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Higher Education and Labour Market Dynamics in Europe

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Outline

- Definitions
- Theoretical and Empirical Debates on Job mismatch and its implications
- Data and Model
- Findings
- Discussion-Future Work

Work Definitions

- Paid – Unpaid Work,
- Part of social reproduction – “arduous task”
- Self achievement and self-fulfilment
- ILO definition (F-T employed $\geq 30h$) - (Employed $\geq 1h$)
- Marxian theory (surplus value – generic gross profit)
- Inclusion of psychology components
- Emancipation, happiness, self-expression dignity and participatory or self-management of the product of Labour
- Connections between geography, technology, gender, race with Work
- Feminist economists include women’s unpaid housework and care in their definition of Work

Dynamics of Work

- Workers are very keen of using the notion of Work to describe both paid and unpaid activities. (Fenwick ,2006)
- There is a large gap between what workers want and what they actually have. (Freeman & Rogers 2006,2007)
- Participatory education can turn influence various political, economic and cultural aspects of their life. (McCowan, 2003)
- Work can be placed within the dynamics of capitalistic society in parallel with education (Livingstone, 2003)

Overqualification & underemployment

Four separate methods; (Lenton, 2011)

1. The analysis of the expertises required for a particular job,
2. The self assessment of the commensurability of one's educational attainment with the job performed,
3. The direct mismatch perception of an individual irrespectively of her education, and
4. The realised matches method which can be statistically revealed by the comparison of a labourer's obtained education with the mean or mode level within the occupation as that can be retrieved by the data.

Overqualification & underemployment

- Pay penalty 10% - 25% (Sloane 2003)
- Overqualification is highly related with substantially lower job satisfaction and well-being at work
- Negative implication to wages, career progression, labour utilisation, productivity, workers development of skills, Improvements in EU15 but not in UK (Bewan & Cowling, 2007)
- Growing overqualification in Netherlands, Spain, Portugal (Hartog, 2000). Same for Britain for 1986-2001 (Felstead et al)

Overqualification & underemployment

- Regional disparities indicate a strong persistence in unemployment that may have adverse consequences for those regions occupying the bottom positions in rankings (Martin ,1997); Pekhonen and Tervo ,1998); Dixon et al., 2001).
- Aragon et al., (2003) argue that the increase in unemployment disparities cannot be solely imputed to labour market disequilibrium.
- More frequent allocation of underemployment amongst to vulnerable population (women, minorities, first entrants, low-skilled), adding that individuals resident in rural areas or central cities face underemployment more often and in greater severity (Jensen and Slack ,2003)

Overqualification & underemployment

- Graduate underemployment consists of a major problem in UK labour market. Nabi (2003)
- Stepping stone Vs Entrapment hypothesis (Cockx, 2005; Brown and Lauder, 2008)
- Discouraged worker effect (Ham et al, 2001)
- Assignment theory (Sattinger, 1993)
- Skill underutilisation (Green and Zhu, 2010); Johnson et al., 2002)
- Distinction of underemployment with overqualification - talent use gaps, the credential gaps, the relevance gaps, the performance gaps, the general working knowledge gaps and lastly the subjective gaps (Liningstone, 2009)

Overqualification & underemployment

- Measurements are being distinguished in terms of job satisfaction, mobility, training participation and pay. Different measurements methods provide different outcomes, (Omey 2006, 2010)
- Underemployment IS the willingness of part-time employees to work for more hours (Wilkins ,2006)
- For part-time workers who prefer to work for more hours the effects on underemployment resembles those of unemployment. (Wilkins 2007)
- Major influence of the educational system orientation to job mismatches (Wolbers, 2003).

Literature Summary

- Returns to required for a job education years are in most of the cases higher than those of the acquired ones.
- When an individual is overeducated enjoys positive but lower returns than the matched one
- Returns to undereducated individuals are most of the times negative but proportionally smaller than the wage premium associated with an extra year of schooling and the wage penalty associated with an upward mismatch of overeducated by a year.
- Some studies identify non-significance to returns to undereducation where this is rarely the case with overeducation returns

Data & Methodological Strategy

- **Disciplinary norms** → Econometrics have increasingly been used to make statistical inferences capable of being generalised to a much larger population than that used for the study
- Data analysis from ESS (European Social Survey Rounds 2 and 5)
- **Limitations** → Data-checking (“imputation checks and outliers) sampling and non-sampling errors and variance, measurement and processing errors) - proxies and weight variables – truncated key variables

Data

- ESS Data rounds 2 and 5-Here round2
- Round 2:Family, Work & Well-Being; Opinions on Health & Care Seeking; Economic Morality in Europe: Market Society & Citizenship
- Round 5:Work, Family and Well-being: The Implications of Economic Recession; Trust in Criminal Justice
- 17 countries included after testing all variables carefully

Data Western countries

	1 (2002)	2 (2004)	3 (2006)	4 (2008)	5 (2010)	This research
Austria	x	x	x		x	
Belgium	x	x	x	x	x	x
Denmark	x	x	x	x	x	x
Finland	x	x	x	x	x	x
France	x	x	x	x	x	
Germany	x	x	x	x	x	x
Greece	x	x		x	x	x
Ireland	x	x	x	x	x	x
Italy	x	x				
Luxembourg	x	x				
Netherlands	x	x	x	x	x	x
Norway	x	x	x	x	x	x
Portugal	x	x	x	x	x	x
Spain	x	x	x	x	x	x
Sweden	x	x	x	x	x	x
Switzerland	x	x	x	x	x	
United Kingdom	x	x	x	x	x	x

Data Eastern Countries

	1 (2002)	2 (2004)	3 (2006)	4 (2008)	5 (2010)	This research
Bulgaria			X	X	X	
Croatia					X	
Cyprus			X	X	X	
Czech Republic	X	X		X	X	
Estonia		X	X	X	X	X
Hungary	X	X	X	X	X	
Israel	X			X	X	
Lithuania					X	
Poland	X	X	X	X	X	X
Romania			X	X		
Russian Federation			X	X	X	
Slovakia		X	X	X	X	X
Slovenia	X	X	X	X	X	X
Turkey		X		X		
Ukraine		X	X	X	X	

Data (Descriptive Stats)

Figure 1. Job mismatch between countries 3 cat

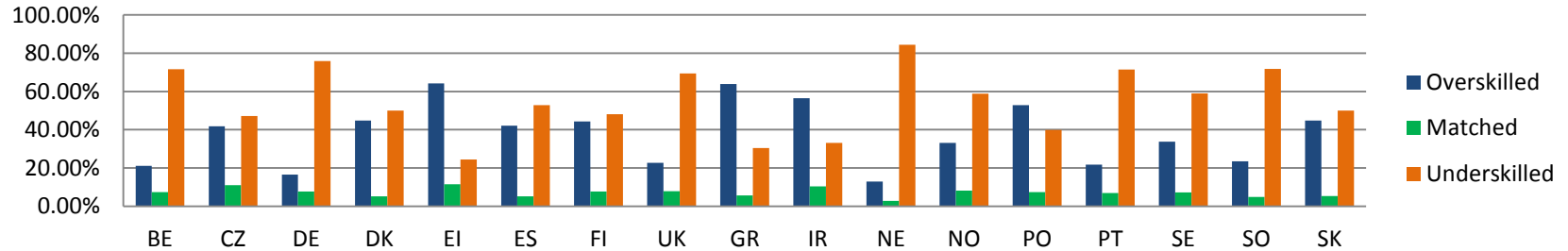
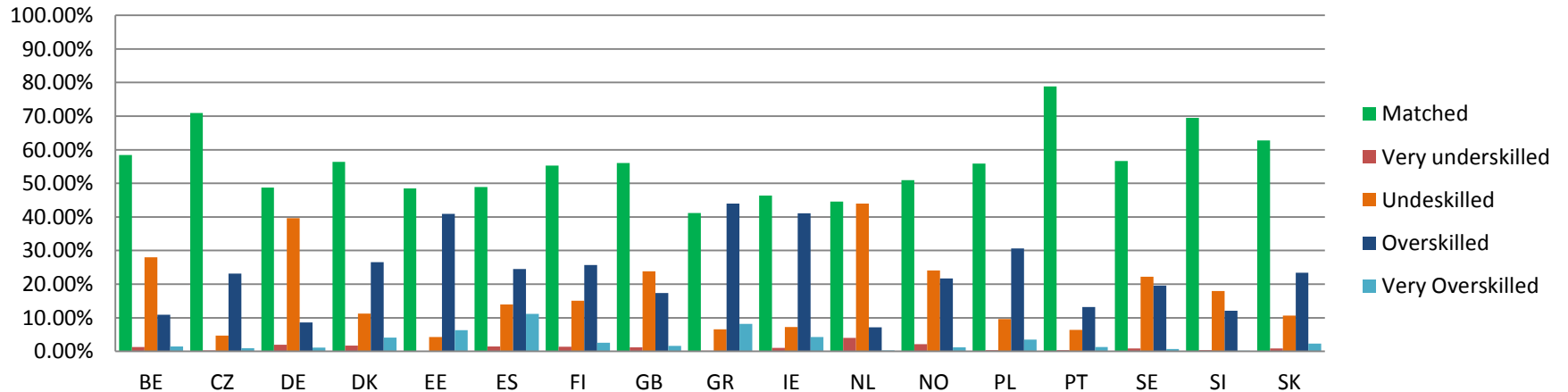


Figure 2. Job mismatch between countries 5 cat

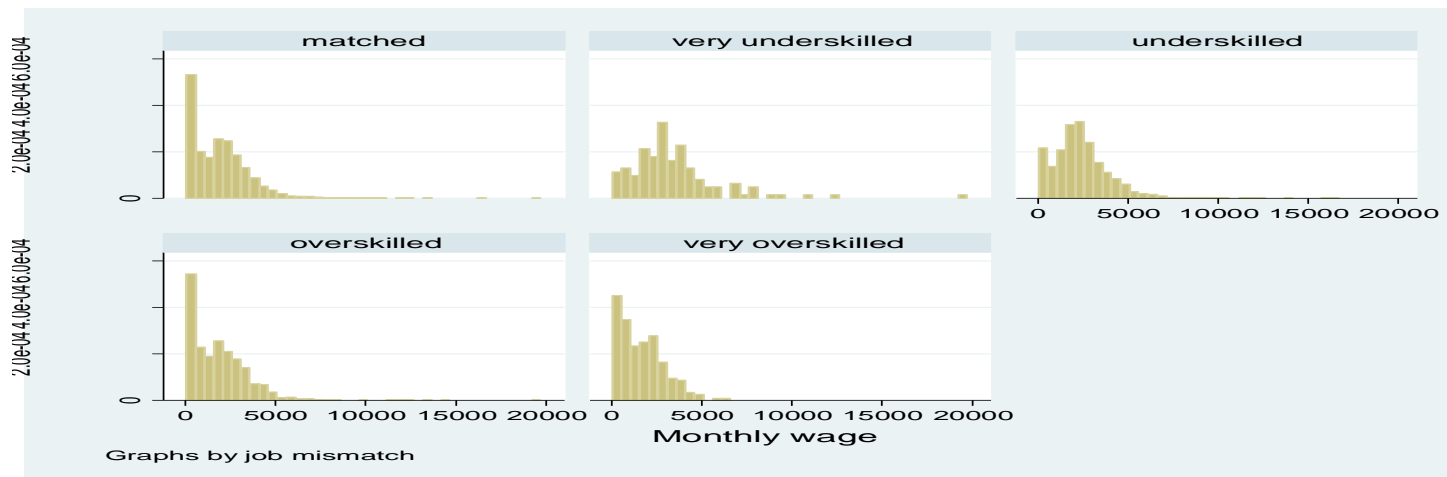
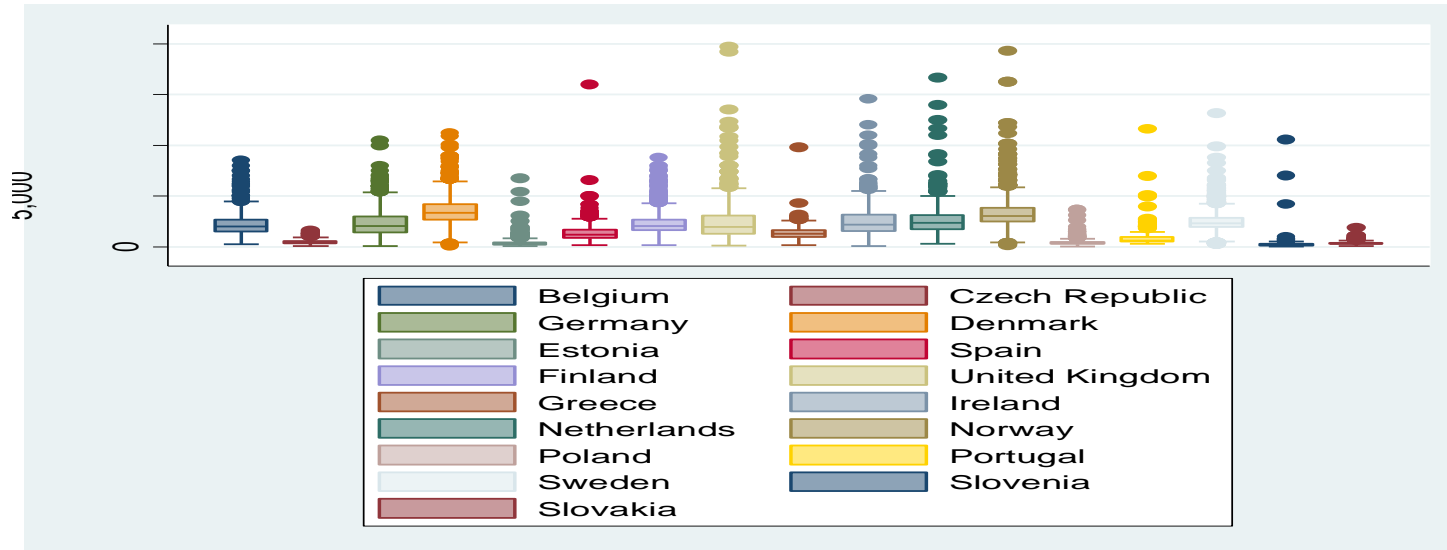


Data (Descriptive Stats)

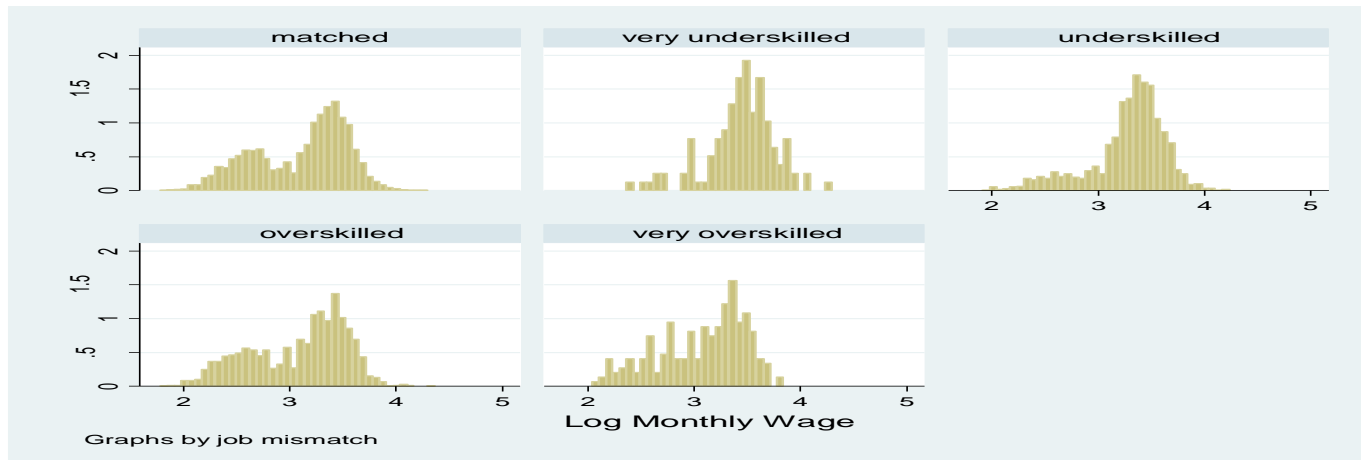
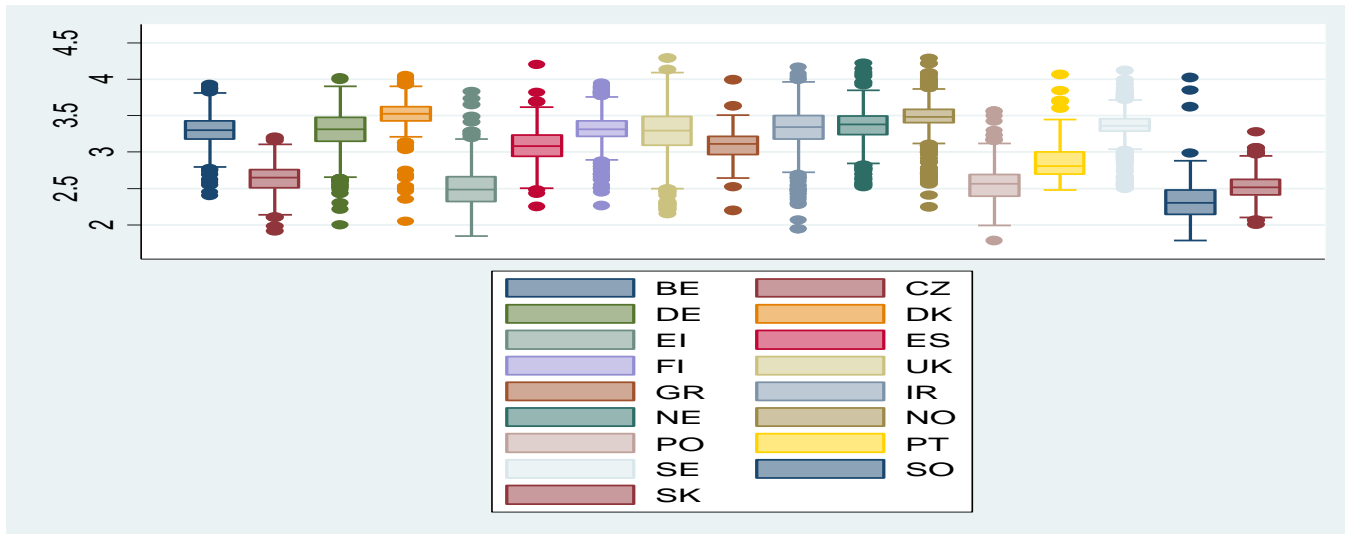
cntryre	mean	sd	N	se(mean)	iqr
BE	2300.583	1251.201	415	61.41903	1200
CZ	473.9322	207.1013	602	8.440819	255.7545
DE	2357.061	1398.176	655	54.63126	1600
DK	3598.492	1459.192	653	57.10261	1512.083
EI	427.6045	519.3998	492	23.41635	252
ES	1417.144	1105.471	385	56.34001	835
FI	2398.42	1267.682	801	44.79133	1080
UK	2469.459	2144.759	592	88.14904	1870.316
GR	1410.376	847.5288	201	59.78007	720
IR	2495.776	1615.559	576	67.31497	1661.667
NE	2620.017	1647.095	545	70.55378	1417.5
NO	3340.59	1724.392	909	57.19448	1371.917
PO	445.7686	372.5002	450	17.55983	244
PT	891.8771	1012.176	241	65.19999	500
SE	2507.576	1133.097	937	37.01665	934.0649
SO	300.107	748.6921	309	42.59161	160
SK	366.6821	187.0053	342	10.11209	169.6203
Total	2025.438	1681.337	9105	17.62036	2245.5

match	mean	sd	N	se(mean)	iqr
matched	1936.882	1629.991	4843	23.42222	2238.491
very underskille	3512.855	2619.139	121	238.1035	2300
underskilled	2492.718	1727.853	1628	42.82326	1802.564
overskilled	1875.317	1640.985	1986	36.82264	2203.294
very overskilled	1687.548	1252.82	229	82.78867	1850
Total	2040.916	1684.191	8807	17.9464	2287.333

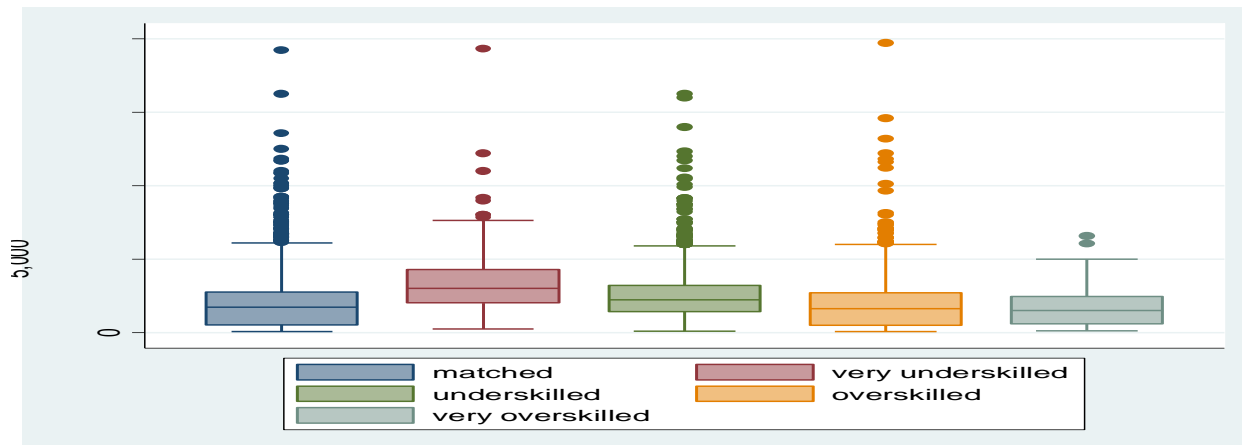
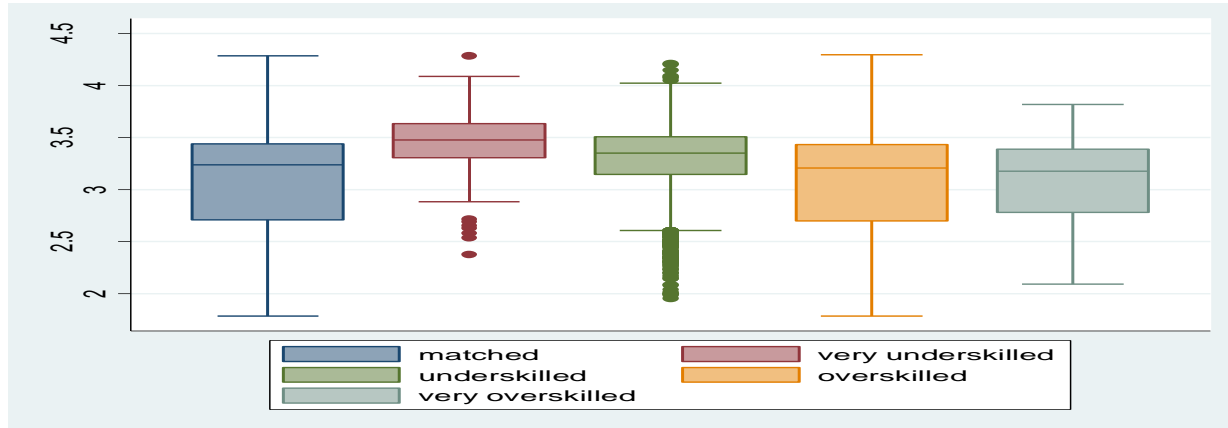
Normalising the Data



Normalising The Data



Normalising the Data...



Model

- Variant of a model found in Duncan & Hoffman (1981) to examine mismatch between ESS respondents of 17 countries. This model approach mismatch as the difference between acquired from an individual and required years for the job that this individual currently holds.
- We account further for educational levels and not only years
- Returns to educational levels –OLS
- Other: gender, General health, Years of education, Establishment size, Previous unemployment>12m, Household income Perceptions, Dependent children, Perceptions on personal substitutability on work, NACE classification of industries, Major class Classification (Wright)

Hypothesis testing



$H_0 : b_{edy/edl} = 0 \rightarrow$ Level of educations have no effect on mismatched pay

$H_1 : b_{edy/edl} \neq 0 \rightarrow$ Level of education does affect mismatched pay

For years of education and Job sat:

$$Mw_i = a + b_1 (u_i \text{ or } o_i + b_{2..j} (\text{age}, F\text{class}, \text{sex}, \text{estsz}, \text{unemp12m}, \text{hincfel}, \text{Nace}, \text{Wrclass}) + b_3 (\text{Edyrs})_i + b_{j+1} JM \varepsilon + \varepsilon_t$$

$$Mw_i = a + b_1 (u_i \text{ or } o_i + b_{2..j_i} (\text{age}, F\text{class}, \text{sex}, \text{estsz}, \text{unemp12m}, \text{hincfel}, \text{Nace}, \text{Wrclass}) + b_{j+1} (\text{Edyrs})_i * jm_i + \varepsilon_t$$

For levels of education and Job sat:

$$Mw_i = a + b_1 (u_i \text{ or } o_i + b_{2..J_i} (\text{age}, F\text{class}, \text{sex}, \text{estsz}, \text{unemp12m}, \text{hincfel}, \text{Nace}, \text{Wrclass}) + b_3 (\text{Edlev})_i + b_{j+1} JM \varepsilon + \varepsilon_t$$

$$Mw_i = a + b_1 (u_i \text{ or } o_i + b_{2..i} (\text{age}, F\text{class}, \text{sex}, \text{estsz}, \text{unemp12m}, \text{hincfel}, \text{Nace}, \text{Wrclass}) + b_3 (\text{Edlev})_i + b_5 \text{Edlev} * jm_{i+1} + \varepsilon_t$$

Key Variables

- Match,matchiu,matchio: (matched, very underskilled, underskilled, overskilled, very overskilled)
 - Matched (0-5y plus \leq compulsory ed)
 - Very (6-9y plus 10y or more)
- Edlev3: Isced level recoded (Primary, Secondary, Tertiary)
- Edeyears: Years of education,
- Control Variables: Ageband: (age groups by 5, working pop)
- Cclass: Classification of countries: Continental, Liberal, Eastern, Southern and Nordic variant of Ferrara classification
- Nace1:NACE classification of industries, (conversion to 2-digit section-16 groups- extract Extra territorial organisation and bodies - no obs)
- Major class Classification (Wright) Expert managers, Expert supervisors , Experts, Skilled managers, Skilled supervisors ,Skilled workers, Low skilled managers, Low skilled supervisors, Low skilled workers

Job matching variable



Count		Education required for job				Total
		No compulsory education	+0-5 years	6-9	More than 10 years	
Education obtained	Under compulsory or compulsory education	1818	1557	67	11	3453
	up to 5 years beyond compulsory education	1641	4357	544	74	6616
	6-9 years beyond compulsory education	215	1160	930	180	2485
	more than 10 years beyond compulsory education	31	118	133	76	358
Total		3705	7192	1674	341	12912

		Education required for job				Total
		No compulsory education	+0-5 years	6-9 years	More than 10 years	
Education obtained	Under compulsory or compulsory education	matched	underskilled	very underskilled	highly underskilled	3453
	up to 5 years beyond compulsory education	overskilled	matched	underskilled	very underskilled	6616
	6-9 years beyond compulsory education	very overskilled	overskilled	matched	underskilled	2485
	more than 10 years beyond compulsory education	highly overskilled	very overskilled	overskilled	matched	358

Other Variables

- Other: gender, General health (Dummy 0=good, 1=bad-
too little information for bad)
- Firm size, (under 10, 10-24, 25-99, 100-499, 500 or more)
- Previous unemployment > 12m (Yes, No, N/A)
- Household income Perceptions, (Living comfortably,
copying, difficult, very difficult)
- Dependent children and Perceptions on personal
substitutability on work (insignificant, slightly for
substitutability)

Job satisfaction variable

- Composite variable constructing after pooling
 - Jbrqlrn (Job requires learning)
 - Vrtywrk (variety on work)
 - hlthrwk(health and safety)
 - jbscr (Job security)
 - Hlpcowk (support from co-workers)
 - Nevdnjb (Never enough time to get everything done)
 - Oprtad (Opportunities for advancement)
- All variables used constructed first to binary(0,1).
No response or n/a Individuals excluded

Mismatch & Ed Years

	Model 1a b/se	Model 2a b/se
1b.job mismatch	0.000 (.)	0.000 (.)
2.job mismatch	862.553*** (110.87)	1006.096*** (117.99)
3.job mismatch	292.353*** (35.86)	569.769*** (86.21)
4.job mismatch	-124.730*** (33.97)	347.252* (137.65)
5.job mismatch	-615.299*** (88.08)	138.994 (230.65)
age groups	64.585*** (5.90)	65.565*** (5.90)
educyears	101.807*** (4.92)	125.502*** (8.31)
1b.Classification ~a	0.000 (.)	0.000 (.)
2.Classification F~a	300.866*** (45.79)	303.570*** (45.76)
3.Classification F~a	-1462.488*** (42.89)	-1467.912*** (42.89)
4.Classification F~a	-569.209*** (53.19)	-553.120*** (53.35)
5.Classification F~a	434.104*** (36.71)	432.838*** (36.68)
1b.Sex	0.000 (.)	0.000 (.)
2.Sex	-582.437*** (26.19)	-583.408*** (26.17)
Establishment size	113.549*** (9.44)	113.240*** (9.43)
Any period of unem~w	32.244*** (6.65)	32.883*** (6.65)
Feeling about hous~e	-186.471*** (16.50)	-185.231*** (16.49)
EGP Classes	-130.740*** (6.25)	-131.272*** (6.25)
intedmatch		-11.043*** (3.12)
constant	1516.100*** (115.35)	1345.739*** (124.92)
R-sqr	0.537	0.538
dfres	7591	7590
BIC	128391.3	128387.7

* p<0.05, ** p<0.01, *** p<0.001

Mismatch Educ years & job sat

	Model 3a b/se	Model 4a b/se
1b.job mismatch	0.000 (.)	0.000 (.)
2.job mismatch	729.090*** (196.43)	1185.867*** (152.43)
3.job mismatch	412.253*** (117.93)	702.623*** (124.17)
4.job mismatch	92.090 (188.04)	533.388** (199.82)
5.job mismatch	-167.819 (319.61)	386.177 (330.20)
intedmatch	-5.532 (4.54)	-15.085*** (4.37)
educyears	103.157*** (11.69)	142.644*** (11.77)
age groups	54.258*** (8.34)	74.445*** (8.06)
1b.Classification ~a	0.000 (.)	0.000 (.)
2.Classification F~a	30.600 (67.46)	432.922*** (60.58)
3.Classification F~a	-1345.842*** (57.71)	-1526.836*** (60.92)
4.Classification F~a	-514.835*** (68.26)	-594.365*** (77.60)
5.Classification F~a	347.181*** (53.96)	472.447*** (48.28)
1b.Sex	0.000 (.)	0.000 (.)
2.Sex	-471.870*** (36.61)	-663.509*** (35.70)
Establishment size	86.604*** (13.02)	124.651*** (13.09)
Any period of unem~w	24.404** (8.70)	43.827*** (9.44)
Feeling about hous~e	-144.329*** (22.65)	-220.960*** (23.32)
EGP Classes	-116.360*** (9.58)	-131.351*** (8.24)
constant	1458.922*** (175.40)	1130.190*** (173.58)
R~sqr	0.556	0.509
dfres	2486	4816
BIC	41239.1	82357.5

* p<0.05, ** p<0.01, *** p<0.001

Mismatch and Ed levels



	Model 5a b/se	Model 6a b/se
1b.job mismatch	0.000 (.)	0.000 (.)
2.job mismatch	717.727*** (123.41)	784.950*** (130.37)
3.job mismatch	184.022*** (40.93)	314.782*** (91.56)
4.job mismatch	-23.528 (40.97)	191.077 (140.52)
5.job mismatch	-211.626* (98.49)	110.473 (224.50)
age groups	62.225*** (7.11)	62.399*** (7.11)
1b.Classification ~a	0.000 (.)	0.000 (.)
3.Classification F~a	-1624.764*** (41.12)	-1622.781*** (41.14)
4.Classification F~a	-757.434*** (66.19)	-752.674*** (66.24)
5.Classification F~a	837.612*** (43.88)	838.459*** (43.87)
1b.RECODE of eisce~	0.000 (.)	0.000 (.)
2.RECODE of eisced~	174.866*** (50.41)	229.957*** (61.08)
3.RECODE of eisced~	667.806*** (55.09)	789.253*** (93.92)
1b.Sex	0.000 (.)	0.000 (.)
2.Sex	-519.723*** (31.43)	-518.954*** (31.43)
Establishment size	116.452*** (11.19)	116.520*** (11.19)
Any period of unem~w	24.981** (7.87)	24.956** (7.87)
Feeling about hous~e	-122.943*** (18.18)	-122.544*** (18.18)
EGP Classes	-112.233*** (7.51)	-112.323*** (7.51)
edumatch		-30.326 (19.00)
constant	2395.468*** (102.92)	2389.134*** (102.98)
R-sqr	0.629	0.629
dfres	4431	4430
BIC	74301.0	74306.9

ϵ_i

Mismatch Educ level and Job satisfaction

	Model 7a b/se	Model 8a b/se
1b.job mismatch	0.000 (.)	0.000 (.)
2.job mismatch	584.534* (249.03)	867.759*** (165.05)
3.job mismatch	340.229** (128.18)	333.355* (136.18)
4.job mismatch	323.497 (199.54)	163.551 (209.74)
5.job mismatch	220.317 (321.55)	137.449 (327.77)
edumatch	-44.769 (28.36)	-28.491 (27.30)
age groups	47.795*** (10.69)	71.456*** (9.86)
1b.Classification ~a	0.000 (.)	0.000 (.)
3.Classification F~a	-1468.842*** (59.38)	-1710.331*** (58.74)
4.Classification F~a	-687.869*** (88.00)	-756.259*** (100.20)
5.Classification F~a	691.137*** (72.65)	880.653*** (56.61)
1b.RECODE of eisce~	0.000 (.)	0.000 (.)
2.RECODE of eisced~	109.801 (79.51)	368.980*** (96.91)
3.RECODE of eisced~	648.019*** (135.26)	924.507*** (141.20)
1b.Sex	0.000 (.)	0.000 (.)
2.Sex	-408.384*** (46.65)	-594.510*** (43.77)
Establishment size	85.219*** (16.28)	136.358*** (15.91)
Any period of unem~w	16.062 (10.86)	37.415** (11.52)
Feeling about hous~e	-120.433*** (27.09)	-136.132*** (26.15)
EGP Classes	-110.941*** (12.11)	-111.322*** (10.07)
constant	2569.113*** (155.38)	2183.520*** (145.95)
R-sqr	0.599	0.619
dfres	1545	2670
BIC	25763.8	45340.3

* p<0.05, ** p<0.01, *** p<0.001

Running the regression seperately...

	Model 20 b/se	Model 21 b/se	Model 22 b/se	Model 23 b/se
1b.Underskilled	0.000 (.)		0.000 (.)	
2.Underskilled	694.931*** (128.94)		551.694*** (145.42)	
3.Underskilled	184.130*** (43.20)		-80.104 (131.56)	
age groups	61.058*** (8.53)	57.297*** (7.05)	60.876*** (8.53)	57.851*** (7.04)
1b.Classification ~a	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
3.Classification F~a	-1608.492*** (47.90)	-1630.282*** (40.37)	-1612.740*** (47.92)	-1625.686*** (40.35)
4.Classification F~a	-751.405*** (82.77)	-791.977*** (64.08)	-760.388*** (82.84)	-783.066*** (64.08)
5.Classification F~a	837.283*** (50.43)	845.059*** (45.79)	837.117*** (50.40)	848.885*** (45.76)
1b.RECODE of eisce~	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
2.RECODE of eisced~	143.002* (56.02)	196.639*** (54.28)	30.606 (77.00)	291.049*** (63.01)
3.RECODE of eisced~	712.088*** (62.17)	631.857*** (57.98)	503.801*** (116.01)	869.015*** (99.29)
1b.Sex	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
2.Sex	-557.660*** (37.34)	-461.857*** (31.09)	-558.756*** (37.32)	-461.046*** (31.05)
Establishment size	121.806*** (13.22)	99.141*** (11.03)	121.394*** (13.21)	98.866*** (11.02)
Any period of unem~w	31.413** (9.56)	24.793** (7.68)	32.373*** (9.57)	25.426*** (7.68)
Feeling about hous~e	-137.654*** (21.88)	-97.722*** (17.38)	-139.100*** (21.87)	-97.666*** (17.36)
EGP Classes	-113.510*** (8.99)	-103.439*** (7.49)	-113.367*** (8.98)	-103.485*** (7.48)
1b.Overskilled		0.000 (.)		0.000 (.)
2.Overskilled		-182.099* (86.38)		36.817 (113.96)
3.Overskilled		-26.579 (35.99)		393.076** (147.16)
edumatchiu			61.583* (28.96)	
edumatchio				-87.652** (29.81)
constant	2403.880*** (120.79)	2336.997*** (102.81)	2400.333*** (120.74)	2391.381*** (104.35)
R-sqr	0.608	0.677	0.608	0.678
dfres	3409	3395	3408	3394
BIC	57478.4	56005.1	57482.0	56004.5

* p<0.05, ** p<0.01, *** p<0.001

Mismatch ed lev and job sat

	Model 28 b/se	Model 29 b/se	Model 30 b/se	Model 31 b/se
1b.Underskilled	0.000 (.)		0.000 (.)	
2.Underskilled	569.851* (277.92)		548.185** (183.84)	
3.Underskilled	319.268 (198.58)		-193.291 (187.65)	
edumatchiu	-35.911 (47.73)		86.432* (39.48)	
age groups	40.381** (13.53)	44.552*** (10.59)	75.706*** (11.47)	67.213*** (9.99)
1b.Classification ~a	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
3.Classification F~a	-1454.257*** (71.15)	-1458.388*** (58.98)	-1710.400*** (67.84)	-1722.963*** (57.82)
4.Classification F~a	-610.856*** (112.42)	-771.636*** (86.63)	-839.862*** (123.68)	-753.976*** (97.40)
5.Classification F~a	733.735*** (88.56)	751.319*** (75.06)	856.523*** (63.22)	870.731*** (60.01)
1b.RECODE of eisce~	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
2.RECODE of eisced~	100.194 (106.82)	128.473 (83.53)	84.367 (118.92)	460.070*** (103.53)
3.RECODE of eisced~	650.132*** (172.18)	667.811*** (150.99)	513.137** (171.39)	1020.402*** (148.05)
1b.Sex	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
2.Sex	-456.307*** (58.31)	-407.473*** (46.10)	-634.757*** (50.43)	-500.711*** (44.20)
Establishment size	97.667*** (20.43)	66.619*** (16.07)	136.476*** (18.19)	120.048*** (15.99)
Any period of unem~w	22.003 (13.79)	18.956 (10.66)	43.423** (13.58)	36.041** (11.46)
Feeling about hous~e	-110.612** (34.64)	-100.838*** (25.85)	-165.616*** (30.41)	-103.605*** (25.44)
EGP Classes	-100.312*** (15.33)	-106.991*** (12.02)	-116.672*** (11.69)	-101.409*** (10.25)
1b.Overskilled		0.000 (.)		0.000 (.)
2.Overskilled		-77.064 (163.19)		114.178 (165.58)
3.Overskilled		277.891 (216.82)		451.898* (217.75)
edumatchio		-58.188 (46.02)		-99.798* (42.55)
constant	2435.770*** (193.62)	2557.441*** (157.94)	2295.465*** (164.73)	2182.687*** (151.01)
R-sqr	0.563	0.643	0.602	0.673
dfres	1130	1244	2116	1961
BIC	19048.6	20483.9	36074.6	32787.3

* p<0.05, ** p<0.01, *** p<0.001

Discussion Of The Results (Control Variables)

- Underskilled variable: earn significant more than matched in the most part of the analysis
- Overskilled people doesn't seem to experience bigger wage penalty when controlling for educational levels but they still earn less than their matched counterparts
- Job satisfaction does affect someone's pay.
- Similarly for all other variable depending on the model used

Smoothing the effect of JM variable

	Model 40 b/se	Model 41 b/se	Model 42 b/se	Model 43 b/se
jmis==2	317.957*** (35.21)	639.773*** (71.18)	480.446*** (96.94)	772.535*** (102.70)
jmis==3	-156.481*** (33.59)	574.395*** (144.52)	274.095 (194.67)	805.230*** (211.46)
age groups	64.230*** (5.92)	66.215*** (5.92)	53.646*** (8.34)	75.663*** (8.08)
educyears	95.604*** (4.82)	139.596*** (9.73)	112.943*** (13.75)	160.201*** (13.78)
cclass==2	294.278*** (45.94)	299.800*** (45.87)	24.029 (67.52)	428.314*** (60.75)
cclass==3	-1472.462*** (43.01)	-1479.380*** (42.95)	-1360.426*** (57.65)	-1537.440*** (61.03)
cclass==4	-605.783*** (53.01)	-574.202*** (53.27)	-539.635*** (67.77)	-614.750*** (77.65)
cclass==5	434.140*** (36.84)	432.614*** (36.78)	348.582*** (54.05)	470.885*** (48.42)
Female==2	-582.409*** (26.27)	-584.204*** (26.23)	-470.733*** (36.68)	-665.834*** (35.80)
Establishment size	115.456*** (9.47)	114.707*** (9.46)	87.978*** (13.04)	126.459*** (13.12)
Any period of unem~w	33.658*** (6.67)	34.305*** (6.66)	25.697** (8.70)	45.725*** (9.46)
Feeling about hous~e	-190.362*** (16.55)	-188.181*** (16.53)	-143.697*** (22.70)	-226.189*** (23.37)
EGP Classes	-134.014*** (6.26)	-134.323*** (6.25)	-118.353*** (9.57)	-134.942*** (8.24)
jmisint		-25.221*** (4.85)	-15.738* (6.96)	-32.469*** (6.85)
constant	1622.213*** (114.43)	1364.320*** (124.54)	1477.786*** (174.84)	1145.285*** (172.89)
R-sqr	0.533	0.535	0.554	0.506
dfres	7593	7592	2488	4818
BIC	128430.6	128412.5	41235.5	82371.5

* p<0.05, ** p<0.01, *** p<0.001

Discussion (Methodological Critique – Operational Issues)



- No Longitudinal analysis through time and same people - Effects of economic crisis longitudinally.
- Subsequent research – time components – pooled data-contextual analysis- multilevel analysis
- Careful examination of qualitative issues of components of job satisfaction such as (prestige of job, job security, scientific interest, promotion, etc) logit models for examining relation of job sat with mismatch after controlling for education and pecuniary non pecuniary rewards of job

Conclusion – Further Research

- Data limitations – Methodological Issues
- Fail to Reject null hypothesis – educational level have no effect in mismatched pay – Results need further confirmation/validation
- Further Research:
 - Inclusion of information on Industry composition and years of experience
 - Inclusion of contextual levels such as
 - Unemployment rate (2004-2010) countries
 - Country performance in GDP (2004-2010)
 - GNI,
 - HDI,
 - Gini coefficient
 - the Corruption Perceptions Index
 - Investigation of skills underutilisation
 - Impact of job tenure and experience on graduates employability and mismatch.
 - Empirical investigation of “stepping stone hypothesis” Vs “entrapment hypothesis” (i.e. The impact of graduate’s first job on their subsequent careers)

Thank you!