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Underqualification as an opportunity for low-educated workers

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What is under-qualification?

- You managed to find a job that normally requires a higher level of formal education than you have.
- Your job level is higher than migth be expected given your formal level of education

→ So, you dit very well when you are under-qualified!!

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Relevance: Under-qualification and low educated

Regional and firm perspective

In general: Mismatch on labour market lowers productivity

(Thurow, 1973; Sattinger, 1993)

Low educated: Less investment in social support if people manage to improve their position and be more self-sufficient?

Individual

In general: Under-qualification positive financial consequences for worker in terms of wages and less risk of firing (Nordin et al, 2010)

Incentive NOT to invest in formal education?

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Factors influencing chance for under-qualification

- **Developments on the labour market influence chances low educated**
  - Globalization, rising education, decrease medium jobs (See f.i. Sassen, 1988; Autor et al, 2003, 2006; van der Waal, 2010)
  - Negative (crowding out) and positive effects (informal learning) when low- and high educated work together (See f.i. Gesthuizen & Scheepers,2010; de Beer, 2006)
  - Regional differences in labour market structure (See f.i. Hensen et al, 2009; Büchel & van Ham (2003); Groot; Wolbers, 2003)
- **Firm characteristics influence chances low educated**
  - Composition of high- and low educated employees in firm→proximity (Boschma, 2006; Canton, 2009; Broersma et al, 2012)
  - Different results found for type of firm (OECD, 2011; Green & Mc Intosh, 2007)
- **Personal characteristics influence chances**
  - More under qualification with increasing age, being male or native (See f.i. Hensen et al, 2009; Frank, 1978; Buchel & van Ham, 2003; Green & McIntosh, 2007)

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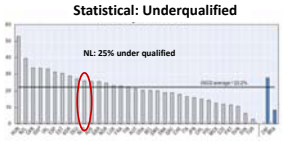
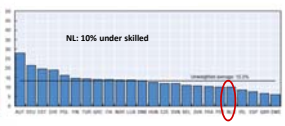
Definition matters: Discrepancy between qualification and skills

In general, three ways to define match on labour market:
'normative', ´statistical´ and ´self declared´
→*Heterogeneity in outcomes*

Statistical: Underqualified



Self declared: Underskilled



OECD, 2011

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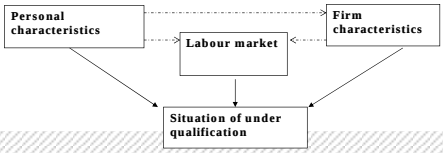
Aim

Do we find effects of experience/learning and competition, for personal, firm- and labour market variables in explaining the chance for low educated to be under-qualified?

→Low educated
→Positive environments
→Interaction with high educated
→Comparing measurements



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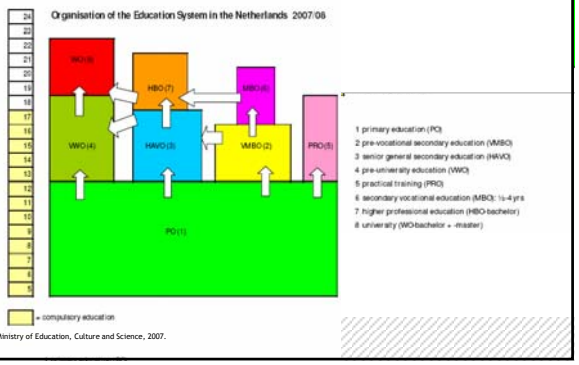
Educational system



Source: Ministry of Education, Culture and Science, 2007.

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Method (1)

- **Dataset:** Working Conditions Survey (WCS)*
  - Repeated set of cross sections of workers in firms
  - Information about worker and company
  - Period: 1996-2006

Dependent: Defining under qualification in two ways: normative and statistical

	Normative definition: Based on job classification system	Statistical definition: Based on mean			
Education levels in dataset	Corresponding job level	Mean	St. dev.	Cases	Corresponding job level
Primary education (ISCED 0-1)	I	2,07	0,79	21593	II
Pre-vocational secondary Education (ISCED 2)	II + III	2,71	0,74	43535	III
Lower secondary general education (ISCED 2)	II + III	2,95	0,61	122992	III
Senior general secondary education and Pre-university Education (ISCED 3)	IV	3,48	0,80	32977	III + IV
Secondary vocational education (ISCED 3)	IV	3,81	0,68	84018	IV
Higher professional education (ISCED 5)	V+VI+ VII+ VIII	4,76	0,72	49371	V
University (ISCED 5-6)	V+VI+ VII+ VIII	5,39	0,85	13299	V + VI
Total		3,45	1,07	367785	

Focus ⇨

Condition	Resulting job match
Joblevel Worker<Matched level based on formal education	Jobmatch=over qualified
Joblevel Worker=Matched level based on formal education	Jobmatch=match
Joblevel Worker>Matched level based on formal education	Jobmatch=under qualified

Example: worker with education ISCED 2 and job on level IV is under qualified in both measures

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Method (2): Selection and analysis

- **Selecting** low educated (max. ISCED 2) with at least a job match
- **Model:** Binary Logistic Regression chance to be under qualified vs having a jobmatch for normative and statistical measure

	Variables in model	
	Internal data	External data
Person	- Age - Ethnicity - Gender - Working hours (- Function type; administrative, etc)	-
Region	- % High skilled jobs →summing up workers in region - % high educated in region →summing up workers in region - Being in one of 4 biggest cities	- Average unemployment rate per zipcode - National unemployment rate→measuring business cycle effect
Firm	- % High skilled jobs → summing up workers in firms - % High educated in firm → summing up workers in firms - Firm size (- Firm Sector)	-

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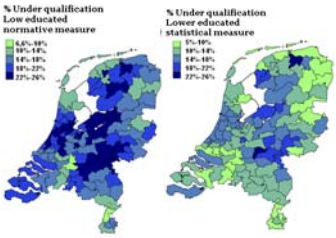
Regional variation under-qualification in the Netherlands



Job allocation	Based on normative measure	Based on statistical measure
% Over qualified	3,2%	20,2%
% Match	78,5%	66,6%
% Under qualified	18,3%	13,2%

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Model results

Under qualification (1) vs job match (0)		Normative measure B	Normative measure z	Statistical measure B	Statistical measure z
Personal characteristics	Gender=female	-0.93	-21.58***	-0.92	-22.45***
	Non-native	-0.59	-8.27***	-0.50	-9.73***
	Ethnicity unknown	-0.100	-1.08	-0.09	-1.02
	Age 16 to 25 (ref. Age 50+)	-1.43	-22.99***	-1.68	-22.76***
	Age 25 to 35	-0.89	-22.46***	-0.91	-21.51***
	Age 35 to 50	-0.29	-10.38***	-0.28	-9.99***
	number of working hours	0.04	14.90***	0.04	12.36***
Labour market	business cycle	-1.03	-1.40	-9.13	-1.41
	being in one of 4 biggest cities	-0.24	-1.85*	-0.14	-1.10
	regional unemployment rate	-5.58	-1.68*	-4.98	-1.69*
	percentage high skilled jobs in region excl firm	1.38	1.77*	0.36	0.53
	percentage high educated in region excl firm	-0.57	-0.69	0.13	0.20
Firm type	firm size	-0.08	-6.58***	-0.07	-7.88***
	percentage high skilled jobs in firm excl worker	4.02	16.21***	3.72	16.69***
	percentage high educated in firm excl worker	-1.31	-5.00***	-1.21	-5.66***
	Constant	7.90	3.80***	7.90	3.89***
	N Pseudo R^2 Wald chi2(36) Prob>chi2	180047 0.369 6502.07 0.000		148305 0,215 7072,57 0,000	

Effect of age seems lineair

Labour market effect only of marginal importance

Firm effects important

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Interaction effects age * women, ethnicity

Underqualification (1) vs job match (0)		Normative measure B	Normative measure z	Statistical measure B	Statistical measure z
Single effects	Gender = female	-0.71	-16.39***	-0.86	-17.47***
	Non-native	-0.29	-5.11***	-0.23	-3.88***
	Age >39	0.93	30.53***	0.85	30.20***
Interaction effects	Non-native * age>39	-0.65	-5.96***	-0.55	-6.34***
	Women*age>39	-0.51	-9.57***	-0.18	-3.39***

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Conclusion/discussion

- **I**ndications for positive learning and negative competition
- **P**ersonal- and inter-firm aspects more important in explaining under qualification than labour market characteristics
- **U**nderqualification increases with age and is lower for women, non-natives and part-time workers
- **I**nteraction effects: the age effect is weaker for women and non-natives
- **M**inor differences between different measurements for under-qualification
  - →*Further research:*
  - →*Working on better job-classification based on skills*
  - →*Cohort effects? Following people over time*

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Thank you for your attention