this sub-section also makes use of these LFS data to analyse labour market outcomes according to time since leaving school. It must be emphasized, however, that a number of approximations are required to piece together transitional histories from the typically very limited retrospective information that is available from this data source.[13] Although typically not as severe as in the case of longitudinal data, the available samples of recent school leavers are often relatively small.[14] Finally, it should be noted that LFS data organised by potential labour market experience do not refer to a single age cohort, followed through time, but rather to experience cohorts at a point in time, which contain a mix of persons of different ages.

- To the extent feasible, both the longitudinal and cross-sectional analysis of the school-to-work transition of youth aged 15 to 29 years are subdivided by gender and by broad educational attainment categories.[15]

Youth employment rates by time since leaving school

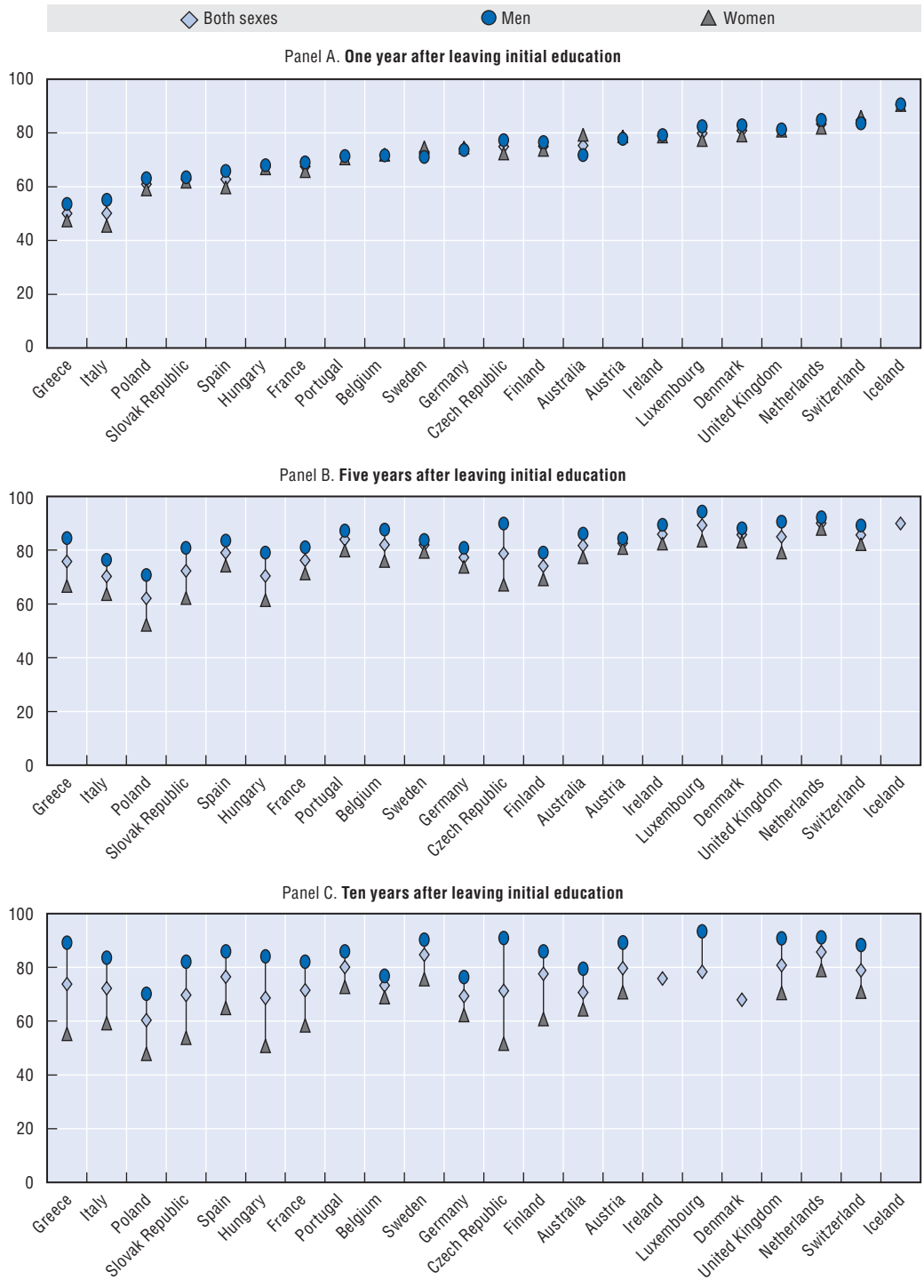
In general, young job starters may face difficult access to employment: they account for a large share of new entrants in the labour market and thus have to compete among themselves and with others who typically have already acquired some work experience (Martin *et al.*, 1984; Ryan, 2001a). It is therefore normal that many youth take some time to find their way into the labour market after leaving school, as they learn more about labour market opportunities, their work interests and motivations and potential employers become better able to gauge their productive potential.

One year after completing initial education, a significant share of youth are unemployed or inactive, rather than working, in Australia and 21 European countries for which data are available (Figure 1.4). Nonetheless, employment rates exceed 75% in nearly half of the countries covered (Australia, Austria, Denmark, Iceland, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom).[16] Five years after leaving school, employment rates are markedly higher, particularly in the countries where employment was low in the first year. Employment rates are still below 70% only in Poland, while they exceed 85% in the seven best performing countries (Denmark, Iceland, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom).[17] After five years, the overall youth employment performance nearly matches that of prime-age adult workers.

It is noticeable that employment performances of men and women are similar one year after school completion, but a gender employment gap emerges after that, as marriage and motherhood begin to depress relative participation rates for young women.[18] However, there are large cross-country differences in the size of the gender employment gap and how rapidly it develops as time out of school increases.[19]

Youth with low qualifications have significantly lower employment rates one year after finishing initial education than do better qualified school leavers (Figure 1.5). In one-half of the 18 countries for which data are available, less than 50% of all youth leaving school without finishing upper secondary education were employed 12 months later, whereas this is never the case for school leavers with a tertiary degree. Better educated youth experienced a quicker transition to employment in all countries, but the importance of this advantage differs significantly across the countries analysed. Relatively strong educational effects on the speed of the school to work transition are found among the countries with the lowest overall employment rates for youth one year out of school (*e.g.* Poland), but also among countries with intermediate employment rates one year out

Figure 1.4. **Employment rates by gender of youth and young adults one, five and ten years after leaving initial education,[a] 2004-2006[b]**



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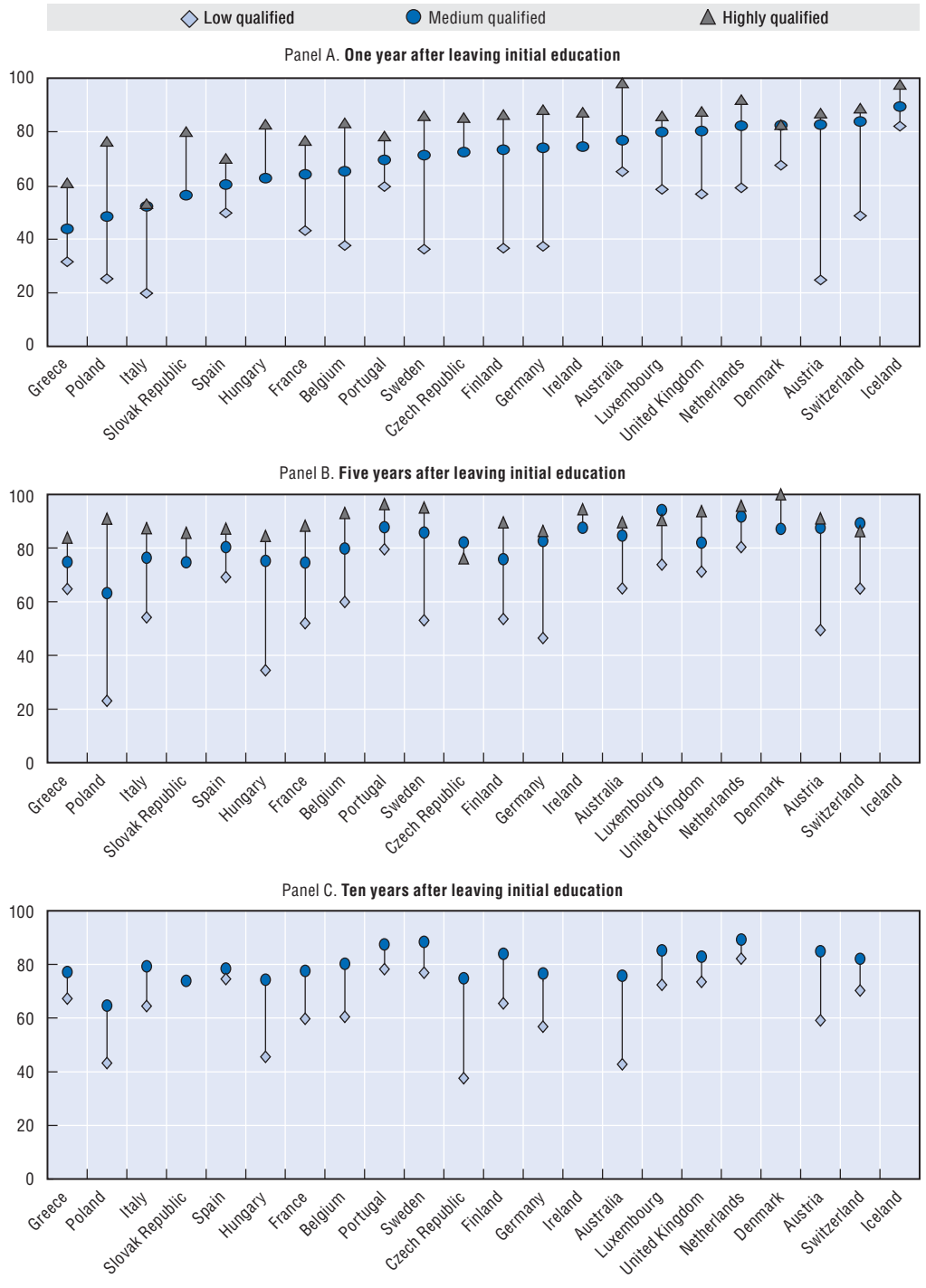
Ranking of countries based on ascending order of employment rates one year after leaving initial education.

a) Sample restricted to recent school leavers aged 15 to 29. Values not shown when insufficient observations are available.

b) Employment rates calculated on the basis of pooled data for the years 2004 to 2006.

Source: OECD Secretariat calculations based on the European Labour Force Survey (EULFS) for the European countries and the Household Income and Labour Dynamics (HILDA) for Australia.

Figure 1.5. **Employment rates by qualification of youth and young adults one, five and ten years after leaving initial education,[a] 2004-2006[b]**



StatLink http://dx.doi.org/10.1787/346522384103

Ranking of countries based on ascending order of employment rates of medium qualified young workers one year after leaving initial education.

a) Sample restricted to recent school leavers aged 15 to 29. Values not shown when insufficient observations are available.

b) Employment rates calculated on the basis of pooled data for the years 2004 to 2006.

Source: OECD Secretariat calculations based on the European Labour Force Survey (EULFS) for the European countries and the Household Income and Labour Dynamics (HILDA) for Australia.

of school (*e.g.* Sweden, Finland and Germany). Most countries with a high overall employment rate for recent school leavers achieve relatively high employment rates for youth of all levels of qualifications.[20]

Employment gaps by qualification level are somewhat lower five years after leaving school, but still large in many countries, especially in Austria, Germany, Hungary, Poland and Sweden.[21] There is also considerable cross-country variation concerning whether the qualification gaps closed more rapidly between low and medium-skill youth (*i.e.* the employment advantage from completing upper secondary schooling) or between medium and high-skill youth (*i.e.* the employment advantage from completing tertiary education). The former gap closes further by ten years after leaving school, but a substantial gap remains for a majority of these 22 countries, suggesting that it could persist throughout the working lives of these cohorts.[22] This is consistent with the historic pattern that labour force participation is higher for more educated persons.

These patterns confirm that low educational attainment represents an enduring barrier to employment, while showing it also appears to impede initial insertion into the labour market. However, an age effect probably also depresses initial employment rates for low-skill youth and is not controlled for in Figure 1.5: many early school leavers are still teenagers living with their parents and may delay entering the labour market for several years. A similar, but weaker effect is present for medium-skill youth. Box 1.2 uses simple multivariate methods to examine how time since leaving school and other factors influence employment status.

Box 1.2. **A multivariate perspective on the factors influencing employment, unemployment and inactivity for out-of-school youth**

The table below provides odds-ratio estimates from binomial logit models of the probability for young school leavers of being employed, unemployed, inactive or non-employed. These logit-models, albeit limited to European countries, help summarise and strengthen the findings in the descriptive overview of school-to-work transitions in the main body of the chapter, while also testing their robustness in a multivariate context.

In the logit models, current labour force status is assumed to be influenced by prior labour force status, time elapsed since leaving school (potential labour market experience) and educational attainment. The sample excludes youth in initial education and apprenticeship. The results refer to 2006 and are reported separately by gender, as men and women do not share the same patterns of work transitions with the passage of time (*cf.* Figures 1.4 and 1.6). The estimated odds-ratios were obtained from a pooled regression with fixed-country effects across 21 European countries for which data are available from the European Labour Force Survey. Values above (below) 1.0 indicate that the associated regressor increases (reduces) the probability of having the indicated work status, relative to the reference person.

Both for men and women, having been employed one year earlier, rather than having been inactive, increases markedly the probability of being currently employed. Unemployed women have a greater chance of getting into work one year later than inactive women, but no such difference emerges for men. Employment prospects for male school leavers increase with the passage of time, in the sense that transitions from inactivity to employment become more common. However, the opposite is true for young women, for whom inactivity becomes progressively more persistent. As reported in the main text, qualifications matter. The probability of moving from inactivity to employment rises steadily with the level of educational attainment for both men and women.

Box 1.2. **A multivariate perspective on the factors influencing employment, unemployment and inactivity for out-of-school youth** *(cont.)*

Factors influencing the work status of youth after leaving initial education in Europe, 2006

Odds-ratios from binomial logit regressions of the probability of being in a given work status by gender[a, b]

	Relative probability of being:[c]							
	Employed		Unemployed		Inactive		Non-employed	
	Men	Women	Men	Women	Men	Women	Men	Women
Intercept	0.5**	0.5***	0.3***	0.2***	0.9	0.9	1.9**	2.2***
Reference person: inactive one year ago								
Employed one year ago	14.3***	20.0***	0.2***	0.4***	0.0***	0.0***	0.1***	0.0***
Unemployed one year ago	0.9	1.5***	3.0***	4.1***	0.3***	0.2***	1.2	0.7***
Reference person: one to three years since leaving initial education								
Four to five years	1.2	0.8**	0.8**	0.7***	1.1	1.8***	0.9	1.2**
Six to eight years	1.3***	0.8***	0.7***	0.6***	1.1	2.2***	0.8***	1.3***
Nine years or more	1.3***	0.7***	0.7***	0.5***	1.1	2.4***	0.7***	1.4***
Reference person: low qualified								
Medium qualified	2.0***	2.0***	0.6***	0.8***	0.6***	0.6***	0.5***	0.5***
Highly qualified	3.5***	4.1***	0.4***	0.5***	0.3***	0.3***	0.3***	0.2***
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Likelihood ratio[d]	2 433***	3 294***	1 217***	884***	1 261***	2 643***	2 433***	3 295***
Number of observations	5 594	6 234	5 594	6 234	5 594	6 234	5 594	6 234

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*, **, ***: statistically significant at the 10%, 5%, 1% level, respectively (two-tailed test).

a) The binomial logit models were estimated using maximum likelihood for a pooled sample of 21 European countries: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom.

b) The sample includes out-off-school youth aged 15 to 29 years.

c) For better readability, odds-ratios are reported taking the exponential of individual regression coefficients. A coefficient above one implies a higher probability than for the reference person to have the indicated work status. Thus, for example, the probability for an employed man of remaining employed one year later is more than 14 times higher than the probability for an inactive man of becoming employed. Conversely, a coefficient below one implies a lower probability than for the reference person to have the indicated work status. The reference person is a young job starter, having left initial education one to three years ago, who was inactive one year ago, and is low qualified.

d) Indicators of statistical significance of the full model referring to the Chi-square test for the joint significance of all the predictors.

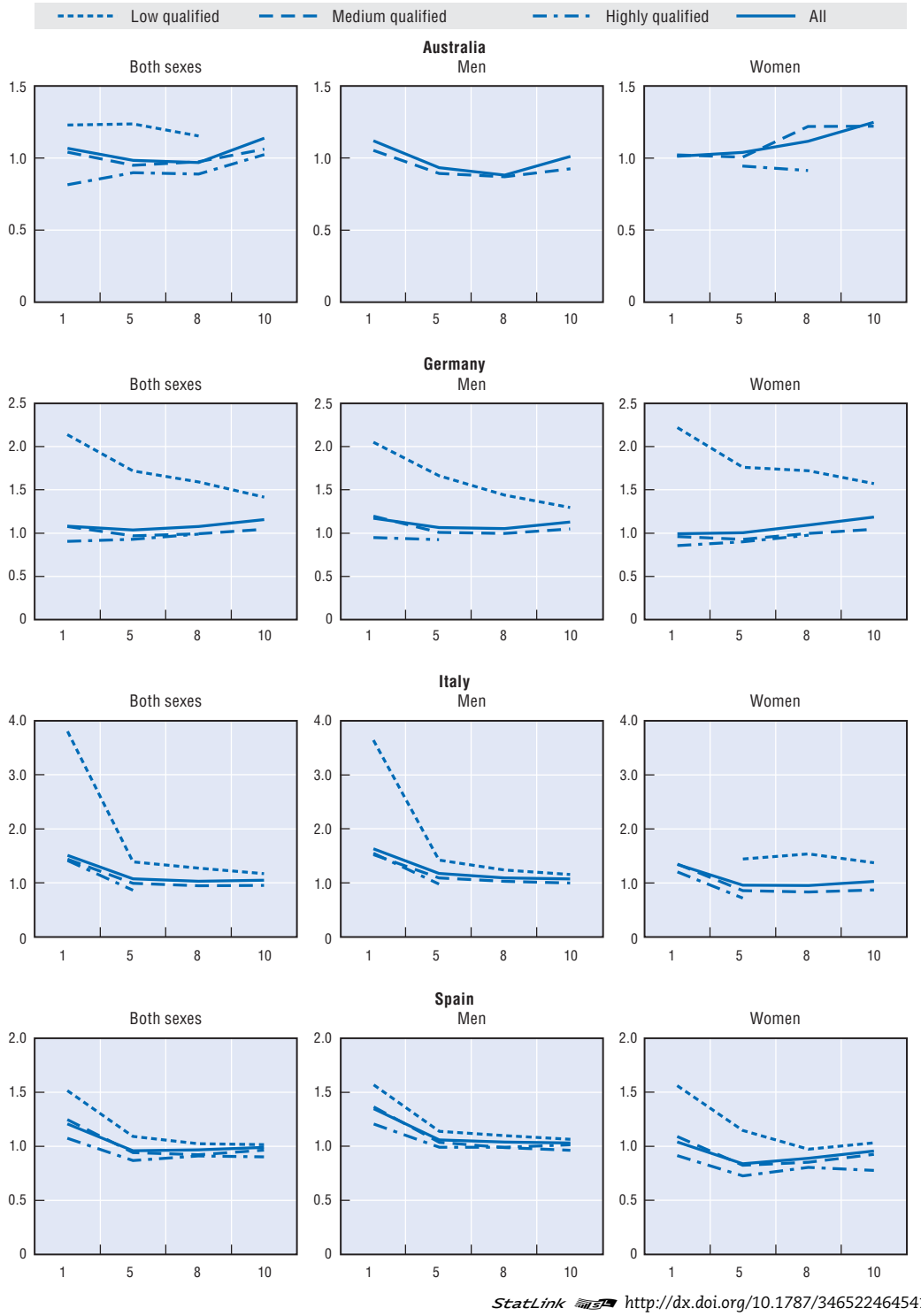
Source: OECD estimates based on the European Labour Force Survey (EULFS).

Convergence of youth to adult employment rates after leaving school

Figure 1.6 provides further insights into the speed of the convergence of youth employment rates to those of prime-age adults (aged 30 to 49 years), as potential experience increases. The 2004-2006 data shown in the figure trace out the time-path of the ratio of adult to youth employment rates, calculated one, five, eight and ten years after leaving initial education. Adult employment rates are substantially higher than those of the most recent school leavers (those who left school during the previous year), but this ratio declines toward 1.0 as youth employment rates approach those of adults. However, the speed of convergence – and whether it is fully achieved after ten years – varies considerably across the four countries included in Figure 1.6, as well as between men and

Figure 1.6. **Speed of transition to work of youth by educational attainment and gender: four country examples**[a]

2004-2006[b] ratios of adult (30-49 years) to youth (15-29 years) employment rates, one, five, eight and ten years after leaving initial education



StatLink http://dx.doi.org/10.1787/346522464541

a) See Figure 1.A1.1 for additional countries. Values not shown when insufficient observations are available.
b) Ratios calculated on the basis of pooled data for the years 2004 to 2006.

Source: OECD calculations based on the European Labour Force Survey (EULFS) for the European countries and the Household Income and Labour Dynamics (HILDA) for Australia.

women and the three levels of educational attainment. Annex Figure 1.A1.1 extends this analysis to all 18 countries for which data are available, documenting even greater heterogeneity in the speed of transition.

The 2004-2006 cross-section data suggest that most school leavers have integrated into the labour market within five years after leaving school, although the transition is slower in certain countries and for some sub-groups of youth. As has often been noted, young labour market entrants achieve a relatively smooth school-to-work transition in countries where the school-to-work transition is shaped by a dual educational system combining work and study for non-university bound youth, allowing them to gain work experience in apprenticeship while finishing their upper secondary schooling (*e.g.* Austria, Germany and Switzerland). In such systems, it is important that a significant share of employers demonstrate a strong commitment to taking on apprentices and retaining some of them as employees after they have completed their apprenticeships.[23] The school-to-work transition is also relatively quick and smooth in other countries with very different institutional settings. For example, employment rates of young labour market entrants converge to those of adult workers within five years of finishing initial schooling in the Netherlands, Portugal, Spain and the United Kingdom. Youth employment rates remain more than 10% lower than adult employment rates for recent labour market entrants in two out of 18 countries for which the data are reported.

In most OECD countries, recent cohorts of female school leavers have reduced the gaps with their male counterparts in terms of educational attainment and labour force participation. Nonetheless, important gender differences emerge in the speed of transition to work. Whereas convergence for men tends to be steady, this is not the case for women in some countries: employment rates of young women, in particular those with low educational attainment, diverge from those of adult women near the end of the ten-year time window for potential labour market experience analysed. This might be due to the fact that, by that time, a number of women withdraw from the labour market for family reasons (*i.e.* for child bearing and rearing). This divergence in employment rates occurs in the early years of labour market entry for young female school leavers in Australia.

Figure 1.6 and Annex Figure 1.A1.1 reveal that low-qualified youth are experiencing the greatest difficulties achieving convergence to adult employment rates. Their relative employment ratios remain above one after ten years from school completion, even in countries where overall youth employment rates converged to adult rates within five years (*e.g.* Austria, France, Germany and the United Kingdom). When they do converge, it takes longer on average for low-skilled youth, than for their better educated counterparts. However, the size of the low-qualified group ranges from as low as 3% in Switzerland and several central European countries to nearly 30% in Portugal and Spain.

The slow convergence of youth to employment rates for the least educated school leavers suggests that recent cohorts of dropouts may never attain the employment rate of earlier cohorts in some countries, perhaps due to the impact of rising job skill requirements in restricting employment opportunities for workers lacking a good basic education. Thus the importance of policies to further reduce drop-out rates (*cf.* Figure 1.1, Panel A). The pattern of relative youth employment rates by years of potential experience was quite stable between 2000 and 2006 in most of a sample of 18 European countries (data

Figure 1.A1.1. **Speed of transition to work of youth[a] by educational attainment and gender**

2004-2006[b] ratios of adult (30-49 years) to youth (15-29 years) employment rates, one, five, eight and ten years after leaving initial education

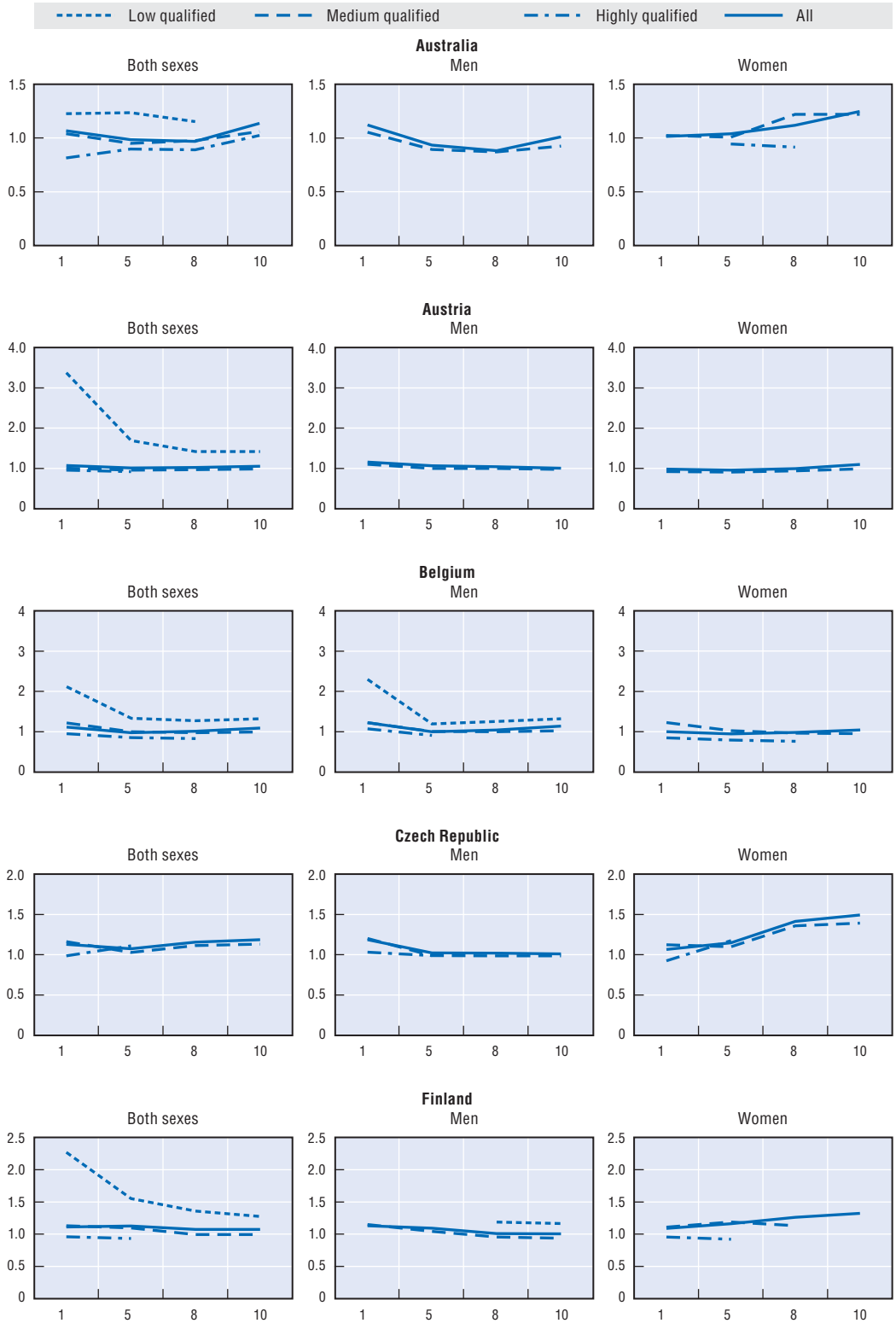


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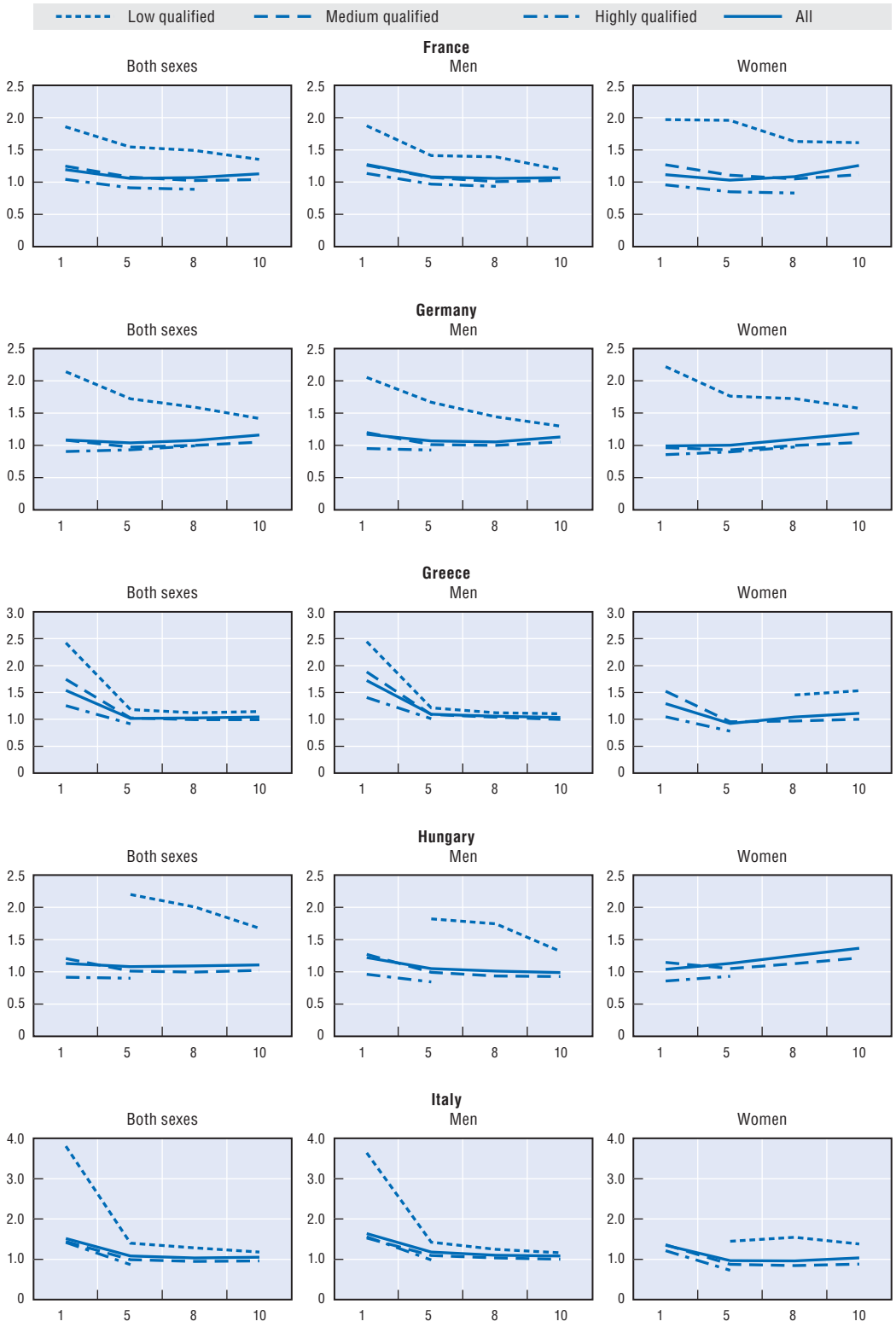
Figure 1.A1.1. **Speed of transition to work of youth[a] by educational attainment and gender** *(cont.)*

2004-2006[b] ratios of adult (30-49 years) to youth (15-29 years) employment rates, one, five, eight and ten years after leaving initial education



StatLink http://dx.doi.org/10.1787/346867734421

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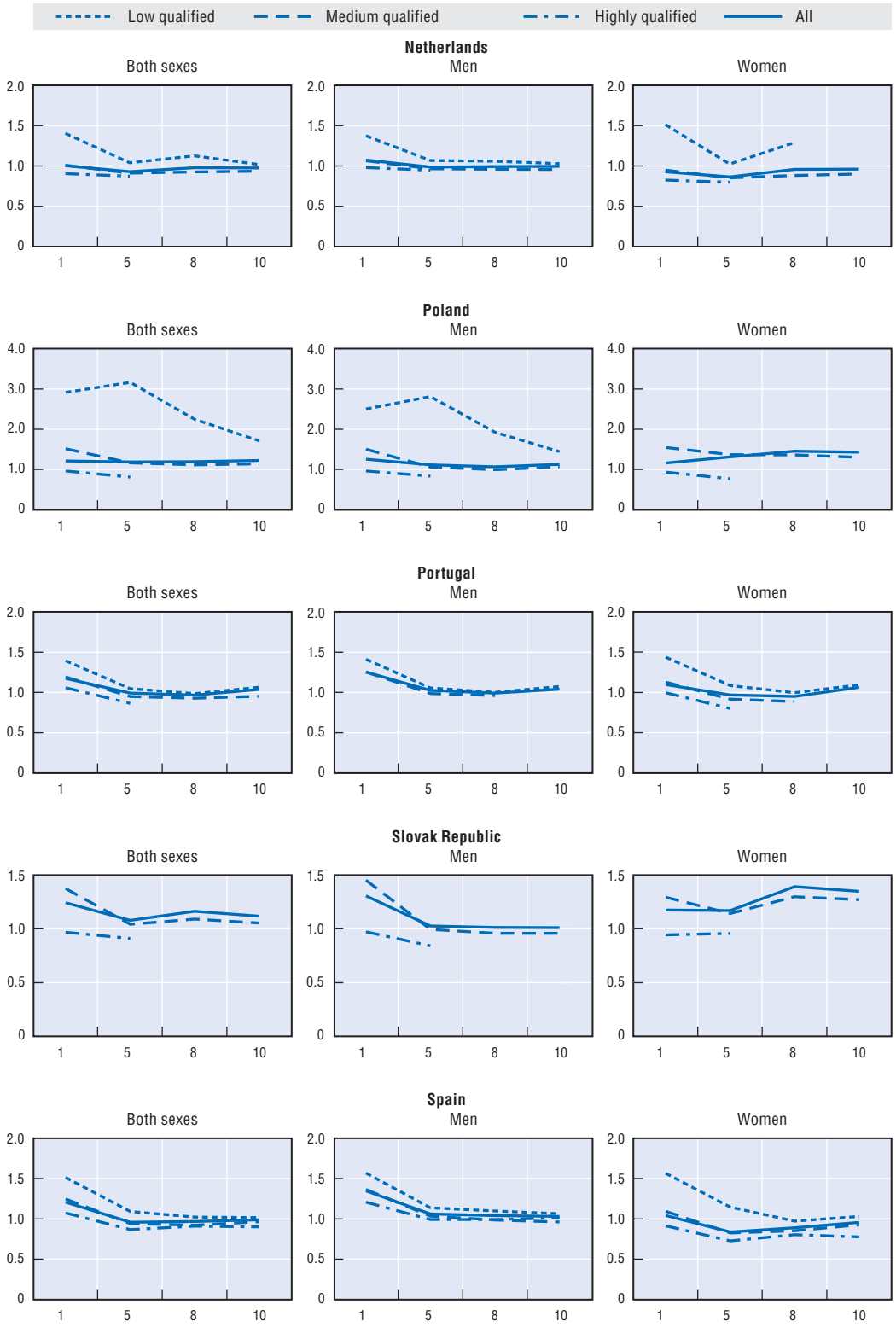
Figure 1.A1.1. **Speed of transition to work of youth[a] by educational attainment and gender** *(cont.)*

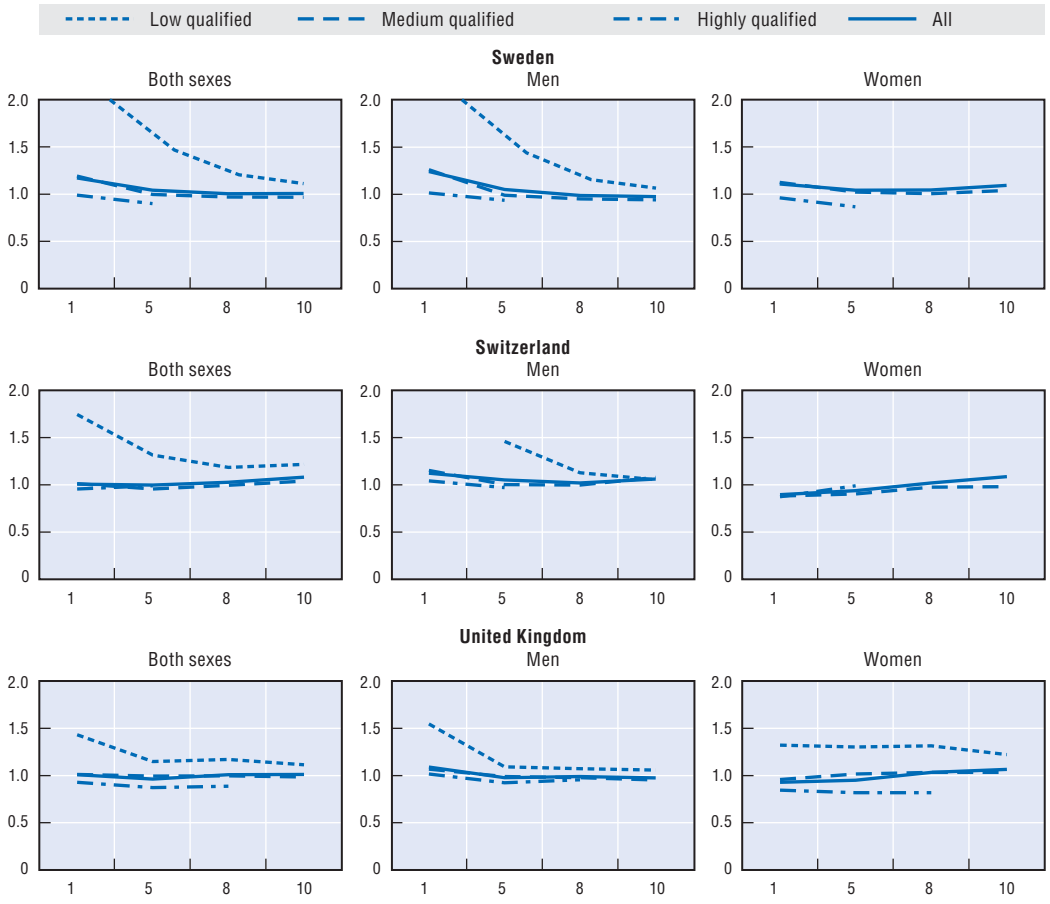
2004-2006[b] ratios of adult (30-49 years) to youth (15-29 years) employment rates, one, five, eight and ten years after leaving initial education



StatLink http://dx.doi.org/10.1787/346867734421

Figure 1.A1.1. **Speed of transition to work of youth[a] by educational attainment and gender** *(cont.)*

2004-2006[b] ratios of adult (30-49 years) to youth (15-29 years) employment rates, one, five, eight and ten years after leaving initial education



StatLink http://dx.doi.org/10.1787/346867734421

a) Values not shown when insufficient observations are available.
b) Ratios calculated on the basis of pooled data for the years 2004 to 2006.

Source: OECD calculations based on the European Labour Force Survey (EULFS) for European countries and the Household Income and Labour Dynamics (HILDA) for Australia.

Table J. **Public expenditure and participant stocks in labour market programmes in OECD countries[a]** *(cont.)*

Programme categories and sub-categories	Portugal						Slovak Republic						Spain[d]						Sweden					
	Public expenditure as a percentage of GDP			Participant stocks as a percentage of the labour force			Public expenditure as a percentage of GDP			Participant stocks as a percentage of the labour force			Public expenditure as a percentage of GDP			Participant stocks as a percentage of the labour force[g]			Public expenditure as a percentage of GDP			Participant stocks as a percentage of the labour force		
	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
1. PES and administration[a]	**0.14**	**0.17**	**0.16**				**..**	**..**	**..**				**0.12**	**0.13**	**0.13**				**0.24**	**0.22**	**0.23**			
of which: 1.1. Placement and related services[a]	0.03	0.04	0.03				0.01	0.06	0.09				0.03	0.03	0.04				0.09	0.08	0.08			
1.2. Benefit administration[a]	0.03 [b]	0.03 [b]	0.03 [b]				..	..	..				0.02	0.02	0.02				0.04 [h]	0.04 [h]	0.04 [h]			
2. Training	**0.29**	**0.29**	**0.25**	**0.69**	**0.92**	**0.86**	**0.01**	**0.02**	**0.01**	**0.18**	**0.17**	**0.09**	**0.15**	**0.17**	**0.16**	**0.58**	**1.22**	**1.20**	**0.32** [i]	**0.33** [i]	**0.33** [i]	**1.06**	**1.07**	**1.10**
2.1. Institutional training	0.17	0.17	0.15	0.27	0.39	0.38	0.01	0.02	0.01	0.18	0.17	0.09	0.10	0.09	0.09	0.47	0.52	0.52	0.19	0.20	0.20	0.54	0.52	0.54
2.2. Workplace training	0.03	0.04	0.04	0.14	0.16	0.17	-	-	-	-	-	-	0.01	0.06	0.06	-	0.70	0.68	-	-	-	0.01	-	0.02
2.3. Alternate training	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4. Special support for apprenticeship[a]	0.08	0.08	0.07	0.26	0.36	0.30	-	-	-	-	-	-	0.03	0.01	0.01	0.10	-	-	-	-	-	-	-	-
4. Employment incentives[a]	**0.17**	**0.16**	**0.13**	**2.21**	**1.56**	**1.41**	**0.01**	**0.03**	**0.02**	**0.22**	**0.59**	**0.49**	**0.27** [e]	**0.31** [e]	**0.33** [e]	**7.76** [e]	**11.25** [e]	**12.32** [e]	**0.41** [e]	**0.49** [e]	**0.58** [e]	**2.20** [e]	**2.45** [e]	**2.77** [e]
4.1. Recruitment incentives	0.16	0.15	0.12	2.16	1.49	1.36	0.01	0.03	0.02	0.22	0.59	0.49	0.24 [f]	0.24 [f]	0.25 [f]	7.68 [f]	10.84 [f]	10.49 [f]	0.41	0.44	0.51	2.17	2.25	2.50
4.2. Employment maintenance incentives	-	-	-	-	-	-	-	-	-	-	-	-	0.01	0.06	0.07	-	-	1.52	-	-	-	-	-	-
5. Supported employment and rehabilitation	**0.04**	**0.04**	**0.04**	**0.10**	**0.10**	**0.10**	**-**	**0.01**	**0.01**	**-**	**0.27**	**0.07**	**0.07**	**0.02**	**0.02**	**0.50**	**0.19**	**0.20**	**0.22**	**0.22**	**0.20**	**0.78**	**0.74**	**0.78**
5.1 Supported employment	-	-	-	0.01	0.01	0.01	-	0.01	0.01	-	0.27	0.07	0.06	0.02	0.02	0.50	0.19	0.20	0.20	0.19	0.17	0.61	0.56	0.56
5.2 Rehabilitation	0.04	0.04	0.04	0.09	0.09	0.09	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.02	0.03	0.18	0.19	0.22
6. Direct job creation	**0.04**	**0.03**	**0.03**	**0.43**	**0.38**	**0.38**	**0.03**	**0.06**	**0.06**	**3.78**	**4.02**	**3.92**	**0.11**	**0.09**	**0.08**	**..**	**..**	**1.03**	**-**	**-**	**-**	**-**	**-**	**-**
7. Start-up incentives	**-**	**-**	**-**	**-**	**0.11**	**0.08**	**0.02**	**0.05**	**0.05**	**0.11**	**0.43**	**0.77**	**0.04**	**0.06**	**0.08**	**..**	**..**	**0.72**	**0.03**	**0.03**	**0.03**	**0.12**	**0.12**	**0.11**
8. Out-of-work income maintenance and support[a]	**1.10**	**1.19**	**1.12**	**5.35**	**5.49**	**5.47**	**0.30** [c]	**0.17** [c]	**0.12** [c]	**2.82**	**1.46**	**3.66**	**1.46**	**1.42**	**1.39**	**6.26**	**6.20**	**6.18**	**1.29**	**1.17**	**0.96**	**7.90**	**7.64**	**6.94**
8.1. Full unemployment benefits	1.08	1.16	1.09	5.33	5.45	5.42	0.29	0.17	0.12	2.82	1.46	3.66	1.43	1.39	1.36	6.25	6.19	6.17	0.87	0.80	0.65	4.50	4.33	3.76
of which: Unemployment insurance	0.89	0.96	0.89	3.92	4.14	4.10	0.29	0.17	0.12	2.82	1.46	3.66	1.07	1.04	1.03	3.28	3.28	3.33	0.87 [j]	0.80 [j]	0.65 [j]	4.50 [j]	4.33 [j]	3.76 [j]
8.2, 8.3. Partial and part-time unemployment benefits	-	-	-	..	0.03	0.05	-	-	-	-	-	-	-	0.01	-	0.01	0.01	0.01	0.37	0.34	0.28	3.40	3.31	3.19
8.4, 8.5. Redundancy and bankrupcy compensation	0.02	0.03	0.03	-	-	-	0.01	0.01	-	-	-	-	0.03	0.02	0.03	-	-	-	0.05	0.03	0.02	-	-	-
9. Early retirement[a]	**0.05**	**0.09**	**0.15**	**0.11**	**0.22**	**0.36**	**0.04**	**0.09**	**0.22**	**0.48**	**0.62**	**1.68**	**0.03**	**0.03**	**0.04**	**0.12**	**..**	**..**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL (1-9)	**1.84**	**1.98**	**1.87**				**..**	**..**	**..**				**2.24**	**2.23**	**2.24**				**2.51**	**2.46**	**2.32**			
Active measures (1-7)	0.68	0.69	0.61				..	..	..				0.75	0.78	0.80				1.22	1.29	1.36			
of which: Categories 1.1 plus 2-7	0.58	0.55	0.49				0.08	0.23	0.23				0.66	0.68	0.71				1.07	1.15	1.22			
Categories 2-7 only	0.55	0.52	0.45	3.43	3.07	2.83	0.07	0.17	0.14	4.29	5.47	5.34	0.63	0.65	0.67	..	..	15.47	0.98	1.07	1.13	4.16	4.39	4.76
Passive measures (8-9)	1.15	1.29	1.26	5.46	5.71	5.83	0.34 [c]	0.27 [c]	0.34 [c]	3.30	2.07	5.34	1.49	1.45	1.43	6.37	6.21	6.19	1.29	1.17	0.96	7.90	7.64	6.94

a) See the introductory note about scope and comparability at *www.oecd.org/employment/outlook*. Sub-categories 1.1 and 1.2 refer only to separately-identified spending. Active and passive participant stocks should not be added (some people appear in both).

b) Secretariat estimate based on the ratio of benefit administration costs to benefits paid (2.2%) for a wider range of benefits (reported in IGFSS, *Conta da Segurança Social 2005*).

c) Does not include social assistance, which is the form of income support received by the majority of registered unemployed.

d) Categories 1 to 7 include expenditure by the autonomous communities and municipalities (additional to data published by Eurostat).

e) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Germany, Italy, Spain and Sweden.

f) Includes an employer subsidy for the conversion of temporary contracts into permanent contracts, not otherwise conditional on employment status.

g) Participant stock data do not include participants in municipal programmes.

h) Administration costs of independant unemployment insurance funds.

i) Includes income support paid to participants in "Activities within counselling, guidance and placement services" but not the corresponding services. This expenditure is not allocated across sub-categories.

j) Includes "basic insurance" which is not a contribution-based benefit.