

CHAPTER 3

DEMAND-SIDE OPPORTUNITIES AND BARRIERS

Although education and training policies are central elements of any long-term effective strategy for improving youth labour market prospects, a comprehensive policy framework has to pay attention to opportunities and constraints on the labour market. It must pay particular attention to the labour market arrangements and institutions and their impact on the demand for young people, specifically those with no or limited education or lacking labour market experience.

Section 1 examines the current economic situation and employment opportunities in general in Denmark. Section 2 explores the macro-economic determinants of youth unemployment, its sensitivity to the business cycle, in particular how it is impacted by the current economic recession. The following sections examine wages and labour market institutions. Section 3 looks at the relative wages of young people and Section 4 reviews labour contract regulation that could affect the entry of youth into the labour market. Finally, Section 5 reviews the evidence on wage gaps between young women and young men.

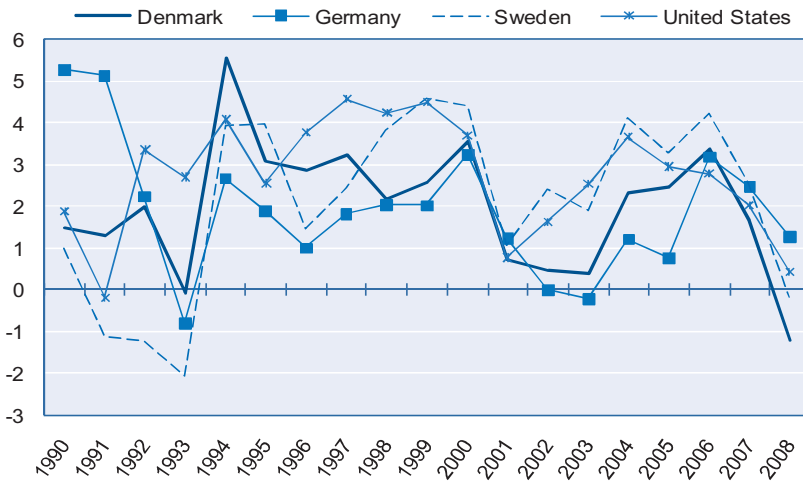
1. GDP growth and overall employment in Denmark

A. *Until recently*

Up to 2006, the Danish economy enjoyed sustained growth and tight labour markets, and between 2004 and 2006, the annual GDP growth was between 2.3 and 3.3% (Figures 3.1 and 3.2). In 2007, the economy grew by only 1.6% but this modest performance apparently reflected capacity constraints, including major labour shortages. Capacity utilisation rose close to historical peaks and skilled labour shortages – partially due to a quasi-stagnant labour supply (Figure 3.3) – became a more prominent constraint holding back production. The annual GDP growth turned negative (-1.2%) in 2008 but the overall unemployment rate remained very low, around 3%.

Figure 3.1. **GDP growth, Denmark versus Germany, Sweden and the United States, 1991-2008**

Gross domestic product, constant 2000 prices, annual percentage change



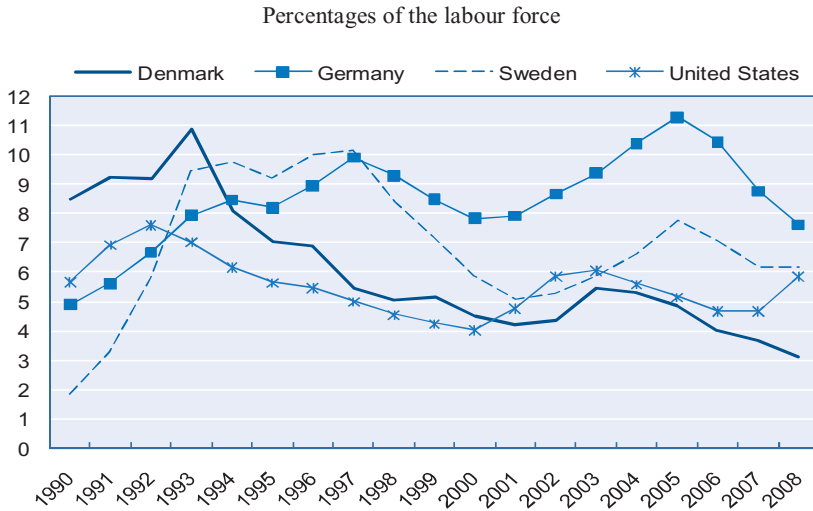
Source: OECD National Accounts database.

Part of the need for extra workers was met by an increase in foreign labour inflows. Strong labour demand in the Danish economy translated into an influx of temporary migrants⁴⁹ and a rise in the number of cross-border commuters coming from Germany or Sweden. Particularly the construction and manufacturing sectors benefited from this additional labour force.

Yet, at that stage of the business cycle, opening doors and cutting paperwork was enough to combat a structural deficit of skills. Figures from the Danish Economic Council (2007a) show that 20% of foreign workers leave within a year and 40% of them within two years, partially as a consequence of the country's restrictive work permits policy. A related issue is the role of the country's high marginal taxation rates in discouraging high-skilled immigration.

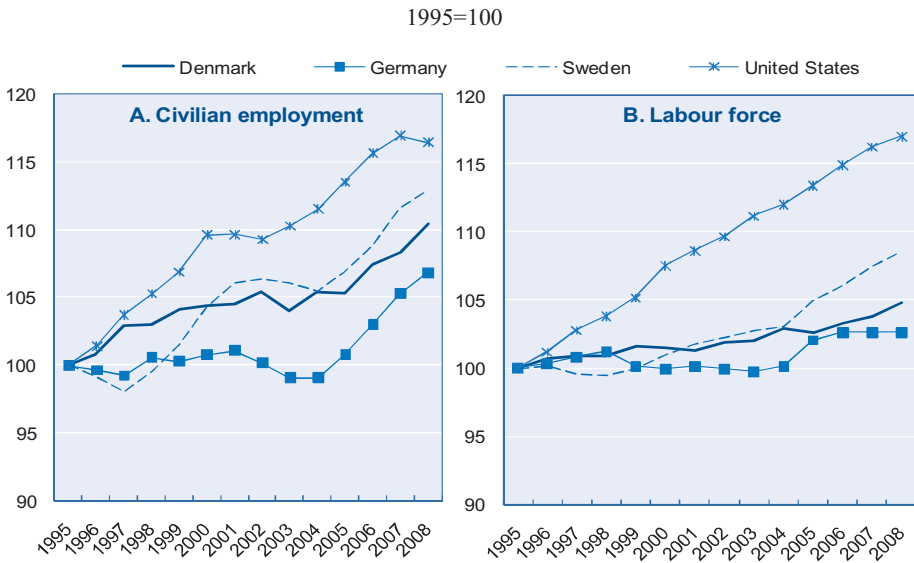
49. As a result of the EU enlargement, Denmark has decided to establish a transitory period (2004-09) for free movement of citizens from Estonia, Latvia, Lithuania, Poland, the Slovak Republic, Slovenia, the Czech Republic and Hungary. During this period, workers need to apply for a work and residence permit to become eligible for working in Denmark.

Figure 3.2. **Total unemployment rate, Denmark, Germany, Sweden and the United States, 1990-2008**



Source: OECD Labour Force database.

Figure 3.3. **Total civilian employment and total labour force, Denmark, Germany, Sweden and the United States, 1995-2008**

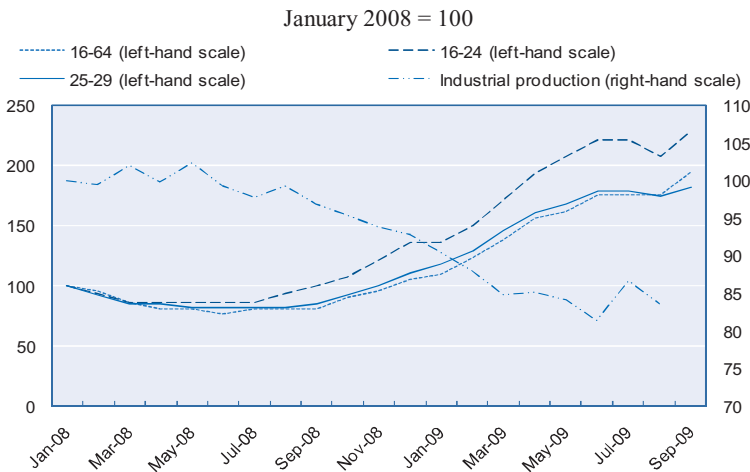


Source: OECD Labour Force database.

B. Recent developments

In the immediate future, issues of concern to Danish policy makers will include rising unemployment. The world is indeed facing a severe economic crisis that is affecting Denmark and is currently deteriorating the labour market prospects of many of its citizens. Danish unemployment statistics up to September 2009 show a rapid deterioration of the situation (Figure 3.4), particularly for youth.⁵⁰ The unemployment rate of youth aged 16-24 has more than doubled in September 2009 since January 2008, while that of young adults (aged 25-29) has risen by 80%, more in line with the evolution of the overall unemployment rate.⁵¹ A reassuring element, however, is that this surge intervened when youth unemployment rate reached an historical low.

Figure 3.4. **Industrial production and unemployment rate,^a by age group, Denmark, January 2008-September 2009**



a) Unemployed registered at the PES (seasonally adjusted).

Source: Statistics Denmark and *OECD Main Economic Indicators database*.

50. Data used in Figure 3.4 are administrative data which differ from labour force survey data. A difference regarding youth is that a student who declares in the survey that he wants a job is counted in the labour force while he is not included in the Danish administrative unemployment data.
51. The unemployment rate index highlighted here and in Figure 3.4 should not be confused with unemployment rate levels. For instance, in September 2009, among the three age groups considered here, the 16-24-year-olds had the lowest unemployment rate, and the 25-29-year-olds was the group with the highest unemployment rate.

2. Youth unemployment and the business cycle

This recent increase of the youth unemployment rate in Denmark echoes similar developments taking place in other OECD countries. And they replicate to a large extent labour market patterns observed in the past during economic recessions.

Using time series data covering the past four decades, it is indeed relatively easy to show that for the OECD on average, each one negative percentage point deviation from the GDP's long-term growth rate leads to 0.65 percentage point increase of the adult (25-54) unemployment rate. But the equivalent youth (15-24) unemployment rate increment is 1.36 percentage point (Table 3.1, Col. 2).

Results for Denmark point at slightly higher reactivity for adult workers (Table 3.1). A one negative percentage point deviation from the GDP's long-term growth rate usually translates into a 0.92 percentage point increase of the adult unemployment rate. And the Danish youth (15-24) unemployment rate usually rises by 1.1 percentage points. This is more than the adult reactivity, but less than elsewhere in the OECD in similar circumstances.

Table 3.1. **How the unemployment rate responds to 1 percentage point (negative) deviation of the GDP growth rate,^a Denmark versus all OECD countries**

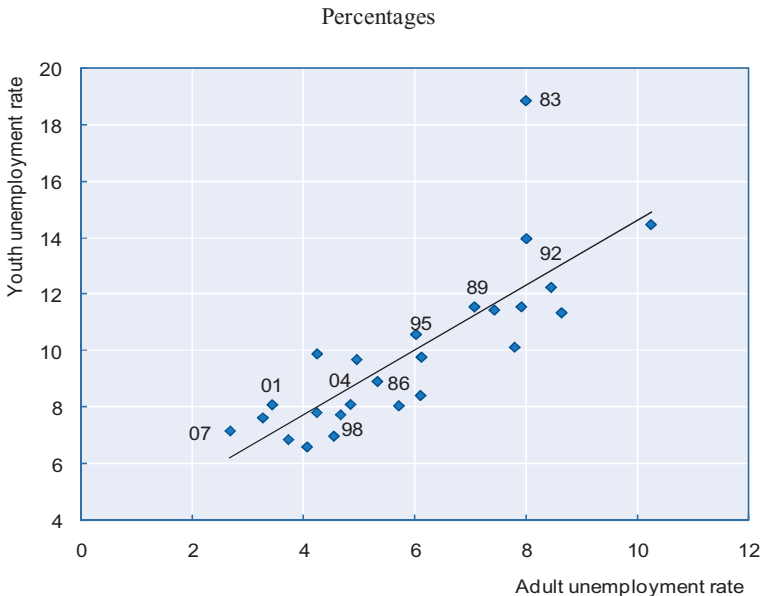
	Denmark	OECD (all countries pooled)
Youth (15-24)	1.10	1.36
Adults (25-54)	0.92	0.66
Senior (55-64)	0.64	0.45

- a) A crucial input of the analysis is the GDP data. Annual GDP time series consist of GDP chained linked volume index, with base year 2000. We are particularly interested in the consequences of GDP shocks, where the term “shocks” refer to deviations from the long run trend. To capture these shocks we resort to de-trending techniques. Our GDP data are de trended with a Hodrick Prescott (1997) filter. This methodology basically consists in minimising a function of the sum of the cyclical part of a time-series plus the sum of the squares of the trend component's second differences, multiplied by a given parameter λ . Following a large literature and given the annual frequency of the data, a parameter $\lambda = 6.25$ was chosen.

Source: *OECD Labour Force database* for unemployment rates and *OECD Annual National Accounts database* for GDP.

Examination of how youth and adult unemployment rates are related conveys the same message (Figure 3.5). Youth (15-24) and adult (25-64) unemployment rates are highly correlated in Denmark. Youth unemployment rates vary in response to variations in economic conditions as do adult unemployment rates, increasing in recessions and recovering during periods of expansion.

Figure 3.5. **Youth^a and adult^b unemployment rates, Denmark, 1983-2007**



- a) Aged 15-24.
b) Aged 25-54.

Source: OECD Labour Force database.

The estimated slope of the linear trend on display in Figure 3.5 is about 1.14, meaning that a 1 percentage point increase (decrease) of the adult unemployment rate translates into a 1.14 percentage point increment (reduction) of the youth unemployment rate. This youth *versus* adult pattern based on historical data is thus remarkably similar to the very recent developments on display on Figure 3.4.

Conventionally, labour economists expect youth unemployment rates to be higher and more sensitive than adult unemployment rates to changes in aggregate demand for labour. Here are some of the main reasons.

First, much research has shown that the first reaction of firms in a downturn is to cease hiring before commencing on the more expensive procedure of redundancies. It is evident that young people comprise a disproportionate segment of job seekers and thus are more heavily affected by a recruitment freeze.

Second, for employers, the cost of firing young people is generally lower than for older workers. Having less experience than the long-term insiders, they embody lower levels of investment by firms in specific training and consequently involve a smaller loss to firms making them redundant. Moreover, young people are more likely to be subject to the LIFO (last-in first-out) rule. Almost invariably, employment protection legislation (EPL) requires a qualifying period before it can be invoked and typically compensation for redundancy increases with tenure/seniority. Thus, also for these reasons, the more recently hired employees will be cheaper to fire. Obviously, this will disproportionately affect young people (O’Higgins, 1997). However, it is worth stressing that in Denmark the EPL asymmetry between young and older workers is nil or at least very limited compared with other OECD countries (more on this in Section 4).⁵² Other things being equal, it implies that the overall cost of the economic crisis in terms of job destructions should be less concentrated on young workers.

Third, young people are more likely to voluntarily quit their jobs than older workers.⁵³ If such voluntary quitting or behaviour or “shopping around” is less cyclically sensitive than job availability, one consequence is that when job opportunities become scarce, unemployment will increase more amongst those groups with a higher likelihood of quitting their jobs (Moser, 1986).

52. For example Spain, Poland or France.

53. Their initial experiences in the labour market are likely to involve a certain amount of “shopping around” in so far as circumstances permit, so as to find an appropriate occupation. The opportunity cost of doing so is lower for young people. They will tend to have less experience and lower wages, and are less likely to “need” a job to support a family. Blanchflower and Freeman (1996) report that, in the United States, young people between the ages of 16 and 25 typically hold 7-8 different jobs.

3. Starting wages and labour relations

A. No legal minimum wage but relatively high starting wages for low educated workers

There is no statutory national minimum wage in Denmark. For those covered by collective agreements, hiring wages are regulated by trade agreements resulting from the collective bargaining between the social partners. They reflect a host of factors, like previous work experience, the nature of the work, whether it is day-time work or evening work etc. Age is only a determining factor under the age of 18 and with respect to apprenticeship (see Chapter 2, Section 4).

In 2007, about one-out-two workers of the private sector was part of a collective agreement with an explicit wage floor. The agreed minimum wage varies from sector to sector with the lowest in 2007 being around EUR 12 (DKK 90) per hour, but with many agreements having a minimum wage of around EUR 13 (DKK 100) per hour.

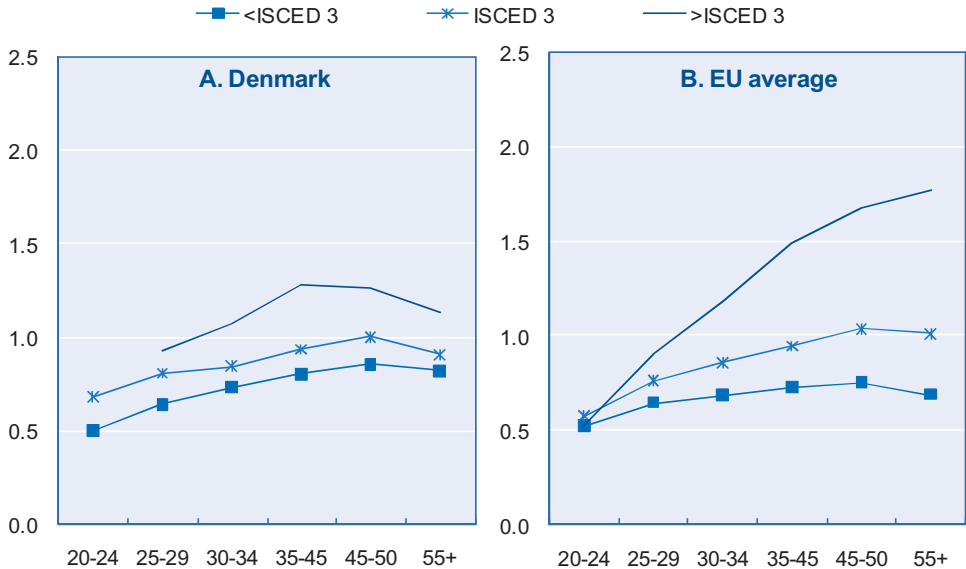
B. Wage profiles

In the absence of statutory minimum wage, it makes sense to focus on actual wages and benefits received by workers. European data (EUSILC) can be used to compute relative age-wage profiles that can be compared internationally (Figure 3.6).

The usual pattern emerges: younger people earn less than older ones. In 2007, relative earnings profiles in Denmark were very similar to those observed on average across the European Union, except perhaps for prime-age individuals holding tertiary education qualifications (>ISCED 3) for whom relative pay appears much inferior to what it is on average in Europe. This confirms that the tertiary graduate gross wage premium is quite low in Denmark by OECD standards (see Figure 2.10 for more evidence on this), and in line with the “compressed wage structure” story often referred to in Nordic countries.

Figure 3.6. **Wage profiles of full-time workers, by educational attainment, Denmark and Europe,^a 2007**

Percentages of average monthly gross wage among 15-64-year-olds, all educational levels pooled



a) Unweighted average of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden and the United Kingdom.

Source: European Survey on Income and Living Conditions (EUSILC).

4. Non-wage costs and other barriers to employment

A. Non-wage costs

The tax-wedge – the difference between what employers pay out in wages and social security charges and what employees take home after tax social security deductions and cash benefits – has also to be taken into account. Table 3.2 (3rd column) indicates that Denmark's tax wedge in 2008 was intermediate compared to those registered in other OECD countries. This result also holds for low-wage earners (2nd column). In fact, indirect wage costs (*i.e.* social security contributions) are very low in Denmark by international standards, whilst the rate of direct taxation of wage income is high (Westergaard-Nielsen, 2006).

Table 3.2. **Tax wedge including employer social security contributions in OECD countries, 2008**

Percentages

	Tax wedge on low-wage earner ^a	Tax wedge on average earner ^b
Belgium	50.3	56.0
Hungary	46.7	54.1
Germany	47.3	52.0
France	45.5	49.3
Austria	44.4	48.8
Italy	43.0	46.5
Netherlands	41.7	45.0
Sweden	42.5	44.6
EU19	39.8	43.9
Finland	38.3	43.5
Czech Republic	40.0	43.4
Greece	37.6	42.4
Denmark	38.9	41.2
Turkey	37.6	39.7
Poland	38.7	39.7
Slovak Republic	36.1	38.9
Spain	33.8	37.8
Norway	34.3	37.7
Portugal	32.9	37.6
OECD	33.5	37.4
Luxembourg	29.6	35.9
United Kingdom	29.7	32.8
Canada	26.6	31.3
United States	28.0	30.1
Japan	28.0	29.5
Switzerland	26.5	29.5
Iceland	23.7	28.3
Australia	21.9	26.9
Ireland	16.0	22.9
New Zealand	18.2	21.2
Korea	17.4	20.3
Mexico	10.9	15.1

Countries are ranked by descending tax wedge on low-wage earner.

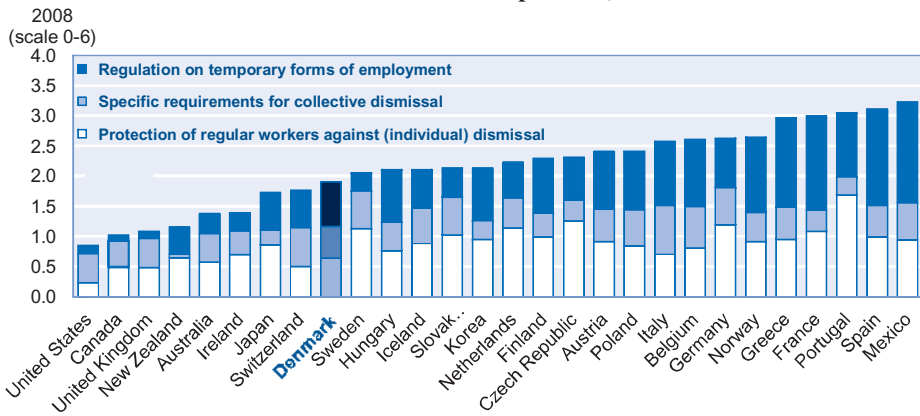
- a) Total tax wedge including employer mandatory social security contributions for a single worker with no children earning 67% of the average production wage.
- b) Total tax wedge including employer mandatory social security contributions for a single worker with no children earning the average production wage.

Source: OECD Taxing Wages database.

B. Employment protection and dismissal rules

Theoretically, very strict employment protection could negatively affect employment prospects for low-skilled and inexperienced workers, by restraining employers' willingness to take a risk on them. But the OECD indicator of the strictness of employment protection at 1.91 in 2008 (Figure 3.7) suggests that Denmark has one of the less strict employment legislation frameworks in Europe. This probably reflects the Danish internationally praised “flexicurity” model (see Box 3.1 for more details) where generous unemployment and welfare benefits are granted in exchange for very little legal job protection (Westergaard-Nielsen, 2006).

Figure 3.7. Overall strictness of employment protection and its three main components, 2008^a



a) Countries are ranked from left to right in ascending order of the overall summary index.

Source: OECD Employment Protection database.

Box 3.1. Flexicurity

Flexicurity – the contraction of the English words, flexibility and security – is currently a popular concept for employment and labour market reforms in many OECD countries. In recent years, Denmark has become the prime example of a real-life flexicurity labour market. The Danish case of flexicurity is a combination a flexible labour market with liberal hiring-and firing procedures on the one hand, and relatively generous social security and active labour market policies on the other hand. In general terms, Denmark has succeeded in combining: *i*) relative generous unemployment benefit schemes; *ii*) an active labour market policy and *iii*) flexible employment contracts. The first two ingredients are covered extensively in Chapter 4). The focus hereafter in on the third one.

There are a couple of numerical indicators that suggest that Danish workers change jobs more often than elsewhere. Denmark is among a group of countries with a rather low average tenure with the same employer (around 8.5 years in 2005). In contrast, the average tenure of 12 years in Japan in year 2000 is almost 50% higher than in Denmark. The average number of jobs held per worker in Denmark is also the highest in Europe; almost six jobs in Denmark, compared to four jobs on average in EU-25. More than 70% of people in Denmark think that changing jobs every few years is good, compared with 40% in Europe.

The high degree of mobility from employer to employer is probably linked to the relatively modest level of job protection. Low job protection exists since the 1980s and is consistent with the Danish industrial structure dominated by small and medium-sized enterprises. In practice, almost all Danish workers should be considered as “temporary” workers who can be dismissed upon short notice. Such flexibility is also attributable to the tradition whereby the social partners regulate most of the terms and conditions important to the labour market themselves, as opposed to the state regulation found in other countries.

Source: Danish Economic Council (2007b); Bredgaard and Larsen (2007), OECD (2004b).

5. Gender wage gap

There may also be barriers to employment and equal pay for some categories of workers, typically women. In many OECD countries, despite dramatic educational gains by women⁵⁴ in terms of tertiary education participation and completion, women are behind in terms of labour market outcomes. How does Denmark fare in this respect? A recent release of the *OECD Employment Outlook* (OECD, 2008c, Chapter 3) shows that in Denmark women’s employment gap in relation to men is about 8.8%,⁵⁵ one of the lowest across the OECD.

There is few available international evidence about gender wage gap. But one can again turn to the EUSILC survey to get some evidence on this important labour market outcome. Using the gross monthly earnings information of young workers aged 16-29 it contains, one can estimate a series of log-linear earnings⁵⁶ equations that include a gender dummy.

-
54. In Australia, for example, young women have higher educational attainment than young men. By the age of 24, 80% of women had completed upper secondary education in 2007 compared with 71% for men (OECD, 2009b).
 55. The gender employment gap is defined as the difference between male and female employment rates as a percentage of the male employment rate.
 56. The advantage of the log-linear specification of the wage W is that it generates estimates for the X explanatory variable coefficient that are easy to interpret as

Table 3.3 reports the results for a model that just control for age, education and labour supply⁵⁷ of the respondents. They confirm the existence of a gross (monthly) wage gap between men and women of equal age, equal educational attainment⁵⁸ and who are similar in terms of supply of labour. The average of coefficients points at an unaccounted gap of 20% across Europe, whereas the estimated unaccounted gap for Denmark is above at 25%. This high gap compares unfavourably with that of the Netherlands, Ireland, the United Kingdom or Germany, where it is virtually non-existent.

Danish research allows going one step further in explaining the gender wage gap. Analysing wage data covering the period 1997-2006, Deding and Larsen (2008) find that 70 to 80% of the gross wage gap⁵⁹ can be explained by gender differences in terms of work experience, occupation/position within firms or the chosen sector or industry.

The gender-biased allocation across sectors or industry pointed out by Deding and Larsen (2008) could be partially attributed to systematic difference in terms of fields of study within a certain educational group,⁶⁰ leading to a gender-biased allocation across sectors or industries. There is indeed international evidence of a persistent bias gap as to the type of tertiary education⁶¹ (> ISCED 3) chosen by young women resulting in occupation segregation.⁶² Women still dominate within teacher training, pedagogy, health and social care, whereas men dominate within the natural sciences, engineering or advanced VET programmes (OECD, 2008b).

they correspond to points of percentage of change of the wage level. For a model $\log W = \beta_0 + \beta_1 X + \varepsilon$ there is indeed that $\beta_1 = d \ln W / dX = (dW/W) / dX \approx (WX + 1 - WX) / WX$ when $dX = 1$.

- 57. Average number of hours of work per week.
- 58. Using ISCED categories.
- 59. Ranging from 17 to 21%.
- 60. All individuals with a tertiary educational attainment for instance.
- 61. This issue should not be confused with that of the overall propensity of women *versus* men to participate in tertiary education. It is well establish that in many OECD countries, including Denmark, young women now outnumber their male counterparts in tertiary education completion.
- 62. Canadian female graduates, for instance, are overrepresented in low-paid fields (arts and humanities, education) and underrepresented in those that offer higher earnings prospects (engineering, computer sciences) (OECD, 2008b).

Table 3.3. **Female wage gap, young women aged 16-29, Europe, 2007**
OLS coefficients (and p-value in italics)^a

	Estimate	P values
Spain	-0.28	<i>0.0000</i>
Norway	-0.27	<i>0.0002</i>
Denmark	-0.25	<i>0.0000</i>
Poland	-0.25	<i>0.0000</i>
Iceland	-0.23	<i>0.0002</i>
Austria	-0.23	<i>0.0000</i>
Greece	-0.22	<i>0.0000</i>
Portugal	-0.22	<i>0.0000</i>
Sweden	-0.22	<i>0.0006</i>
Finland	-0.21	<i>0.0001</i>
Slovak Rep.	-0.20	<i>0.0000</i>
Belgium	-0.20	<i>0.0000</i>
Czech Rep.	-0.18	<i>0.0000</i>
Italy	-0.16	<i>0.0000</i>
Luxembourg	-0.15	<i>0.0008</i>
Hungary	-0.12	<i>0.0007</i>
France	-0.11	<i>0.0050</i>
United Kingdom	-0.07	<i>0.0112</i>
Germany	-0.02	<i>0.6980</i>
Ireland	0.01	<i>0.7738</i>
Netherlands	0.03	<i>0.4196</i>
EU unweighted average	-0.17	

a) Estimated model is log- linear. List of controls includes: highest educational attainment (ISCED 1 to 6), age, age square, and hours worked per week. The gender gap is captured by a gender dummy variable (1=Women, 0=Men).

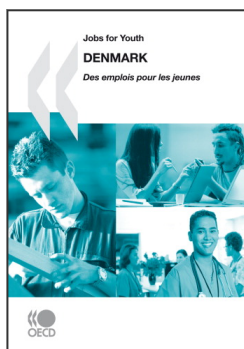
Source: European Survey on Income and Living Conditions (EUSILC).

6. Key points

Until very recently Denmark was characterised by tight labour markets. Capacity utilisation rose close to historical peaks and skilled labour shortages became a more prominent constraint. A tight market also implied better labour market opportunities for low-educated youth or young immigrants.

However, in the immediate future, issues of concern to Danish policy makers will include rising youth unemployment. The world is indeed facing a global economic crisis that is affecting Denmark and is currently deteriorating the labour market prospects of many Danish citizens.

This said, Denmark's labour market institutions are supposedly conducive to good employment prospects for youth, and this should help quickly reduce youth unemployment, when, hopefully the economy starts picking up. Other elements should encourage risk-averse employers to recruit inexperienced youth with longer-than-usual unemployment spells. They comprise: *i*) a moderate tax-wedge by European standards; and, what is more *ii*) a relatively lax employment protection framework.



From:
**Jobs for Youth/Des emplois pour les jeunes:
Denmark 2010**

Access the complete publication at:
<https://doi.org/10.1787/9789264075160-en>

Please cite this chapter as:

OECD (2010), "Demand-side opportunities and barriers", in *Jobs for Youth/Des emplois pour les jeunes: Denmark 2010*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264075160-7-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.