goldschmidt & Wang, 1999; Alexander *et al.*, 2001; Marks, 2007

### Motivational

- Interest in schooling:
- Opinion about teachers: Rumberger & Thomas, 2000
- Retentions: Goldschmidt & Wang, 1999; Jimerson, 1999; Roderick *et al.*, 2000
- Attention during classes:
- Truant: Carbonaro, 1998; Rumberger, 1995
- Homework: Goldschmidt & Wang, 1999; Seltzer, 1994

STUDENT  
DROPOU

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## Parental characteristics

### Exogenous

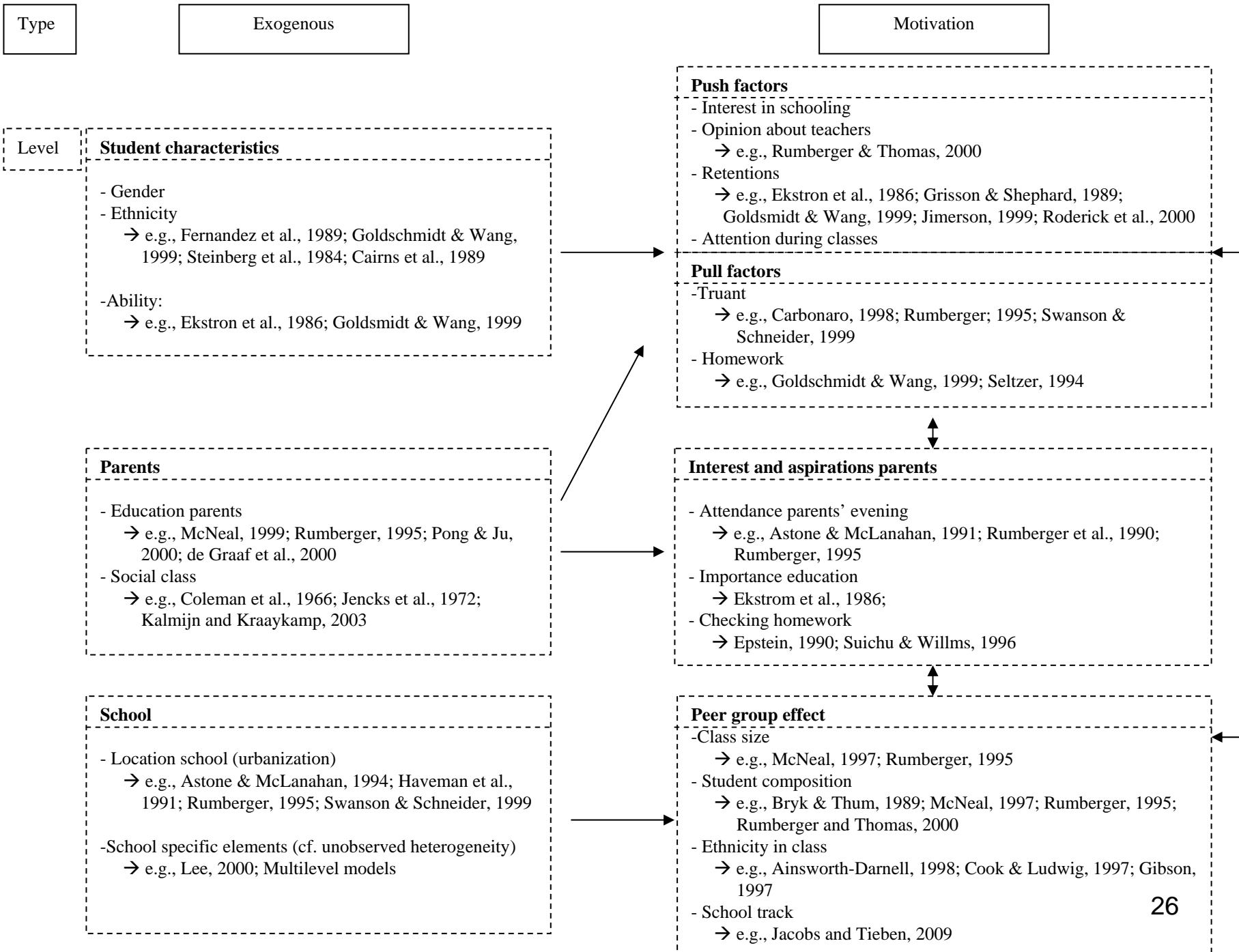
- Education parents: McNeal, 1999; Rumberger, 1995; Pong & Ju, 2000; De Graaf *et al.*, 2000
- Social class: Kalmijn & Kraaykamp, 2003

### Interests and aspirations parents

- Attendance parents' evenings: Astone & McLanahan, 1991; Rumberger *et al.*, 1990; Rumberger, 1995
- Importance of education: Alexander *et al.*, 2001; Mapp, 2004
- Checking homework: Epstein, 1990; Suichu & Willms, 1996

## School characteristics

- School location (urbanization): Haveman *et al.*, 1991; Astone & McLanahan, 1994; Swanson & Schneider, 1999; Rumberger, 1995
- Class size: McNeal, 1997; Rumberger, 1995
- Composition of student body: Bryk & Thum, 1989; McNeal, 1997; Rumberger, 1995; Rumberger & Thomas, 2000.
- Ethnicity in class: Ainsworth-Darnell, 1998; Gibson, 1997;
- School track: Jacobs and Tieben, 2009



		Hazard Ratio	signif.	Hazard Ratio	signif.	
Gender	female = 1	1.216	***	1.218	***	
Homeland mother (Netherlands = 1)	Morocco	1.087				
	Surinam / Antilles	1.329				
	Turkey	1.439				
	Other	1.039				
Academic path (three or more grade rep.)	twice grade repetition	0.172	***	0.153	***	
	once grade repetition	0.143	***	0.109	***	
	on track	0.132	***	0.086	***	
	Move forward once	0.147	***	0.088	***	
Year of birth (1970-1977 = 1)	1978	2.114				
	1979	1.944				
	1980	1.707				
	1981	1.395				
Test score		0.978	***	0.976	***	
	Intest in school (totally disagree =1)	Partly disagree	0.859		0.913	
		Partly agree	0.728		0.777	
		Totally agree	0.645	***	0.694	*
Location of school (very large city)	Large city	1.050				
	Urban	1.067				
	Rural	0.985				
	Very rural	0.920				
Highest degree parents (primary = 1)	Lower secondary	0.988		0.966		
	Higher secondary	0.814	***	0.748	***	
	First step higher	0.659	***	0.578	***	
	Second step higher	0.666	***	0.582	***	
	Third step higher	0.826		0.701	*	
Work parents (unknown = 1)	Worker	1.264				
	one-man business	1.381				
	Self employed	1.216				
	Lower employee	1.267				
	Middle employee	1.086				
	Higher employee	1.124				
Checking homework (never=1)	Sometimes	1.007		1.004		
	Frequently	1.096		1.106		
	Almost always	1.309	***	1.308	***	
Talking about school		0.904	***	0.908	***	
Log likelihood		-25226		-26543		
Degrees of freedom		36		18		
LR Chi		588.250	***	584.87	***	

where \*\*\*, \*\* and \* denote, respectively, significance at 1, 5 and 10% level as determined by a standard z-statistic.

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Early school leaving rate (left figure) is heavily influenced by the economic cycle.

- We ‘removed’ economic influences, institutional differences and population differences from the gross figure (based on Eurostat data)
- Result (right figure): ‘net’ policy effect

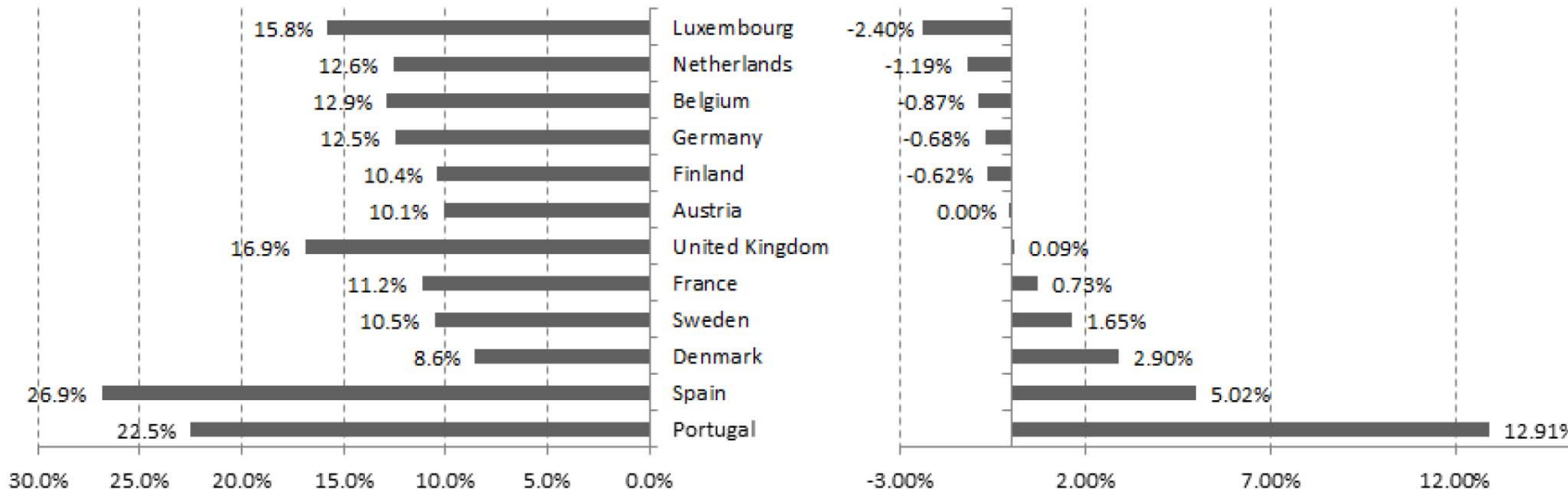


Figure 3: Naming and shaming based on policy influences

There is much to learn from early school leaving policy in the Netherlands

Caution should be taken:

- Some structural differences in educational system (e.g., two levels of three years, strong ability tracking, central exit exam).
- Not all measures are effective

Advice in setting-up policy:

Make sure that policy can be evaluated. Do not implement a policy in all schools at the same time, but allow for an experimental and evidence based set-up!

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De Witte, K. and Van Klaveren, C. (2010). How Uniform Incentives can Provide a Negative Motivation -- An Application to Early School Leaving in Two Large Cities. *Applied Economics*. In press.

Cabus, S. and De Witte, K. (2010). Does school time matter? – On the impact of compulsory education age on school dropout. Conditionally accepted in *Economics of Education Review*

De Witte, K. and Cabus, S. (2010). Dropout prevention measures in the Netherlands, an evaluation. *TIER Maastricht Working Paper Series*.

Thyssen, G., De Witte, K., Groot, W. and Maassen van den Brink, H. (2010). Preventing school dropout: A critical review of the literature. *TIER Maastricht Working Paper Series*.

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Cabus, S., K. De Witte, M. Csillag, W. Groot and H. Maassen van den Brink. *Voortijdig schoolverlaten: Beleidsevaluatie 2011 – Deel 2 Kwalificatieplicht – Verzuimbeleid*. NICIS/TIER Universiteit Maastricht.

Cabus, S. and K. De Witte (2011). Invloed van leerplichtwet op voortijdig schoolverlaten. *Economisch Statistische Berichten* 96 (4606), 166-169.

Thyssen, G., K. De Witte, W. Groot, H. Maassen van den Brink (2010). De stereotypen van voortijdig schoolverlaten. *Impuls voor onderwijsbegeleiding* 41 (3), 151-153.

De Witte, K., W. Groot, H. Maassen van den Brink, S. Cabus and G. Thyssen (2010). Dropout prevention measures in the Netherlands – A quantitative assessment.

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De Witte, K., S. Cabus, G. Thyssen, W. Groot and H. Maassen van den Brink (2010). *Voortijdig schoolverlaten: Beleidsevaluatie 2010 – Deel 1 Verkenningen*. NICIS Institute.



# Early school leaving in the Netherlands

## Policy and research

[www.personeel.unimaas/k-dewitte](http://www.personeel.unimaas/k-dewitte)

[www.econ.kuleuven.be/kristof.dewitte](http://www.econ.kuleuven.be/kristof.dewitte)

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