

Training

Lezione 6

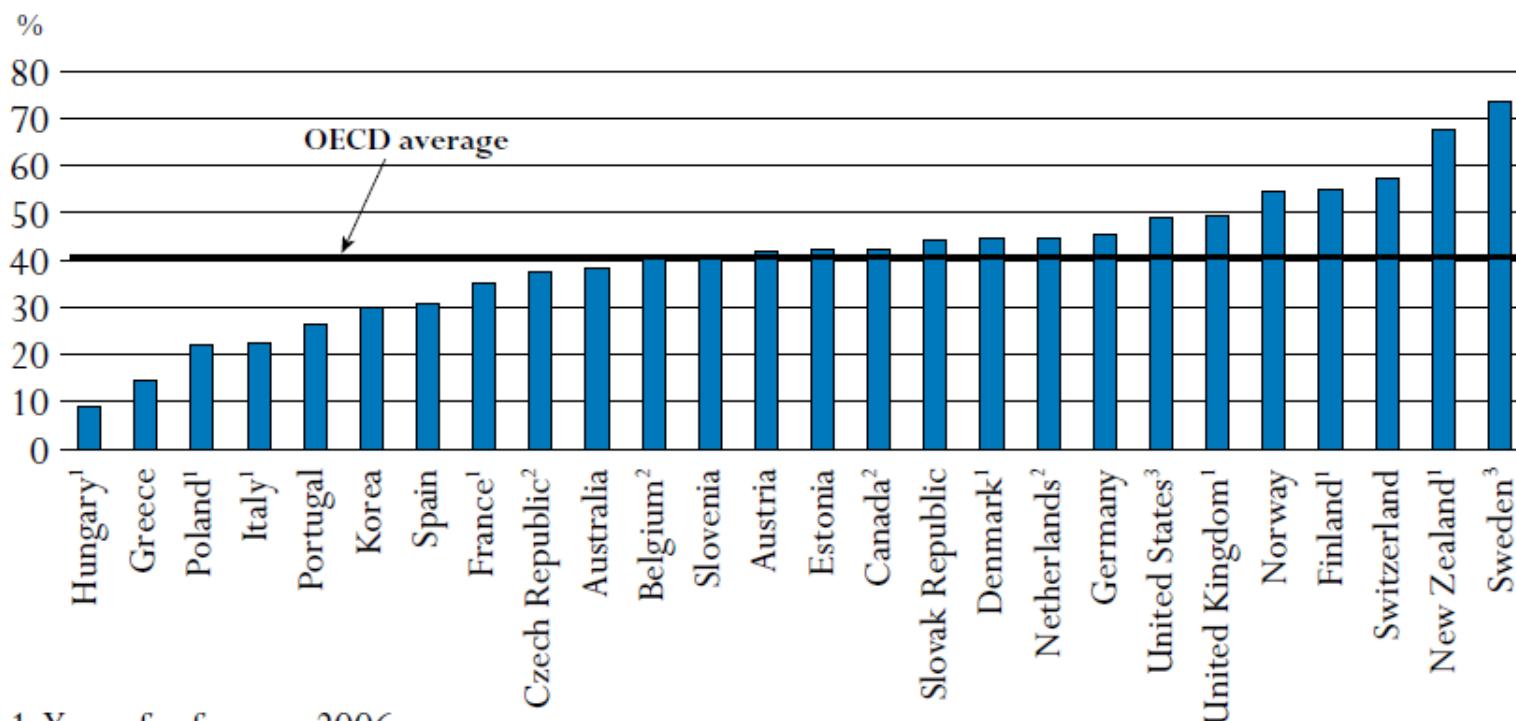
Training

- Il capitale umano acquisito a scuola tende a diventare obsoleto col passare del tempo, tende a deprezzarsi
 - progresso tecnologico
 - memoria imperfetta
- Al fine di mantenere costante il livello di capitale umano si deve praticare l'aggiornamento professionale (training)
- Il training può essere disposto e finanziato da

Chart A5.1. Participation in formal and/or non-formal education (2007)

This chart shows the participation of the 25-64 year-old population in formal and/or non-formal education in 2007.

Investment in education and training after leaving initial education is essential for upgrading labour force skills and increasing overall skill levels in the economy. Participation rates indicate how far-reaching such investment is in different countries. Across the OECD, more than 40% of the adult population participates in formal and/or non-formal education in a given year. Countries differ significantly, however. In New Zealand and Sweden, more than 60% of the population is involved in some sort of formal and/or non-formal education over the course of a year, whereas in Hungary and Greece less than 15% of the population is engaged.



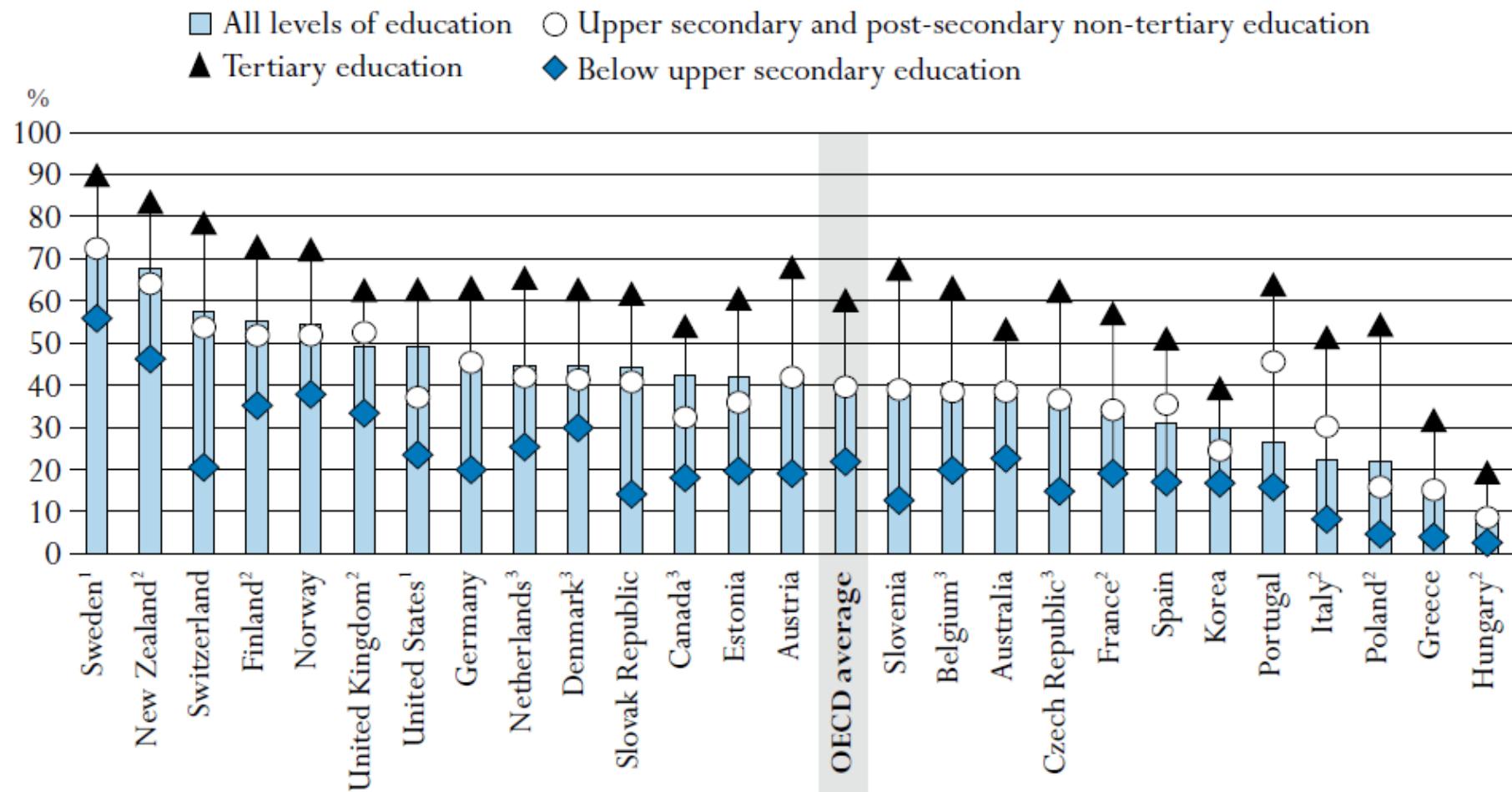
1. Year of reference 2006.

2. Year of reference 2008.

3. Year of reference 2005.

Countries are ranked in ascending order of participation in education.

**Chart A5.2. Participation in formal and/or non-formal education,
by educational attainment (2007)**



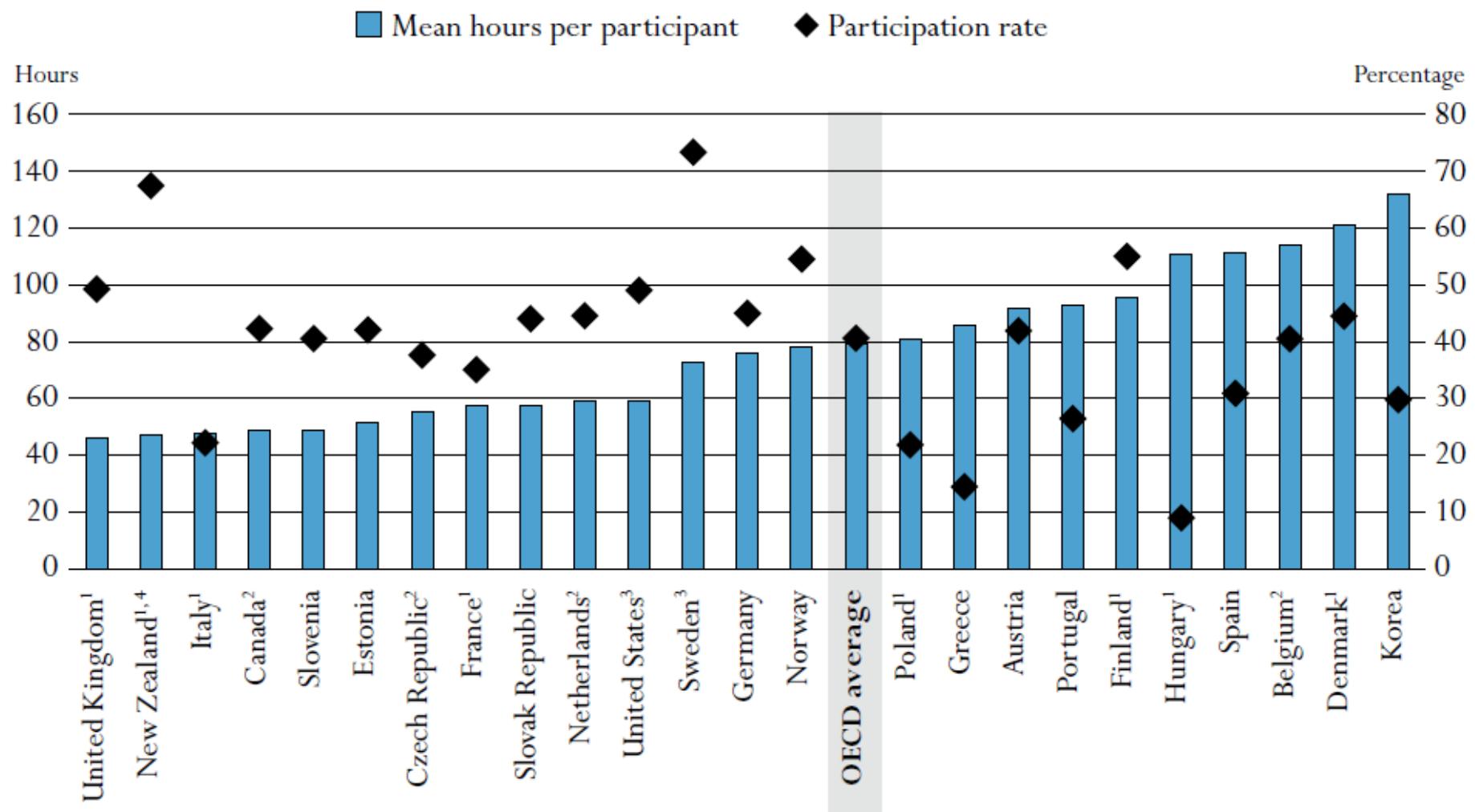
1. Year of reference 2005.

2. Year of reference 2006.

3. Year of reference 2008.

Countries are ranked in descending order of participation in formal and/or non-formal education, for all levels of education.

**Chart A5.5. Mean hours per participant and participation in non-formal education
(2007)**



1. Year of reference 2006.

2. Year of reference 2008.

3. Year of reference 2005.

4. Excluding adults who participated only in “short seminars, lectures, workshops or special talks”.

Countries are ranked in ascending order of the mean hours per participant in non-formal education.

Table A5.1a.
Participation in formal and/or non-formal education, by gender and age (2007)
Participation rate of the 25-64 year-old population

	Males					Females					Total				
	25-34	35-44	45-54	55-64	25-64	25-34	35-44	45-54	55-64	25-64	25-34	35-44	45-54	55-64	25-64
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
OECD countries															
Australia	48	41	38	c	39	43	39	39	26	37	46	40	39	25	38
Austria	51	49	44	26	44	43	47	41	24	40	47	48	43	25	42
Belgium ¹	55	49	40	24	41	58	48	33	23	40	56	49	36	23	41
Canada ¹	50	47	38	27	41	50	48	46	28	44	50	47	42	28	42
Czech Republic ¹	50	49	42	26	42	38	41	40	17	34	44	45	41	22	38
Denmark ²	58	51	40	28	44	57	49	50	29	45	57	50	45	29	45
Finland ²	64	53	49	31	49	68	68	65	45	61	66	61	57	38	55
France ²	51	40	35	15	36	46	38	31	17	34	48	39	33	16	35
Germany	59	54	48	30	48	48	47	45	27	42	53	51	47	28	45
Greece	22	15	13	5	14	24	15	13	c	15	23	15	13	5	14
Hungary ²	15	9	6	3	8	17	12	8	2	10	16	11	7	2	9
Italy ²	29	24	23	13	22	32	24	21	11	22	30	24	22	12	22
Korea	40	27	22	23	29	32	32	31	25	31	36	29	27	24	30
Netherlands ¹	64	47	46	33	48	55	42	44	24	42	60	45	45	29	45
New Zealand ²	72	70	73	59	69	66	67	70	58	66	69	69	72	59	67
Norway	68	55	49	42	53	62	61	58	41	56	65	58	53	41	55
Poland ²	33	25	15	7	21	35	27	18	6	22	34	26	16	7	22
Portugal	39	29	23	13	27	41	29	21	9	26	40	29	22	11	26
Slovak Republic	54	49	45	27	45	48	53	46	21	43	51	51	45	24	44
Spain	39	34	27	17	31	41	33	28	17	31	40	34	27	17	31
Sweden ³	80	76	70	58	71	82	82	78	64	76	81	79	74	61	73
Switzerland	66	64	59	47	60	61	56	58	44	55	64	60	59	45	57
United Kingdom ²	61	48	46	33	47	56	55	52	41	51	59	51	49	37	49
United States ³	55	46	42	33	45	57	52	54	47	53	56	49	48	40	49
<i>OECD average</i>	51	44	39	27	41	48	44	41	28	41	50	44	40	27	41
<i>EU19 average</i>	48	41	36	23	38	46	42	37	24	37	47	41	37	23	37
partner countries															
Estonia	50	42	27	24	37	55	54	46	30	47	53	48	37	27	42
Slovenia	47	46	36	20	38	58	49	40	24	43	52	48	38	22	41

1. Year of reference 2008.

2. Year of reference 2006.

3. Year of reference 2005.

Table A5.1b.
Participation in formal and/or non-formal education, by gender and educational attainment (2007)
Participation rate of the 25-64 year-old population

	Males				Females				Males and females			
	Below upper secondary education		Upper secondary and post-secondary non-tertiary education		Tertiary education		All levels of education		Below upper secondary education		Upper secondary and post-secondary non-tertiary education	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD countries												
Australia	c	38	55	39	22	39	52	37	23	38	53	38
Austria	20	43	65	44	19	41	73	40	19	42	68	42
Belgium ¹	21	39	64	41	18	37	63	40	20	38	63	41
Canada ¹	25	35	54	44	17	37	60	50	22	36	57	47
Czech Republic ¹	23	40	62	42	9	33	63	34	15	37	62	38
Denmark ¹	32	40	62	44	28	43	63	45	30	41	63	45
Finland ²	33	47	68	49	38	58	76	61	35	52	73	55
France ²	21	35	58	36	17	33	56	34	19	34	57	35
Germany	21	47	64	48	19	44	63	42	20	45	63	45
Greece	5	15	29	14	3	15	34	15	4	15	32	14
Hungary ²	c	8	18	8	2	10	21	10	3	9	19	9
Italy ²	9	29	50	22	7	31	53	22	8	30	51	22
Korea	15	23	36	29	18	26	43	31	17	25	39	30
Netherlands ¹	34	42	63	48	19	42	69	42	25	42	65	45
New Zealand ²	46	68	84	69	46	59	83	66	46	64	84	67
Norway	41	51	69	53	35	53	75	56	38	52	72	55
Poland ²	5	17	51	21	4	15	57	22	5	16	54	22
Portugal	17	49	64	27	14	42	64	26	16	46	64	26
Slovak Republic	c	42	59	45	c	39	65	43	14	41	62	44
Spain	18	35	50	31	16	36	53	31	17	35	51	31
Sweden ³	53	71	88	71	58	74	92	76	56	72	90	73
Switzerland	21	53	78	60	20	55	79	55	21	54	79	57
United Kingdom ²	35	47	58	47	32	60	67	51	33	53	63	49
United States ³	24	33	58	45	23	41	67	53	23	37	63	49
OECD average	25	40	59	41	21	40	62	41	22	40	60	41
EU19 average	23	38	57	38	19	38	61	37	20	38	59	37
Partner countries												
Estonia	21	34	54	37	17	38	64	47	20	36	61	42
Slovenia	16	36	62	38	10	43	72	43	13	39	68	41

1. Year of reference 2008.

2. Year of reference 2006.

3. Year of reference 2005.

Table A5.4a.

Participation in formal and/or non-formal education, by workplace aspects
(full-time/part-time status, occupation and industry) (2007)
Participation rate of the 25-64 year-old employed population

	Full-time/ part-time status		Occupation				Industry				Total (11)
	Full-time	Part-time	High skilled white collar	Low skilled white collar	High skilled blue collar	Low skilled blue collar	Upper-tier services	Lower-tier services	Goods- producing industries	Resource industries	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
OECD countries											
Australia	46	38	48	37	28	31	53	37	34	31	44
Austria	48	49	64	53	31	22	65	38	39	36	48
Belgium ¹	51	44	62	51	26	27	60	36	42	20	49
Canada ¹	48	41	60	39	35	27	56	36	34	45	47
Czech Republic ¹	48	42	63	42	34	41	61	35	41	46	48
Denmark ²	48	65	65	50	41	32	56	44	39	32	48
Finland ²	63	51	74	65	43	44	71	54	51	52	62
France ²	44	36	56	39	27	29	49	35	37	23	42
Germany	55	46	69	49	38	34	67	43	43	51	53
Greece	18	20	27	21	7	8	28	14	9	7	18
Hungary ²	12	10	20	10	6	8	18	8	8	7	12
Korea	29	27	m	m	m	m	m	m	m	m	29
Netherlands ¹	53	53	60	47	39	36	m	m	m	m	53
New Zealand ²	75	64	87	65	61	49	84	64	60	63	73
Norway	61	59	69	58	46	39	67	55	48	50	60
Poland ²	31	21	52	26	13	16	47	23	22	13	30
Portugal	32	25	55	35	14	18	48	27	22	10	32
Slovak Republic	56	44	64	45	42	49	64	37	52	41	54
Spain	36	32	53	38	24	22	51	27	28	18	36
Sweden ³	79	79	91	78	64	58	86	74	71	64	79
Switzerland	64	59	80	54	44	32	74	53	48	53	63
United Kingdom ²	59	47	64	59	43	41	63	45	49	c	57
United States ³	55	56	m	m	m	m	m	m	m	m	55
OECD average	48	44	61	46	34	32	58	39	39	35	47
EU19 average	46	42	59	44	31	30	56	36	37	30	45
Partner countries											
Estonia	50	44	68	51	30	30	63	50	37	33	49
Slovenia	m	m	66	47	32	26	72	36	36	m	48

¹. Year of reference 2008,². Year of reference 2006.³. Year of reference 2005.

Table A5.5.

Participation in job-related non-formal education, by gender and labour force status (2007)
Participation rate of the 25-64 year-old population

	Males				Females				Total				
	Employed		Unemployed		Employed		Unemployed		Employed		Unemployed		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Australia	29	18	3	25	27	15	4	20	28	16	4	22	
Austria	41	33	7	36	41	28	6	28	41	31	6	32	
Belgium ¹	39	16	3	31	38	17	3	26	38	16	3	29	
Canada ¹	34	27	3	31	37	3	3	30	36	16	3	31	
Czech Republic ¹	46	6	2	38	41	11	3	28	44	9	3	33	
Denmark ¹	26	c	4	24	27	7	4	22	27	9	4	23	
Finland ²	48	14	9	39	61	22	17	48	54	18	14	44	
France ²	39	24	4	33	38	25	7	29	38	24	6	31	
Germany	50	22	14	42	46	22	8	33	48	22	10	38	
Greece	14	5	1	12	17	7	c	10	15	6	1	11	
Hungary ²	8	3	c	6	9	3	c	6	8	3	c	6	
Italy ²	19	7	3	16	23	8	2	13	21	7	2	14	
Korea	14	21	10	15	11	9	3	7	13	17	4	11	
Netherlands ¹	46	c	12	41	46	c	11	31	46	27	12	36	
New Zealand ^{2,4}	30	13	5	27	32	14	6	25	31	13	6	26	
Norway	53	23	11	47	59	c	11	47	56	24	11	47	
Poland ²	22	5	1	16	27	4	1	16	24	4	1	16	
Portugal	25	4	1	20	26	7	0	17	25	5	1	19	
Slovak Republic	49	7	4	41	48	4	3	35	49	5	3	38	
Spain	26	11	3	22	27	10	2	17	26	11	2	20	
Sweden ³	71	30	16	62	76	32	15	60	73	31	15	61	
Switzerland	38	26	7	35	39	28	7	31	39	27	7	33	
United Kingdom ²	37	19	10	31	41	17	7	30	39	18	8	31	
United States ³	36	17	10	32	50	18	9	37	43	18	9	34	
<i>OECD average</i>	35	16	6	30	37	14	6	27	36	16	6	28	
<i>EU19 average</i>	36	14	6	30	37	14	6	26	36	15	6	28	
Partner countries	Estonia	39	10	3	33	50	12	7	40	44	11	6	36
	Slovenia	32	9	4	26	37	7	2	25	34	8	3	26

¹. Year of reference 2008.². Year of reference 2006.³. Year of reference 2005.⁴. Excluding adults who participated only in "short seminars, lectures, workshops or special talks".

Chart I.1 Training participation and training intensity across countries

Percentage of employees (aged 25-64 years) taking some training in one year and average annual hours per employee

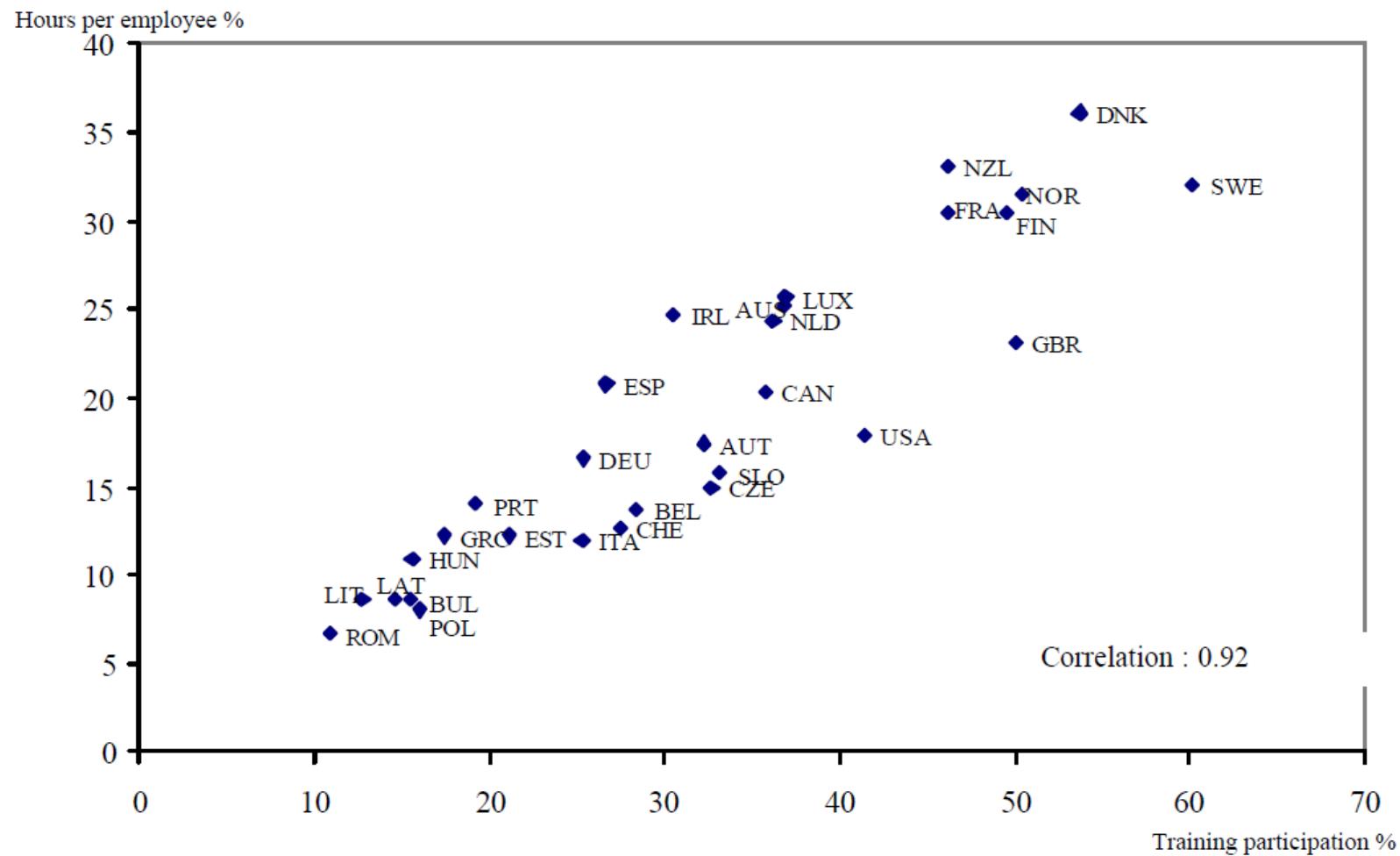


Figure I2. R&D investment and training, by country

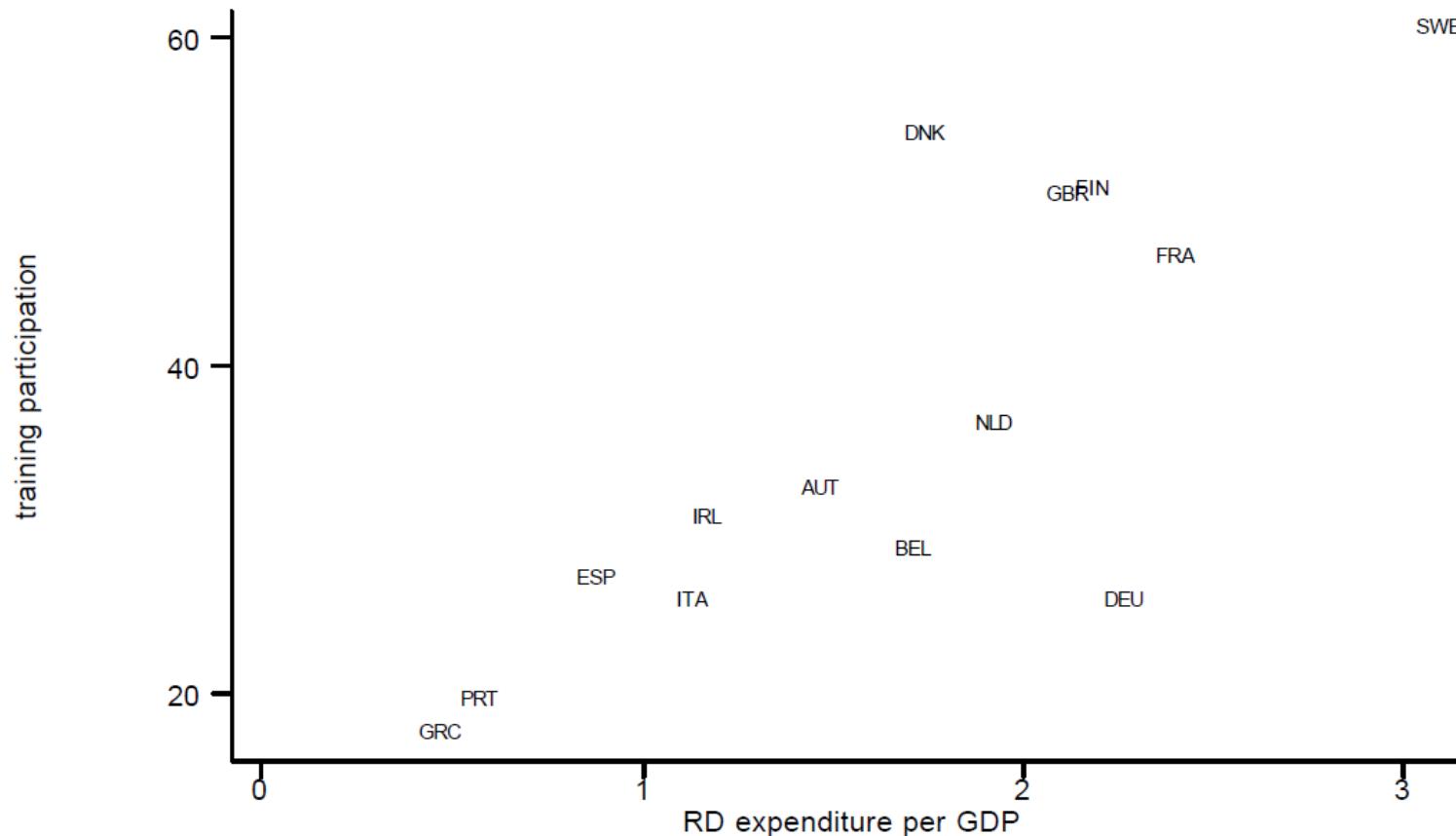


Chart 2.4. Share of employer-sponsored training

Panel A. Training courses

Decomposition by source of training course financing^{a, b}

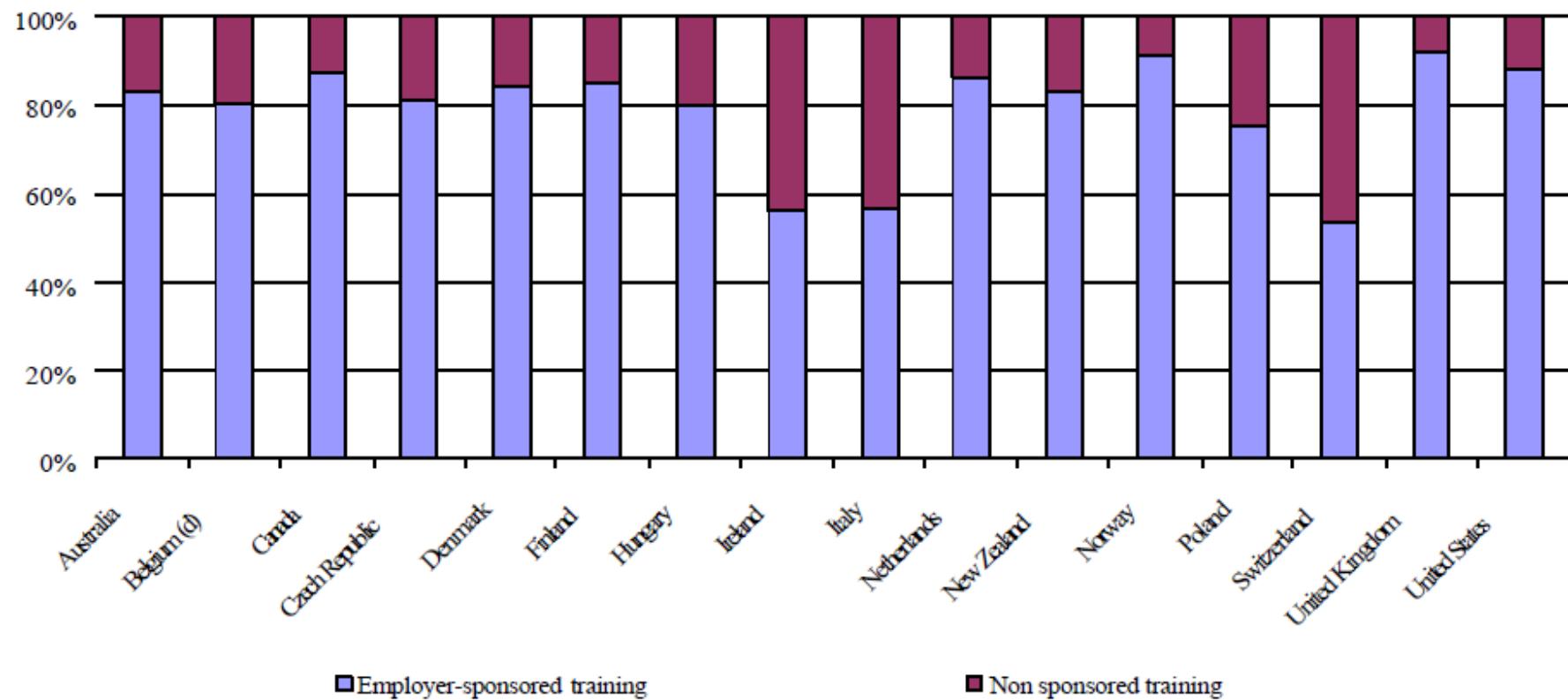


Chart 2.5. Employers' investment in training, by firm size

Panel A. Training participation

Share of total wage and salary employees who receive employer-sponsored training^a

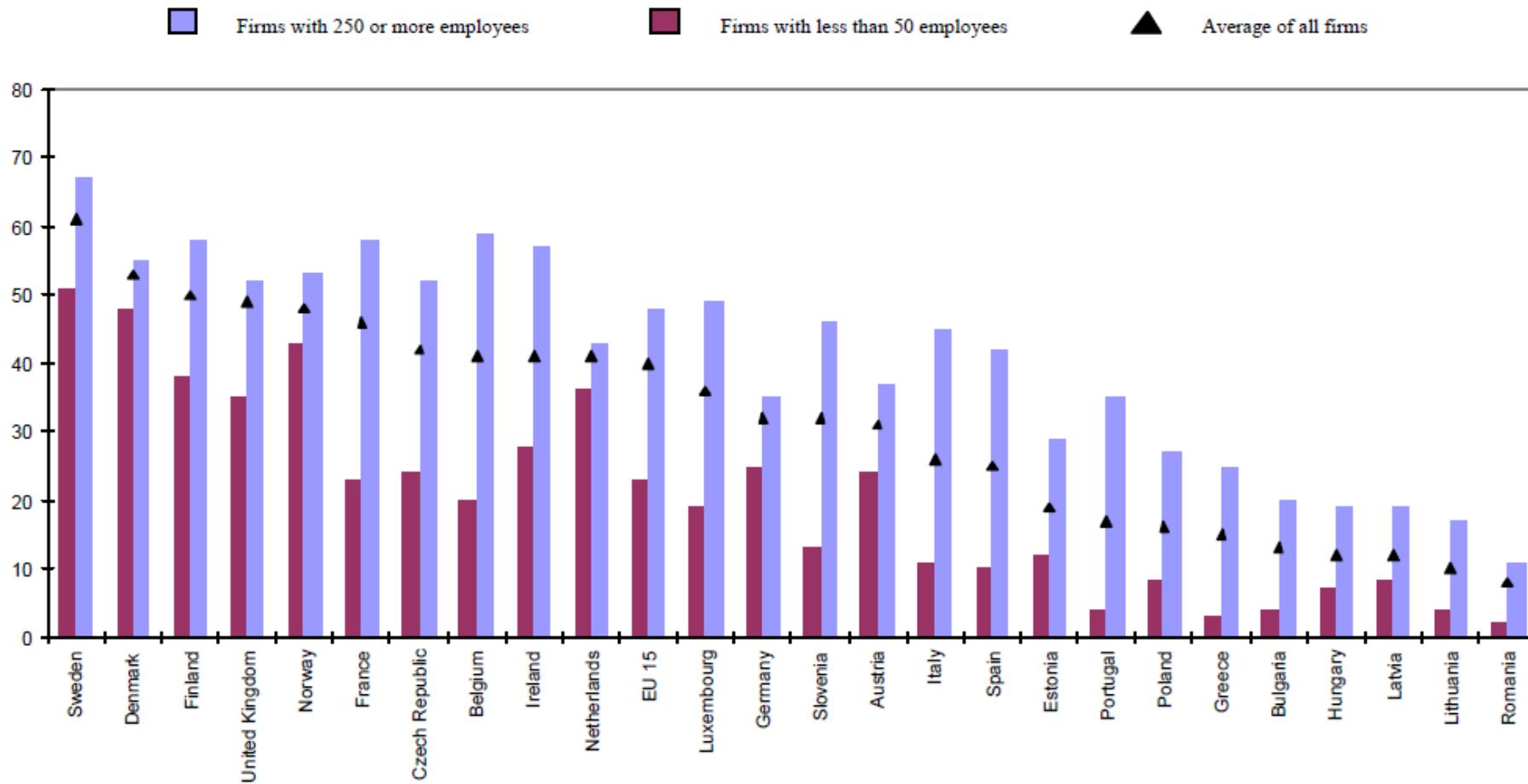


Chart 2.6 Training participation in innovative and non-innovative firms

Share of total wage and salary employees who receive employer-sponsored training^a

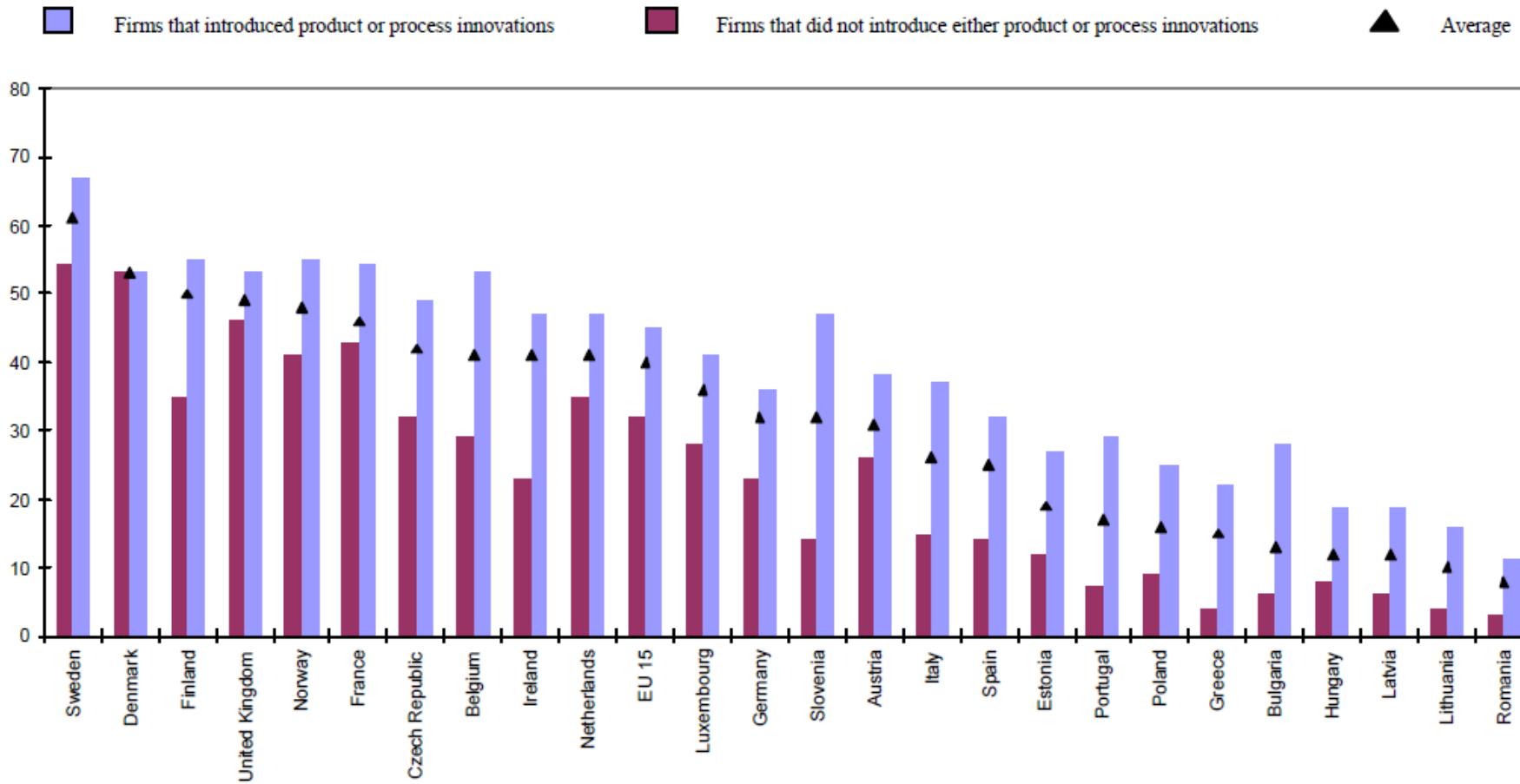


Table 4.2 Private returns to training. ECHP 1995-97-99-01.

	<i>OLS</i>	<i>FE</i>
Denmark	.042*** (.005)	.020*** (.007)
Netherlands	.037** (.019)	-.030 (.031)
Belgium	.055*** (.011)	.026* (.016)
France	.072*** (.007)	.000 (.013)
UK	.079*** (.005)	.019* (.010)
Ireland	.081*** (.010)	.005 (.022)
Italy	.097*** (.013)	.038*** (.014)
Greece	.216*** (.027)	.060* (.032)
Spain	.072*** (.007)	.017 (.012)
Portugal	.180*** (.013)	.105*** (.025)
Austria	.103*** (.006)	.004 (.012)
Finland	.055*** (.008)	.038** (.018)

Note : each regression include age, age squared, country, year, education, gender, marital status and industry dummies.

Table 4.1 Wage returns studies

Table 1: Wage return studies

country	study	dataset	period	traindef	method	b	se
United States	Lynch (1992)	NLSY	1980-1983	Weeks of OJT	OLS+SC	0.0020	
	Veum (1995)	NLSY	1986-1990	Hours of OJT	FE	-0.0002	-0.0012
	Parent (1999)	NLSY	1979-1991	Years of OJT	OLS	0.0073	-0.0399
					FE	0.0090	-0.0392
	Loewenstein and Spletzer (1998)	NLSY	1988-1991	Formal Company Training	OLS	0.1692	-0.0255
Canada	Daniel Parent (2003)	FSLS, Men FSLS, Women	1995	Career of job-related training	HT	0.1216	-0.0372
United Kingdom	Booth (1991)	BSAS, Men BSAS, Women	1987	incidence, formal job-related	FE	0.0346	-0.0193
	Booth (1993)	BNSG, Men BNSG, Women	1986/87	weeks in 1st year, employer provided	OLS	0.1060	-0.0380
		BNSG, Men BNSG, Women			OLS	0.1660	-0.0400
	Blundell et al. (1996)	NCDS, Men NCDS, Men	1981-1991	incidence, on-the-job empl provided	OLS+SC	0.0100	-0.0020
∞		NCDS, Women NCDS, Women			OLS+SC	0.0100	-0.0030
		NCDS, Men NCDS, Men			FE	-0.0020	-0.0030
		NCDS, Men NCDS, Women			FE	0.0100	-0.0040
	Blundell et al. (1999)	NCDS, Men NCDS, Men	1981-1991	empl prov course without qual	quasi-difference	0.0360	-0.0180
		NCDS, Men NCDS, Men			quasi-difference	0.0660	-0.0170
		NCDS, Men NCDS, Women			quasi-difference	0.0030	-0.0320
		NCDS, Women NCDS, Women			quasi-difference	0.0460	-0.0320
		NCDS, Men NCDS, Men			OLS	0.0830	-0.0170
		NCDS, Men NCDS, Men			FE	0.0500	-0.0190
		NCDS, Men NCDS, Women			IV	0.0650	-0.0440
		NCDS, Women NCDS, Women			OLS	0.1420	-0.0220
		NCDS, Women NCDS, Women			FE	0.1100	-0.0260
		NCDS, Women NCDS, Women			IV	0.0270	-0.0560
France	Arulampalam and Booth (2001)	NCDS	1981-1991	incidence, work related	Selection model	0.3420	-0.1740
	Goux and Maurin (2000)	FQP	1988-93	participation, firm provided	OLS+SC	-0.0570	-0.0680
		FQP			OLS	0.0710	-0.0200
	Denis Fougère et al. (2001)	FQP, Job switchers FQP, Non switchers	1993	participation, firm provided	Switching Regr.	0.2930	-0.1210
Germany	Pischke (2001)	GSOEP	1986-89	years, work related	Switching Regr.	0.1280	-0.0910
					FE, growth	0.0380	-0.0270
					FE	0.0260	-0.0190
Norway	Kuckulenz and Zwick (2003)	BIBB/IAB	1998/99	incidence, work-related	Selection Model	0.1500	-0.0400
	Pal Schoene (2002)	NSOE	1989/1993	incidence, employer provided	OLS	0.0530	-0.0070
					FE	0.0110	-0.0060
Netherlands	Leuven and Oosterbeek (2002)	EPIO	2000	incidence, work related	OLS	0.0980	-0.0290
					SC	-0.0050	-0.0560
Switzerland	Gerfin (2003)	SLFS	1998-2000	incidence, work-related	Matching	0.0200	