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
Outline

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
How do you know whether they left school (without diploma)?

→ Registration of students is start of policy
Dropout prevention
Improved registration

→ 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

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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

- Regions receive a letter with their (absolute and relative) performance
Dropout prevention
Naming and shaming

Jongeren met een startkwalificatie op zak vergroten hun kans 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 staan 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.

Ga naar www.aanvalopschooluitval.nl voor meer informatie over de 'Aanval op Schooluitval'.
Dropout prevention
Naming and shaming

Source: www.voortijdigschoolverlaten.nl
Figuur 3: RMC-regio’s, realisatie reductie nieuwe vsv’ers in 2009-2010 t.o.v. 2005-2006
Bron: DUO

Reductie
- 30 % of meer
- 25 - 30 %
- 20 - 25 %
- minder dan 20%
‘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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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)

Ministry of Education - Projectdirectie kennis

39 regional dropout authorities (RMC)

Municipalities

Coordinating responsible for the school group

Local responsible at the school
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
Dropout prevention
Regional accountability

Regional accountability: the ‘convenant’

Preventive Measures
- Mentoring & Coaching
- Care & Advisory Teams
- Smoothing Transition
- Extended School

Curative Measures
- EVC or Dual Tracks
- Frequent Intakes

Dropout prevention policy

Compulsory Education
- Registration & Communication
- Reporting Truants (“verzuimloket”)
- Apprenticeships
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

<table>
<thead>
<tr>
<th>Impact of dropout prevention</th>
<th>0.25 quantile</th>
<th>0.5 quantile</th>
<th>0.75 quantile</th>
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<tbody>
<tr>
<td>Initial implementor</td>
<td>0.001</td>
<td>-0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>Number of implemented prevention items</td>
<td>0.004 ***</td>
<td>0.005 ***</td>
<td>0.004 ***</td>
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<td>Care and advisory team</td>
<td>0.000</td>
<td>0.000</td>
<td>0.002</td>
</tr>
<tr>
<td>Mentoring and coaching</td>
<td>-0.008 ***</td>
<td>-0.008</td>
<td>-0.006 ***</td>
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<td>Changing subject</td>
<td>-0.003</td>
<td>-0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td>Optimal track or profession</td>
<td>-0.001</td>
<td>-0.003</td>
<td>-0.006</td>
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<tr>
<td>Apprenticeship</td>
<td>-0.005 *</td>
<td>-0.005</td>
<td>-0.006</td>
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<tr>
<td>Frequent intakes</td>
<td>-0.007 **</td>
<td>-0.007</td>
<td>-0.003</td>
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<tr>
<td>Extended school</td>
<td>-0.011 ***</td>
<td>-0.011</td>
<td>-0.010</td>
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<tr>
<td>Reporting truants</td>
<td>-0.008 ***</td>
<td>-0.005</td>
<td>-0.001</td>
</tr>
<tr>
<td>Curative projects</td>
<td>-0.005 *</td>
<td>-0.008</td>
<td>-0.010</td>
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<tr>
<td>Time fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Region fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
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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 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
Dropout prevention
school accountability

➔ 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**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DiD</td>
<td>DiD</td>
<td>Fixed effects at school level</td>
<td>Fixed effects at neighborhood</td>
</tr>
<tr>
<td>Treatment indicator ($D_t$)</td>
<td>$\hat{\alpha}_1$</td>
<td>-0.0065</td>
<td>-0.0108</td>
<td>-0.0098</td>
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<td></td>
<td></td>
<td>(-0.88)</td>
<td>(-1.48)</td>
<td>(-1.32)</td>
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<tr>
<td>Time Indicator ($T_t$)</td>
<td>$\hat{\alpha}_2$</td>
<td>0.0235</td>
<td>0.0234</td>
<td>0.0228</td>
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<tr>
<td></td>
<td></td>
<td>(-3.22)</td>
<td>(-3.29)</td>
<td>(-3.17)</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td>$\hat{\theta}$</td>
<td>-0.0252</td>
<td>-0.0247</td>
<td>-0.0241</td>
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<td></td>
<td></td>
<td>(-2.38)</td>
<td>(-2.38)</td>
<td>(-2.3)</td>
</tr>
<tr>
<td>Covariates ($X_{ji}$)</td>
<td></td>
<td></td>
<td>Individual, family and school type characteristics</td>
<td>Individual, and family characteristics</td>
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<tr>
<td>Constant</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>R-squared</td>
<td>0.0019</td>
<td>0.0521</td>
<td>0.0812</td>
<td>0.113</td>
</tr>
<tr>
<td>Observations ($n$)</td>
<td>12,849</td>
<td>12,784</td>
<td>12,784</td>
<td>12,784</td>
</tr>
</tbody>
</table>

(1) t-values between brackets.
(2) We use robust standard errors to control for heteroskedasticity. Chi-squared(1) = 81.93; Prob > chi² = 0.0000.

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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

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
## Dropout Prevention

### The Literature

- **Student characteristics**
  - Gender
  - Ethnicity
    - e.g., Fernandez et al., 1989; Goldschmidt & Wang, 1999; Steinberg et al., 1984; Cairns et al., 1989
  - Ability:
    - e.g., Ekstron et al., 1986; Goldsmidt & Wang, 1999

- **Parents**
  - Education parents
    - e.g., McNeal, 1999; Rumberger, 1995; Pong & Ju, 2000; de Graaf et al., 2000
  - Social class
    - e.g., Coleman et al., 1966; Jencks et al., 1972; Kalmijn and Kraaykamp, 2003

- **School**
  - Location school (urbanization)
    - e.g., Astone & McLanahan, 1994; Haveman et al., 1991; Rumberger, 1995; Swanson & Schneider, 1999
  - School specific elements (cf. unobserved heterogeneity)
    - e.g., Lee, 2000; Multilevel models

- **Push factors**
  - Interest in schooling
  - Opinion about teachers
    - e.g., Rumberger & Thomas, 2000
  - Retentions
    - e.g., Ekstron et al., 1986; Grisson & Shephard, 1989; Goldsmidt & Wang, 1999; Jimerson, 1999; Roderick et al., 2000
  - Attention during classes

- **Pull factors**
  - Truant
    - e.g., Carbonaro, 1998; Rumberger; 1995; Swanson & Schneider, 1999
  - Homework
    - e.g., Goldschmidt & Wang, 1999; Seltzer, 1994

- **Interest and aspirations parents**
  - Attendance parents’ evening
    - e.g., Astone & McLanahan, 1991; Rumberger et al., 1990; Rumberger, 1995
  - Importance education
    - Ekstrom et al., 1986;
  - Checking homework
    - Epstein, 1990; Suichu & Willms, 1996

- **Peer group effect**
  - Class size
    - e.g., McNeal, 1997; Rumberger, 1995
  - Student composition
    - e.g., Bryk & Thum, 1989; McNeal, 1997; Rumberger, 1995; Rumberger and Thomas, 2000
  - Ethnicity in class
    - e.g., Ainsworth-Darnell, 1998; Cook & Ludwig, 1997; Gibson, 1997
  - School track
    - e.g., Jacobs and Tieben, 2009
<table>
<thead>
<tr>
<th>Gender</th>
<th>female = 1</th>
<th>Hazard Ratio</th>
<th>signif.</th>
<th>Hazard Ratio</th>
<th>signif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeland mother (Netherlands = 1)</td>
<td>Morocco</td>
<td>1.087</td>
<td></td>
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<tr>
<td></td>
<td>Surinam / Antilles</td>
<td>1.329</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>1.439</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Other</td>
<td>1.039</td>
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<tr>
<td>Academic path (three or more grade rep.)</td>
<td>twice grade repetition</td>
<td>0.172</td>
<td>**</td>
<td>0.153</td>
<td>**</td>
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<tr>
<td></td>
<td>once grade repetition</td>
<td>0.143</td>
<td>**</td>
<td>0.109</td>
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<tr>
<td></td>
<td>on track</td>
<td>0.132</td>
<td>**</td>
<td>0.086</td>
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<td></td>
<td>Move forward once</td>
<td>0.147</td>
<td>**</td>
<td>0.088</td>
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<td></td>
<td>1979</td>
<td>1.944</td>
<td></td>
<td></td>
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<td></td>
<td>1980</td>
<td>1.707</td>
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<td></td>
<td>1981</td>
<td>1.395</td>
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<td>Test score</td>
<td>Partly disagree</td>
<td>0.978</td>
<td>**</td>
<td>0.976</td>
<td>**</td>
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<tr>
<td></td>
<td>Partly agree</td>
<td>0.859</td>
<td></td>
<td>0.913</td>
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<td></td>
<td>Totally agree</td>
<td>0.728</td>
<td></td>
<td>0.777</td>
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<td>Location of school (very large city)</td>
<td>Large city</td>
<td>1.050</td>
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<td></td>
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<tr>
<td></td>
<td>Urban</td>
<td>1.067</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>0.985</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very rural</td>
<td>0.920</td>
<td></td>
<td></td>
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<tr>
<td>Highest degree parents (primary = 1)</td>
<td>Lower secondary</td>
<td>0.988</td>
<td></td>
<td>0.966</td>
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<tr>
<td></td>
<td>Higher secondary</td>
<td>0.814</td>
<td>**</td>
<td>0.748</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>First step higher</td>
<td>0.659</td>
<td>**</td>
<td>0.578</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>Second step higher</td>
<td>0.666</td>
<td>**</td>
<td>0.582</td>
<td>**</td>
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<tr>
<td></td>
<td>Third step higher</td>
<td>0.826</td>
<td></td>
<td>0.701</td>
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<td>1.264</td>
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<td>one-man business</td>
<td>1.381</td>
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<td></td>
<td>Self employed</td>
<td>1.216</td>
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<td></td>
<td>Lower employee</td>
<td>1.267</td>
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<td>Middle employee</td>
<td>1.086</td>
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<td>Higher employee</td>
<td>1.124</td>
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<td>1.007</td>
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<td>1.004</td>
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<tr>
<td></td>
<td>Frequently</td>
<td>1.096</td>
<td></td>
<td>1.106</td>
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<tr>
<td></td>
<td>Almost always</td>
<td>1.309</td>
<td>**</td>
<td>1.308</td>
<td>**</td>
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<td>Talking about school</td>
<td></td>
<td>0.904</td>
<td>**</td>
<td>0.908</td>
<td>**</td>
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<td>Log likelihood</td>
<td></td>
<td>-25226</td>
<td></td>
<td>-26543</td>
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<tr>
<td>Degrees of freedom</td>
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<td>18</td>
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<td>LR Chi</td>
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<td>588.250</td>
<td>**</td>
<td>584.87</td>
<td>**</td>
</tr>
</tbody>
</table>

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

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

![Graph showing early school leaving rates and policy effects](image)

**Figure 3**: Naming and shaming based on policy influences
Conclusion

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!


References


Early school leaving in the Netherlands
Policy and research

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