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At work but earning less:

**Trends in decent pay and
minimum wages for young people**

Damian Grimshaw

Employment and
Labour Market
Policies Branch

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Preface

The primary goal of the ILO is to work with member States towards achieving full and productive employment and decent work for all. This goal is elaborated in the ILO Declaration 2008 on *Social Justice for a Fair Globalization*,¹ which has been widely adopted by the international community. Comprehensive and integrated perspectives to achieve this goal are embedded in the Employment Policy Convention of 1964 (No. 122), the *Global Employment Agenda* (2003) and – in response to the 2008 global economic crisis – the *Global Jobs Pact* (2009) and the conclusions of the *Recurrent Discussion Reports on Employment* (2010 and 2014).

The Employment Policy Department (EMPLOYMENT) is engaged in global advocacy and in supporting member States in placing more and better jobs at the center of economic and social policies and growth and development strategies. Policy research and knowledge generation and dissemination are essential components of the Employment Policy Department's activities. The resulting publications include books, country policy reviews, policy and research briefs, and working papers.²

The *Employment Policy Working Paper* series is designed to disseminate the main findings of research on a broad range of topics undertaken by the branches of the Department. The working papers are intended to encourage the exchange of ideas and to stimulate debate. The views expressed within them are the responsibility of the authors and do not necessarily represent those of the ILO.

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¹ See http://www.ilo.org/public/english/bureau/dgo/download/dg_announce_en.pdf

² See <http://www.ilo.org/employment>.

Foreword

In 2012, the International Labour Conference adopted a resolution that contains a call for action to tackle the unprecedented youth employment crisis through a set of policy measures.¹ This resolution provides guiding principles and a package of inter-related policies for countries wanting to take immediate and targeted action to address the crisis. The package comprises conditions of work and wage policies that ensure equal treatment, offer adequate protection and improve employment prospects of young workers, including through minimum wages as tool to prevent abusive and discriminatory pay practices and improve the purchasing power of young workers. The same resolution requested the International Labour Office to collect, analyse and disseminate data and information on youth labour market trends, including on wages, with a view to monitor emerging issues.

The paper “At work but earning less: Trends in decent pay and minimum wages for young people” reviews existing literature and analyses recent data on young workers’ earnings. The findings of the paper point to the increase over time of the youth wage discount, i.e. the wage gap between adult and young workers. The widening of this gap has resulted in a reduced purchasing power of young workers and increased polarization of their earnings, compared to adult workers. Contrary to mainstream economic models of labour markets, the findings of the analysis show that the increase of the youth wage discount occurred despite an increase in the average level of education of young people and a decline in their share of the working age population.

This paper also reviews the minimum wage policy of several countries and shows that, in some of them, young people are often subject to a wage that is lower than the minimum one (the so called youth or sub-minimum wage). The internationally-accepted principle of “equal remuneration for work of equal value” sees the value of the work performed as main criterion for wage determination, irrespective of the worker’s age. One key function of the minimum wage is to protect earnings at the lower end of the pay scale and, by redistributing income, to boost aggregate demand through the multiplier effect. Most importantly, it prevents labour market discrimination on any grounds. Together with the lowering of employment protection of young workers, the setting of a sub-minimum wage for youth is perhaps one of the most controversial dimensions of the literature on youth employment, particularly with respect to the impact of statutory minimum wage on employment.

Authored by Professor Damian Grimshaw of the University of Manchester, this publication is the result of an inter-department project led by the Employment and Labour Market Policies Branch and the Inclusive Labour Markets, Labour Relations and Working Conditions Branch of the ILO. The project was coordinated by Patrick Belser, Senior Wage Specialist, and Gianni Rosas, Senior Employment Specialist and Head of the Youth Employment Programme, with the support of and inputs by Kristen Sobeck, Wage Specialist of the ILO. The inputs of Valentina Barucci, Youth Employment Officer, are also acknowledged with many thanks.

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¹ See ILO resolution “The youth employment crisis: A call for action”, Geneva, 2012, accessible at http://www.ilo.org/ilc/ILCSessions/101stSession/texts-adopted/WCMS_185950/lang--en/index.htm

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1. Introduction

The global economic crisis has drawn into sharp relief the many problems young people face in the labour market around the world. The headline indicator is the unemployment rate. Young people typically face higher unemployment rates since they also join the labour market at the end of a long queue, have limited work experience, are often crowded into low-skill sectors, and tend to suffer by being the last hired and the first fired. The economic crisis has exacerbated their labour market position in both advanced economies and in developing countries (ILO 2011, ILO 2012: 47, 75).

Failure to secure decent employment and pessimism about their economic prospects add to the adverse conditions that underpin the current waves of young people's protests in several countries. Moreover, unemployment has a major scarring effect on young people's future employment and earnings. A further shock to young people's economic prospects results from the austerity measures adopted in many countries, which shifted the burden of past spending deficits to younger generations. Youth in paid employment will likely be saddled with higher social security and tax contributions but at a significantly reduced return in the form of pensions, access to good education, healthcare and welfare benefits. The terms of social settlements in many countries are being hastily redrawn to the disadvantage of young people.

This report reviews the issues, empirical evidence and policy approaches that shed light on youth wages. It has three main goals – first, to explore the analytical tools and concepts applied in the academic literature to evaluate young people's pay, second to review the international experience with the use of minimum wages in protecting youth wages and third to draw out the relevant policy implications and a possible research agenda. Several key questions and conundrums drive the analysis, including:

- why is there such enormous cross-national variation in the gap between youth wages and those of adult workers?
- why (in almost all countries for which data are available) have youth wages diminished relative to other workers' wages in recent years despite a shrinking supply and increased education among those in the labour market?
- what roles do education and training and labour market institutions (e.g. wage-setting systems and employment protection legislation) play in shaping young people's wage prospects?
- why do half the countries with a statutory minimum wage set a lower minimum wage for young workers and the other half apply a standard rate to all workers? and
- what effects do the level of minimum wage and use of age-related rates have on young people's employment and pay conditions?

The report is structured into three parts. Part one compiles evidence from a wide range of international studies and data sources to identify and analyze key characteristics of the wage structure for young people. It then considers how patterns of pay map against patterns and trends in the youth labour supply and updates the picture with a consideration of conditions resulting from the post-2007 economic crisis. Part two argues for the need to consider how key institutions frame and shape the peculiar characteristics of the youth labour market, with a focus on skill formation systems, wage structure and wage-setting systems, and the use of, and rules governing, part-time and temporary employment. Part three reviews a sample of countries' minimum wage rules with a special focus on the lessons learned from the use of sub-minimum wages for young people. It also includes reviews of particular moments of policy reform in selected countries that have served as quasi-natural experiments for the analysis of the pay and employment effects of age-related minimum wages. Finally, part four concludes with a summary and reflections on policy lessons and further research.

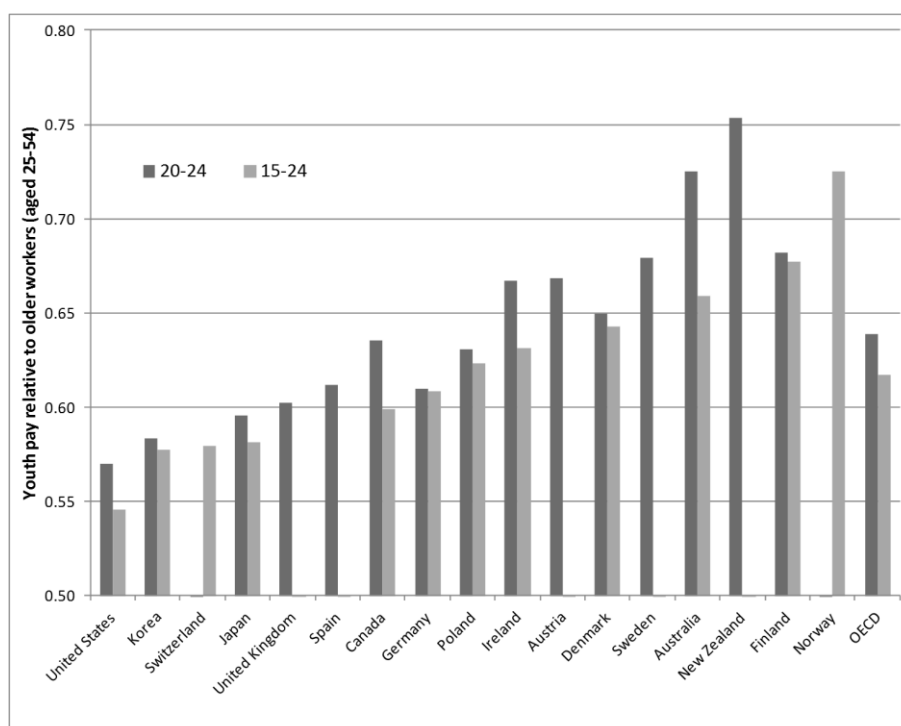
2. Young people’s position in the labour market

2.1. Wages for young people

Around the world, young people earn, on average, lower wages than other workers. This fits with conventional expectations. Age and experience in a job are widely perceived to correlate positively with earnings. It is notable, however, that there is no international standard or norm in the size of young people’s pay relative to other workers - what is sometimes referred to as the youth ‘wage discount’ (Blanchflower and Freeman 1999). The youth wage discount tends to be highest in some of the less developed countries of the world and lowest in wealthier ones, although some developed countries appear to have similar youth wage discounts to those of less wealthy countries. One fact common to the advanced economies, which provides a puzzle for our subsequent analysis, is a near universal trend of falling youth pay relative to other workers. This section reviews some of the available wage data.

Recent data for the countries of the Organisation for Economic Co-operation and Development (OECD suggest that young workers aged 15-24 earned on average around 62 per cent the wages of older workers (see Figure 2.1).

Figure 2.1. Average pay of young workers compared to older workers, OECD countries



Note: Two groups of young workers shown, aged 15-24 and 20-24; older workers defined as aged 25-54; gross average earnings of full-time workers; mix of hourly, weekly, monthly and annual earnings for different countries.

Source: Author’s compilation based on data from OECD earnings database, 2006.

There is enormous variation across countries. The highest wage discount prevails in the United States where young people earn just 55 per cent of the wage of older workers and the lowest discount is found in Norway where the corresponding ratio is 73 per cent. For the cohort of young workers aged 20-24, the wage discount is smaller in all countries, with a range in the pay differential from 57 per cent in the United States to 75 per cent in New Zealand. Alternative, less complete and non-harmonized data for 2010 collected by the ILO provide similar information for Turkey, Mexico and South Africa. In Turkey, youth aged 20-24 earned approximately 66 per cent of average wages of all workers. In Mexico the same age group earned around 77 per cent of all workers' average earnings, while in South Africa youth aged 15-24 earned around 75 per cent of the median wage of all workers.¹

Available data for large cities in West Africa also reveal a substantial youth wage discount and confirm large inter-country variation. The data also point to a substantial additional wage penalty for young female workers.² Data for the younger 15-19 years old age group show that youth pay drops as low as 24 per cent of older workers' pay for young men in Niamey, the capital of Niger, and as low as 15 per cent of older male workers' pay for young women workers in Abidjan (the largest city in the Ivory Coast) and Bamako, capital city of Mali; women's average pay is substantially lower than men's in all seven cities shown, so young women's pay compared to older women's pay is higher, ranging from 28 per cent to 54 per cent (Table 2.1). For the 20-24 age cohort, the youth wage discount is lower than for the 15-19 age group, as seen for the OECD countries, but still significant: young men aged 20-24 can expect to earn on average between 42 per cent and 66 per cent of older men's pay and the comparable figures for young women are 20-31 per cent, or 45-66 per cent relative to older female workers' pay.

Table 2.1. Male and female young workers' pay compared to older workers, West African cities

	Abidjan (Ivory Coast)	Bamako (Mali)	Cotonou (Benin)	Dakar (Senegal)	Lome (Togo)	Niamey (Niger)	Ouagadougou (Burkina Faso)
Relative to male older workers' pay:							
Male 15-19	0.27	0.31	0.30	0.32	0.30	0.24	0.26
Male 20-24	0.42	0.66	0.49	0.45	0.47	0.44	0.41
Relative to female older workers' pay:							
Female 15-19	0.15	0.15	0.25	0.20	0.19	0.16	0.16
Female 20-24	0.28	0.20	0.31	0.29	0.31	0.27	0.25
Relative to female older workers' pay:							
Female 15-19	0.28	0.36	0.54	0.40	0.40	0.28	0.29
Female 20-24	0.53	0.46	0.66	0.57	0.63	0.48	0.45

Source: Author's compilation based on Développement Institutions & Analyses de Long Terme (DIAL, 2007: Table 9a).

¹ Source: ILO database. It is not possible to compare between countries both because of differences in definitions of earnings (hourly, weekly, annual, etc) and because the reference wage is all workers rather than older workers which conflates country differences in youth composition of the workforce.

² It is not possible to make direct pay comparisons between regions due to differences in data sources, definitions of average earnings and population samples among other factors.

Trends in youth pay

Analysis in the 1970s and 1980s of young workers' relative pay (i.e. comparison between young and adult workers' pay) in OECD countries highlighted a surprising downward trend despite the shrinking supply of young workers which ought to have been favourable for their pay prospects, all other factors held constant (OECD 1986). Blanchflower and Freeman (1999) reported a continuation of this pattern through the 1990s in a selection of OECD countries. Comparing across countries, Blanchflower and Freeman demonstrated that the magnitude and timing of trends differed by country, as did the distribution of declining pay among males and females, as well as between the cohorts of young workers aged 15-19 and 20-24. For example, Australia witnessed a steady erosion of young workers' relative pay during the entire period 1975-1994. In Canada the drop was largely in the late 1970s and early 1980s although continued for females aged 20-24 and in Denmark the drop was mostly significant among the younger 15-19 male and female groups, but only during 1986-1989.³

A review of these studies and their comparison with OECD earnings data points to a continued deterioration in young workers' earnings. Of the 11 OECD countries for which data are available for the period 1996-2006, nine register a falling relative pay level and just two (Canada and Ireland) an upwards trend (indicated on the upper left of the diagonal line shown in Figure 2.2).⁴ The OECD 11-country average shows a fall in young workers' pay from 64 per cent of older workers' average earnings to 62 per cent. The largest falls are registered for Denmark and Poland, the two countries with the highest levels of youth pay in 1996 among the sample shown in the figure. The links with changing youth labour supply and compositional education effects are explored in the following section.

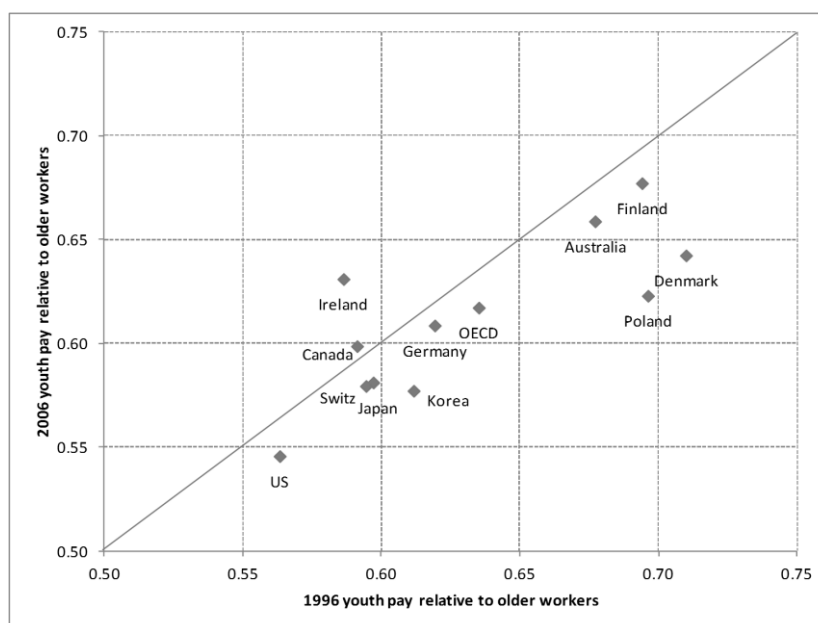
Again, the alternative, less complete source of trend data for seven countries collected by the ILO provide further substance to this picture of trends.⁵ For the United States and Australia, the years since 2006 have witnessed a continued downward trend; in the US workers aged 16-24 witnessed a drop from 61 per cent to 58 per cent during 2006-2011 (in this case expressed as a ratio of all workers rather than older workers) and in Australia the drop for workers aged 20-24 was from 70 per cent to 66 per cent during 2006-2010. Data for Canada suggest the picture of stability shown in Figure 2.2 has been sustained; the ratio of pay for young workers aged 15-24 to all workers was 58 per cent in 2006 and 2010. However, a different picture emerges for Japan since 2006 where the ILO data shows a falling nominal wage for all workers and a small rise among young workers leading to a marginal rise in the young 20-24 year old workers' relative pay, from 66 per cent to 67 per cent, during the period 2006-2010. Interestingly, the data suggest male and female workers experienced divergent trends in Japan during this period - young men enjoyed a rising wage relative to all workers but young women experienced no change. However, closer inspection shows that in fact women in both age groups experienced rising nominal wages on average and men falling nominal wages; the gender pay gap for young workers and for all workers has thus narrowed. Additional data for three countries not included in Figure 2.2 show a similar trend was experienced in the UK in recent years, but in Turkey and Mexico there was a marginal rise in the youth wage (aged 20-24) relative to all workers during 2006-2010 by one percentage point.

³ See, Blanchflower and Freeman, 1999, Figures 3a – 3c.

⁴ Australia, Canada, Denmark, Finland, Germany, Ireland, Japan, Korea, Poland, Switzerland, United States

⁵ The data are not harmonised and therefore do not allow for comparison between countries (see footnote 3). Data for the United States are median weekly, for Australia average weekly, for the UK median hourly, for Canada, Turkey and Mexico average hourly and for Japan average monthly data from ILO databases.

Figure 2.2. Trends in youth pay relative to older workers, 1996-2006, OECD



Source: OECD earnings database, 15-24 age group compared to 25-54 age group. See appendix Table 1.

The implications of low pay among youth

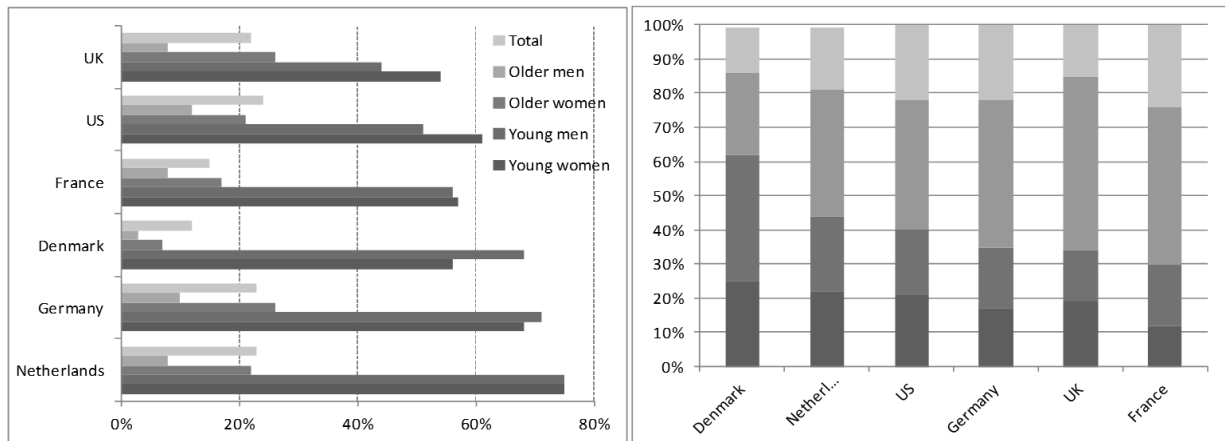
The size of the youth wage discount is such that young people in work face a considerably high risk of being employed in a low-wage job. In some countries, the bulk of low-wage jobs is indeed occupied by young people, which has a considerable influence on policy debates about the role of low-wage jobs as stepping stones towards more stable, better paid jobs or as low-wage traps. Nevertheless, despite its obvious relevance for policymakers, the issue of low-wage work would appear to be relatively low in the list of current priorities. Evidence of this includes the absence of (low-)wage indicators in the analysis of youth labour markets and in the identification of the related implications for policymakers. The various explanatory factors for young people's disadvantaged wage position are discussed in section 2.2 of this paper. This section reports some of the available empirical evidence.

Drawing on data of the early 2000s, the OECD Employment Outlook (2006) reported a higher incidence of low-wage work among youth than older workers – at least twice the size - in all OECD countries for which data were available.⁶ More recent data for Europe and the United States suggest that being young significantly increases the probability for an individual to be in low-wage employment. Wage data collected and analyzed as part of a recent six-country low-wage project funded by the Russell Sage Foundation reveal that young women and young men are between 2.5 and 5.8 times as likely to be in low-wage employment as the overall average for the country.⁷ In terms of the absolute incidence of low-wage employment, a majority of young male and female workers are in low-wage employment in all six countries (except for young men in the United Kingdom for whom the low-wage incidence is 44 per cent - see Figure 2.3).

⁶ See OECD, 2006, p. 175.

The gender divide is mixed, with two out of six countries (the United Kingdom and the United States) recording a significantly higher incidence of low-wage employment among young women, and two recording similar incidences (France and the Netherlands). In two cases the low-wage rate is relatively higher among young men (Denmark and Germany). This contrasts with the situation of adult workers, among whom women are consistently affected by higher risk of low pay compared to men.

Figure 2.3. The incidence and composition of low-wage employment among young/older males/females, Europe and the US

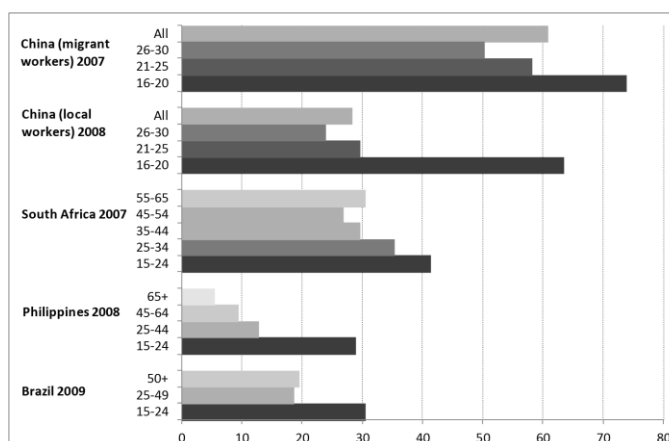


Note: low-wage employment defined as earnings less than two thirds of the median for all employees.
Source: Adapted from Mason and Salverda (2010: Table 2.2).

Young workers account for a disproportionate share of all low-wage workers. Country data collected by the ILO for the 2010-11 Global Wage Report, show a consistently higher risk of low-wage employment among young workers than older workers (Figure 2.4). The risk is particularly high among young migrant workers in China where the data record a low pay incidence of 74 per cent among 16-20 year olds and 58 per cent among 21-25 year olds, compared with an incidence of 28 per cent for all local workers. Young workers represent 62 per cent of all low-wage workers in Denmark, where low-wage employment is considered to be almost entirely a problem of young people, as explored in Box 2.1. The available evidence for Latin American countries also points to a similar pattern. In the early 1990s, young workers constituted around one third of workers in low-wage jobs across the region, compared to a share of around one fifth of the total workforce. This is certainly not the case in other countries, however, where policy reports are often keen to emphasize the fact that low-wage work is more a problem for the adult workforce, especially women, and not the result of employers paying low wages to the young and inexperienced.⁸

⁸ See, for example, Boushey et al., 2007 for the United States.

Figure 2.4. The incidence of low-wage employment by age group in China, South African, Philippines and Brazil

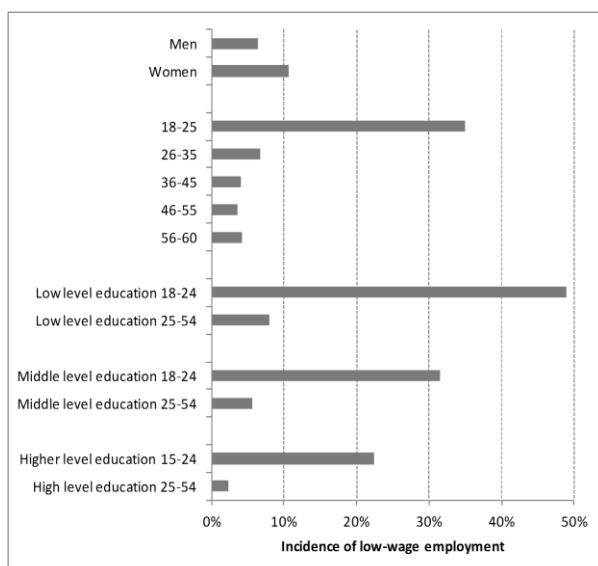


Source: ILO Global Wage Report: Figure 23, own compilation.

Box 2.1. Low-wage work among young people in Denmark

The phenomenon of low-wage employment in Denmark is largely confined to young people. Among older workers (25-54 years), the proportion of workers earning less than two thirds of the median is comparatively low - between 2.3 per cent and 8.0 per cent depending on the level of education – but among young workers the overall incidence of low-wage employment is 35 per cent, increasing up to 49 per cent for 18-24 year olds with only a low level of education (see Figure).

The large difference in proportion of young and other workers in low-wage employment has two implications: first, that such work tends to be temporary and second, that a high share of the population will have worked in a low-wage job at some time in their lives, a factor that may contribute to social cohesion in Danish society. In fact, the 'share of low-wage work among young people is far higher in other countries where the incidence of low pay is higher. The



proportion of young workers in low-wage employment almost doubled over the 1980-2002 period while among older workers there was no change. The upward trend appears to be the result of two factors. First, change in welfare policy limited unemployment benefits for young people to a maximum of six months, thus lowering the reservation wage. Second, an increasing number of students take low-wage, part-time jobs. More than half of Danish youth work during their studies, one of the highest rates in the OECD (see Figure 2.3). In the retail and hotel sectors, for example, student workers account for more than one fifth of the workforce (Westergaard-Nielsen 2008). Danish students receive a small grant from the government for the duration of their studies and additional earned income is allowed up to a limit of approximately €10,000 before the grant is reduced. As a result, young students have an incentive to work relatively few hours and for relatively modest pay.

In their detailed analysis of the retail sector, Esbjerg et al. (2008) argue that young students employed in low-wage employment constitute a 'transitional workforce' who account for the bulk of all low-wage jobs. They characterise their approach to work and their employment prospects in positive terms: *[Transitional workers] will leave the low-wage group as they graduate from high school or university and go on to formal jobs or careers. Because they do not expect a career in retailing, these employees have modest pay demands. They want work to be fun, which they mainly associate with good companionship with fellow workers, both on and off the job* (see Esbjerg et al., 2008, p. 173).

Source: Westergaard-Nielsen (2008) and Figure adapted from Table 2.8, author's compilation.

2.2. Labour supply and youth wages

Mainstream economic models of labour markets suggest that the wage position of young workers is to a great extent shaped by their labour supply. Increased volumes of young people in the labour market may in certain contexts act to dampen upward pressures on their level of pay relative to older workers; conversely, increased scarcity of a shrinking pool of youth labour may be expected to place upwards pressure on wages paid by employers. Much depends, however, on the effect of educational attainment and work experience among young people in the labour market. Low pay may be justified to some extent where it compensates for low education and is designed around a period of training while in employment. Education tends to have an important positive impact on pay, whether because it acts as a signal to employers that the educated worker can be assumed to be more productive or because education actually does enhance productivity.⁹ For example, the average wage premium for an adult worker with tertiary education in OECD countries in 2009 was around 50 per cent compared to someone with upper secondary education. Conversely, the wage penalty of not having completed upper secondary education was approximately 23 per cent.¹⁰ Therefore, it could be expected that country differences in youth wage discounts reflect differences in young people's educational attainment relative to the adult workforce. Countries with larger youth wage discounts are likely to have larger shares of young people with a low level of education. Moreover, gender gaps in both educational attainment *and* wage returns to education are likely to shape differences between countries and over time. A growing cohort of young educated women who nevertheless earn a smaller wage return to their education compared to men may therefore be associated with an increase in the youth wage discount over time.

There are complex feedback effects as well. As relative pay drops, young people face growing incentives to pursue further education beyond compulsory schooling, leading to a diminished pool of young people in the labour market. This dynamic may potentially generate upward pressure on pay. However, multiple factors beyond labour supply can shape youth pay. For instance, the trend observed in several countries (such as Denmark) of students taking part-time work at modest rates of pay is likely to dampen upward wage pressures.¹¹

Youth labour supply

A number of studies have shown that there has been a downward trend in the share of young people in the working-age population since at least the 1980s.¹² With the exception of Africa, all regions of the world have witnessed a falling share of young people (15-24 years) compared to the working-age population (15-59 years). Figure 2.5 shows a sudden drop in North America in the 1980s and a longer-term stable downward trend in Asia, Europe and Latin America and the Caribbean. The largest drop occurred in Latin America and the Caribbean (from a 38 per cent share to 29 per cent) and the lowest share in 2010 was recorded in Europe where young people account for just one fifth of the total population aged 15-59 years.

⁹ See Chevalier et al. (2004) for an attempt to separate out the empirical support for these competing views.

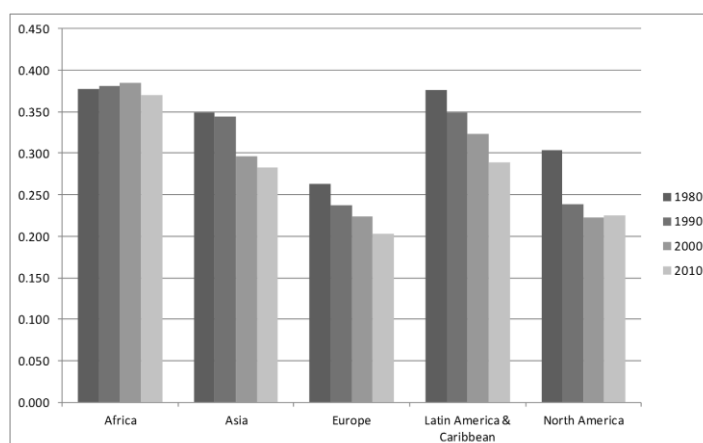
¹⁰ See OECD: Employment Outlook, OECD, Paris, 2011.

¹¹ See Box 2.1.

¹² See for instance Blanchflower and Freeman, 1999; OECD, 2008.

Data for the major economies of the world display a similar downward trend. Brazil registers the largest drop from the 1980 share among the 10 countries in the Table accompanying Figure 2.5. Nevertheless, the youth share stabilized during 2000-2010 in China, the United States, France and Germany and in fact increased in Australia and the United Kingdom. Overall, the large declines in cohort size would be expected to act as an enabling condition for increased pay for young workers relative to other workers. However, as documented above, this is not what occurred in most OECD countries.

Figure 2.5. International trends in the youth share of the working-age population (15-24/15-59) by region and for selected countries



	1980	1990	2000	2010	Change 1980-2010
Brazil	0.375	0.333	0.318	0.268	-0.107
China	0.337	0.346	0.241	0.246	-0.091
Italy	0.251	0.252	0.191	0.168	-0.083
USA	0.303	0.240	0.224	0.227	-0.076
Germany	0.259	0.221	0.184	0.185	-0.074
Australia	0.287	0.259	0.219	0.228	-0.059
Russia	0.273	0.218	0.249	0.214	-0.059
France	0.263	0.248	0.215	0.211	-0.052
India	0.357	0.344	0.333	0.310	-0.047
UK	0.266	0.244	0.202	0.219	-0.047

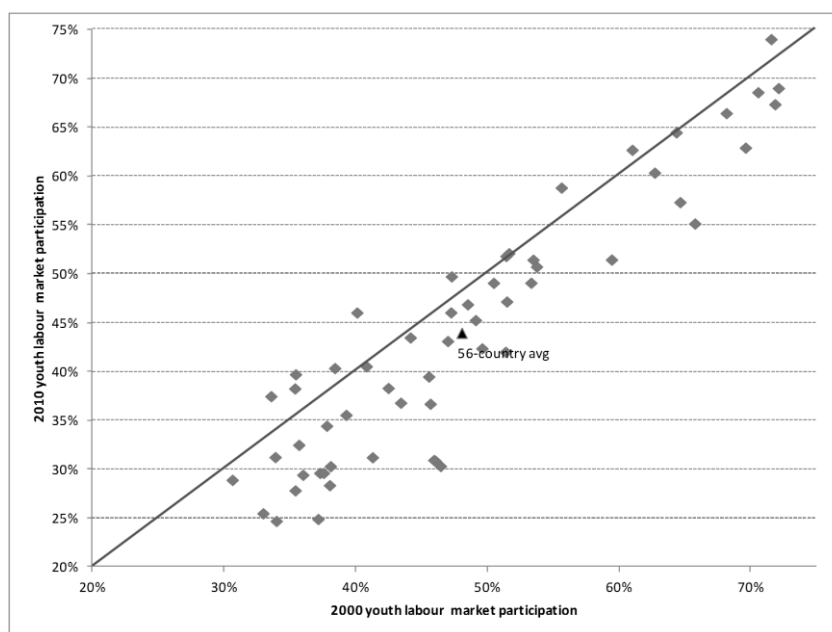
Source: UN Population statistics, http://esa.un.org/wpp/unpp/panel_indicators.htm

International evidence tends to show a fall in the rate of labour market participation among young people. Among a sample of 56 countries for which 2000-2008/10 data are available (see ILO's KILM database), about 44 experienced a fall in labour market participation during the 2000s. The measure for the 56-country average declined from 48 per cent to 44 per cent. The largest falls, of more than ten percentage points, were recorded in a diverse group of countries, including Morocco, the Czech Republic, Hungary and the United States.

There is little sign of convergence around a lower mean, since the 2010 pattern is more dispersed than that of 2000.¹³ Among countries with the highest labour market participation rates, most saw a small fall (such as Denmark, Netherlands, Australia), while Iceland witnessed an increase, from 72 per cent to 74 per cent. At the other end of the spectrum, countries with below-average rates of labour market participation tended to experience above-average falls as it is shown in Figure 2.6.

¹³ The standard deviation of data recorded in 2000 is 0.117 compared with a measure of 0.131 for the 2010 data.

Figure 2.6. Trends in youth labour market participation



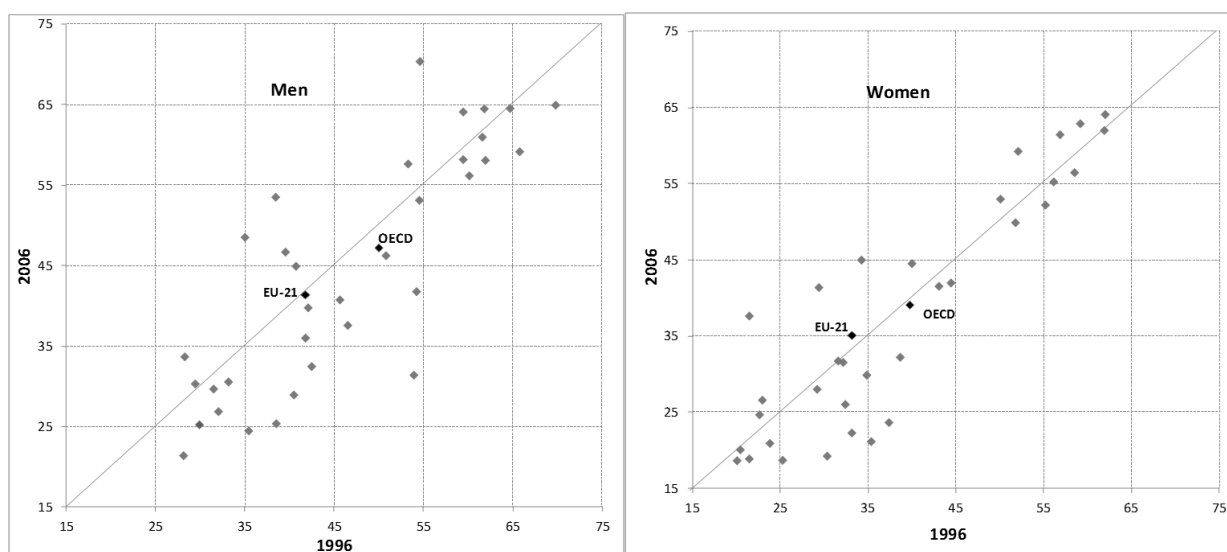
Notes: Youth defined as aged 15-24 years old. See Table 2 in the Appendix for details of the 56 countries covered.
Source: ILO KILM data 7th Edition.

Data available for OECD countries indicate that employment rates among young people have on average dropped over the last fifteen years. When combined with their diminishing share in the working-age population, the pool of young people in the labour market is clearly falling in most countries. Figure 2.7 plots youth employment to population ratios for two years, 1996 and 2006, for OECD countries for men and women separately. The more recent trend that accounts for the impact of the recession is considered in chapter 3 below.

On average, employment rates in the 34 OECD countries (see Figure 2.7) decreased from 50 per cent to 47.2 per cent among young men and from 39.8 per cent to 39.1 per cent among young women. Most of the largest drops in male and female youth employment rates were experienced in countries where youth employment rates were already low in 1996 – for young men this includes Hungary (35 per cent to 25 per cent) and Luxembourg (38 per cent to 25 per cent) and for young women the largest drops were in the Czech Republic (37 per cent to 24 per cent), Luxembourg (35 per cent to 21 per cent) and Turkey (30 per cent to 19 per cent).

Against the general trend are a handful of countries where significant increases in employment rates occurred during 1996-2006 – both Ireland and Spain witnessed substantial rises for young men and women (for Spain from 35 per cent to 49 per cent for men and from 21 per cent to 38 per cent for women and for Ireland from 38 per cent to 54 per cent for men and from 34 per cent to 45 per cent for women). Other significant rises occurred among young men in Iceland and young women in Finland. As will be shown in chapter 4 of this paper, the said rises turned into sharp falls during the recession and ongoing depression, particularly in Ireland and Spain.

Figure 2.7 Change in male and female youth employment rates, OECD, 1996-2006



Source: author's tabulation based on OECD Labour Force Statistics, accessible at www.oecd.org/document/15/0,3746,en_2649_33927_38938959_1_1_1_1,00.html

The educational attainment among young people in the labour market is changing. In most countries a growing share of youth are extending their stay in non-compulsory tertiary education. This picture might suggest a reduction in the average level of qualifications among those who remain as full-time labour market participants. However, the data suggest the reverse. During the decade 1996 to 2006, about 19 out of 24 OECD countries experienced an increased overall education level among active youth aged 15-24. According to a composite indicator of education mix, the OECD average increased from 4.43 to 4.87 on a 10 point scale (see Table 2.2). Countries with a significant upward shift include France, Italy, the Republic of Korea and the United Kingdom. Germany registered no significant change and four display a downward shift in education level among young people in the labour market – Canada, Lithuania, Norway and Sweden.

Table 2.2. Change in education level of young people (15-24) in the labour market (composite score scaled 1 to 10), OECD, 1996 to 2006

	1996	2006	Change
Australia	4.30	4.96	+0.66
Austria	4.04	4.22	+0.18
Belgium	5.44	5.86	+0.42
Canada	5.87	5.70	-0.17
Czech Republic	4.86	5.31	+0.45
Denmark	3.65	3.99	+0.34
Finland	4.50	4.70	+0.20
France	4.66	5.68	+1.02
Germany	3.96	3.95	-0.01
Greece	4.17	4.79	+0.62
Ireland	5.03	5.22	+0.19
Italy	2.76	3.97	+1.21
Korea	5.96	7.34	+1.38
Lithuania	6.04	5.63	-0.41
Netherlands	3.95	4.13	+0.18
New Zealand	4.43	5.16	+0.73
Norway	4.98	4.29	-0.69
Poland	4.79	5.70	+0.91
Portugal	2.01	2.80	+0.79
Slovenia	4.52	5.29	+0.77
Spain	3.62	4.44	+0.82
Sweden	4.90	4.48	-0.42
Switzerland	4.14	4.16	+0.02
United Kingdom	3.75	5.20	+1.45
OECD-24 average	4.43	4.87	+0.35

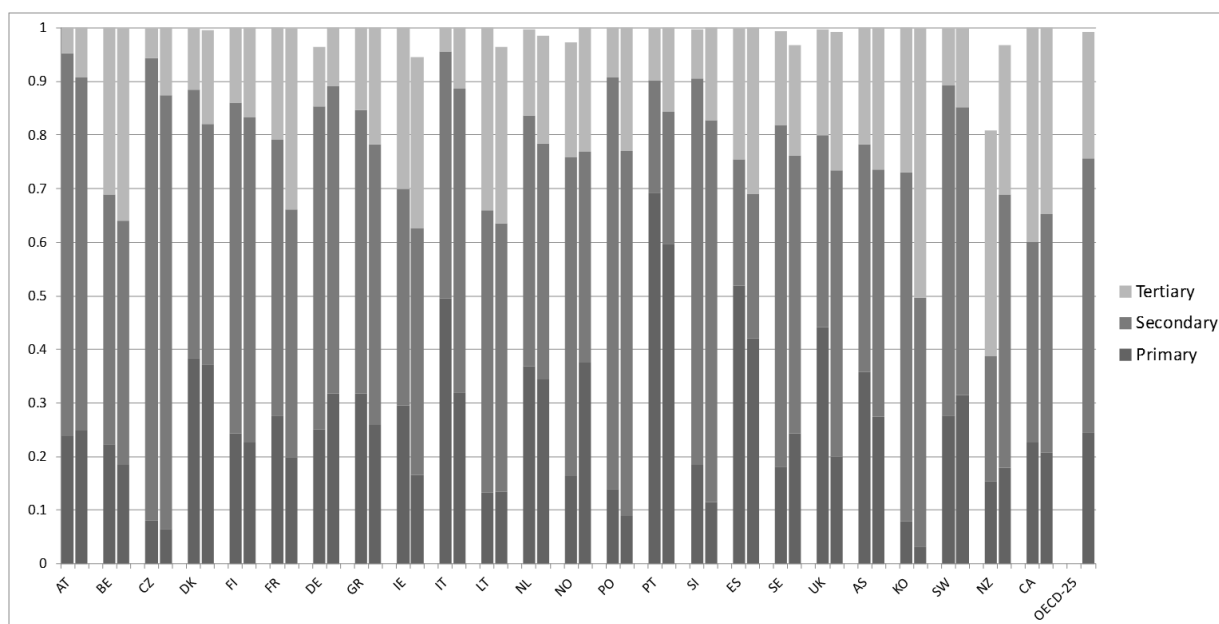
Note: composite score a function of shares with primary, secondary and tertiary education levels weighted by 1, 2 and 3 respectively and scaled from 1 to 10.

Source: ILO KILM data 7th edition (Key Indicators of the Labour Market).

Underpinning the rise was an increased share of active young people with tertiary education, true of 20 OECD countries (the exceptions being Canada, Germany, Lithuania and New Zealand) and particularly notable in the Republic of Korea (from 27 per cent to 50 per cent), Poland (a rise from 9 per cent to 23 per cent) and France (from 21 per cent to 34 per cent). Most countries experienced a reduction in the share of young people with low educational attainment (i.e. primary level). The drop was especially large in the Czech Republic and the United Kingdom (Figure 2.8).

However, low educational attainment among young people is still a significant feature of other regions of the world, possibly explaining observed higher youth wage discounts. For example, in Indonesia 2006 data suggest that around one in 20 young people in the labour market did not complete primary education, although this figure has improved since 1996. In Brazil, three fifths of the youth population had not reached complete primary level education in 1996 (Table 2.3), *vis-à-vis* 8 per cent of young people today. In addition, the share of tertiary educated youth in the labour market rose during the decade 1996-2006, which is very significant given the large population numbers involved. In Indonesia there were an additional 0.5 million young people with tertiary education in the labour market, and in Brazil an additional 1.6 million.

Figure 2.8. Education composition of young people (15-24) in the labour market, OECD, 1996 and 2006



Note: for each country left column is 1996 data, right column 2006 data. 1997 data for Australia and New Zealand. US data missing. Japan data after 1997 missing.

Source: author's compilation based on data from ILO KILM database, 7th edition.

Table 2.3. Education composition of young people in the labour market in Indonesia and Brazil, 1996 and 2006.

Country	Year	<1 year	Pre-primary	Primary	Secondary	Tertiary
Indonesia	1996	0.017	0.092	0.637	0.227	0.027
	2006	0.007	0.048	0.579	0.309	0.057
Brazil	1996	0.038	0.543	0.237	0.166	0.01
	2006	0.025	0.055	0.472	0.394	0.051

Source: ILO KILM data, 7th edition, own compilation.

Labour supply and youth wages

Declines in the share of young people in the overall population and youth labour market participation rates, along with higher educational attainment, ought to boost the pay of young people relative to other workers, holding all other factors constant. This section briefly presents some simple tests of this notion for a sub-set of countries where data are available.

A comparison of trends in youth pay with trends in youth employment rates highlights the absence of any simple relationship between relative pay and labour supply and certainly rejects the stylized premise that an increasing scarcity of youth labour drives up relative pay. Table 2.4 shows trends in youth pay relative to adult workers for the period 1996-2006 and the trends in youth employment rates. In Canada and Ireland, the only two countries where youth pay increased relative to that of adult workers, youth employment rates in fact increased significantly, by 6 and 13 percentage points, respectively. Among the countries where youth pay dropped relative to older workers, a wide range of trends in youth employment rates can be observed, from a reduction of close to 7 points in Korea to an increase of nearly 10 points in Finland. If anything, the relationship between these two variables is the opposite of that conventionally predicted: the measure of correlation is positive (0.66) such that increasing labour supply of youth is associated in general with rising relative pay and vice-versa.

Table 2.4. Comparison of youth pay and employment rates, 1996-2006

	Youth earnings relative to adult earnings			Youth employment rate		
	1996	2006	p.p. change	1996	2006	p.p. change
Poland	69.6%	62.3%	-7.32	27.86	23.99	-3.86
Denmark	71.0%	64.2%	-6.75	65.95	64.57	-1.39
Korea	61.2%	57.7%	-3.43	33.73	27.18	-6.55
Australia	67.7%	65.9%	-1.83	60.46	63.74	3.28
United States	56.3%	54.6%	-1.74	57.62	54.25	-3.37
Finland	69.4%	67.7%	-1.68	34.54	44.14	9.60
Japan	59.7%	58.1%	-1.58	45.02	41.40	-3.62
Switzerland	59.4%	58.0%	-1.48	63.27	63.33	0.06
Germany	61.9%	60.9%	-1.05	47.04	44.01	-3.02
Canada	59.1%	59.9%	0.76	52.65	58.47	5.81
Ireland	58.6%	63.1%	4.48	36.35	49.36	13.00
OECD	63.5%	61.7%	-1.78	44.87	43.17	-1.70

Source: Author's compilation based on OECD Labour Force Statistics and OECD Employment Outlook (2008: Table 1.A1.2).

Table 2.5. Trends in youth pay and composite education levels, OECD, 1996-2006

	Youth earnings relative to adult earnings			Composite education level		
	1996	2006	p.p. change	1996	2006	change
Poland	69.6%	62.3%	-7.32	4.79	5.70	0.91
Denmark	71.0%	64.2%	-6.75	3.65	3.99	0.34
Korea	61.2%	57.7%	-3.43	5.96	7.34	1.38
Australia	67.7%	65.9%	-1.83	4.30	4.96	0.66
United States	56.3%	54.6%	-1.74	--	--	--
Finland	69.4%	67.7%	-1.68	4.50	4.70	0.20
Japan	59.7%	58.1%	-1.58	6.75	--	--
Switzerland	59.4%	58.0%	-1.48	4.14	4.16	0.02
Germany	61.9%	60.9%	-1.05	3.96	3.95	-0.01
Canada	59.1%	59.9%	0.76	5.87	5.70	-0.17
Ireland	58.6%	63.1%	4.48	5.03	5.22	0.19
OECD-11	63.5%	61.7%	-1.78	--	--	--
OECD-9	64.2%	62.2%	-2.04	4.69	5.08	0.39

Source: Author's compilation based on OECD Earnings database and ILO KILM data, 7th edition.

From the selection of countries shown in Table 2.5, increased educational attainment among active youth seems not to be associated with higher pay relative to adult workers. The four countries (out of nine) with the largest relative drop in youth earnings (Poland, Denmark, Korea and Australia) during 1996-2006 were also those that experienced the greatest improvement in educational achievement, as measured by the composite index discussed above. Only Ireland displays a positive association between improved earnings and improved educational attainment among young people in the labour market. Chapter 3 of this paper examines in detail the pay differentials by level of education among young workers in employment.

Further interrogation of the causal factors that shape youth pay, beyond the supply and demand of human capital, is needed. Notions of job queues in labour markets provide for an alternative analysis. According to the job queue perspective, what determines a person's wage is not primarily their individual productivity, but rather their position in a queue for jobs ranked by differential earnings prospects.¹⁴ The higher up the job queue, the more likely the individual is to enter a high-wage job. The ordering of individuals is shaped by institutional factors, such as educational qualifications and training certification. Employers also play a strong role in ranking individuals, thereby generating the possibility of gender stereotyping and gender discrimination, as Reskin and Roos (1990) show in their original analysis of women's entry into occupations.

In a world of job queues, employers rank potential job applicants by perceived work experience and performance. In this context, young people are likely to fall to the back of the queue. Widening wage inequality then, especially associated with the falling position of the lowest paid compared to average earnings, drives the youth wage discount far more than labour supply factors. There may also be crowding effects similar to the gender segregation patterns and the gender pay gap. In workplaces and sectors where employers display a preference for recruiting young workers (e.g. retail and hospitality sectors), supply and demand factors are likely to be less significant than the wage signals associated with being at the back of the job queue.

Applying the logic of job queue analysis, a falling labour supply of young people is therefore quite consistent with rising concentrations of youth in certain workplaces and sectors, which may dampen wage levels relative to older workers. This is due to the segmented nature of the competition for jobs and the possibility that, just as many jobs are traditionally considered to be women's or men's jobs¹⁵, they may also be labelled as youth jobs or student jobs.

The functioning of labour market institutions is critical to the shaping of pay prospects for young workers, including systems of skill formation, the role of trade unions and collective bargaining and employment protection, especially the protection of flexible employment forms such as part-time and temporary work. These issues are discussed in chapter 3 of this paper.

¹⁴ See Thurow, 1969.

¹⁵ See Grimshaw and Rubery, 2007.

2.3. The impact of the economic crisis

High profile reports from the major international policy bodies have called for special attention to be paid to young people's deteriorating position in the labour market during the current economic crisis.¹⁶

The ILO estimates that the youth unemployment rate for the world increased by close to one percentage point during the 2008-2010 period, from 11.8 per cent to 12.7 per cent.¹⁷ Youth unemployment rates increased in particular in developed economies and the European Union, Central and South-Eastern Europe, South Asia, Latin America and the Caribbean. In OECD countries, unemployment shot up by more than five percentage points to 17.6 per cent in 2010, and signs of recovery are starting to appear only with regard to male youth unemployment.

Alongside the immediate impact of reduced earnings and job prospects in an economy in crisis, young people suffer long-term negative consequences on their wages that is directly associated with their heightened risk of experiencing a spell of unemployment. Labour economics analyses refer to this effect as 'scarring'.¹⁸ As well as scarring effects on wages and employability, some studies of past recessions also show long-term adverse effects on other indicators including job satisfaction, health and happiness.

It is too early to estimate the medium-term effects of the current crisis on youth pay, but several studies have examined the impact of previous recessions. Scarpetta et al. (2010) find that a one percentage point increase in the unemployment rate at the point a young person enters the labour market reduces annual earnings by up to 8 per cent in the United Kingdom in the first year and still registers a 2 per cent penalty 10 years on. In other countries the initial effect is smaller but, in the case of France and Spain, it is longer-lasting – a scarring effect for up to 15 years after labour market entry.

Analysis of data for Japan identifies instead the substantial effect caused by the more limited opportunities for young people to enter stable, full-time employment and the need instead to accept non-regular, unstable employment forms. The study of Genda et al. shows that entering the labour market during a recession 'has a persistent negative effect on earnings for young Japanese men'.¹⁹ Moreover, the findings suggest that entering during a recession not only lowers future annual earnings but also, for lower educated persons, increases the risk of joblessness and the acceptance of part-time employment. A substantial portion of the decline in earnings seems to be attributable to the lower likelihood of regular, stable employment.

A study drawing on data from the United Kingdom shows that youth unemployment imposes a substantial scar on subsequent earnings and the wage scar increases in size for individuals with a worse experience of unemployment when young (defined as between 16 and 23 years).²⁰ The results are striking. While educational attainment reduces some of this effect on wages, shrinking the actual scarring effect, on average an individual with a history of more than 13 months of unemployment when young experiences the following reduction in earnings, compared to an individual with no youth unemployment:

¹⁶ See for instance, ILO 2012 Global Employment Trends: 33, OECD 2010, *Off to a Good Start? Jobs for Youth*: 24 and The World Bank, *Policy Research Working Paper* - Cho and Newhouse 2011

¹⁷ See ILO, 2011.

¹⁸ See Arulampalam, 2001.

¹⁹ See Genda et al., 2010, p.182.

²⁰ See Gregg and Tominey, 2004.

- 30 per cent (male) and 34 per cent (female) at age 23;
- 42 per cent (male) and 35 per cent (female) at age 33; and
- 32 per cent (male) and 25 per cent (female) at age 42.²¹

For both men and women, a negative impact on wages is still visible at age 42 only when unemployment was experienced for more than six months. These findings show to what extent the rise of long-term unemployment among young people during the present crisis can be damaging. A period of unemployment longer than six months when young carries a scar on wages at age 42 of 6-10 per cent.²² The authors conclude that, 'interventions to reduce the exposure of young adults to substantive periods of unemployment could - if successful - have substantial returns in terms of the individual's lifetime earnings and could represent a good investment'.²³

²¹ *Ibid.* Gregg and Tominey, 2004, p. 13-19.

²² *Ibid.* Gregg and Tominey, 2004, p. 19.

²³ *Ibid.* Gregg and Tominey, 2004, p. 19.

3. Features of the youth labour market

3.1 The relevance of institutions for youth wages

Pay is not simply the result of the market allocation of human resources or human capital. For young people, pay is shaped over the long-term by institutions influencing young people's transition from education to employment, competitions for jobs, formation of skills, and change from one employment contract to another. These institutions vary substantially across countries, even among those with similar levels of economic development. This section reviews the potential effects of three key institutions – skill formation systems, wage structures and wage-setting systems, and rules governing the use and quality of part-time and temporary employment. The role of minimum wage institutions is considered separately in chapter 4. Table 3.1 provides a summary of the effects of these three key institutions for youth wages.

Table 3.1. The relevance of labour market institutions for youth pay

Institutions	Relevant features	Potential effects on youth pay
1. Skill formation systems	Quality of compulsory schooling Infrastructure for vocational training (role of social partners, financial resources, degree of coordination) Reputation and quality of skill credentials/qualifications Employer willingness to provide training and develop skills Balance of investment in industry and firm-specific skills versus general skills	<ul style="list-style-type: none"> • Good basic schooling boosts pay prospects and raise efficiency of training investment by firms • Stratification of good and bad schooling reduces participation in further education and widens pay differential between low and high educated youth • Weak employers' commitment to vocational training diminishes pay prospects of young school-leavers • Stronger emphasis on industry and firm-specific skills generates demand for vocational skill and raises pay relative to the highly educated • Privatised higher education system acts as pressure for higher wage premium for high education to pay off private debt, increasing pay differentials among youth
2. Wage structures, industrial relations and wage-setting	Degree of inequality between highest and lowest paid Incidence of low-wage work Level of collective bargaining coverage Union membership Age-linked pay practices Wage-career paths	<ul style="list-style-type: none"> • A compressed wage structure lessens the youth wage penalty • A high incidence of low-wage work increases the risk of young workers' experience of low pay • Lower union density reduces likelihood of benefiting from union wage premium and jointly regulated principles of pay progression • Varying union strategies towards setting age-related pay rates • Extended periods of competition for entry into relatively unstructured occupations in knowledge sectors leads to new forms of segmentation between fast and slow tracks
3. Employment protection and flexible employment forms	Incidence of part-time and temporary contracts Forms of regulation to protect equal status of part-time and temporary contracts Part-time and temporary jobs as peripheral or core to employment practices	<ul style="list-style-type: none"> • Likelihood of youth over-representation among part-time and temporary jobs • Opportunities for transitions to standard employment forms versus risk of becoming trapped • Access to equivalent pay and benefits (e.g. health cover, unemployment compensation, pension, unfair dismissal, etc.) • Risk of low status of part-time/temporary work located in segmented labour markets

3.2. Training and the pay-offs to education

The type of skill formation system from schooling into paid employment is one of the most important features of a labour market in enabling young people to enter into stable and fulfilling work with decent pay prospects. The type of skill formation system influences the wage structure, such that countries where most school-leavers enter some form of apprenticeship programmes are more likely to be characterized by more compressed pay differentials.²⁴ According to Whitley, different types of states develop different approaches to the regulation and management of skill formation systems (see Table 3.2.) and such differences shape the range of wage outcomes for young people.²⁵

Table 3.2. Four types of states and skill formation systems

	State types			
	Arm's length	Dominant developmental	Business corporatist	Inclusive corporatist
Country examples	United Kingdom, United States	Korea, France (up to 1980s)	Japan	Germany, Sweden
Active involvement in economic development	Low	High	Considerable	Considerable
Active encouragement of business associations	Limited	Limited	Considerable	Considerable
Active encouragement of labour associations and organisation of representation	Limited	Low	Limited	Considerable
Standardisation of skill formation system	Low	Varied (subject to resources)	Limited	Considerable
Mechanism for certifying skills	Market-led	State technical schools	Employers with state coordination	Regulated by all social partners and state
Benefits	Market flexibility	Standardisation can be high	Strong schooling system and large firm training provision	Cooperation ensures smooth introduction of new standards and encourages broad skill provision
Limitations	Signalling of skills is difficult, high labour turnover	Practical utility of skills and speed of response to market are weak	Weaker provision outside the large firm segment	Potential for slower response to market changes

Source: Adapted from Whitley (2007: table 2.1 and pages 45-46).

Studies in the 'varieties of capitalism' approach argue there is a strong association between the type of skill formation system and wage structure, with implications for relative earnings of young people stratified by level and type of education. In inclusive corporatist countries, such as Germany, high levels of inclusion of young school leavers in apprenticeship training, coupled with the strong reputation of high quality vocational training programmes among employers, generate high demand. In arm's length type approaches, as in the United Kingdom and the United States, a reliance on the market to produce general skills increases the risk that school leavers do not acquire marketable skills and 'end up as low-paid unskilled workers for most or all of their working lives'.²⁶

²⁴ See Estevez-Abe et al., 2001.

²⁵ See Whitley, 2007.

²⁶ See Estevez-Abe et al., 2001, p. 177.

The expected result is a high differential between the pay of highly qualified young workers vis-à-vis low qualified ones in market-led systems such as the United Kingdom and United States. Table 3.3 presents 2004 data on pay differentials among young people (15-24) by level of education for 21 OECD countries. For the most part, it appears to add further support for the above argument: the arm's length training systems of the United Kingdom and the United States are at the top of the list of countries ranked by education's wage premium. By contrast, Germany sits in the middle of the ranking largely due to the small negative differential between high and medium educated young workers (also found in Denmark and Sweden), which is likely to reflect the longer work experience of youth with medium education and the late entry to employment among higher educated youth. Spain displays the lowest differentials by education among young people.

Table 3.3. Differentials in youth pay by level of education, OECD 2004

	Medium to low	High to medium	High to low
Finland	2.33	1.54	3.57
United States	2.00	1.57	3.13
Netherlands	1.82	1.52	2.76
United Kingdom	1.49	1.52	2.26
Sweden	3.13	0.69	2.14
Canada	1.43	1.48	2.11
Norway	2.08	0.98	2.04
Australia	1.43	1.42	2.03
Denmark	2.17	0.86	1.87
Germany	1.96	0.91	1.78
Hungary	1.12	1.54	1.73
New Zealand	1.20	1.40	1.69
Switzerland	1.41	1.17	1.65
Ireland	1.19	1.31	1.56
France	1.23	1.20	1.48
Luxembourg	1.09	1.31	1.42
Korea	1.33	1.05	1.40
Czech Republic	1.20	1.14	1.36
Belgium	1.15	1.14	1.31
Poland	1.09	1.18	1.29
Spain	1.00	1.16	1.16
OECD-21	1.56	1.24	1.94

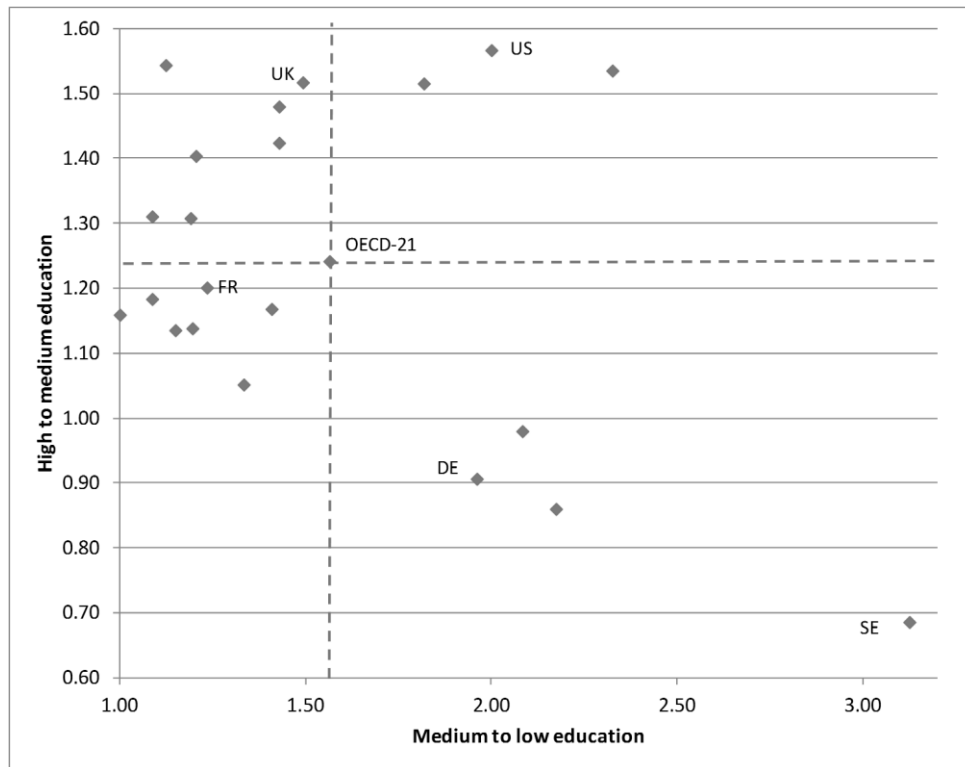
Note: Data refer to 2001 in Australia, 2002 in Ireland, Italy, Luxembourg and the Netherlands and 2003 in Belgium, Canada, Denmark, Finland, Norway and Sweden.

Source: Author's compilation based OECD Employment Outlook (2008), Annex table 1.A1.2.

As shown in Figure 3.1, the variety of patterns is such that countries cluster in all four quadrants around the 21-country average. In the upper right quadrant, the United States is characterized by high pay differentials between all three groups of young people by education. In the upper left, the United Kingdom displays an above-average pay differential between high and medium educated youth but slightly below average among the medium and low educated. Germany is the reverse to the United Kingdom situation with a below-average pay premium for high educated youth compared to youth with medium education, but an above-average pay differential among medium and low educated young people, similar in size to that found in the United States.

Indeed, the pay differential in Sweden exceeds that of the United States - mid-level educated young workers earn on average more than three times the wage of low level educated youth; a similar pattern holds for other Scandinavian countries, Denmark, Finland and Norway. Finally, France is illustrative of a country with below average pay differentials among young people stratified by education. In this same quadrant one can find Spain, the country with the most compressed structure of pay differentials by education among young workers.

Figure 3.1. Country differences in pay differentials among high/medium educated and medium/low educated young workers, 2004, OECD

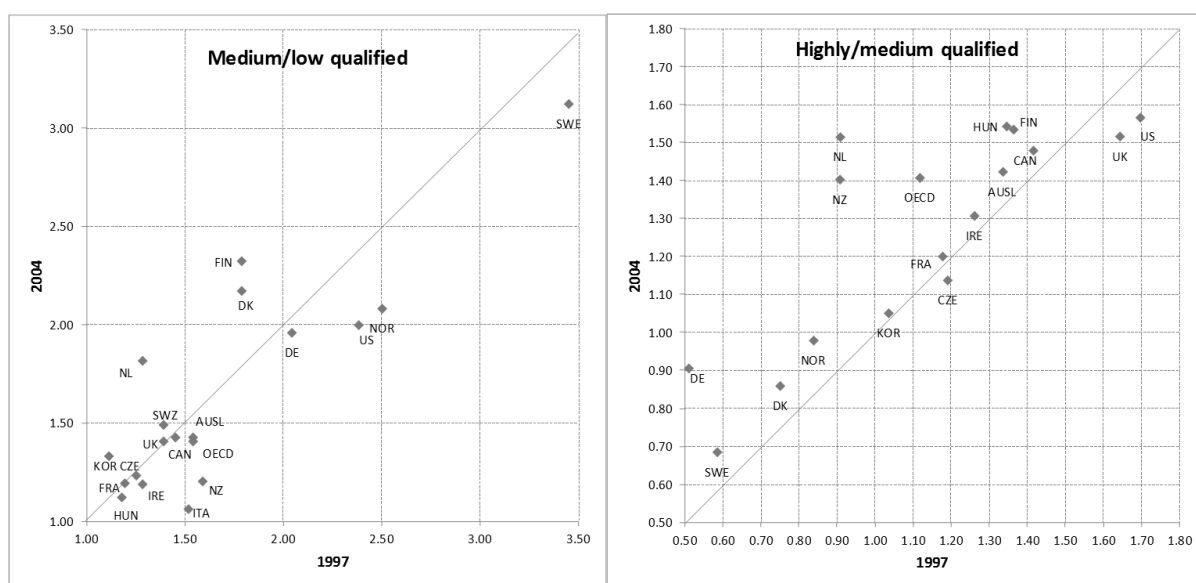


Note: 1. Data refer to 2001 in Australia, 2002 in Ireland, Italy, Luxembourg and the Netherlands and 2003 in Belgium, Canada, Denmark, Finland, Norway and Sweden.
Source: OECD Employment Outlook (2008), Annex table 1.A1.2; own compilation.

The trend in pay differentials points, on average, towards a compression of pay differentials between medium and low educated youth and a widening of the differential between medium and high educated youth. Between 1997 and 2004 the former dropped on average, from 1.54 to 1.41 percentage points, while the latter increased substantially, from 1.12 to 1.41. However, Figure 3.2 illustrates mixed trends among countries. For example, Finland and the Netherlands experienced increases in returns to both levels of education, while the United States witnessed a drop in unadjusted wage returns to education at the medium and high levels for young workers. Germany is notable for the substantial increase in the relative pay of highly educated young people relative to medium educated youth, from a pay differential of 0.51 to 0.91 percentage points.

While much of the comparative literature focuses on OECD countries, there is evidence in other regions of the role of the state in financing training as a form of income transfer to support transitions of unemployed young people into the labour market.²⁷ Such programmes – operational in Argentina, Chile, Mexico and Brazil, among others - involve relatively large state expenditures and target hundreds of thousands of young people. A report of the Inter-American Development Bank argues that because such programmes are organized through competitive bids to private providers on a decentralized basis they are able to respond rapidly to market needs. The report also reviews evidence of a positive impact on youth wages, especially among young women.²⁸ Nevertheless, the programmes are not functional equivalents to the usual institutions of a skill formation system since they are designed primarily to provide unemployed youth with job search skills rather than to upgrade their skills in response to emerging industries or new technologies.

Figure 3.2. Trends in the wage payoffs to education: low qualified and highly qualified relative to medium qualified, OECD, 1997-2004



Note: 1. Data on earnings by educational attainment refer to 1996 in Finland and the Netherlands and 1998 in Italy and Korea. Data refer to 2001 in Australia, 2002 in Ireland, Italy, Luxembourg and the Netherlands and 2003 in Belgium, Canada, Denmark, Finland, Norway and Sweden.

Source: OECD Employment Outlook (2008), Annex table 1.A1.2; own compilation.

3.3. Wage structures and wage setting in low-wage sectors

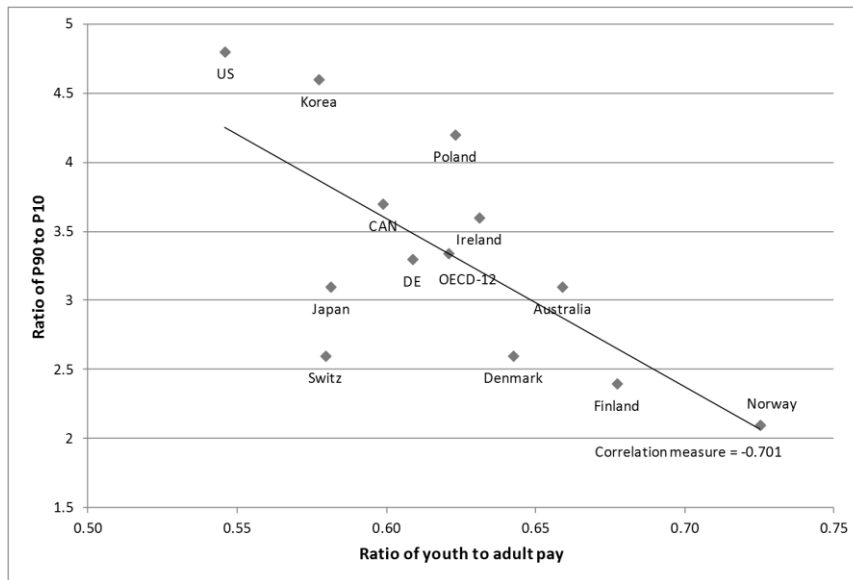
A second variable that contributes to country differences in youth wage discounts is the wider structure of wage inequality. If young workers are concentrated at the bottom of the wage structure then the relative wage penalty is smaller in countries where the gap between top and bottom is small. Among OECD countries, youth pay is high relative to adult workers' pay in Finland and Norway where overall wage inequality (measured by the ratio of the top to bottom decile) is low. Conversely, youth pay is relatively low in countries such as the United States and the Republic of Korea where overall wage inequality is high. Figure 3.3 shows that the estimated correlation measure between the ratio of youth to adult pay and overall wage inequality for 12 selected OECD countries is moderately strong and negative, a measure of -0.70.

²⁷ See IDB, 2004.

²⁸ *Ibid.* IDB 2004, p. 267.

High concentrations of young workers in low-wage employment suggest the overall pay levels and systems of wage-setting in low-wage sectors are likely to play a key role in influencing the youth wage discount. Low-wage sectors in Europe and the United States feature poor pay prospects for youth, but for different reasons than found among older workers. In the Netherlands, for example, young workers (below age 23) in 2004-06 accounted for around three fifths of the supermarket workforce. This sector had a low pay incidence exceeding 57 per cent in 2002.²⁹ Three quarters of these young people worked in the two lowest paying jobs of shelf-stackers and shop assistants.³⁰ However, their circumstances differ from adult workers in low-wage work since this study found most 15-19 year olds combined school with retail work and so too did a fifth of 20-23 year olds, who may also receive a state subsidy towards living expenses. The differentiated system of youth minimum wages (see chapter 4) allows retail employers to set youth pay rates at levels considerably lower than adult rates. Van Klaveren et al.³¹ found that median hourly pay for young workers in supermarkets was €4.73 compared to €11.19 for adult workers.

Figure 3.3. Relative youth pay and overall wage inequality, selected OECD countries, 2006



Note: 2005 P90/P10 data for Australia, Denmark, Germany, 2004 data for Finland, Ireland, Poland, Switzerland and 2002 data for Norway.

Source: OECD earnings database, own compilation.

A key issue concerns mobility patterns. While they experience a greater risk of low pay than adult workers, young people generally enjoy a stronger chance of moving from low-wage into higher paid work. As Solow argues in a review of comparative data for Europe and the United States, ‘there are substantial differences among the countries, although mobility is fairly substantial everywhere, if only because younger workers eventually propel themselves into better jobs’.³² Nevertheless, exit rates from low-wage employment vary significantly across countries. The share of young people trapped in low-wage employment over a five-year continuous period varies from zero in Denmark to more than 10 per cent in the United Kingdom, United States and Greece (Quintini and Martin 2006: figure 15); again, to quote Solow (2008: 6), ‘the self-image [of the US] of an extremely mobile society is not valid, at least not in this respect.’

²⁹ See van Klaveren et al., 2009.

³⁰ *Ibid.* van Klaveren et al., 2009.

³¹ *Ibid.* van Klaveren et al., 2009.

³² See Solow, 2008, p. 6.

Protection of pay prospects through collective bargaining is limited among young people due to their low trade union membership rates. In France, for example, only 2.7 per cent of young people aged less than 30 years old are union members, compared to 8.2 per cent for all workers.³³ In the United Kingdom, union density among 20-24 year olds was 12 per cent in 2010 compared to 27 per cent for all employees.³⁴

Reasons for their lower unionization have been suggested to include the collapse of family ties (so that parents who are union members do not pass on their collectivist values), outright opposition to the ideology of unions among younger people in favour of a more individualist perspective, and the weak voting and political rights of youth within the unions themselves. However, an interrogation of United Kingdom survey data among unionized and non-unionized youth points to alternative explanations. Among them, 'union inefficiencies', i.e. unions are sometimes present in a workplace but youth are not asked to join. Additional explanations are the relatively short time spent by young people at a workplace before moving on, and a belief that union membership is not needed (rather than opposition to union principles).³⁵

The position of trade unions regarding youth pay tends to vary between favouring age-related pay rates in wage agreements, to preferring harmonization of pay rates regardless of age. This dichotomy often results in agreements on either age-related or universal statutory minimum wage rates (see below). A good illustration of the latter is the case of Tesco supermarkets in the United Kingdom and its wage agreements with Usdaw, the major retail union (Box 3.1).

Changing patterns of pay progression in tandem with transformations of sectors and occupations in the economy are an under-researched area. One innovative study points to a new pattern of segmentation in pay and career profiles for young workers associated with the rise of knowledge-intensive sectors of employment.³⁶ The study argues that many entry paths into contemporary labour markets are characterized by intensive competition, instability and unwillingness of employers to commit to long-term training investments. The result is a competitive and open entry process and subsequent job moves dependent on factors that may include the ability of an individual to negotiate, or to pass the right qualifications, or to develop a strong reputation among peers and/or senior colleagues.

Young workers continue competing for better job placements long after their opportunities in alternative careers have closed down, resulting in a trap of 'slow track' job assignments. Earnings patterns in the United Kingdom among occupations in relatively unstructured labour markets (e.g. journalists/writers, media, management consultants, academics and software engineers) compared with more structured professions (e.g. police, nurses, teachers) confirm that high turnover is associated with increasing inequality. Conversely, more structured professions display a compression of within-group inequalities. A striking finding is that while becoming older reduces the likelihood of being among the 20 per cent lowest paid workers in traditional occupations, it actually increases the risk of low pay in tournament occupations.³⁷

³³ See Rehfeldt, 2010.

³⁴ See Achur, 2010.

³⁵ See Waddington and Kerr, 2002.

³⁶ See Marsden, 2007.

³⁷ *Ibid.* Marsden, 2007.

Box 3.1. Abolishing age-related pay rates at Tesco supermarkets, United Kingdom

For many years, Tesco supermarkets set two basic pay scales, one for adults aged 18 years old and over and another for young workers aged 16-17 years old. Tesco has a collective agreement with Usdaw, the major retail trade union. Starting in 2004, the union began a campaign to increase the youth rate in light of a steady decline relative to the adult pay scale. In the words of a senior union official in 2009:

‘What we are hoping to do is ... to effectively abolish youth rates in Tesco in the coming years. ... That seems sensible and reasonable given that many of the 16 and 17 year olds are doing entirely the same job as an adult worker. Our argument is always, “You’re trained to do the job. You should be paid to do the job.”’

Then in 2010, following six years campaigning, the union won the argument to extend the adult rate to all workers aged 16 years and over. The results of the reform are shown in the below table.

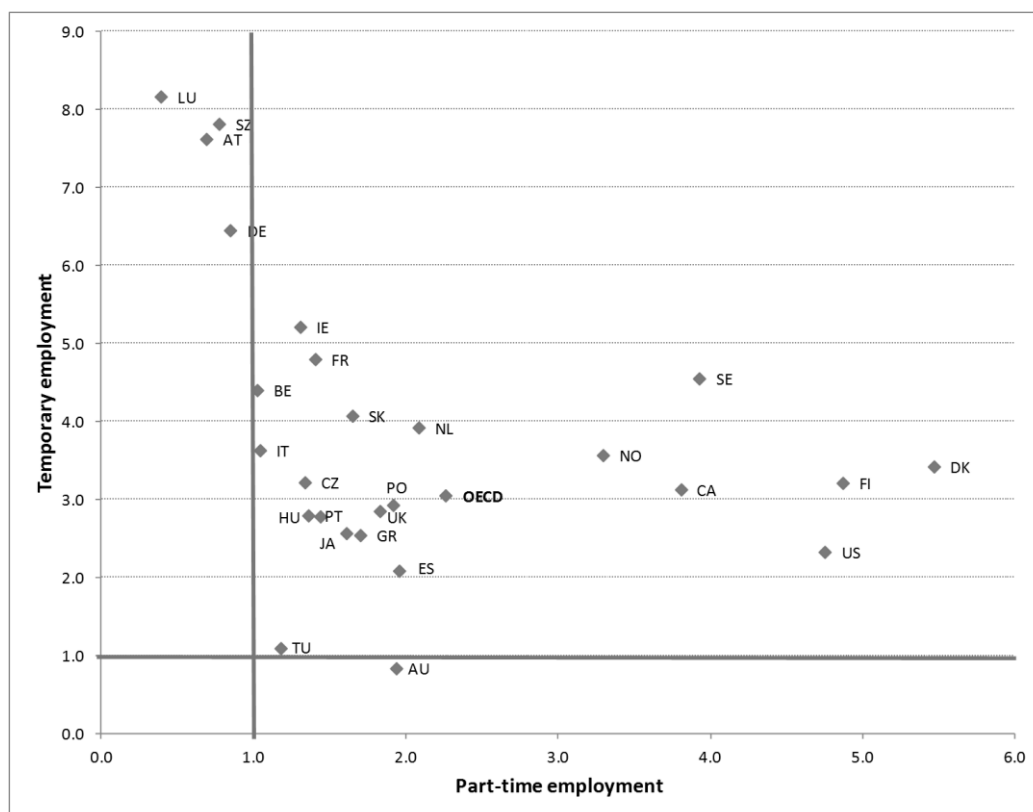
	Minimum basic rate		Pay differential
	Age 16-17	Adult rate (age 18+)	
2000	£4.14	£4.58	0.90
2002	£4.41	£5.16	0.85
2004	£4.67	£5.56	0.84
2006	£5.02	£6.02	0.83
2008	£5.42	£6.50	0.83
2010	£6.81	£6.81	0.00

Source: Grimshaw et al. (2010: 36-7).

3.4. Part-time and temporary employment

OECD data show that young workers are almost always more likely to experience a high incidence of flexible employment, compared to adult workers (aged 25-59 years). Figure 3.5 plots the relative incidence of young workers in part-time and temporary employment drawing on 2006 data. Young people are on average twice as likely to be in part-time work as adult workers, and three times as likely to be employed in temporary work. The incidence of temporary employment among youth is especially high in Austria, Germany, Luxembourg, and Switzerland, reaching more than six times that of adult workers. Australia is an exception, as young people are less likely to be in temporary employment than other workers. The relative incidence of youth part-time work is high in the Nordic countries (Denmark, Finland, Sweden) and North American countries (the United States, Canada). It is notable that where young people experience relatively higher incidence of temporary employment, adult workers are more likely to be found in part-time work (see Figure 3.4).

Figure 3.4. The incidence of part-time and temporary employment among young workers relative to older workers, OECD 2006



Source: OECD employment database, own compilation.

Country studies provide further information drawing on national data sources. In Japan, the proportion of young workers in part-time jobs is relatively low, 2 per cent for young men and 11 per cent for young women.³⁸ Part-time work is relatively more common among adult male workers aged 55 and older, and among women aged 30 and older. Temporary work, on the other hand, is more commonly experienced among young people as part of the school-to-work transition (19 per cent of young male workers and 21 per cent of young female workers compared to 7 per cent and 9 per cent of all male and all female workers respectively). While some may be content with the match of job type with other obligations (such as education for example), a substantial minority express dissatisfaction. Around one in four young people in part-time jobs say they accepted the work due to the unavailability of regular employment. The share of dissatisfied youth is higher among those in temporary jobs (more than a third of young men and almost a half of young women).³⁹

In France, young people are strongly over-represented among temporary agency work and fixed-term contracts (in line with the data presented in Figure 3.5 above).⁴⁰ National data show that 7 per cent and 26 per cent of 15-24 year olds respectively are employed in temporary agency and fixed-term jobs, compared to 2 per cent and 8 per cent of all workers.⁴¹

³⁸ See Asao, 2009.

³⁹ *Ibid.* Asao 2009.

⁴⁰ See Michon, 2009.

⁴¹ *Ibid.* Michon, 2008.

In the Netherlands, where part-time has almost become a standard employment form, young people are over-represented in this type of employment. They are also the age group most likely to wish to increase their work hours. Keizer finds that between 11 per cent and 18 per cent of male and female young workers in part-time jobs (aged 15-20 and 20-25) would prefer more hours of work compared to 4-11 per cent of adult workers.⁴² Young people's share in temporary agency workers in the Netherlands has actually decreased in recent years.

Weak integration of young people in the labour market depends also on their length of tenure in low-status, part-time and temporary contracts. A recent OECD report analyses a group of young people referred to as 'poorly integrated new entrants'.⁴³ These are youth in temporary jobs, with little chance of moving into more permanent arrangements. Drawing on EU-SILC data for 2005-7 the analysis suggests that around 7 per cent of youth aged 15-29 who left education and found a temporary job were not in stable employment 24 months later. Spain has the highest share of 'poorly integrated' youth with 22 per cent (reflecting its high overall use of temporary employment contracts), whereas the United Kingdom has the lowest (2 per cent).

⁴² See Keizer, 2009.

⁴³ See OECD, 2010.

4. Youth minimum wages: An overview

4.1. Youth minimum wages

The practice of setting a youth minimum wage at a lower level than the standard, or adult, minimum wage raises many issues for labour market performance on the one hand and, on the other, for social cohesion and perceptions of fairness. Countries might opt out of youth minimum wage or reduce the starting age for the adult rate in order to avoid age discrimination, and encourage the matching of pay with competency rather than age. Moreover, alternative policies may be in place such as wage subsidies that encourage employers to hire young people. By contrast, arguments in favour of youth minimum rates usually point at the relatively lower productivity of young workers, the need to compensate employers for the costs of training investments, the dangers of pricing out further education, and the need to respond to high youth unemployment.

From the perspective of the ILO, sub-minimum youth wages potentially conflict with the principle of equal pay for work of equal value. In other words, rather than age, it ought to be the value of work performed that carries greater weight in determining the wage. The ILO Minimum Wage-Fixing Convention (1970) therefore does not provide for the setting of different minimum wages on the basis of age. Neither, however, does it prohibit them, since the Convention allows for the exclusion of certain groups of workers on agreement with social partners, although subject to periodic examination in light of the principle of equal remuneration.⁴⁴

This chapter summarizes the characteristics of youth minimum wages for a selection of countries from different regions of the world. It identifies specific youth rates, age ranges and evidence of the incidence of minimum wage beneficiaries. The case of youth rates for trainees and apprentices is considered, as well as examples of wage subsidies for youth employment. The discussion extends to review evidence of minimum wage implementation and considers problems of non-compliance, as well as the ‘lighthouse effect’ of youth minimum wages in the informal economy.

4.2. Country systems of youth minimum wages

A sub-minimum for youth

The selection of countries included in Table 4.1 illustrates commonalities and differences in provisions for youth minimum wage across regions. The list includes both countries that have set special sub-minimum rates for young workers, as well as countries that extend a standard minimum wage to all workers (typically aged 16 years and over). Among these, youth rates were in fact previously in place in Spain, Canada and the Republic of Korea. Among countries with a youth minimum wage, the age threshold varies between 18 (the most common) and 23 (the Netherlands). Most countries set one or two youth rates. For instance, in the United Kingdom the introduction of a national minimum wage in 1999 was accompanied by a youth minimum for 18-21 year olds and only later, in 2004, was a second youth rate for 16-17 year olds established in response to evidence of exploitative pay for youth (see Box 4.1).

⁴⁴ See Ghellab, 1998.

Table 4.1. Characteristics of youth minimum wage systems in 19 selected countries

Country	Usual starting age of adult rate	Number of youth rates	per cent of adult rate	Notes
Europe				
Belgium	22	6	67.4% (16), 73.2% (17), 79.0% (18), 84.8% (19), 90.5% (20), 96.3% (21)	Set as a fixed % of adult rate; Adult rate at 22+ requires 12 months' work experience; 2 rates for 21 distinguish between 6 months experience or not
Czech Rep.	22	2	80% (<19), 90% (19-21)	The 19-21 youth rate only applies for those with experience <6 months
France	18	2	80% (16), 90% (17)	Youth rates only for workers with <6 months experience; Apprentices and some trainees not covered by minimum wage
Ireland	18	1	70.1% (16-17)	Set as a fixed % of adult rate; New adult entrants and people returning to work after 3 years on unemployment benefits only entitled to 80% of adult rate for the first 12 months and 90% for following 12 months
Netherlands	23	8	30.0% (15), 34.5% (16), 39.5% (17), 45.5% (18), 52.5% (19), 61.5% (20), 72.5% (21), 85.0% (22)	Set as a fixed % of adult rate
Portugal	18	1	75.0% (16-17)	Prior to 1987 the starting age for the adult rate was 20 years old and a second youth minimum wage for 18-19 year olds prevailed
Spain	16	0	--	During 1995-1998 the youth rate for 16-17 year olds was converted to the adult rate. During 1990-1995 the 16-17 youth rate was fixed at 65% of the minimum wage
Turkey	16	1	85.2% (15)	Youth rate set at 70% in 1989 steadily rising to 85% by 1999
United Kingdom	21	2	61.4% (16-17), 83.0% (18-20)	New youth rate for 16-17 year olds introduced in 2004. Starting age for adult rate lowered from 22 to 21 in 2010
Africa				
Algeria	--	0	--	15% of adult rate paid by state to trainees as a pre-salary
Kenya	18	0	--	Multiple minimum rates by sector, occupation, location
Tunisia	18	1	85% (<18)	--
Americas				
Canada	16	0	--	Youth rates abolished in provinces during 1980s/1990s except in Ontario for students < 18 years and working <28 hours per week, paid 93.7% of adult rate
Chile	18	1	74.7% (15-17)	--
United States	20	1	58.6% (16-19)	Youth rate only applies for first 90 consecutive days; Also 85% of adult rate for FT students with a limit of 20 hrs per week
Asia and the Pacific				
Australia	21	6	36.8% (<16), 47.3% (16), 57.8% (17), 68.3% (18), 82.5% (19), 97.7% (20)	Set as a fixed % of adult rate. New Minimum Wage Panel set up in 2010 as part of the Fair Work Australia wage-fixing institution
New Zealand	18	1	80% (16-17)	Prior to 1994 teenagers were exempt from minimum wage. Starting age for adult rate lowered from 20 to 18 years in 2001. Since 2008, the youth rate only applies to those with < 3 months experience
Japan	16	0	--	--
Korea	16	0	--	Abolished youth rates in 2005. All workers (young and old) with < 3 months experience entitled to 90% of minimum wage. Pre-2005 youth <18 years entitled to 90% of adult minimum for first 6 months

Source: October 2010 minimum wage data from the OECD Minimum wage database for all data except – France from Gautié (2008); Kenya from Andalón and Pagés (2008); Australia from Fair Work Australia www.fwa.gov.au/alldocuments/PR062011.htm; Canada details from the Ontario government www.labour.gov.on.ca/info/minimumwage/; Korea from OECD (2007: 81-2) 'Jobs for Youth Korea'; Spain from Antón and Muñoz de Bustillo (2011); Turkey from Erdogdu (2008); Africa from Eyraud and Saget (2005: table 6).

Box 4.1. Why did the United Kingdom introduce a second youth minimum wage for 16-17 years old?

Five years after the introduction in 1999 of a statutory national minimum wage that covered workers aged 22 and older as well as a youth development rate for 18-21 year olds, the Low Pay Commission (the independent body that recommends minimum wage increases) recommended the introduction of a second minimum wage for young workers aged 16-17 years. This was a reversal of its earlier argument that 16-17 year olds ought to be exempt from minimum wage protection because most were in full-time education or in paid work undertaking training. Therefore, they constituted a distinctive segment of the labour market. The reasons for this change of policy are the following:

- Evidence of employers offering full-time jobs with no training and very low wages to 16-17 year olds (described by one trade union as 'multiple exploitation')
- Evidence of employers dismissing 17 year olds when they reached the age of 18
- To provide an incentive for 16-17 year olds not in education to take up paid work
- To help improve the low-wage image of retail and hospitality employers
- International evidence that other countries apply a minimum wage to 16-17 year olds

Overall, the Low Pay Commission summarised its policy stance as follows:

The case in favour is that it will prevent exploitation. The United Kingdom is the only major country where the National Minimum Wage does not offer protection to 16–17 year olds, and we continue to be concerned by evidence of full-time jobs for 16–17 year olds offering very low rates of pay and little or no training. We have also been struck by the views of the retail and hospitality sectors that a 16–17 year old rate could remove the poor image of their sectors caused by employers paying very low rates. But we are concerned to make sure that a minimum wage for 16–17 year olds does not damage the education, training or job prospects of this age group (2004: 69).

The policy establishes no link between the 16-17 and the 18-20 youth minimum wages. Apprentices below 19 years of age are exempt from the minimum wage, as well as 16-17 year old workers on specified pre-apprenticeship programmes.

The suitable wage level was defined on the basis of several considerations. A similar rate to the then 18-21 youth minimum wage was viewed as inappropriate, because it would affect 35% of jobs held by 16-17 year olds compared with 6 per cent of jobs held by 18-21 year olds. A similar rate was also ruled out because of the higher unemployment rates among 16-17 year olds and a view that pitched too high a youth rate would exacerbate labour market problems. Evidence from multiple sources indicating that most 16-17 year olds earned £3 per hour underpinned the decision to set the new youth minimum at £3.

Source: Low Pay Commission (2004: chapter 3).

Some countries use more than two youth rates, and up to eight in the Netherlands for the separate years between 15 and 22 years old (see Box 4.2), and six in Australia and Belgium. There are potential risks and costs to the use of multiple youth rates. As young employees age, employers face a significant annual increase in labour costs and may be tempted, or pressured, depending on the context of labour and product market conditions, to substitute them with even younger workers. Wider age bands with smaller differentials between minimum wages lessen the problem of annual cost increases.

Box 4.2. Multiple youth rates in the Netherlands

The design of minimum wages in the Netherlands is curious both for its late starting age for the application of the adult minimum wage (23 years old) and for its use of eight separate youth rates starting at the very low level of 30 per cent of the adult rate.

The introduction of a statutory national minimum wage in the Netherlands in 1969 (building on a prior collectively agreed national minimum established since 1964) applied to all employees aged 24 years and over. This was changed to a starting age of 23 year olds in 1970. Then in 1974 a long tail of differentiated youth minimum wages was introduced. The youth rates are set as a percentage of the adult rate from 30 per cent for 15 year olds to 85 per cent for 22 year olds. In 2010 the rates were as follows (Euros per week):

- €326.75 for employees aged 23 years old and above
- €277.70 for 22 years
- €236.9 for 21 years
- €201.00 for 20 years
- €171.50 for 19 years
- €148.70 for 18 years
- €129.10 for 17 years
- €112.70 for 16 years
- €98.00 for 15 years

The Dutch government cites three reasons for the use of multiple rates. First, young workers are relatively less productive since they have less experience. Secondly, their income needs are limited since they often live with their parents and do not need to provide for a family. Finally, higher pay would make paid employment too attractive compared to further education. Unions, on the other hand, advocate for lowering the starting age of adult minimum wage from 23 to 21 or 18 years old.

Source: OECD Minimum Wage database and Salverda (2009: 294, 316-321).

Ratio of youth to adult minimum wage

An important source of inter-country differentiation, and one that impacts upon debates about fairness and employment effects, is the level of youth minimum rates relative to the adult rate. The average ratio of youth rate (average of multiple rates where these are present) to the adult minimum wage ranges from 53 per cent in the Netherlands and 59 per cent in the United States, to 85 per cent in France and Tunisia. In some countries however, particular age groups are associated to very low ratios (Table 4.1). The lowest is found in the Netherlands, where 15 year olds are entitled to 30 per cent of the adult minimum, and in Australia where the newly established Minimum Wage Panel has established that workers below 16 years old can receive 37 per cent of the adult rate.

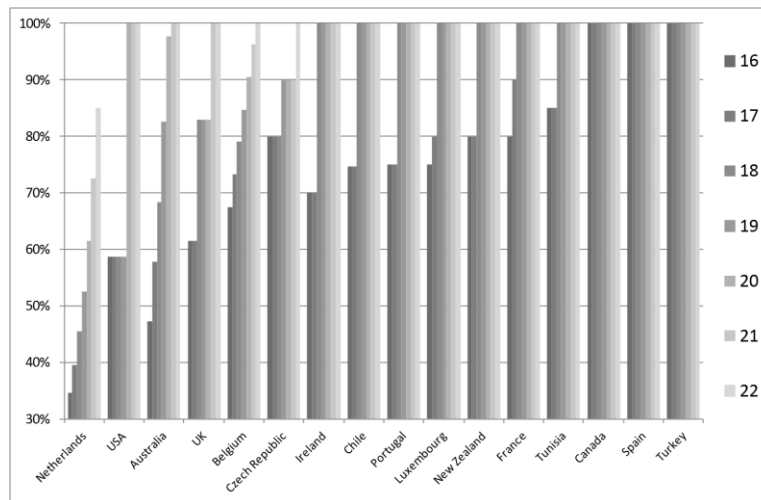
Figure 4.1 compares the relative value of youth minimum wages for separate age groups between 16 and 22 years old for a selection of 16 countries for which data are available. Countries are ranked according to the average ratio of youth minimum wages to the adult rate, and to the value of youth minimum wages compared to median earnings for all workers. The Netherlands and the United States are at the bottom of both ratios, thereby creating a form of double wage penalty to young workers. For example, the youth minimum wage for a 16 year old is just 16 per cent of median earnings in the Netherlands and 22 per cent in the United States; for a 18 year old the respective figures are 22 per cent in both countries. The implementation of very low youth rates generates incentives to low-productive young labour, rather than to efforts to improve efficiency and effectiveness.

At the other end of the spectrum, Canada, Spain and Turkey do not apply age-based wage differentials (with the exception of the province of Ontario in Canada). Three countries limit the youth discount to 20 per cent or less, namely France, New Zealand and Tunisia.

Compared with the level of median earnings for the workforce, Chile, France, New Zealand and Turkey top the ranking for youth minimum wage level, thanks to the relatively high level of the adult minimum wage. Two countries that do not set a separate youth minimum wage, Spain and Canada, fall down the ranking due to the relatively low value of the adult minimum wage.

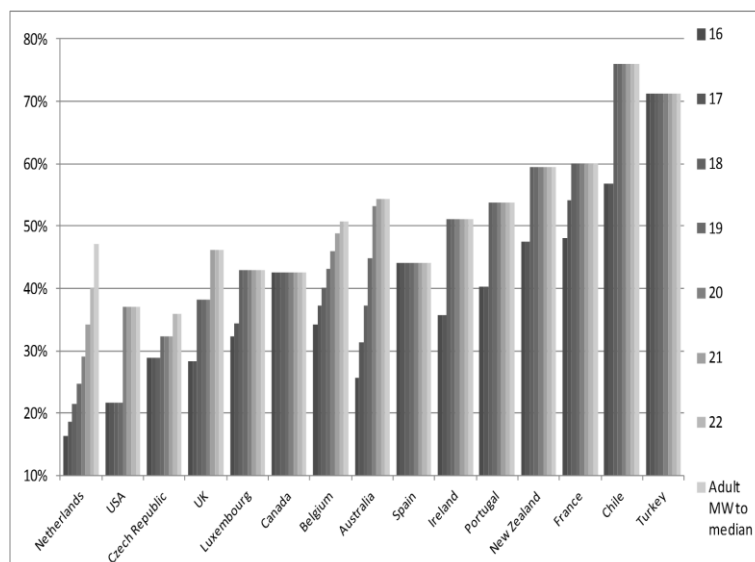
Figure 4.1. Relative value of youth minimum wages

a. Youth minimum wages relative to adult rates by age



Source: Based on data included in Table 4.1

b. Youth minimum wages relative to median earnings of all employees



Note: Country selection on the basis of data availability. Youth minimum wage data are for October 2010. Minimum wage to median earnings are 2009 data.

Source: Based on data included in Table 4.1

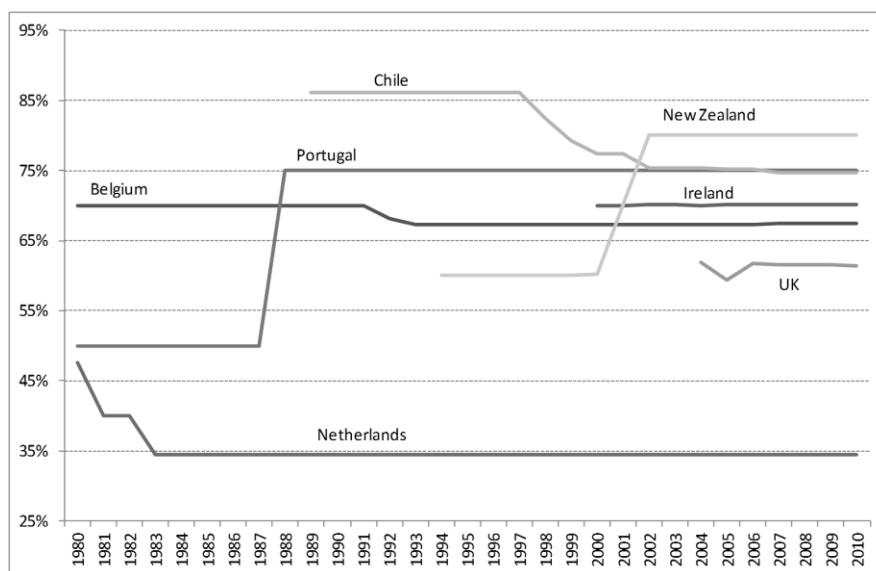
Trends in youth minimum wages

A selection of countries for which data are available show that the ratio of youth to adult minimum wage tends to be stable for long periods, although it can experience substantial shifts upward and downward, as the result of policy actions. Upward shifts were implemented in Portugal in 1988 when the fixed ratio was reformed from 50 per cent of the adult rate to 75 per cent, and in New Zealand in 2001 when the youth minimum wage was raised in two annual steps from 60 per cent of the adult rate to 80 per cent (see Box 4.3). Downward shifts occurred in the Netherlands in the early 1980s, in Belgium in the early 1990s, and in Chile in the late 1990s (although in this country the final ratio is still a significant 75 per cent of the adult minimum).

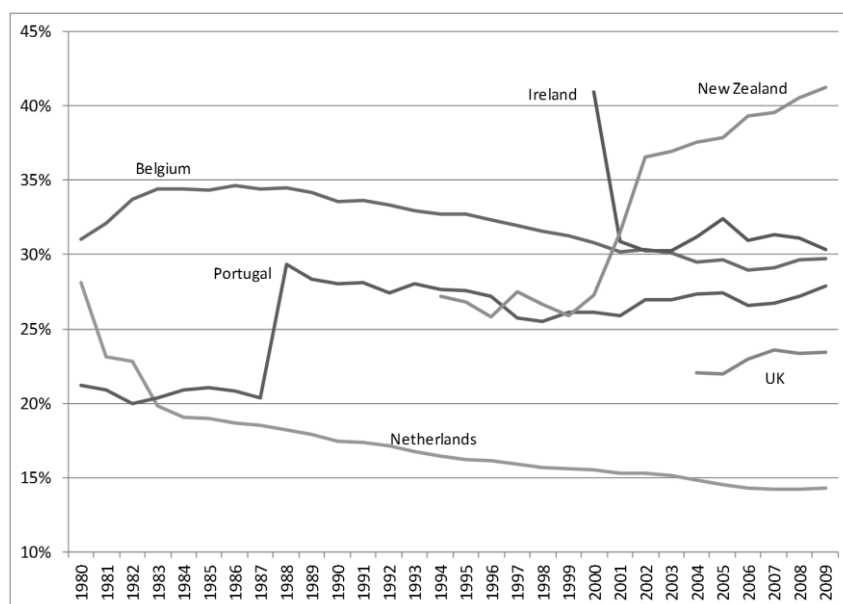
Trends in youth minimum wages for workers aged 16 and relative to median earnings of all workers are similarly diverse, owing to the mixed trajectories of adult minimum wage. Among the seven countries displayed in Figure 4.2b only New Zealand displays a rise in its youth minimum wage, which in fact continued during the 2000s the substantial one-off effect of the raising from 60 per cent to 80 per cent of the adult minimum wage. By contrast, Belgium and the Netherlands have experienced a steady fall in the ratio of youth minimum wages to median earnings, by around five percentage points in both countries during the last two decades. In the case of Belgium, the decline was reinforced by the reduction in the early 1990s in the youth minimum relative to the adult minimum wage.

Figure 4.2. Trends in the relative level of the minimum wage for workers aged 16 years old in 7 countries, 1980-2010

a. Trend relative to the adult minimum wage



b. Trend relative to median earnings



Source: OECD minimum wage database; own compilation.

Box 4.3. Upgrading the youth minimum wage in New Zealand

Following the introduction of a national statutory minimum wage in 1983 for adult workers aged 20 years and above, New Zealand introduced a youth minimum wage in 1994 for 16-19 year olds, set at 60 per cent of the adult rate. Following the election of a new coalition government in 1999 formed between the Labour Party and the Alliance, the level of the youth minimum wage was revisited with the objective of improving labour market conditions for young people. In 2000 a preliminary decision was made to raise the youth rate to 80 per cent of the adult rate, and to lower the starting age for eligibility to the adult rate from 20 to 18 years. The raising of the youth minimum wage was implemented in two steps, to 70 per cent of the adult rate in 2001 and to 80 per cent in 2002.

The extended coverage of the adult minimum wage to 18-19 year olds had the effect of raising their minimum wage by 69 per cent in 2001. The two-step increase in the youth minimum for 16-17 year olds led to a rise by 19 per cent in both 2001 and 2002 (see table below, annual increases in parentheses).

	Adults	Age 18-19	Age 16-17
1990	6.13	--	--
1994	--	3.68	3.68
1995	6.25 (2.0)	3.75 (1.9)	3.75 (1.9)
1996	6.38 (2.0)	3.83 (1.9)	3.83 (1.9)
1997	7.00 (9.8)	4.20 (9.7)	4.20 (9.7)
2000	7.55 (7.9)	4.55 (8.3)	4.55 (8.3)
2001	7.70 (2.0)	7.70 (69.2)	5.40 (18.7)
2002	8.00 (3.9)	8.00 (3.9)	6.40 (18.5)
2003	8.50 (6.3)	8.50 (6.3)	6.80 (6.3)
2004	9.00 (5.9)	9.00 (5.9)	7.20 (5.9)
Increase (2000-3)	12.6%	86.8%	49.5%

Source: Hyslop and Stillman (2004).

The relationship between pay and experience

The country systems vary in the extent to which they reward experience (and its association with better performance and productivity) over the regulatory obligation to reward age. Paying a significantly higher wage to workers aged 20-22 years and with no work experience, vis-à-vis 17-18 year olds who may have earned one or two years of experience since leaving compulsory schooling, might be perceived as unfair.

However, most countries listed in Table 4.1 make no reference in their legislation to a period of employment experience or probation. Only five countries limit the application of youth minimum wages to workers with limited employment experience, and extend the adult minimum wage to young workers once experience, or probation, exceeds a specified threshold.⁴⁵ In particular:

- In Belgium, there is a special consideration of experience for workers aged 21 years old that distinguishes between those with six months experience. Also, entitlement to the adult rate requires 12 months experience;
- In the Czech Republic the youth minimum for 19-21 year olds (but not the lower minimum for young workers aged less than 19) is limited to workers with less than six months experience;
- In France, the dual youth minimum wages for 16 year olds and 17 year olds only applies to workers with less than six months work experience;
- In New Zealand the youth rate for 16-17 year olds only applies to those with less than three months employment experience;
- In the United States the single youth minimum wage for 16-19 year olds only applies to young workers who have not accumulated 90 consecutive days of employment.

4.3. Special provisions for trainees and apprentices

Exemptions or reduced wages for jobs that provide training or apprenticeships to young workers are relatively common. The rationale for establishing legal provisions for such cases is clear: young workers accept a lower wage in exchange for training and improved labour market prospects.

However, it is important to note that policies of youth minimum wages and specific provisions for apprentices are not always jointly established.⁴⁶ Several countries apply one of these two policies, but do not apply both. Countries such as Canada, Chad, Chile, the Czech Republic, Lebanon, Papua New Guinea, and Tunisia, for example, do have a youth minimum wage, but no provisions for apprenticeships. Conversely, Bulgaria, El Salvador, Ghana, Japan, Morocco, Pakistan, the Philippines, Portugal, South Africa, and Vietnam, do apply provisions for apprenticeships but have no specific minimum wage policy for youth.

⁴⁵ Korea is another example where minimum wages are contingent upon minimum work experience but it applies to all workers since youth minimum wages were abolished in September 2005. The rules state that all workers, regardless of age, are limited to 90% of the standard minimum wage until they secure more than three months work experience.

⁴⁶ See Eyraud and Saget, 2005.

In Japan, for example, there is no youth minimum wage but employers can apply for apprentices to be exempt from the regional/sector minimum wages. Similarly, in Pakistan there is no youth minimum wage, but a policy for apprentices obliges employers to pay 50 per cent of the minimum wage during the first year of the apprenticeship, and increase it annually for three years.⁴⁷ In some cases, countries with no statutory national minimum wage (such as Germany and Sweden) make special provisions for apprentice pay within collective bargaining agreements.

Table 4.2 presents information for the same group of 19 countries listed in table 4.1, in this case with regard to their statutory wage protection for trainees or apprentices. From the information available, countries can be divided into three groups. Some countries simply exempt apprentices from minimum wage regulations, such as Japan, the Republic of Korea and, until 2010, the UK. Others set a specific single rate, either as a nominal amount or a fixed percentage of the adult minimum wage. Portugal, for example, applies an apprentice minimum of 80 per cent of the adult minimum wage subject to a maximum duration of 12 months. A third group applies multiple apprentice minima conditional on age and/or year of apprenticeship. In France, three apprentice minimum wages are set according to age. In Australia, Ireland and Spain the minimum payable increases with each successive period of the apprenticeship duration. In Australia in particular, the final fourth year of an apprenticeship is in fact rewarded at a higher level than the standard national minimum wage.

The levels of apprentice minimum wages vary between countries. In United Kingdom, the minimum wage for apprentices established in 2010 by the Low Pay Commission is relatively low compared with other countries, but it is in line with the non-statutory apprentice wage set by the Learning and Skills Council. In its review of the first 12 months of implementation of the apprentice minimum wage, the Low Pay Commission concluded that ‘on the basis of available evidence we believe that it has been introduced at a level which is unlikely to have adversely affected provision’.⁴⁸

⁴⁷ *Ibid.* Eyraud and Saget, 2005.

⁴⁸ See LPC, 2011, p. 92.

Table 4.2. The use of statutory wage protection for trainees and apprentices

Country	Youth minimum wage?	Special statutory provision for trainees?	Details of policy
Europe			
Belgium	Yes	No	--
Czech Rep.	Yes	No	--
France	Yes	Yes	Set at a fixed rate of the adult minimum wage: 25% (16-19), 42% (20-23), 78% (24)
Ireland	Yes	Yes	For employees aged over 18 undertaking training, rates are 75% for the first third of the course, 80% for second third and 90% for final third. Each one third must be > 1 month but < 12 months
Netherlands	Yes	No	--
Portugal	Yes	Yes	80% of minimum wage for a period not exceeding 12 months
Spain	No	Yes	70%, 80%, 90% of minimum wage during first, second and third year of training contract
Turkey	Yes	No	--
United Kingdom	Yes	Yes	Introduced in 2010 and set at £2.50 (42% of the adult minimum wage)
Africa			
Algeria	No	Yes	15% of minimum wage in the form of a pre-salary paid by the state
Kenya	No	No	--
Tunisia	Yes	No	
Americas			
Canada	No	No	--
Chile	Yes	No	--
United States	Yes	Yes	75% of the minimum wage for high school students aged 16+ enrolled in vocational education (shop courses).
Asia and the Pacific			
Australia	Yes	Yes	Since 2011 national minimum rates set for award and agreement free employees: 64%, 76%, 93%, 111% of the adult minimum wage applied in years 1-4 of the apprenticeship.
New Zealand	Yes	Yes	Apprentice minimum rates apply to workers who have to undertake 60 credits per year of an industry training programme to become qualified in their occupation
Japan	No	Yes	Employer may apply for exemption
Korea	No	Yes	Employer may apply for exemption

Source: adapted from Eyraud and Saget (2005: table 6) and supplemented by FairWork ombudsman for Australia www.fairwork.gov.au/pay/national-minimum-wage/pages/default.aspx; Steedman (2010) for France and for Ireland from www.iboa.ie/knowyourrights/yourrightsroi/minimumwage.html; US from www.dol.gov/elaws/esa/flsa/docs/slplink.asp.

4.4. Youth wage subsidies

A complication in applying youth minimum wages relates to their inter-connection with government policies of targeted wage subsidies, designed to encourage employers to hire young unemployed people. Wage subsidies vary in form and may complement or substitute for youth minimum wages. Youth wage subsidies represent one example of targeted subsidy policy. Other policies may address, for instance, workers from low-income households, low-skill workers or long-term unemployed. Many governments implement youth wage subsidies in order to increase the possibility of young market entrants to gain work experience, and provide employers with a less costly means of assessing the performance of youth workers.

One form of youth wage subsidy that complements a youth minimum wage applies to the hiring of all young people within a certain age range and regardless of their status in the labour market. An example is the newly proposed youth wage subsidy in South Africa. While policy design discussions are ongoing at the time of writing, a 2011 Treasury report suggests it may cover all 18-24 year old workers earning below a low-wage threshold, as well as 18-29 year olds new to employment again earning a low wage. The payable amount would be around half the minimum wage, for a period of six months and up to two years⁴⁹. Anticipated positive effects include a reduction in cumulative risk of unemployment among young people, improvement of young people's access to good jobs and better prospects of finding a job once the subsidized period ends. Unintended consequences include substitution of younger for older workers, the deadweight costs of subsidizing existing young workers for whom employers do not, or have not, necessarily required a wage subsidy, and 'destructive churning' caused by opportunistic employers who continually hire and fire young people in order to maximize the benefits from wage subsidies⁵⁰.

A quite different example is illustrated by a draft of two new wage subsidy policies in the United Kingdom. Implemented in 2011, the policies in fact substitute for the minimum wage. The first policy targets all unemployed claimants regardless of age ('mandatory work activity'), while the second one targets youth (16-24 years) specifically (four-week 'work experience' placements). Both policies allow job search organizations (involving both public sector job centres and private sector contractors) to oblige an unemployed person to take up voluntary work for a fixed duration at a designated workplace. During the volunteering period, workers receive no wage payment but continue to be eligible to unemployment benefits (as well as a contribution towards travel and childcare expenses).⁵¹ The policies have generated a great deal of controversy in the media. The government defends the work experience policies as an appropriate method to provide young unemployed people with insights into the working world and improve their chances of employability. However, the policies have come under fire both because of the harsh sanctions imposed on individuals who refuse voluntary work (leading to benefits sanctions of 13 or 26 weeks), and because of the use of voluntary placements in many of the leading high profit firms (causing some, such as Tesco the supermarket chain, to withdraw from the scheme due to the reputational damage of using 'slave youth labour').⁵² The schemes introduce a new segment of youth workers into the United Kingdom labour market, outside of national minimum wage legislation that covers workers.

⁴⁹ Source: South Africa National Treasury, 2011.

⁵⁰ *Ibid.*, South Africa National Treasury, 2011.

⁵¹ See DWP, 2011.

⁵² Sourced from www.thisismoney.co.uk/money/news/article-2104699/Tesco-makes-dramatic-U-turn-slave-labour-scheme-Twitter-outrage.html (accessed 29/02/2012).

4.5. Evidence from implementation

An indication of the relevance of a youth minimum wage is demonstrated by the proportion of young workers who receive it. Table 4.3 presents evidence from various countries of either the incidence of workers receiving age-related minimum wage, or paid at or below the minimum wage. In all countries shown, young workers are far more likely to be paid at (or below) the statutory minimum wage than older groups of workers.

Some studies report the results of econometric tests on the likelihood that young workers earn at and/or below the statutory minimum wage. For example, in China age is a statistically significant predictor of the likelihood of earning at or below the minimum wage – it is negative and non-linear such that older workers share to some extent the risk factor associated with youth.⁵³

Table 4.3. Share of young workers paid the minimum wage in selected countries

Country	Source	Age group	% paid the age-related minimum wage	% of all minimum wage earners
Croatia	Nestić (2009)	<25	6.3	--
		25-34	3.2	
		35-44	3.6	
		45+	2.1	
		Total	3.2	
France	Schmid & Schulten (2006)	<26	--	31.7
		Total	--	100.0
Hungary	Köllő (2009)	15-20	31.2	0.4
		21-25	13.2	6.9
		26-30	10.8	15.1
		31-49	9.6	49.8
Netherlands	Salverda (2009)	15-19	16.8	23
		20-24	10.5	25
		25-64	2.4	51
		Total 15-64	4.0	100
United Kingdom	Low Pay Commission (2011)	16-17	5.7	
		18-20	7.3	
		Total	4.2	

⁵³ See Du and Pan, 2009.

Country	Source	Age group	% paid the age-related minimum wage	% of all minimum wage earners	
Argentina	Kristensen & Cunningham (2006)	12-17		70.0	
		18-24		20.3	
		25-64		12.4	
		65+		31.7	
Brazil	Kristensen & Cunningham (2006)	12-17		16.5	
		18-24		9.9	
		25-64		5.6	
		65+		6.4	
China	Du and Pan (2009: table 5), reference to hourly minimum wage 2005 data	Local workers:		Migrant workers:	
		16-20	68.4	16-20	89.6
		21-30	46.5	21-30	74.2
		31-40	59.6	31-40	78.8
		41-50	59.6	41-50	83.4
		50+	47.4	50+	91.5
Mexico	Kristensen & Cunningham (2006)	12-17		25.6	
		18-24		6.5	
		25-64		6.0	
		65+		24.4	
Ireland	Nolan (2009)	<19		64	
		19-25		13	
		26+		2	

Non-compliance is a problem in all countries to a greater or lesser extent. The issue in China is complicated by two factors. First, the large share of migrant rural workers joining urban labour markets is significantly less likely to enjoy protection than local workers (see table 4.3). Second, the large difference in non-compliance indicators – depending on the adoption of the monthly or hourly minimum wage – as working hours tend to be very long.⁵⁴ In New Zealand, problems of non-compliance have been identified following the reforms to the minimum wage that increased youth minimum rates for 16-17 year olds and extended the adult minimum to 18-19 year olds. Pacheco reports a substantial rise in the proportion of young workers earning below the respective minimum wage, from less than one in 20 of youth 16-17 year olds in 2000 (preceding the reforms), to close to one in five, and more than one in ten youth 18-19 year olds, by 2004.⁵⁵

⁵⁴ See Du and Pan, 2009.

⁵⁵ See Pacheco, 2008.

5. Youth minimum wages and employment: Case studies from selected countries

One of the most controversial dimensions of the literature on youth wages concerns the impact of a statutory minimum wage on employment and the appropriateness of a sub-minimum youth rate. Youth minimum wage policy raises several questions. Do higher minimum rates price young people out of the labour market? Do lower minimum wage rates for youth increase their employment chances? Does the use of a standard minimum wage encourage employers to substitute older for younger workers? Does a youth minimum wage pitched too high discourage participation in further education?

There are numerous empirical studies that investigate the potential dis-employment effects of youth minimum wages, their substitution effects (e.g. with older/more skilled workers, or from older to younger workers), gender and interaction effects between formal and informal sectors. An international review of theory and empirical evidence highlights both the advances in theory building in this area and the uncertainty in the empirical evidence about the direction and size of youth employment effects.⁵⁶

Two general observations may be made about the various international studies on the subject. First, the effort to contextualize the minimum wage effects in the specific labour market and economic context of a particular country varies considerably across authors. Some explicitly integrate country conditions (e.g. GDP growth, regional differences, collective bargaining, training provision) and others assume a quasi-textbook, perfectly competitive labour market scenario. Second, studies adopt divergent methodologies including neoclassical econometric models, approaches informed by the more recent models of monopsony employers and, in a minority of cases, the analysis of qualitative data.”

5.1. Job losses and job gains

Empirical tests of the employment effects of youth minimum wages adopt several competing methodologies. The first and the most common one sets out with the mainstream neoclassical economics rationale that pay is a signal of an individual’s productivity. Young workers are assumed to have lower productivity than adult workers, due to lower levels of work experience and on-the-job training. Therefore, youth are in principle harmed by the application of a universal minimum wage, or a youth minimum wage set too high, for two reasons. On the demand side, employers are expected to prefer hiring older, more productive workers. On the supply side, young people enjoy an unrealistic incentive to enter paid employment rather than continuing with education.

The second methodology applies a monopsonistic labour market perspective, developed in the 1990s. Evidence had shown that low-wage employers exercised considerable discretion in wage-setting, and therefore were often able to raise wages up to a point and increase employment without adversely affecting profitability.⁵⁷ The theory therefore underpins predictions of employment gains from minimum wage rises. Similar theories include the efficiency wage models where productivity depends on the wage paid.

⁵⁶ See Ghellab, 1998. See also Neumark and Wascher, 2008.

⁵⁷ Card and Krueger, 1995.

While these two divergent approaches test hypotheses using econometric analyses of quantitative data, a third methodology analyses qualitative data drawing on interviews with employers and employees. Table 4 in the appendix presents a summary of a small sample of selected studies conducted recently across several countries.

Country examples of youth minimum wage reform have given rise to a small body of literature that investigates the effects of reform on youth employment, as well as, in some cases, on education participation and unemployment rates. This chapter of the paper reviews the findings of four such country experiments.

5.2. Abolishing youth rates in Spain

Spain is part of a small group of countries (along with the Republic of Korea, all but one provinces of Canada and, to a partial extent, New Zealand) that have abolished sub-minimum wages for young workers. A single rate applied for 16-17 year olds during 1990-1995 and was converted to the adult minimum wage over a three year period ending in 1998.⁵⁸ Two specific labour market details are also notable. First, unemployment was very high at the time of the policy reform, up to approximately 50 per cent among 16-19 year olds. Second, the statutory minimum wage was (and continues to be) low in Spain compared to other countries, some 34 per cent of median earnings compared to above 40 per cent in Australia, Belgium, France, the Netherlands and New Zealand.⁵⁹

Several studies have tested the impact of the reduced starting age for the adult minimum wage on youth employment but point to conflicting results. Three illustrative studies are as follows:

- Antón & Muñoz de Bustillo (2011) find a significant negative impact on young workers aged 16-17 years old. They deployed a difference-in-differences approach, comparing the 16-17 age group with the 18-20 age group, using data for 1995 and 1998. Controlling for a set of observable characteristics (assumed to be proxies for individual productivity) the effect on employment is negative and significant: -3.0 per cent using the linear probability model and -2.6 per cent using the *probit* model;
- Blázquez et al (2011) find no significant youth employment effects resulting from the rising Kaitz index (the ratio of the minimum wage to median earnings) during the period following the policy reform, 2000-2008. The method makes specific controls for the Spanish labour market context, including accounting for regional differences in wage structures and seasonal fluctuations in wages. It also integrates a lags for the impact of minimum wages on employment;
- Cebrián et al. (2010) test the impact of the steady rising of the Kaitz index on the 16-19 age group and find no evidence that the employment rate is affected. They argue the findings are not surprising given the low level of the statutory minimum wage in Spain coupled with its low coverage of the workforce.⁶⁰

⁵⁸ Prior to 1990 two youth minimum wages were set for 16 and 17 year olds separately at the levels of 38 and 61 per cent of the standard minimum wage (Antón and Muñoz de Bustillo 2011).

⁵⁹ Source: OECD database.

⁶⁰ Own translation from the original text: 'Los resultados de las estimaciones muestran que en ningún caso (ni siquiera para los adolescentes de 16 a 19 años) la tasa de empleo se ve afectada de forma significativa por los

5.3. Uprating the youth minimum wage in New Zealand

Reforms in New Zealand led to reducing the starting age for the adult minimum wage from 20 to 18 years, and increasing the relative youth minimum wage for 16-17 year olds from 60 per cent to 80 per cent of the adult rate in two stages (2001 and 2002). Three elements of New Zealand's labour market context are potentially relevant. First, the average pay of young workers (aged 20-24) in New Zealand compared to older workers was the highest among OECD countries according to 2006 data (see chapter 2). Second, New Zealand witnessed a relatively high increase in the education composition of its youth workforce during 1996-2006 compared to other OECD countries (see chapter 3). Third, pay differentials by level of education among New Zealand youth are narrow compared to the OECD average.

Stillman and Hyslop analyze household data for three groups of youth, namely 16-17, 18-19, and 20-25 year old, over the 1997-2003 period.⁶¹ Their study is of special interest because it investigates several outcomes resulting from the youth minimum wage changes, including employment, hours worked, wage distribution, unemployment and education decisions. In their application of difference-in-differences methodology, the authors assume 20-25 year olds are unaffected by the changes on minimum wage, and all groups of youth share similar labour market conditions over time. Kernel wage distributions illustrate the positive impact of the reforms in shifting the wage structure of 16-17 year olds and 18-19 year olds to the right. It also shows that 18-19 year olds were already far more likely than 16-17 year olds to be paid above the pre-2000 youth minimum wage. Difference-in-difference estimates report positive effects on the employment and hours worked for both groups of youth, with a statistically significant effect recorded for hours worked by 16-17 year olds. Regression results confirm the significant rise in 16-17 year olds' hours worked (by 2.2 hours per week or 10-15 per cent), but also identify a significant drop of 3-4 per cent in hours of education, a significant rise in unemployment and in inactivity. A smaller drop in education hours is also recorded for 18-19 year olds.

5.4. A low and falling youth minimum in the Netherlands

The Netherlands represents a particular case, due to its adoption and continued use of eight separate wage rates for young people aged between 15 and 22 years old. The country is also notable for having what appears to be the highest starting age for the adult minimum wage in the world. Like Denmark, most students work (in part-time or temporary jobs) and the risk of low pay is very high relative to older workers. The impact of the crisis on youth unemployment has been less than in most OECD countries and youth employment rates remain among the highest.

cambios en el índice de Kaitz. Este resultado no es extraño si se tiene en cuenta el bajo grado de cobertura del SMI en nuestro país' (Cebrián et al. 2010: 25).

⁶¹ See Stillman and Hyslop, 2007.

Salverda's assessment of qualitative views among trade unions and employers from the Dutch retail sector suggests several potential problems with the long tail of youth wages.⁶² They may encourage employers to hire ever younger workers, as each cohort ages and moves up the wage scale and the annual cost increases are significant. In addition, the low youth wage rates may well incentivize education among young people, but for those who do enter paid employment it may discourage employers from making suitable investments in skills development. Finally, the disconnect between job experience and young workers' pay is perceived as unfair. In fact, a new collective agreement among social partners in the retail sector was agreed in 2010, introducing wage enhancements for work experience, and improving career prospects and perceptions of fairness.

5.5. The United Kingdom – lowering the starting age for the adult minimum wage and introducing a new minimum for 16-17 year olds

After careful consideration of several specially commissioned empirical studies, the Low Pay Commission recommended in 2004 the introduction of a second youth minimum wage for 16-17 year olds. Also - after consistently resisting the Low Pay Commission recommendations since 1999 to start the adult minimum wage at age 21 years rather than 22- the government finally responded positively in 2010. Specific labour market conditions experienced by young people in the UK during this period include: high incidence of low pay; high pay differentials among young people with low, medium and high levels of education, and combined with the highest rise in educational attainment among young people relative to other OECD countries (albeit from a relatively low level in the mid-1990s); and a relatively uncommon trend of a rising youth share of the working-age population during the 2000s. Three illustrative studies are the following:

- Dickens et al. (2010) analyze what happens when young low skilled people with highest qualification from compulsory schooling up to 16 years old move from the 18-21 youth rate to the adult rate. This move represented a jump in the minimum wage of around 18-20 per cent over the 1999-2009 investigated period. Their analysis provides positive support for the policy to lower the starting age of the adult minimum wage to 21 years. They find that the jump in pay experienced by workers passing from 21 to 22 years old is in fact associated with a positive rise in employment, along with a reduction in unemployment among men and a fall in inactivity among women. All three results are statistically significant and hold with various formulations of the regression technique used, as well as several falsification tests.
- Dickerson and Jones (2004) examined the possible consequences of the planned introduction of a 16-17 youth minimum wage on education and employment decisions among 16 year olds. Deploying multiple methodologies (including a novel, decision-making model), the study finds that a new statutory wage floor would have only a marginal impact on the decision to continue education post-16 and symmetrical results on the decision to enter paid employment.

⁶² See Salverda, 2009.

- Drawing on a telephone survey, Neathey (2004) selected 16 organizations that employed 16-17 year olds in order to investigate employer practices. The evidence found that most employers were favourable to the idea of new youth minimum wage and only two were opposed. Most supported a 16-17 minimum wage above the one actually introduced the following year. In addition, while 12 of 16 employers paid 16-17 year olds a lower wage than adult workers, most said a new minimum wage would have no impact except in their approach towards trainee positions if this were covered.

6. Conclusions

6.1 Summary of key findings

This report has addressed a number of issues that are important to shed light on youth wages. Chapters two and three critically analyzed both empirical evidence regarding young people's position in the labour market and competing explanations in the academic literature, including labour supply factors and institutional factors. Chapter four focused on country experience in the use of statutory minimum wage systems to protect youth wages. The review raises issues for appreciation of the labour market conditions of young people, for the factors associated with the so-called youth 'wage discount', and for the relative merits of alternative country systems of minimum wages and sub-minimum wages for young people.

Key features of youth pay and youth labour markets include:

- Common evidence of a lower youth wage relative to that of older workers but substantial cross-national variation;
- Considerably larger risk of low pay faced by young workers vis-à-vis adult workers, especially among men;
- Downward trend in youth wages relative to adult workers in recent years, despite a declining youth share of the population (except for Africa), falling youth employment rates and rising education levels;
- Part-time and temporary employment of full-time students as an important feature of youth labour markets in some countries; and
- Disproportionately large and adverse impact of the crisis on young people's labour market prospects, including on unemployment rates, employment rates and pay prospects.

Given these conditions, what factors help explain youth wages, in particular the differential cross-national gaps between young and old people's wages? The following findings shed light on this matter:

- Trends and cross-national patterns in youth wages appear largely unrelated to basic labour supply factors;
- Skill formation systems shape youth wages directly via the quality of schooling (including extent of stratification), the commitment of employers, government and unions to training (since weak employer commitment significantly diminishes the pay prospects of young people without qualifications from tertiary education) and the balance of investment in general and firm-specific skills and in public or privatized higher education;
- More unequal wage structures generate higher wage penalties for young people in employment;
- Lower mobilization of young people by trade unions reduces their likelihood of enjoying union mark-ups of the wage;

- New career structures in knowledge-based sectors increase the openness of competition for jobs and inject pay and employment uncertainty over longer periods in young people's early career stages;
- Over-representation in part-time and temporary work can dampen pay prospects for young people but much depends on the over-riding regulations that frame the quality of flexible employment forms, as well as employer strategies for their use (e.g. segmented or standardized);
- Other factors are also likely to be relevant including job queue effects and crowding effects at the level of the job, workplace and sector (much like we have learned from the sex segregation literature); and
- Issues not investigated here include the implications of GDP growth, the sectoral composition of the economy (especially between high-tech and low-tech requirements), entitlements to welfare benefits and the fluidity between education and labour market participation.

Other than the vocational and education training system, the most important institution shaping young people's wages is the minimum wage. ILO data suggest that, among its member countries, around nine in ten operate a minimum wage of some sort. Around half of these countries provide for a lower minimum wage for young workers, while the other half applies a single standard rate for all. Occasional exceptions are made for workers with limited work experience, typically less than six months.

Key insights from the review of international experience of minimum wages include the following:

- ***There is no common trend in countries' policy reforms*** – some countries have abolished youth minimum wages in recent years while others have established new youth minimum wages;
- ***There is a wide variety of minimum wage rules affecting youth people***, including (a) differential starting ages for the adult minimum wage (from 16 to 23); (b) varying number of youth rates (from 1 to 8); (c) different levels relative to the adult rate (from 35 per cent to 80 per cent for 16 year olds, for example); (d) divergent practices of either fixing youth rates as a percentage of the adult rate or separate consideration of youth labour market conditions; and (e) special allowances for the accumulation of work experience in compensation for an assumed improved productivity;
- Countries both with and without specific youth minimum wages apply ***special rules for young trainees and apprentices***, and set the minimum rate typically at a level lower than the applicable minimum wage;
- ***The youth minimum wage overlaps with targeted youth wage subsidy policies*** in many countries;
- ***Minimum wages exert a strong 'bite' on the youth wage structure*** – there is a high share of young workers paid at the minimum wage level in several countries for which data are available; and
- Some countries suffer from serious problems of ***non-compliance with minimum wage rules for young people***.

Finally, the report reviewed a small sample of analyses of the labour market effects of minimum wage policy with a focus on what happens when countries change the rules of the game in a particular set of labour market conditions facing young people. The results are often conflicting and arrive at results using competing methodologies.⁶³ A recent study provides a valuable review of such differences relating to conflicting results for the United States.⁶⁴ The authors argue that failures to control for the heterogeneity in employment trends across different states generate biases towards negative employment elasticity.

In broad terms, the following observations can be made:

- Reducing the starting age for the adult minimum wage is associated with the full range of employment effects (from a positive to a negative effect), but generally negative effects on unemployment and some evidence of substitution of older for younger workers;
- Raising the relative level of the minimum wage affecting young workers can have at worst no significant employment effect and at best a small positive effect, albeit there is some evidence of negative effects on unemployment and inactivity;
- The adoption of many different rates for young workers is likely to conflict with norms about pay and experience, and can dis-incentivize employer training decisions;
- There is some evidence of reduced enrolments in education caused by lowering the starting age of the adult minimum wage. However, other factors act as stronger determinants of young people's education/employment decisions, such as the level of qualifications at young age and the opportunities to enter trainee positions with government support.

6.2. Further research

Further research on youth wages depends upon availability of better data. Analyses of national data in most developed economies draw on high quality survey and micro-data, including variables of workplace characteristics, individual and household descriptors and labour market conditions. However, this appears to be often lacking outside of the major conurbations of middle- and low-income countries. Access to good data on earnings in these countries can assist in efforts to draw lessons for policy development in diverse country experiences.

Very few studies have conducted cross-national comparative analyses of the impact of minimum wages on youth employment. Yet, this represents a potentially rich avenue for further enquiry. Several countries have moved towards abolishing youth minimum wages in the last decade. However, disentangling the effects of the minimum wage from country-specific conditions, such as a peculiarly high level of unemployment, or a high share of young people working in involuntary part-time and temporary jobs, is a challenging exercise.

⁶³ See Ghellab, 1998.

⁶⁴ See Allegretto et al., 2011.

More efforts at undertaking comparative analyses would shed light on the distinctiveness of country effects, associated with particular labour market conditions, employment practices and institutions, as well as the general state of the economy and sectoral composition of youth employment, especially concerning the technology mix.

Some studies point to adverse employment and unemployment effects of policy reform, for example in relation to the abolition of youth minimum wages by reducing the starting age for the adult rate. More studies investigating what combination of institutional reforms can facilitate equal minimum wages for young and old workers without adverse labour market (and education) consequences would be welcome.

Another important area for research would be looking at types of employer wage and training practices required to supplement minimum wage rules so as to minimize substitution effects between young and adult workers. Such investigations might identify the marginal effects associated with enhanced spending on vocational education, increased employer training provision, better performance of schools in delivering qualifications to young people and improved subsidies to firms to take on apprentices.

The method of *ceteris paribus*, holding all other factors constant, combined with the problem of absent variables in many analyses needs to be addressed. One answer is to conduct studies that analyze the consequences of joined-up policy reforms for youth wages, as well as the implications of employer practices with respect to pay, training and job security.

References

- Achur, J. (2010) 'Trade union membership 2010', BIS and National Statistics, United Kingdom, <http://www.statistics.gov.uk/hub/index.html>.
- Allegretto, S., Dube, A. and Reich, M. (2011) 'Do minimum wages really reduce teen employment? Accounting for heterogeneity and selectivity in state panel data', *Industrial Relations*, 50 (2): 205-240.
- Andalón, M. and Pagés, C. (2008) 'Minimum wages in Kenya', IZA Discussion Paper No. 3390.
- Antón, J.-I. and Bustillo, R. M. de (2011) 'The impact of the minimum wage on Spanish youth: Evidence from a natural experiment', Mimeo, University of Salamanca.
- Arulampalam, W. (2001) 'Is unemployment really scarring? Effects of unemployment experiences on wages', *The Economic Journal*, 111 (475): 584-606.
- Asao, Y. (2009) 'Overview of non-regular employment in Japan', in JILPT (2009).
- Bassanini, A. and Ok, W. (2003) 'How do firms' and individuals' incentives to invest in human capital vary across groups?', Mimeo, www.oecd.org/dataoecd/4/8/34932892.pdf.
- Bell, D. N. F. and Blanchflower, D. G. (2010) 'Young people and recession: A lost generation?'
- Blanchflower, D. G. and Freeman, R. B. (1999) 'The Declining Economic Status of Young Workers in OECD Countries', Mimeo, www.dartmouth.edu/~blnchflr/papers/DecliningYouth.pdf.
- Blázquez Cuesta, M., Llorente Heras, R. and Moral Carcedo, J. (2011) 'Minimum wage and youth employment rates, 2000-2008', *Revista de Economía Aplicada*, 56: 35-57.
- Boushey, H., Fremstad, S., Gragg, R. and Waller, M. (2007) 'Understanding low-wage work in the United States', Mobility Agenda paper and CEPR, www.mobilityagenda.org/home/page/Publications.aspx.
- Campolieti, M., Fang, T. And Morley, G. (2005) 'Minimum wage impacts on youth employment transitions, 1993-9', *Canadian Journal of Economics*, 38 (1): 81-104.
- Card, D. and Krueger, A. (1995) *Myth and Measurement: The New Economics of the Minimum Wage*, Princeton, N.J.: Princeton University Press.
- Cebrian, I., Pitarch, J., Rodriguez, C. and Toharia, L. (2010) 'Análisis de los efectos del aumento del salario mínimo sobre el empleo de la economía española', *Revista de Economía Laboral*, 7: 1-37.
- Chevalier, A., Harman, C., Walker, I. and Zhu, Y. (2004) 'Does education raise productivity, or just reflect it?', *The Economic Journal*, 114: F449-F517.
- Cho, Y. and Newhouse, D. (2011) 'How did the great recession affect different types of workers? Evidence from 17 middle-income countries', World Bank Policy Research Working Paper, 5636.
- Crouch, C., Finegold, D. and Sako, M. (eds.) (1999) *Are Skills the Answer? The Political Economy of Skill Creation in Advanced Industrial Economies*, Oxford: OUP.
- Croucher, R. and White, G. (2010) 'The impact of minimum wages on the youth labour market: An international literature review', Report for the Low Pay Commission
- Dickens, R., Riley, R. and Wilkinson, D. (2010) 'The impact on employment of the age related increases in the National Minimum Wage', Report prepared for the Low Pay Commission.

- Dickerson, A. and James, P. (2004) 'Estimating the impact of a minimum wage on the labour market behaviour of 16 and 17 year olds', Report for the Low Pay Commission.
- Dolado J., Kramarz, F., Machin, S., Manning, A., Margolis, D., Teulings, C., Saint-Paul, G. and Keen, M. (1996) 'The economic impact of minimum wages in Europe', *Economic Policy*, 11 (23): 317-372.
- Du, Y. and Pan, W. (2009) 'Minimum wage regulation in China and its applications to migrant workers in the urban labor market', *China and World Economy*, 17 (2): 79-93.
- DWP (2011) 'Could you offer work experience?', Job Centre Plus, Department of Work and Pensions, United Kingdom.
- Erdogdu, S. (2008) 'Turkey: Minimum wage in tension between economic and social concerns', in D. Vaughan-Whitehead (ed.)
- Estevez-Abe, M., Iversen, T. and Soskice, D. (2001) 'Social protection and the formation of skills: a reinterpretation of the welfare state', in P. A. Hall and D. Soskice (eds.)
- Eyraud, F. and Saget, C. (2005) *The Fundamentals of Minimum Wage Fixing*, Geneva: ILO.
- Gautié, J. (2008) 'Towards the end of an active minimum wage policy', in D. Vaughan-Whitehead (ed.).
- Genda, Y., Kondo, A. and Ohta, S. (2010) 'Long-term effects of a recession at labour market entry in Japan and the United States', *Journal of Human Resources*, 45 (1): 157-196.
- Gregg, P. And Tominey, E. (2004) 'The wage scar from youth unemployment', CMPO Working Paper Series, University of Bristol, 04/097.
- Grimshaw, D., Shepherd, C. and Rubery, J. (2010) 'National report UK', Report prepared for the EC project 'Minimum Wage Systems and Changing Industrial Relations in Europe', www.mbs.ac.uk/research/europeanemployment/projects/minimum-wage.aspx.
- Hall, P. A. and Soskice, D. (eds.) (2001) *Varieties of Capitalism*, Oxford: OUP.
- Hyslop, D. and Stillman, S. (2004) 'Youth Minimum Wage Reform and the Labour Market', IZA Discussion Paper No. 1091.
- IDB (Inter-American Development Bank) (2008) *Outsiders: the Changing Patterns of Exclusion in Latin America and the Caribbean*, Washington D.C.: Inter-American Development Bank.
- IDB (2004) *Good Jobs Wanted: Labor Markets in Latin America*, Washington D.C.: Inter-American Development Bank.
- ILO (2012) *Global Employment Trends 2012*, Geneva: ILO.
- ILO (2011) 'Global employment trends for youth: 2011 update', Geneva: ILO.
- ILO (2004) *Global Employment Trends for Youth*, Geneva: ILO.
- JILPT (Japan Institute for Labour Policy and Training) (2009) *Non-Regular Employment: Issues and Challenges Common to the Major Developed Countries*, Tokyo: Japan.
- Keizer, A. (2009) 'Non-regular employment in the Netherlands', in JILPT (2009).
- Köllő, J. (2009) 'Hungary: the consequences of doubling the minimum wage', in D. Vaughan-Whitehead (ed.).

- Kristensen, N. and Cunningham, W. (2006) 'Do Minimum Wages in Latin America and the Caribbean Matter? Evidence from 19 Countries', World Bank Policy Research Working Paper 3870.
- Low Pay Commission (2004) *The National Minimum Wage: Protecting Young Workers*, London: The Low Pay Commission.
- Low Pay Commission (2011) *National Minimum Wage: Low Pay Commission Report*, London: Low Pay Commission.
- Marsden, D. (1999) *A Theory of Employment Systems*, Oxford: OUP.
- Marsden, D. (2007) 'The growth of extended 'entry tournaments' in the labour markets of knowledge intensive sectors in Britain since 1975', Paper presented at the British Academy of Management, HRM Special Interest Group Workshop.
- Marsden, D. and Ryan, P. (1989) 'Statistical tests for the universality of youth employment mechanisms in segmented labour markets', *International Review of Applied Economics*, 3 (2): 148-169.
- Mason, G. and Salverda, W. (2010) 'Low pay, working conditions and living standards', in J. Gauthier and J. Schmitt (eds.) *Low-Wage Work in the Wealthy World*, New York: Russell Sage Foundation.
- Michon, F. (2009) 'Survey on non-regular employment in France: A profile', in JILPT (2009).
- Neathey, F. (2004) 'Firms' attitudes to employing 16-17 year olds', Report to the Low Pay Commission.
- Nestić, D. (2008) 'Croatia: Moving towards a more active minimum wage policy', in D. Vaughan-Whitehead (ed.).
- Nolan, B. (2009) 'Ireland: a successful minimum wage implementation?', in D. Vaughan-Whitehead (ed.).
- OECD (2006) *Employment Outlook*, Paris: OECD.
- OECD (2008) *Employment Outlook*, Paris: OECD.
- OECD (2009) *Learning for Jobs: OECD Policy Review of Vocational Education and Training, Initial Report*, Paris: OECD.
- OECD (2010) *Off to a Good Start? Jobs for Youth*, Paris: OECD.
- OECD (2011) *Education at a Glance*, Paris: OECD.
- Pacheco, G. (200?) 'The changing role of minimum wages in New Zealand', *New Zealand Journal of Employment Relations*, 32 (3): 2-17.
- Pereira, S. (2003) 'The impact of minimum wages on youth employment in Portugal', *European Economic Review*, 47 (2): 229-244.
- Quintini, G. and Martin, S. (2006) 'Starting well or losing their way? The position of youth in the labour market in OECD countries', *OECD Social, Employment and Migration Working Papers* No. 39.
- Rehfeldt, U. (2010) 'Trade union strategies to recruit new groups of workers – France', www.eurofound.europa.eu/eiro/studies/tn0901028S/fr0901029q.htm.
- Reskin, B. And Roos, P. (1990) *Job Queues, Gender Queues*, Philadelphia: Temple University Press.

- Rubery, J. and Grimshaw, D. (2003) *The Organisation of Employment: an International Perspective*, London: Palgrave.
- Sabia, J. J. (2009) 'Identifying minimum wage effects: new evidence from monthly CPS data', *Industrial Relations*, 48 (2): 311-328.
- Saget, C. (2001): "Is the minimum wage an effective tool to promote decent work and reduce poverty? The experience of selected developing countries." ILO Employment Paper 13. Geneva, ILO.
- Salverda, W. (2009) 'The Netherlands: Minimum wage fall shifts focus to part-time jobs', in D. Vaughan-Whitehead (ed.).
- Scarpetta, S., Quintini, G. and Manfredi, T. (2010) 'A scarred generation: Leaving school when recession hits', OECD Social, Employment and Migration Working Paper.
- Schmid, B. and Schulten, T. (2006) 'The French minimum wage (SMIC)' in T. Schulten, R. Bispinck and C. Schafer (eds.) *Minimum Wages in Europe*, Brussels: ETUI.
- Shannon, M. (2011) 'The employment effects of lower minimum wage rates for young workers: Canadian evidence', *Industrial Relations*, 50 (4): 629-655.
- Shinozaki, T. (2012) 'Not by education alone: How young adults' employment status is determined by employment environments and family backgrounds', *Social Science Japan Journal*, 15 (1): 31–52.
- Solow, R. (2008) 'Introduction: The UK story', in C. Lloyd, G. Mason and K. Mayhew (eds.) *Low-Wage Work in the UK*, New York: Russell Sage Foundation.
- South Africa National Treasury (2011) 'Confronting youth unemployment: policy options for South Africa', National Treasury Discussion Paper, February.
- Steedman, H. (2010) 'The state of apprenticeships in 2010: International comparisons', A Report for the Apprenticeship Ambassadors Network, www.employersforapprentices.gov.uk/docs/research/Research_1_604.pdf.
- Stillman, S. and Hyslop, D. (2007) 'Youth minimum wage reform and the labour market in New Zealand', *Labour Economics*, 14 (2):
- Thurow, L. (1969) *Poverty and Discrimination*, Washington DC: Brookings Institute.
- Van Klaveren, M., Salverda, W. And Tjijdens, K. (2009) 'Retail jobs in the Netherlands: Low pay in a context of long-term wage moderation', *International Labour Review*, 148 (4): 413-438.
- Vaughan-Whitehead, D. (ed.) (2008) *The Minimum Wage Revisited in the Enlarged EU*, Geneva: ILO.
- Verick, S. (2009) 'Who is hit hardest during a financial crisis?', IZA Discussion Paper, No. 5349.
- Waddington, J. and Kerr, A. (2002) 'Unions fit for young workers?', *Industrial Relations Journal*, 33 (4): 298-315.
- Westergaard-Nielsen, N. (2008) 'Statistical analysis and history of low-wage work in Denmark', in N. Westergaard-Nielsen (ed.) *Low-Wage Work in Denmark*, New York: Russell Sage Foundation.
- Whitley, R. (2007) *Business Systems and Organizational Capabilities: the Institutional Structuring of Competitive Competencies*, Oxford: OUP.

Appendix

Table 1. Pay of young workers (aged 15-24) compared to that of older workers (aged 25-24)

	1996	2006	PP change
Australia	0.68	0.66	-0.02
Canada	0.59	0.60	0.01
Czech Republic	0.79	..	--
Denmark	0.71	0.64	-0.07
Finland	0.69	0.68	-0.02
Germany	0.62	0.61	-0.01
Hungary	0.67	..	--
Ireland	0.59	0.63	0.04
Japan	0.60	0.58	-0.02
Korea	0.61	0.58	-0.03
Netherlands	0.53	..	--
Norway	..	0.73	--
Poland	0.70	0.62	-0.07
Switzerland	0.59	0.58	-0.01
United Kingdom	0.64	..	--
United States	0.6	0.55	-0.02
OECD	0.64	0.62	-0.02

Source: OECD data sourced from OECD Employment Outlook chapter 1 Table 1.A1.2.

Table 2. Youth labour market participation rates, 2000 and 2010

	2000	2010	Change (pp)		2000	2010	Change (pp)
Morocco	46.5%	30.3%	-16.1%	Singapore	39.3%	35.6%	-3.7%
Czech Republic	46.1%	30.9%	-15.2%	Poland	37.8%	34.5%	-3.4%
Slovakia	46.0%	31.0%	-15.0%	Belgium	35.7%	32.5%	-3.2%
Hungary	37.2%	24.9%	-12.3%	Netherlands	72.2%	69.0%	-3.1%
United States	65.8%	55.2%	-10.6%	Finland	53.8%	50.8%	-3.0%
Romania	41.3%	31.2%	-10.1%	Israel	33.9%	31.3%	-2.7%
Italy	38.1%	28.4%	-9.7%	New Zealand	62.8%	60.4%	-2.4%
Ireland	51.4%	42.0%	-9.4%	Sweden	53.5%	51.5%	-2.1%
Luxembourg	34.0%	24.7%	-9.3%	Australia	70.6%	68.6%	-2.0%
Portugal	45.7%	36.7%	-9.0%	Bulgaria	30.7%	28.9%	-1.7%
Malta	59.5%	51.5%	-8.0%	Switzerland	68.2%	66.5%	-1.7%
Macedonia	37.6%	29.6%	-8.0%	Spain	48.5%	46.9%	-1.7%
Greece	38.1%	30.3%	-7.8%	Costa Rica	50.5%	49.1%	-1.4%
Lithuania	37.3%	29.6%	-7.7%	Philippines	47.3%	46.1%	-1.2%
South Africa	35.5%	27.9%	-7.6%	Russian Federation	44.2%	43.5%	-0.7%
Korea, Republic of	33.0%	25.5%	-7.5%	Cyprus	40.9%	40.6%	-0.3%
Norway	64.7%	57.4%	-7.3%	Canada	64.4%	64.5%	0.1%
Argentina	49.6%	42.4%	-7.3%	Germany	51.5%	51.8%	0.4%
United Kingdom	69.7%	62.9%	-6.7%	Trinidad & Tobago	51.7%	52.1%	0.4%
Sri Lanka	43.5%	36.8%	-6.6%	Brazil	61.0%	62.7%	1.7%
Puerto Rico	36.0%	29.4%	-6.6%	Latvia	38.5%	40.4%	1.9%
Hong Kong, China	45.6%	39.5%	-6.1%	Panama	47.3%	49.8%	2.4%
Denmark	71.9%	67.4%	-4.5%	Iceland	71.6%	74.0%	2.4%
Mexico	51.5%	47.2%	-4.3%	Estonia	35.4%	38.3%	2.9%
Thailand	53.4%	49.1%	-4.3%	Austria	55.7%	58.8%	3.2%
Turkey	42.5%	38.3%	-4.2%	Chile	33.6%	37.5%	3.9%
Japan	47.0%	43.1%	-3.9%	France	35.5%	39.7%	4.2%
Venezuela, Boliv. Rep.	49.1%	45.3%	-3.9%	Macau, China	40.1%	46.1%	5.9%

Notes: youth defined as aged 15-24 years old. Most recent data available are 2009 for Argentina, Brazil, Hong Kong, Morocco, Philippines, Puerto Rico, Singapore, South Africa, Sri Lanka and Thailand; and 2008 for Costa Rica, Macau, Panama, Trinidad and Tobago and Venezuela.

Source: KILM data 7th Edition.

Table 3. Employment rates of young male and females, OECD 2006-2010

Country	Male					Peak-trough	Female					Peak-trough
	2006	2007	2008	2009	2010	pp change	2006	2007	2008	2009	2010	pp change
Australia	64.5	65.0	65.5	61.7	61.5	-4.0	62.9	63.3	63.6	60.7	59.8	-3.7
Austria	58.2	59.6	59.5	57.3	57.9	-2.3	49.9	51.5	52.2	51.7	49.4	-2.9
Belgium	30.4	29.9	29.7	27.4	27.3	-3.1	24.7	25.0	25.0	23.2	23.1	-1.9
Canada	57.7	59.1	59.1	53.9	53.4	-2.9	59.3	59.8	60.3	57.2	56.6	-3.7
Chile	32.5	32.7	34.1	31.2	36.6	-2.9	18.9	19.6	20.2	19.8	23.8	-0.4
Czech Republic	31.4	32.8	32.3	31.1	29.6	-3.3	23.7	23.9	23.5	21.7	20.6	-3.3
Denmark	65.0	66.3	68.4	63.6	56.9	-11.6	64.1	64.2	65.4	63.7	59.4	-6.0
Estonia	37.6	39.7	40.6	32.1	28.8	-11.8	26.1	30.0	33.2	27.0	23.9	-9.4
Finland	46.7	47.9	47.8	35.6	40.8	-12.3	41.4	44.7	45.0	41.6	40.1	-5.0
France	33.7	34.4	34.7	33.3	33.9	-1.4	26.7	28.4	29.0	29.1	27.7	-1.3
Germany	46.3	48.2	49.7	48.6	49.0	-1.1	41.6	43.5	44.5	44.4	44.5	-0.2
Greece	29.7	29.2	28.5	27.7	24.5	-5.2	18.7	18.7	18.5	18.1	16.2	-2.5
Hungary	24.5	24.2	23.2	19.9	20.0	-4.6	18.8	17.8	16.8	16.3	16.6	-2.5
Iceland	70.4	73.6	70.5	56.7	58.5	-17.0	75.6	75.0	73.9	67.0	65.7	-9.8
Ireland	53.6	52.5	47.5	34.1	28.8	-24.7	45.0	47.1	45.5	38.5	32.6	-14.5
Israel	25.2	26.1	26.5	24.6	24.7	-1.9	28.1	28.3	28.8	29.1	29.3	--
Italy	30.6	29.6	29.1	26.1	24.3	-6.3	20.1	19.5	19.4	17.0	16.5	-3.7
Japan	40.8	41.3	41.0	38.7	37.9	-3.4	42.0	41.5	41.8	41.2	40.5	-1.6
Korea	21.4	20.5	18.5	18.0	17.9	-3.5	32.3	30.4	28.6	27.4	27.7	-4.9
Luxembourg	25.4	26.5	27.0	29.1	22.1	-7.0	21.2	18.4	20.6	24.2	20.3	-3.9
Mexico	59.2	57.8	57.9	53.9	55.8	-5.3	31.8	31.5	31.5	28.8	29.9	-3.0
Netherlands	64.1	66.9	67.8	65.4	62.5	-5.2	61.5	64.0	65.7	65.2	63.5	-2.2
New Zealand	61.0	60.5	58.2	53.9	51.8	-9.2	55.3	55.9	53.8	49.2	48.3	-7.6
Norway	53.2	54.0	57.7	52.0	51.3	-6.4	53.0	56.3	58.3	54.4	52.7	-5.6
Poland	26.9	29.2	31.0	30.4	30.3	-0.6	21.0	22.4	23.7	23.2	22.1	-1.6
Portugal	39.8	39.2	38.5	33.2	30.4	-9.4	31.6	30.6	30.8	29.4	26.5	-5.1
Slovak Republic	29.0	30.9	30.8	26.7	23.6	-7.2	22.3	24.1	21.4	18.6	17.3	-6.8
Slovenia	39.2	43.2	43.0	39.1	37.6	-5.6	30.3	31.4	33.2	31.0	30.0	-3.2
Spain	48.6	48.5	43.2	32.4	28.2	-20.3	37.7	37.0	35.7	29.1	26.5	-11.2
Sweden	45.0	47.1	46.9	38.0	37.9	-9.2	44.6	46.5	45.9	38.8	39.0	-7.8
Switzerland	64.6	65.4	63.6	60.9	63.6	-4.5	62.0	59.7	61.2	62.4	59.7	-2.7
Turkey	41.8	41.5	41.3	39.0	40.2	-2.9	19.3	19.3	19.8	19.3	20.3	-0.5
United Kingdom	58.1	57.3	57.5	52.8	51.5	-6.7	56.5	54.6	55.1	51.4	50.3	-6.2
United States	56.2	54.4	52.3	46.7	44.9	-11.3	52.3	51.8	50.2	47.0	45.1	-7.2
Brazil	63.0	62.9	63.3	61.4	..	-1.9	42.2	42.7	43.1	41.5	..	-1.6
Russian Federation	36.0	38.1	42.9	39.9	39.9	-3.0	29.9	31.8	34.2	33.0	32.0	-2.2
OECD countries	47.2	47.0	46.5	42.8	42.5	-4.7	39.1	39.2	39.1	37.1	36.4	-2.8

Source: OECD.stat.export.

Table 4. Summary of selected literature (since 2000) on youth employment effects of minimum wages

Authors	Country	Data	Method	Issue	Findings
Allegretto et al. (2011)	United States	Current Population Surveys, 1990-2009	Wage regression controlling for spatial heterogeneity	Impact of MW trends in multiple states controlling for varying employment patterns	<ul style="list-style-type: none"> • No dis-employment effects for 16-17 or 18-19 year old groups (employment elasticity indistinguishable from zero)
Antón & Muñoz de Bustillo (2011)	Spain	Spanish Labour Force Survey (EAPS)	Econometric difference-in-differences: 16-17 age versus 18-24	Reduced starting age of adult MW from 18 to 16 year olds	<ul style="list-style-type: none"> • reduced employment by 3 percentage points • increased likelihood of unemployment by 2 points • reduced probability of being enrolled in formal education by 1.5 points
Blázquez Cuesta et al. (2011)	Spain	EAPS and Quarterly Survey of Labour Costs	Econometric model adjusted for regional and seasonal differences	Impact of changing Kaitz index on youth employment 2000-2008	<ul style="list-style-type: none"> • evidence of a neutral or slightly positive effect of a rising Kaitz index on employment
Campolieti et al. (2005)	Canada	Survey of Labour and Income Dynamics (SLID) 1993-9	Employment transition probabilities with longitudinal data	Impact of multiple MW policy reforms over different provinces over time	<ul style="list-style-type: none"> • MW rises associated with an increase in transitions from employment to non-employment among low-wage youth (a minimum wage elasticity of around -0.4)
Cebrian et al. (2010)	Spain	Encuesta de Coyuntura Laboral (ECL)	Econometric model adjusted for business cycle, region and workplace features	Employment effects of rising Kaitz index, 1981-2009	<ul style="list-style-type: none"> • no significant effect on youth employment
Dickens et al. (2010)	United Kingdom	Labour Force Survey	Regression discontinuity approach	Impact on low-skilled workers when passing from age 21 (youth rate) to 22 (adult rate)	<ul style="list-style-type: none"> • significant positive effect on employment • significant negative effect on male unemployment and female inactivity
Dickerson and Jones (2004)	United Kingdom	Youth Cohort Study	Transition matrices, multinomial logits and a novel decision-making model	Effect of a new youth MW on 16-17 year olds' education/ employment decision	<ul style="list-style-type: none"> • marginal effect on education/employment (0.1-0.2 percentage points reduction in numbers continuing in education post-16 with a new MW at £3.00)
Neathey (2004)	United Kingdom	Qualitative data	Telephone survey and case studies of 16 organisations	Views of employers towards employing 16-17 year olds in light of a proposed new youth MW	<ul style="list-style-type: none"> • most employers in favour • most recommended a level above that actually established the following year • no expected adverse impact provided trainees regulated differently

Authors	Country	Data	Method	Issue	Findings
Pereira (2003)	Portugal	Firm-level micro data	Regression method	Impact of reforms to reduce starting age of adult MW from 20 to 18 years old	<ul style="list-style-type: none"> reduced employment of 18-19 year olds caused substitution by 20-25 year olds
Sabia (2009)	United States	Current Population Surveys, 1979-2004	Regression	Effect on teenage employment rate and hours worked of MW rises (with and without macro controls)	<ul style="list-style-type: none"> strong negative employment effects without macro controls, but smaller (still significant) effects with macro (year effect) controls
Salverda (2009)	Netherlands	Qualitative data (retail sector social partners)	Interviews	Impact of long tail of low youth rates	<ul style="list-style-type: none"> encourages substitution of ever younger workers incentivises further education but is a disincentive for employer training investments disconnect between pay and work experience perceived as unfair
Shannon (2011)	Canada	Labour Force Survey microdata 1976-2003	Difference-in-differences	Effect of abolishing youth rate for 15-16 year olds in six of ten provinces	<ul style="list-style-type: none"> mixed results for employment effects except two provinces (Ontario and British Columbia) with significant negative effects (of 5-10 percentage point decrease in 16-16 year old employment rates) weak evidence of hours effects weak evidence for Quebec where the youth-adult MW differential was the largest pre-abolition
Stillman & Hyslop (2007)	New Zealand	Household Labour Force Survey	Econometric difference-in-differences	Reduced starting age of adult MW and raised youth MW	<ul style="list-style-type: none"> no evidence of adverse employment impact of reduced starting age of adult MW increase in unemployment reduction in education enrolment

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