

**The School-to-Work Transition:  
A Cross-National Perspective<sup>1</sup>**

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## **Abstract**

School-to-work patterns and issues are discussed for seven economies (France, Germany, Japan, the Netherlands, Sweden, UK and US). The emphasis is placed on differences across countries in both the current labour market position of young people and recent trends therein, along with the institutions that regulate youth education, training and employment. The power of public policies – including labour market deregulation, labour market programmes, the vocationalisation of education, and apprenticeship – to improve youth outcomes is discussed, drawing on national evaluation literatures. Evidence of extensive policy failure points up the need to develop nationally appropriate institutions to improve school-to-work transitions.

## 1. Introduction

The concept of the school-to-work transition is a recent development, associated with change, waiting and uncertainty. The route from schooling to employment is often depicted nowadays as long and perilous, unlike the short and direct routes presumed available to previous generations – as if Powell’s expedition on the Colorado River were to replace a ride on the Staten Island ferry.<sup>2</sup>

Some countries have indeed seen major deterioration. In France, whereas 86 per cent of the youth cohort had been employed nine months after leaving school in 1973, the rate for their 1992 counterparts had reached only 19 per cent after three years (Joëlle Affichard 1981; Patrick Werquin 1999). In the US, economists typically see fewer problems and less deterioration, but many disadvantaged young people never complete the trip, and many travellers alight at the prison rather than the workplace.

The school-to-work agenda embraces many long-standing issues concerning schooling, employment and training. Does unemployment damage young people? Do sub-minimum wages increase youth employment and training? Is vocational education economically beneficial? Do internal labour markets make it hard for young people to find work (Richard B. Freeman and David A. Wise 1982; Albert Rees 1986; Paolo Garonna and Paul Ryan 1991)?<sup>3</sup>

These issues are considered nowadays as part of a single process, the school-to-work transition, defined typically as the period between the end of compulsory schooling and the attainment of full-time, stable employment (OECD 1996a, 1998c). The case for a unified, transition-oriented treatment of youth activities contains several strands. Firstly, it may be possible to define a small set of trajectories whose importance can be compared across time and

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<sup>2</sup> The OECD talks of ‘longer and more complex transitions than in the past’ (1998a, p.111). A corollary is that the definition of ‘youth’ nowadays includes young adults aged up to 25 and even 30.

<sup>3</sup> In the US policy context, ‘school-to-work’ issues are typically construed more narrowly, as concerning work-based learning in secondary education and over-investment in college education (US DOL 1997; OECD 1999a).

place – though only limited success has attended such efforts in practice.<sup>4</sup> Secondly, path dependence may be present, with ‘upstream’ experiences affecting ‘downstream’ outcomes (e.g., unemployment as a youth increasing subsequent unemployment as an adult). Thirdly, the increased availability of longitudinal datasets has encouraged a sequentialist conception of youth experiences, and improved the prospects of removing selection bias when studying causal links. Finally, particular policies and institutions, including labour market programmes and apprenticeship, may be associated with better school-to-work transitions.

This paper discusses research findings for seven advanced economies. Although analytical evidence has traditionally been confined largely to the US, a European literature has emerged lately. The analysis of different national experiences promises two benefits. Firstly, it extends the evidence on key issues. More may be learned about the employment effects of sub-minimum wages when they are low and cover a wide age-range, as in the Netherlands, than when they are high and short-lived, as in the US. Similarly, the merits of apprenticeship are more readily established for France, where it functions as a direct substitute for full-time vocational education, than for the US, where that is rarely the case. Secondly, differences *between* countries may also prove informative. International comparisons are often weakened by small sample sizes and unmeasured country-specific effects, but they can inform us about a wider range of issues than can evidence from a single country (David G. Blanchflower and Freeman 2000a).

The economies considered here are France, Germany, Japan, the Netherlands, Sweden, the UK and the US. They were chosen on three criteria: firstly, a substantial research literature accessible in English, French or German; secondly, interesting policies and institutions, such as mass apprenticeship in Germany; thirdly, contemporary changes in transition patterns, such as the arrival of high youth unemployment in Sweden and Japan during the 1990s. For Japan, the

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<sup>4</sup> The number of transition categories varies considerably, e.g., between six and twenty for France (Marc Bordigoni and Michèle Mansuy 1997; Werquin 1996). In comparisons of trajectories across time and place, the comparability of categories is typically limited (Christoph Büchtemann, Jürgen Schupp and Dana Soloff 1993).

paucity of English-language materials and the thinness of the econometric literature pose problems, but the country's exceptional attributes warrant its inclusion.<sup>5</sup>

School-to-work issues vary by country. There are two primary foci in the US: structural joblessness amongst disadvantaged non-white youth, the traditional concern of economists, and vocational preparation for non-college-bound youth, the traditional concern of educationists. Although analogous issues arise in other countries, elsewhere socio-economic disadvantage tends to be less damaging and vocational preparation more highly developed. Moreover, other problems are often more pressing: in France, mass youth unemployment; in Japan, defective job-worker matching; in Germany, the sustainability of mass apprenticeship.

The research findings considered here are drawn mostly from microeconomic studies that address the problem of selection bias. The primary focus is young people without post-secondary education. Section 2 discusses youth joblessness. Section 3 considers methodological issues. State dependence is discussed in section 4. Section 5 examines the functioning of youth labour markets, in terms of pay, employment and mobility. Labour market policies, including deregulation and labour market programmes, are discussed in section 6; educational policies, primarily vocationalism and apprenticeship, in section 7. Section 8 concludes.

## **2. Youth employment problems**

The criticisms levelled at school-to-work transitions include inadequate educational attainments, high joblessness, excessive job turnover, and weak links between schooling and employment. The less contentious issues concern unemployment and joblessness; the more contentious, turnover and vocationalism. This section considers the former pair, sections 5 and 7 the latter one.

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<sup>5</sup> Two limitations of this choice of countries are the absence of (i) the two advanced economies with the highest rates of youth unemployment (Spain and Italy) and (ii) the transition and developing economies, in which youth employment problems are typically greatest of all (ILO 1999).

The most accessible index of youth employment problems is the unemployment rate. The US, with its lack of trend during the past 25 years, provides the benchmark in Figure 1. Starting from at most half the US rate, those of the other economies have both increased and fanned out, relative to the US rate. The early 1980s saw sharp increases in France, the Netherlands and the UK; the early 1990s, in Sweden and (again) France. At the end of the 1990s, although the German, Dutch and Japanese youth rates were moderately lower than the US one, those of Sweden and France were much higher, the French rate having remained above 25 per cent since 1994. More favourably, the youth rate has fallen recently in all countries except Japan, and the Dutch and British rates now stand well below their peaks of the early 1980s.

[Figure 1 here]

The limitations of unemployment rates as a guide to youth employment problems are widely recognised (Rees 1986). Two aspects are discussed here: the differences between unemployment and joblessness, and between the short and the long term, in sections 2.1 and 2.2 respectively, before turning to effects of social disadvantage in section 2.3.

## **2.1. Unemployment, inactivity and joblessness**

Young people who face employment difficulties may be inactive instead of unemployed. The line between unemployment and inactivity is fuzzy and, wherever it is drawn, frequently crossed. Young people are particularly likely to drop out of the labour force when jobs are hard to find, whether for study, leisure, illicit activities or inertia. Labour market programmes take some of them out of unemployment without providing regular employment. Unemployment provides therefore only a partial indicator of employment problems.<sup>6</sup>

Such considerations led Rees (1986) to prefer joblessness to unemployment as the principal index of youth employment problems in the US in the early 1980s. Nowadays attention

focuses more narrowly on the out-of-school jobless, i.e., those inactive with respect to education as well as the labour market. Defined thus, youth inactivity is selectively important. In 1997, there were as many inactive as unemployed young males in the Netherlands, Sweden and the US (Table 1).<sup>7</sup> In Sweden and the UK around 10 per cent of the youth cohort is inactive, reflecting strong growth since 1987 (Paul Gregg and Jonathan Wadsworth 1998; Tom Bentley and Ravi Gurumurthy 1999; Social Exclusion Unit 1999). Only in Japan and France has the inactive share remained below three per cent. The growth of youth inactivity in Japan, which may appear marked from an internal perspective (Mitsuko Uenishi 1999), is reassuringly small from an external one.<sup>8</sup>

[Table 1 here]

Even where youth inactivity is extensive, it may be generated by choices (e.g., leisure, travel) not constraints, or by non-economic constraints (e.g., military conscription, present through 1997 in the four continental European countries) not labour market ones. Around half the inactivity of young adult males in Sweden is associated with military service or foreign travel.<sup>9</sup>

Nevertheless, where youth inactivity is high, employment problems may be present, associated particularly with macroeconomic difficulties. In slack labour markets, inactivity is expected to be high, as discouraged job seekers withdraw from the labour force and the already inactive face less incentive to look for work. The growth of youth inactivity was associated with macroeconomic deterioration, as proxied by the adult male unemployment rate, in Sweden during 1987-97 (Table 1, columns 13-14). Macroeconomic factors cannot however account for the entire

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<sup>6</sup> A related defect is that, when educational participation rates are high, the youth labour force may be small, in which case even high unemployment rates involve only a small minority of the youth population cohort – as is the case for French teenagers in particular.

<sup>7</sup> The use of 1987 and 1997 in Table 1 reflects data availability rather than economic suitability. Attention is restricted to males in order to remove most of the inactivity associated with family formation.

<sup>8</sup> Inactivity estimates vary by source. The share of inactive youth for the US in 1987 (Table 1) is much lower than that reported for 1985 by Rees (1986, Table 1). Other data for France suggest that inactivity amongst 15-29 year olds fell during 1975-95 (Ministère de l'Emploi 1999b).

pattern of youth inactivity across countries. Growing labour market slack in France during 1987-97 was associated with broadly constant inactivity rates; falling slack in the Netherlands, the UK and the US, with rising inactivity (Table 1). Multivariate analysis reveals however the expected anti-cyclical component in youth inactivity in the UK (Gregg and Wadsworth 1998).

The other potential determinants of youth inactivity include pay inequality, schooling patterns, household attributes and labour market programmes. In the UK, the US and the Netherlands, young workers face lower wages (by national standards) than do their French and Swedish counterparts, in association with lower wage minima (section 6.1, below), and may be correspondingly less motivated to seek employment. Youth inactivity is associated in the UK with low educational achievement (truancy, early school leaving, lack of qualifications) and social deprivation (joblessness of other household members, residence in a low-income area; Gregg and Wadsworth 1998). The contemporary rise in the age of youth departure from the parental residence (Norman Bowers, Anne Sonnet and Laura Bardone 1999; David Card and Thomas Lemieux 2000), which should have increased parental support for youth consumption, may have encouraged – and in turn been encouraged by – increased youth inactivity. Finally, the methods adopted by public programmes for unemployed youth may explain why inactivity rates have remained lower in France than in Sweden, the UK and the US. In the latter countries, young people either have little access to public income support (the US) or are required to enter labour market programmes of generally low quality in order to qualify for support (Sweden and the UK; Idès Nicaise 1999; Ivar Lødemel and Espen Dahl 2000). Further research is needed to establish which factors are associated with the national specificity of changes in youth inactivity.<sup>10</sup>

The key point here is the importance of joblessness, alongside unemployment, as an indicator of youth employment problems. Although national rankings by unemployment and

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<sup>9</sup> The activities of inactive 20-24 year old Swedish males in 1997 (1987 in parentheses) were: military service, 35% (59%); foreign travel or sickness 15% (10%); other, 50% (30%; source in Table 1).

<sup>10</sup> Cultural change may also have contributed to the growth of inactivity, but such explanations are notoriously difficult to assess. The difficulty is illustrated by the Japanese debate over the emergence of a more materialistic youth mentality, that of the ‘parasite single’, who lives with his or her parents and works only intermittently, as to convenience rather than necessity (Yuji Genda 2000). The broad stability



joblessness (Table 1) largely coincide, many youth are inactive, not unemployed, in four of the seven countries.<sup>11</sup> Moreover, changes in inactivity show little relationship to changes in unemployment across countries: e.g., in the US the two have diverged, but in Sweden converged.<sup>12</sup>

## 2.2. Unemployment flows and durations

The implications of youth unemployment and joblessness for employment difficulties depend on their dynamic attributes. High joblessness need not indicate a problem. If flows in and out are also high, and spell durations correspondingly short, only labour market matching may be involved, to the benefit of labour market efficiency (section 5.2, below). Conversely, low joblessness does not rule out problems: flows may be low and long spells dominant. No one interprets long-term joblessness as a contribution to labour market efficiency.

Comparative evidence is available only for unemployment. Flows into and out of unemployment are higher for youths than for adults in all countries (Table 2, columns 5-6). *Ceteris paribus*, that means lower rates of long-term unemployment for youths than for adults. Nevertheless, the long-term rate was no lower for youths in most countries in 1994, and markedly lower only in Germany (*ibid.*, columns 2-3).

[Table 2]

More favourably, long-term youth unemployment has not increased, during 1985-94 at least. The youth rate did rise in Japan and Sweden, but it remained low in both countries (*ibid.*, columns 1-2). It fell substantially in France, the Netherlands and the UK, in association with

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of youth inactivity in Japan (Table 1) suggests however that there is little to explain along such lines in the first place.

<sup>11</sup> Indeed, as household surveys cannot fully capture the youth inactivity associated with homelessness and self-concealment, Table 1 probably underestimates youth employment problems.

<sup>12</sup> Even out-of-school joblessness cannot capture the full extent of youth employment problems. Some young people become students because jobs are hard to find (Blanchflower and Freeman 2000b). The

labour market tightening (the Netherlands) and the expansion of youth programmes (France and the UK; section 6.2, below).

A less favourable picture is likely for joblessness than for unemployment. Outflows from inactivity tend to be lower than those from unemployment (Gregg and Wadsworth 1998). In some countries, many young people shuttle between labour market programmes, inactivity, and unemployment without finding regular employment, accumulating long spells of joblessness but not of unemployment as they go. In France, 20 per cent of the 1986 cohort of sub-*Baccalauréat* school-leavers remained jobless throughout their first 3.5 years after leaving school, but, as most of them participated in at least one labour market programme, few became long-term unemployed (Isabelle Recotillet and Werquin 1995).

In that context, the fact that in both France and the UK in the mid-1990s more one in twenty young workers was long-term unemployed, despite mass labour market programmes, has constituted a bitter problem for public policy.

### **2.3. Disadvantage**

Rees (1986) noted the strong association in the US between youth joblessness and race and educational failure. The analysis remains appropriate. The 1990s boom – the most sustained peacetime expansion in modern history – has seen the unemployment rate for black teenagers fall from 43 to 30 per cent during 1985-98. The group's employment rate actually fell, however from 34 to 30 per cent during the same period (Rees 1986, Table 1; Lisa M.Lynch 1999, Table 5). The boom has not removed a structural youth employment problem, associated with socio-economic disadvantage.<sup>13</sup>

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tendency is particularly marked in France, where student entitlement to public benefits (e.g. health insurance) encourages young people to enrol as students rather than opt for inactivity.

<sup>13</sup> Evaluations of public training programmes in the US concentrate accordingly upon the disadvantaged (Daniel Friedlander, David H.Greenberg and Philip K.Robins 1997).

In the other countries, similar attributes coexist with the effects of depressed economic activity. In all countries, racial minorities and low achievers perform below par in the labour market (as indicated again, in the absence of comparable data on joblessness, by unemployment rates; Table 3). Members of the largest ethnic minority group, including Turks in Germany and Koreans in Japan, show elevated youth unemployment rates (*ibid.*, columns 2-4).<sup>14</sup> Young workers who have not completed upper secondary education have higher unemployment rates than completers (*ibid.*, columns 6-8).<sup>15</sup>

[Table 3 here]

Labour market disadvantage may also be associated with gender and age. Females may do less well than males in the youth, as in the adult, labour market. As teenagers have less labour market experience than do young adults, they may face greater employment problems (section 5.1, below). In practice, gender differences in youth unemployment are weak in all countries but France, whereas teenage rates typically exceed those of young adults (*ibid.*, columns 10-12, 13-15). Joblessness rates are however higher for young adults than for teenagers in all countries (Bowers, Sonnet and Bardone 1999, Figure 3), which suggests that young adults face greater employment problems than do teenagers. This reversal of expectation is associated with the priority that is typically given to teenagers by labour market programmes.

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<sup>14</sup> The weaker role of ethnicity in defining minority status in Germany and Japan than in the US and the UK may affect 'ethnic' differences in unemployment rates by country. For example, in Japan, as the official criterion is citizenship, ethnic Koreans who possess Japanese citizenship are excluded from the minority category. Relative to a strictly ethnic definition, the citizenship criterion reduces the size of the minority group. It may however increase the inter-group difference in unemployment rates: amongst ethnic Koreans, those whose families have taken out Japanese citizenship are expected to be less socio-economically disadvantaged. A further complication is that ethnic differences in youth unemployment may be raised in the US relative to the other countries by the use of a black/white comparison for former and more heterogeneous ones for the latter (e.g., 'all ethnic minorities' in the Netherlands). That does not however apply to the US/UK comparison. A narrower definition, replacing 'non-white' by 'black' along US lines, raises the inter-group difference in unemployment rates in the UK from 18 to 32 percentage points, well above the 17 point difference in the US.

<sup>15</sup> The criterion of 'usual employment status' means that only differences in long-term unemployment, whose overall incidence is low anyway (Table 2, above), are captured by the Japanese data.

Other potential dimensions of disadvantage include social class, disability and household attributes, for which data are less readily available. In 1996 more than two-fifths of unemployed 20-24 year olds in Germany, the Netherlands, the UK and the US lived in households in which no one else was employed (Bowers, Sonnet and Bardone, 1999, Table 6a).

As the various dimensions of disadvantage are interrelated, the worst placed young people are those who feature in multiple dimensions. If the teenage black male high school dropout represents a trough of disadvantage in the US, the unqualified young female constitutes his French counterpart. In 1987, eighteen months into their working lives, fully 72 per cent of unqualified young French women who had not yet participated in a labour market programme were unemployed (Luc Chevalier and Serge Silberman 1988).

The cross-tabulations in Table 3 provide however a less than conclusive guide to the effects of disadvantage. In the first place, they cannot reveal the *ceteris paribus* contribution of any one dimension of disadvantage. For example, ethnic differences in youth unemployment would be lower holding educational attainment constant.

Secondly, selection effects associated with group size can cause unemployment to vary independently of disadvantage. For example, as the rate of secondary school non-completion falls, the labour market penalty on low educational attainment might be expected to rise, purely as a result of more intensive negative ability-based selection into that state. Any tendency for differences in unemployment by educational attainment to rise as a result appears to be swamped, however, by a concomitant increase in excess demand for unskilled youth labour as its supply falls. In Japan and Germany, the share of educational low achievers is small, but so too is the difference in unemployment by educational attainment (Table 3, columns 6-8). The relatively few young Japanese and Germans who do not make the grade educationally face a labour market for unskilled youth labour that is less glutted than those of other countries, which in turn reduces youth joblessness (Francine Blau and Laurence Kahn 1999).<sup>16</sup>

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<sup>16</sup> Favourable outcomes for less educated youth are fostered in both countries by high youth access to employment (section 5.1, below) and by low dispersions of scholastic achievement in compulsory

Thirdly, inter-group differences in outcomes may reflect individual choices rather than disadvantage. For example, as teenage workers are expected to do more job search than are young adults, their unemployment rates should be higher (section 5.2, below). Other inter-group differences are however less plausibly interpreted in terms of personal choices. Young workers do indeed have reason to search more than do adults, but the same need not apply to young blacks, as compared to young whites. As job turnover rates in early labour market experience are similar for blacks and whites in the US anyway, ethnic differences in job search are probably small (Lynch 1999).

To the extent, then, that youth unemployment rates indicate the effects of disadvantage, the evidence suggests that, while disadvantage runs along similar lines in all countries, the distance that it travels, particularly along the tracks of ethnicity and scholastic achievement, is greatest in the US and the UK. It is perhaps not surprising that the labour market handicaps suffered by disadvantaged youth should be particularly large in the two countries in which labour market inequality has been high and rising fast.<sup>17</sup>

### **3. Evidence and Methods**

An extensive school-to-work literature is available nowadays for all seven countries. Longitudinal micro-data, used initially to describe school-to-work pathways, are regularly analysed with econometric methods for all countries, with the partial exception of Japan.<sup>18</sup>

Although econometric research has proliferated in Europe, little use has been made of social experiments, which have become central to the evaluation of US labour market programmes. Entitlement-based access impedes the random allocation of eligible individuals to

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schooling (S.J.Prais 1993; OECD 1998b); and, in Germany, by remedial education and training, helping the great majority of youth to train to craft level or higher (Wolfgang Franz, Joachim Inkmann, Winfried Pohlmeier and Volker Zimmerman 2000; Christoph Schmidt and Klaus Zimmerman 1996).

<sup>17</sup> As the gap between the unemployment rates of mainstream and disadvantaged youth tends to be greater in slacker labour markets, the differences in Table 3 between the English speaking and other countries should rise were macroeconomic conditions to be equalised across countries.

<sup>18</sup> The limited availability of longitudinal data for Japan appears to reflect low official priority to its collection and release.

non-participant status, and therewith the formation of a control group against whose experiences programme effects can be estimated (Anders Björklund and Håkan Regnér 1996). The difficulty is almost universal for the evaluation of educational programmes, which function on an entitlement basis in all seven countries. Even in the US, only a few educational initiatives have involved random assignment (e.g., R.L.Crain, A.L.Heebner and Yin-Pong Si 1992).

Most research depends therefore on multivariate econometric analysis. Outcomes (e.g., pay) are compared for participants and members of a comparison group, controlling statistically for extraneous influences (e.g., prior education) while estimating the effects of the variable of interest (e.g., training).

Econometric research faces the endemic problem of selection bias. When unmeasured personal attributes are correlated with both the outcome under scrutiny and the variable of interest, simple regression estimates are biased. For example, if ex-trainees earn more than members of the comparison group, is that caused by the training, or by greater motivation in the trainee group, for which no statistical controls can be imposed, owing to lack of data? The difficulty reflects the potential importance of unmeasured personal attributes, including typically ability, motivation, personality, character and appearance, both for economic success and for selection into the activity of interest – as when more able, motivated, sociable, reliable or good looking people sign up or are chosen for training.<sup>19</sup>

Various sophisticated methods, including Heckman two-step procedures, fixed effects models, and instrumental variable estimation, are available for the control of unseen selection processes (Friedlander, Greenberg and Robins 1997). In the absence of social experiments, such methods are arguably necessary for successful evaluation. The econometric evidence considered here is confined largely to studies that attempt to remove selection bias along such lines.

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<sup>19</sup> The low levels of statistical explanation typically achieved by regression analysis of individual labour market outcomes (e.g., Jacob Mincer 1974) are consistent with this interpretation. Even when controls are imposed for many measured attributes, many potentially powerful determinants of economic success remain uncontrolled.

Econometric methods of dealing with selection bias do not however guarantee effective evaluation. They face two limitations, one general, one specific. The general defect emerges from comparisons of evaluations of the same labour market programme by social experiment and by econometric analysis. Econometric results prove highly sensitive to the assumptions made about the distribution of unobserved attributes and selection processes and to the choice of comparison group (Robert J. LaLonde 1986; James J. Heckman and Jeffrey A. Smith 1996).<sup>20</sup> Evaluation research should therefore be eclectic and modest, using multiple sources of evidence and varied evaluation methods, and not expecting definitive conclusions (W. Norton Grubb and Ryan 1999). Even ‘weakly experimental’ methods, including international comparisons, may make be of value, as for apprenticeship (section 7.2, below).<sup>21</sup>

The second limitation is youth-specific. The limited availability of social experiments matters more for youth than for adults. Previous labour market experience can provide valuable information about unobserved personal attributes to help in modelling selection processes (Heckman and Smith 1999). Young people have less of it than do adults, and what they have may be harder to interpret.<sup>22</sup> Econometric results should then prove particularly sensitive to choice of identifying assumptions and comparison group.

The difficulty is increased for many youth policies by entitlement-based access. When the great majority of eligibles participate in the activity of interest, it becomes particularly difficult to construct comparison groups of non-participants, especially those matched to participants in terms of personal attributes and locality (Heckman and Smith 1996). Thus it is particularly difficult to evaluate apprenticeship from German evidence, given that all but the lowest achieving young Germans enjoy an informal public guarantee of a place (section 7.2, below).

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<sup>20</sup> Similarly, the findings of econometric evaluations of Swedish and British labour market programmes vary considerably from study to study (Regnér 1997; Ryan and Büchtemann 1996).

<sup>21</sup> From the standpoint of experimental science, international comparisons may be termed ‘weak’ because of the lack of controls for extraneous influences (e.g., national culture). They may still be informative, as a result of increased identifying variance in the independent variable (Ryan 1991).

<sup>22</sup> The low earnings of teenage apprentices in Britain may be interpreted in terms of low labour quality or high training costs (Blanchflower and Lynch 1994; Ryan 1998).

For these reasons, particular attention is paid here to econometric research that, in grappling with selection bias, respects the informational limits of the endeavour (Sara Connolly, John Micklewright and Stephen Nickell 1992; Michel Sollogoub and Valérie Ulrich 1999).

#### **4. State dependence**

School-to-work issues become more important, and a transition-oriented perspective more relevant, in the presence of state dependence, i.e., when upstream experiences, in schooling or the youth labour market, have downstream effects in working life, and when those effects are stronger for youth than for adults.

The main prospective vehicle is joblessness in general, and unemployment in particular. Most of the evidence concerns unemployment. In France, concern is more widely based, focused on the *précarité* (insecurity) of the various sequences of unemployment, fixed-term employment, labour market programmes and inactivity through which many young people filter in search of regular employment (Werquin 1996).

Labour market programmes often give priority to long-term unemployed youth. Britain's New Deal programme for the long-term unemployed was initially intended only for the under-25s (Bentley and Gurusurthy 1999). Such policies are implicitly predicated on three tenets: that state dependence exists for young workers, that it is stronger for youths than for adults, and that duration dependence dominates occurrence dependence. Are such priorities warranted?

Two types of outcome may be affected by early labour market experiences: immediate well being and economic prospects. Section 4.1 considers the former; section 4.2, the latter. In both cases, the distinction between occurrence dependence, associated with entry to the state, and duration dependence, associated with the length of time spent in it, is potentially important. How we interpret both long-term unemployment and job turnover depends on the relative importance of the two forms of state dependence (sections 2, above, and 5.2, below).



#### 4.1. Personal well-being

Unemployment may cause distress, apart from any associated income loss, because of the absence of a valued activity (paid work), and damage to social standing and self-respect. The effects of unemployment on personal well being have been explored more for Europe than for the US. Indicators of psychological well being and mental health, ranging from simple statements of life satisfaction to multi-dimensional measures of states of mind, are analysed statistically in relation to labour market status (employment, unemployment, etc.). Longitudinal data and fixed effects models are typically used to counter selection effects: e.g., the possibility that greater unhappiness amongst the unemployed than the employed results from the selection of intrinsically less happy individuals into unemployment, rather than any depressing effect of unemployment itself.

Adverse effects of unemployment on well being have been found in separate studies of German and Swedish youth. Occurrence dependence has been detected for Germany: a uni-dimensional, binary index of personal well being is significantly lowered by moves from employment to unemployment and raised by the reverse movement (Liliana and Rainer Winkelmann 1998). Duration dependence was tested for both countries, but proved significant only in Sweden (Tomas Korpi 1997). When unemployment is replaced by joblessness (for German youths), state dependence weakens, suggesting that discomfort and labour market ties go together. Finally, income while unemployed makes no difference to the effects of unemployment on well being in either country. These findings align broadly with earlier ones for the UK and US (Peter Warr, Paul Jackson and Michael Banks 1988; William Darity and Arthur H. Goldsmith 1996).

It is not clear whether unemployment causes more distress to youths than to adults, for whom similar effects have been found (Andrew E. Clark and Andrew J. Oswald 1998). Although in German results occurrence dependence proves greater for young people than for adults, British research has found lower duration dependence for teenagers than for adults (Warr, Jackson and Banks, 1988).

The effect of unemployment on well being is therefore a valid concern for public policy, but the relative importance of duration and occurrence dependence and the differences between young people and adults remain unclear. So do differences in the effects of unemployment *amongst* young people, to whom the value of leisure may well vary considerably.

#### **4.2. Economic prospects**

Unemployment may also damage the economic prospects of the unemployed, by causing skills and motivation to decay, and inducing employers to disfavour them as potential recruits. The effect may operate either during an unemployment spell, by reducing the probability of finding work as its duration lengthens (current dependence); or subsequently, by increasing the probability of experiencing further spells, reduced earning power, etc. (lagged dependence).

The prospects for controlling for unseen adverse selection, into both unemployment and long-term unemployment (i.e., occurrence and duration dependence, respectively), are limited. Restrictive assumptions must be made, concerning the relationship between observable and unobservable individual attributes or the time profile of the underlying hazard function, in order to separate state dependence from selection around unobservable attributes. The results are potentially sensitive to those assumptions (Heckman and George J. Borjas 1980; Heckman 1991).

Current dependence may entail a declining probability of leaving unemployment as spell duration increases, after controlling for duration-based adverse selection. Little attention has been paid to the youth-specifics of the issue. Franz (1982), using a lognormal parametrisation of the baseline hazard, inferred current dependence in Germany, but Wiji Narendranathan and Mark B. Stewart (1983), adopting a less restrictive semi-parametric specification, found none in the UK. More evidence is needed on an issue central to the targeting of public help on the long-term youth unemployed.

Lagged dependence involves the ‘scarring’ of subsequent working life by previous unemployment. Early research found little evidence of it for US youth. Selection into unemployment around unobserved attributes was found to account for most or all of the cross-sectional relationships between youth unemployment and subsequent labour market outcomes (Heckman and Borjas 1980; David T. Ellwood 1982).

European studies have however inferred lagged dependence, starting with findings by Franz (1982) for exit rates in youth unemployment. Subsequent research on German, French, Swedish and British youth concurs, using variously unemployment and employment rates, pay and occupational status as outcome variables. Amongst the identifying assumptions deployed, the most common is that unobserved individual attributes are unchanging and normally distributed.

The regularity with which unemployment-based state dependence has been found for France is particularly striking, given widespread concern over youth insecurity. In all relevant studies, the probability that a young worker gains (or holds) regular employment is significantly reduced by prior unemployment. At the same time, no further damage attaches to employment under fixed-term contracts or participation in labour market programmes (sections 5.1.2 and 5.2, below). Concerns about damaging downstream effects from youth *précarité* are thereby allayed. Although unemployment itself impairs labour market prospects, the wider network of mobility and change within which it is embedded does not impose additional damage (Gilles Allaire, Eric Cahuzac and Gabriel Tahar 1995; Didier Balsan, Saïd Hanchane and Werquin 1996; Thierry Magnac 1996).

Similarly, previous unemployment has been found to increase for German youth the probability of being unemployed (Hans-Jürgen Andress 1989). For British youth, it increases both the probability of entering unemployment (Narendranathan and Peter Elias 1993) and the danger of remaining in unemployment (Narendranathan and Stewart 1993) and reduces occupational upgrading in early working life (Connolly, Micklewright and Nickell 1992). For Swedish youth, it reduces pay when employed (Susanne Ackum 1989).

Various details remain obscure in evidence for Europe, including the relative importance of occurrence and duration dependence. For Germany, Franz (1982) found only duration dependence, but Andress (1989) inferred occurrence dependence. French evidence suggests both duration and occurrence dependence for females, and only occurrence dependence, or weaker forms of both, for males. British research finds occurrence dependence, along with (plausible) threshold effects in duration dependence: amongst males who leave school early, unemployment reduces occupational status, seven years later, only if the relevant spell lasted at least three months (Connolly, Micklewright and Nickell 1992).<sup>23</sup>

Do the scars fade over time? The durability of adverse effects is uncertain. Concern is reduced by the fact that, even in the depressed mid-1990s, 90 per cent of young French females holding low or no educational qualifications – a particularly disadvantaged group – achieved regular employment within six years of leaving school (Balsan, Hanchane and Werquin 1996). The analytical evidence is again mixed. Ellwood's (1982) finding for US youth, that the effects of unemployment last at most two years, is mirrored for the UK by the finding by Narendranathan and Elias (1993) that occurrence dependence for male early school-leavers evaporates within two years. By contrast, duration dependence has been estimated to last at least seven years in France (Allaire, Cahuzac and Tahar 1995)<sup>24</sup>, and up to seventeen years, when outcomes during ages 24-33 are related to prior experiences during ages 16-23, in the UK (Gregg 2000). Unemployment does indeed appear to do durable damage to young people.

Evidence is also scarce on age effects: are youths are more damageable than are adults? A priori, it could go either way. Insofar as young people are more resilient than adults, state dependence should be weaker for them; insofar as they are more immature and vulnerable, it

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<sup>23</sup> Evidence of complementarity between duration and occurrence dependence in adult unemployment in Germany (Gebhard Flaig, Georg Licht and Viktor Steiner 1995) has yet to be replicated for youth.

<sup>24</sup> Allaire *et al.* even find a non-linear time profile: moderate effects from an unemployment spell during the following two years, followed by strong ones during the next two years which then fall back to moderate during the ensuing three years. The a priori plausibility of such a lag structure is however low.

should be stronger. Allaire, Cahuzac and Tahar (1995) find no difference between unemployment effects for teenagers and young adults in France. The issue remains otherwise unexplored.<sup>25</sup>

Although European evidence suggests therefore stronger state dependence than does its US counterpart, three considerations make the conclusion questionable. Firstly, as non-restrictive controls for selection bias are not possible, all findings are potentially sensitive to identifying assumptions, which typically lack economic rationale and empirical validation. Secondly, an economic mechanism as fundamental as state dependence – particularly duration dependence in unemployment – is unlikely to be nationally specific.

Finally, labour market conditions may explain the US-Europe difference. Any adverse effects on subsequent outcomes should be weakest in tight labour markets, where jobs are easy to find.<sup>26</sup> The data used in the early US research concerned the tight labour markets of 1965-73, whereas recent European findings refer to the slack labour markets of the 1980s and early 1990s (Lynch 1989). The explanation is difficult to assess, as labour market conditions are rarely included alongside individual attributes, and, when they are, labour market tightness is typically not interacted with state dependence. Two studies which included local labour market conditions found that they influenced the probability that a young worker is unemployed, but that is hardly surprising (Franz 1982; Narendranathan and Elias 1993). The more important question, whether slack markets intensify the effects of past unemployment, remains to be investigated.

Institutional factors may also generate state dependence. The exceptionally high share of school-leavers in employee recruitment in Japan (section 5.2, below) has induced concern that the slack labour markets of the past decade will not only cut youth recruitment but also leave the

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<sup>25</sup> A French study that included both youths and adults in a Markovian model of year-to-year moves between labour market states found lower persistence in unemployment and fixed-term employment for youths, amongst whom such circumstances were commonplace, than for adults, amongst whom they were less common. The potential implication, that state dependence is weaker for youths than adults, is however undermined by the absence of controls for personal attributes, observed or unobserved, other than age (Denis Fougère and Thierry Kamionka 1992).

<sup>26</sup> Any reduction in state dependence from labour market tightening should be greater for employment-related outcomes than for pay. Unemployment interrupts work-based learning and reduces pay prospects whatever the state of the labour market, whereas a job becomes easier to find in a tight market.

casualties stranded when recruitment recovers and future school-leavers reap the benefit (Michio Nitta 1995). The problem has however been short-circuited by the buoyancy of youth recruitment: smaller and non-industrial firms have largely compensated for hiring cuts by bigger and industrial firms (Naoki Mitani 1999). The losses born by contemporary school-leavers comprise reduced access to career employment in large firms rather than to employment generally.<sup>27</sup>

In sum, unemployment appears to reduce youth well being, and to do damage, possibly short-lived, to youth economic prospects. Both occurrence and duration dependence appear to matter, although their relative importance remains unclear, and the relative susceptibility of youths and adults to unemployment-related damage remains unclear.

## **5. The youth labour market**

School-to-work transitions have been affected by two changes in youth labour markets. Youth employment options have deteriorated, particularly for educational low achievers. The importance of matching young workers to jobs appears to have risen. Both developments potentially extend the transition to career employment, but their importance differs across countries. Section 5.1 discusses the former, section 5.2 the latter.

### **5.1. Employment and pay**

The well known post-1970 deterioration in youth labour market outcomes in the US (Frank Levy and Richard J.Murnane 1992) has been depicted as applying to ‘virtually all OECD countries’ (Blanchflower and Freeman 2000a, p.3). This section questions that generalisation and suggests explanations for the diversity of national experiences.

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<sup>27</sup> Paul Beaudry and John DiNardo (1991) have unearthed a related, albeit not youth-specific, phenomenon in the US. An employee’s current wage proves more closely associated with past labour market conditions (at the time of hire and subsequent to hire) than with current ones, which suggests that, even in the US, workers hired in slack markets suffer semi-durable earnings losses.

The evidence considered here refers primarily to: youth outcomes (pay and employment) relative to those of adults of the same sex; males, in order to avoid the distortion of relative outcomes for young females that results passively from increased labour force participation by adult females; and young adults, for whom, compared to teenagers, fuller data are available, and whose changes in participation in education and labour market programmes have been smaller. The period used for most countries is 1977-96, or the longest sub-period for which comparable data are available at national level on both relative pay and employment.

The relative employment (Table 4) and pay (Table 5) of young workers have indeed deteriorated in the seven economies as a whole. At the same time, national experiences have diverged in two key respects (Figure 2).<sup>28</sup> Firstly, deterioration has not occurred in all countries. In Germany, Japan and the Netherlands, neither youth pay nor employment has fallen much relative to that of adults. Secondly, in France, Sweden, the UK and the US, where major deterioration has occurred, it has involved falls in relative pay in the UK and the US, but in relative employment in France and Sweden.<sup>29</sup>

[Tables 4 here] [Table 5 here] [Figure 2 here]

The widespread deterioration of youth outcomes has come as a surprise. Falling population shares, rising educational achievements and structural change (increases in the employment share of youth-intensive sectors) had all been expected to improve youth relative outcomes during the past two decades. Those developments have all come to pass, but, according to Blanchflower and Freeman (2000a), they have been overwhelmed by macroeconomic

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<sup>28</sup> The periods to which Figure 2 refers are the longest for which changes in relative pay and employment are both available for each country. They differ from country to country, covering ten rather than twenty years for Germany and the Netherlands. Different national periodisations may affect the comparisons: e.g., the moderate decline in youth relative pay that occurred in Germany during 1978-85 (Blanchflower and Freeman, 2000b, Figure 1.3) is not captured by these data.

<sup>29</sup> As participants in employer-sponsored labour market programmes, many of whom are surrogate employees, are excluded here, the implication is that effective youth 'pay' fell by more, and youth 'employment' by less in the relevant countries (notably France, Sweden and the UK; section 6.2, below) than Figure 2 suggests. On the other hand, the deterioration of youth employment conditions associated

difficulties. Youth unemployment tends to be ‘supercyclical’, i.e., to have greater cyclical amplitude than does adult unemployment (OECD 1982). Slackening labour markets have therefore cut the demand for youth labour, relatively as well as absolutely.

Macroeconomic conditions have undoubtedly been important in specific countries: unfavourably, in France, Japan, Sweden; favourably, in the Netherlands. But their explanatory power is clearly limited. Youth outcomes have deteriorated in the US in the absence of any upward trend in aggregate unemployment. Moreover, youth outcomes are measured here relative to those of adults, which removes much – in some countries, all<sup>30</sup> – of the macroeconomic effect. Other influences must be present. Three are suggested here: skill-biased trends in labour demand, institutions of pay determination, and national school-to-work institutions. The emphasis is put on the demand side and price formation, with only a secondary role attributed to supply effects.<sup>31</sup>

The possibility of skill-biased changes in labour demand, deriving in particular from a fall in the substitutability of less for more skilled workers in production technologies, features prominently in explanations of increased skill differentials in pay in the US (Levy and Murnane 1992). By itself, a skill-biased trend should have improved youth outcomes, as their relative educational attainments have risen strongly. But skill comprises experience as well as education. Were the substitutability of education and experience to fall, the ensuing penalty on young workers might outweigh the benefit of their increased educational attainments. The hypothesis is termed here the ‘double skill bias’ one. Although it is a natural extension of standard analysis, it

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with the growth of part-time youth work in France, much of it involuntary, is not captured by the data (Sophie Ponthieux 1997).

<sup>30</sup> Youth unemployment appears not to be supercyclical in Germany and the Netherlands, and possibly not in Japan, consistent with the importance of national school-to-work institutions in those countries (OECD 1996b, Table 4.18; Eskil Wadensjö 1987; sections 5.2 and 7.2, below).

<sup>31</sup> Changes in both demography and educational participation would require detailed consideration in a fuller analysis. The contribution of demography to the pattern in Figure 2 appears minimal, however, as youth population shares declined in all countries except Japan (Sanders Korenman and David Neumark 2000, Figure 2.1) – making the performance of the Japanese youth market all the more remarkable. Nor have changes in educational participation and employment rates been closely associated across countries (OECD, 1981, 1998b). Moreover, some of the increase in educational participation, notably in France and Sweden, undoubtedly reflects demand side problems (job scarcity; Eric Verdier 1993).



has hardly been explored: e.g., Levy and Murnane (1992) offer an *ad hoc* explanation, involving falls in employment in manufacturing and public administration.

Some evidence favours the double skill bias hypothesis. The share of experienced workers within employment in skilled occupations has risen markedly in both French and Swedish data (Catherine Bédoué and Jean-Michel Espinasse 1996; Stig Blomskog and Lena Schröder 1997).

Before examining further evidence, a second factor must be considered: institutions of pay determination. Under competitive pay setting, an adverse shift in youth labour demand reduces youth pay rather than employment, to the extent that youth labour supply is wage-inelastic.<sup>32</sup> Under centralised or co-ordinated pay setting, however, pay structure may in the limit remain unaffected by a demand shift – in which case, the result is a fall in employment not pay.

An explanation combining double skill bias and national institutions of pay setting – henceforth, the maintained hypothesis – is consistent with changes in youth outcomes in the four countries that have seen major deterioration: France, Sweden, the UK and the US (Figure 2). A downward trend in labour demand depresses youth outcomes in all four countries. Pay setting institutions determine to the extent to which the effect falls upon pay (UK, US) as opposed to employment (France, Sweden).

The maintained hypothesis is consistent with evidence on both processes and outcomes in pay setting. Concerning processes, Sweden and France show greater co-ordination and centralisation of pay setting, in terms primarily of collective bargaining coverage and co-ordination, than do the US and the UK (Colin Crouch 1993a). Concerning outcomes, pay differentials are more sensitive to labour market conditions in the US and the UK than in continental Europe (Nickell and Brian Bell 1995; Card, Francis Kramarz and Lemieux 1996).

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<sup>32</sup> All variables are defined here relative to their adult counterparts. Supply-induced falls in employment as a result of wage falls have been inferred for less skilled workers in the US (Chinhui Juhn 1992; Korenman and Neumark 2000).

Institutional pay setting has received particular attention in the aggregate context, as a potential explanation of differences in unemployment and pay patterns in the US and the EU (Paul Krugman 1994; OECD 1994). The Krugman hypothesis has however fared poorly in that context. Defining 'skill' as educational attainment, the predicted rise in the unemployment share of unskilled workers in continental Europe relative to that in the US has not materialised (Nickell and Bell 1995). The anomaly disappears however when skill is defined as experience. The relative employment of young workers has fallen particularly heavily in France and Sweden, while their relative pay has hardly changed at all (Figure 2, above; Ministère de l'Emploi 1999b; Per-Anders Edin, Anders Forslund and Bertil Holmlund 2000).

The relevance of the Krugman hypothesis to youth outcomes has been obscured by the use of inappropriate measures of skill. Using combined schooling-cum-experience indices in particular, relative market outcomes for the least skilled workers show no deterioration in evidence for the US, France and Sweden (Card, Kramarz and Lemieux 1996; Edin, Anders Harkman and Holmlund 1995). It is important therefore to separate the educational and experiential dimensions of skill.

Other evidence also favours the maintained hypothesis. Firstly, the return to experience in earnings functions has risen, both absolutely and relative to that for schooling, but only in countries with relative wage flexibility. As predicted, the tendency has been found for the US and the UK, but not for France (Levy and Murnane 1992; Gregg and Stephen Machin 1994; Dominique Goux and Eric Maurin 1994).

Secondly, changes by occupation in France and Sweden suggest a predominance of quantity over price adjustments in the face of adverse trends in demand for youth. In the presence of rigid pay structures and queuing for good jobs, more educated young workers who cannot find appropriate skilled work displace less educated ones from unskilled work. In doing so, they undergo *déclassement*, i.e., find employment only in occupations less skilled than those for which they are qualified, on conceptual or traditional criteria. Less educated young people

become unemployed (Dominique Fournié 1994; Gérard Forgeot and Jérôme Gautié 1997a; Blomskog and Schröder 1997).<sup>33</sup>

The key difficulty facing the maintained hypothesis is the buoyancy of youth outcomes in Germany, Japan and the Netherlands. Experience-biased trends in labour demand are unlikely to be country-specific. Their potential sources include technical change (particularly new information and telecommunication technologies) and the growth of international trade. Such forces are expected to affect all economies similarly, and appear to have done so in practice (Card, Kramarz and Lemieux 1996). Skill-biased demand shifts may therefore have affected all countries, and some such factor is needed to explain youth-oriented deterioration in four countries.<sup>34</sup> They cannot however explain differences in trends across countries. The question then is how the other three countries have avoided a decline in relative demand for youth labour.

Labour market structure might provide an explanation. Internal labour markets tend to make youth employment particularly sensitive to fluctuations in aggregate demand, as a result of seniority-based job security ('last in, first out') and internal pay structures insulated from the external labour market. Occupational markets, by contrast, admit young workers readily once they have acquired the relevant qualification (David W. Marsden and Ryan 1990; Garonna and Ryan 1991). The prominence of internal markets in France might then account for the scale of the decline in youth employment associated with macroeconomic stagnation. The problem is that, although internal markets are even more prominent in Japan, youth employment appears to be less sensitive to economic stagnation than in France (Mari Sako 1991).

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<sup>33</sup> Bédoué and Espinasse (1996), adopting a competitive view of pay setting in France, interpret the rising share of more educated young workers in less skilled occupations as evidence of *increasing* substitutability between experience and education, alongside declining substitutability in more skilled ones. Assuming pay rigidity leads however to an alternative explanation: the downward 'bumping' of less by more educated youth in low skill occupations. The latter theory is more attractive, not least for avoiding the occupation-specific dichotomisation of the effects of technical change (Forgeot and Gautié 1997b). Similarly, while occupational downgrading in the US often reflects a personal decision to gain valuable work experience (Nachum Sicherman 1991), in the slack labour markets of 1990s France and Sweden employer choices are more plausibly the key influence.

<sup>34</sup> The position of Sweden remains unclear. Trend effects are suggested by the fact that the deterioration of the youth share of *skilled* employment began in the early 1970s (Schröder 1996b). The specificity to the early 1990s of the fall in the youth share of *total* employment suggests by contrast that cyclical

National school-to-work institutions offer a more promising way of rounding out the explanation. The institutions that set Japan and Germany apart from the other four economies are school-employer recruitment networks and mass apprenticeship.<sup>35</sup> The former is discussed in section 5.2, the latter in section 7.2. Both are potentially powerful influences on outcomes in youth markets.<sup>36</sup>

Finally, the picture for females has been starker than that for males. Although trends in youth employment rates have not differed systematically by gender, those in pay have in most countries disfavoured young females (Table 6).<sup>37</sup> Changes in youth pay have been particularly unfavourable to females in France, Japan and the US. The tendency for economic stagnation to impinge disproportionately on young women in Japan and France, but not in Germany and Sweden, may reflect the permissive effects of greater sex discrimination in the former two countries. The levelling up of female access to apprenticeship in contemporary Germany may also have contributed (Schmidt and Zimmerman 1997).

[Table 6 here]

In sum, the labour market position of young workers has deteriorated in some countries but not in others. A promising explanation of the pattern looks to macroeconomic conditions, experience-biased trends in labour demand, institutions of pay determination, and national school-to-work institutions. Simpler explanations cannot however be ruled out without further

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factors have predominated (Edin, Forslund and Holmlund 2000).

<sup>35</sup> Low starting rates and high age-cum-seniority components in the pay structures of large Japanese firms may also encourage greater youth recruitment than do their counterparts in France, where internal markets appear to have weakened (Hiroatsu Nohara 1988; Mitani 1999; Pierre Béret 1992).

<sup>36</sup> The Dutch case is more complex. Its low youth sub-minimum wage (section 6.1, below) should affect pay flexibility, not the position of the demand curve. Macroeconomic success, along with the development of apprenticeship, which is entered nowadays by nearly one-third of young people (Ryan, 2000), may provide the answer.

<sup>37</sup> Absolute rather than relative employment rates are used in Table 6 in order to remove the effects of rising adult female labour force participation.

research. In any case, much remains to be learned about the determinants of youth labour market outcomes.

## **5.2. Mobility: search, matching and waiting**

The school-to-work transition is marked in the US by high mobility, both between jobs and between employment and joblessness (Robert H. Topel and Michael P. Ward 1992; Jacob A. Klerman and Lynn A. Karoly 1995). During their first ten years in the labour market, American school leavers enter a new job almost yearly on average (Table 7).

[Table 7 here]

The cause of high youth mobility is disputed. The orthodox interpretation looks to asymmetric information. Workers and employers are assumed to know what they themselves have to offer, but to be imperfectly informed about the price and quality of offers facing them, and to obtain information about those attributes by search and matching, respectively. In the quality dimension, the equivalent of a trial marriage is required, in which a job-worker match is tried out and, according to the result, either continued indefinitely or abandoned in favour of a randomly chosen alternative match. As young workers lack experience, the return to their investments in information is greater, and their job mobility higher, than for adults (Boyan Jovanic 1979; Donald O. Parsons 1991).

In the alternative interpretation, labour market structure causes high youth turnover. Labour markets are seen as segmented: efficiency wage strategies and insider power lead to large non-compensating differentials in pay by employer and sector (Lawrence F. Katz and Laurence H. Summers 1988; Robert McNabb and Ryan 1990). In a segmented labour market, all workers apply to high wage employers, who, taking their pick, use age as a hiring criterion, expecting mature workers to be more productive than young ones. Low wage firms hire the rejects, including young workers. Young people must therefore wait, working in low wage, secondary jobs until high wage, primary ones become available to them. While they wait, low job rewards

encourage job changing, much of it restless and pointless. Early working life in the US is depicted as a 'moratorium period', containing extensive 'churning', 'milling' and 'floundering' (Paul Osterman 1980; Gregory de Freitas, Marsden and Ryan 1991; David Stern 1999).

Similarly, *précarité* in early labour market experience in France is often interpreted in terms of queuing, whether for any job or for a good one. The decline of internal promotion as a means of reversing occupational downgrading at hire has raised youth turnover rates as young workers have turned to the external market instead (Marsden and Jean-François Germe 1991; Forgeot and Gautié 1997b).

The two interpretations of youth mobility differ normatively as well. The informational approach sees high turnover as efficient, given information costs; the segmentationist one, as inefficient, given the waste of youth potential.

It is not easy to distinguish empirically between the two views. For example, the growth of pay with early labour market experience in the US and France is often interpreted in terms of the accumulation of information with experience (Topel and Ward 1992; Mansuy 1996). That reading faces two difficulties. Firstly, other evidence appears to contradict it. Workers who change jobs more often enjoy less occupational upgrading in the UK and less pay growth in Sweden (Connolly, Micklewright and Nickell 1992; Blomskog and Schröder 1997). Indeed, Topel and Ward (1992) find higher job mobility to be associated in the US with *lower* wage growth after the first two years of experience. Selection processes again obscure the view: young people may be selected – positively or negatively – into job mobility by unobserved attributes that also influence their earning potential. The negative association between job turnover and pay growth in the UK and Sweden appears to reflect adverse selection. More mobile workers may be less lucky in their matches, but lower labour quality appears to make them less match-worthy as well. Corrected for selection, occupational upgrading proves positively associated with job changing in the UK, until a rate of one job change a year is reached (Connolly, Micklewright and Nickell 1992).<sup>38</sup>

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<sup>38</sup> The neglect of training in most research on youth turnover is also damaging. Rosella Gardecki and Neumark (1997) find no relationship in the US between pay and the number of job changes during the

Secondly, even if the underlying relationship between pay growth and turnover is positive, the informational and segmentationist interpretations are not easily distinguished. The growth of pay with mobility might reflect the progressive loosening of age-based penalties on youth hiring into good jobs whose location and content have been known all along (Howard Wial 1991).<sup>39</sup>

Occurrence dependence in youth unemployment is also potentially informative. Were entering unemployment to damage employment prospects, then that dimension of youth mobility, emphasised in search theory, could less plausibly be interpreted as an efficient contribution to information sets (Peder J. Pedersen and Niels Westergård-Nielsen 1993). There is indeed evidence of occurrence dependence for Europe, but not enough to clinch the issue (section 4.2, above).<sup>40</sup>

Can comparative evidence adjudicate between the two interpretations of youth mobility? Job turnover is low by US standards in the other countries in Table 7, particularly Japan and Germany. The institutions presumptively associated with those attributes in Japan and Germany are school-based recruitment and apprenticeship, respectively. The mechanisms through which those institutions might generate low turnover differ considerably.

In Germany, apprenticeship ties together a young person and an employer for around three years, discouraging turnover and giving each extensive knowledge of the other. Most matches are broken subsequently. Although only 20 per cent of apprentices leave the employer

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first five years in the labour market once controls are imposed for training received. The finding casts doubt on the benefits of turnover and the costs of churning alike.

<sup>39</sup> Similarly, inverse associations across sectors between youth employment and *adult* pay may be interpreted in terms of youth exclusion from high wage segments or of high skill requirements in high wage employment, making young people objectively poor candidates for hire. The weakness of the association between adult pay and skill requirements across sectors favours the former interpretation, but not conclusively (Marsden and Ryan 1986).

<sup>40</sup> Matching may itself generate spurious occurrence dependence: the work histories of workers who unluckily experience several match failures will show both multiple unemployment spells and low subsequent pay.

during training, of those who finish the course, around 30 per cent leave on completion, and 70 per cent within five years (Franz, Inkemann, Pohlmeier and Zimmerman 2000; Christian Dustmann, Rob Euwals and Arthur van Soest 1997). More than 50 per cent of young Germans undertake an apprenticeship, and employers do not renew the contracts of only 10 per cent of apprentices upon completion. Apprenticeship thereby opens up to young Germans skilled occupations and high wage employers that remain closed off in countries that lack mass work-based vocational preparation (Marsden and Ryan 1990; Dietmar Harhoff and Thomas J. Kane 1997). Young Germans have therefore less need to search for a good job than do young Americans.<sup>41</sup>

In Japan, the recruitment of secondary school-leavers has since the 1960s been organised separately under the Job Selection Entrusted to Schools system. The school bears the responsibility for placing its leavers. Hiring networks link particular schools and employers. Employers are expected to offer career employment only through schools, to young people during their final year of school, and to select largely in accordance with teachers' recommendations. Students may apply to only one employer at a time. Employers reward schools that have provided good candidates in the past with more job offers in the present (*Jisseki-Kankei*). Around one half of school-leavers currently find employment through school-based networks (Keichi Yoshimoto, Reiko Kosugi, Hiroko Takabe and Toshiro Yokoi 1998; Takehiko Kariya 1999).<sup>42</sup>

German and Japanese institutions share important attributes. The role of the Federal Employment Office in Germany, which recommends secondary applicants to sponsoring employers according to achievement and aptitude, shows similarities to school-based recruitment in Japan. In both countries, the school's ranking of pupils by academic achievement is matched against a ranking of employers, by quality of apprenticeship or career prospects. Young people

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<sup>41</sup> Moreover, the lower dispersion of pay across employers and sectors in Germany than in the US means lower returns to youth search and, assuming equal marginal search costs, lower search levels in Germany.

<sup>42</sup> The lower institutionalisation of recruitment at tertiary level, which relies on the contacts of teaching staff, has facilitated the greater fall in tertiary than in secondary placement rates in recent years (Kariya 1998).



then face incentives to work in school, and employers to hire young people, as well as information to guide their choices (David Soskice 1994; Kariya 1999).

Apprenticeship and school-based recruitment may well explain the favourable contemporary performance of the German and the Japanese youth labour markets (section 5.1, above). The Japanese case is particularly striking. Job Selection Entrusted to Schools has proved a school-to-work 'super-highway', along which the vast majority of school-leavers have moved directly to employment, and most males into career employment.<sup>43</sup>

Both systems have come under strain. The willingness of German employers to offer apprenticeships and of large Japanese firms to recruit school-leavers has declined (H.Althoff 1999; Mitani 1999). The fall in the share of Japanese upper-secondary leavers receiving a job offer six months before graduation, from 69 to 49 per cent during 1991-99, has caused national concern (Ministry of Labour 2000). The share of first jobs provided by large employers, with their superior career prospects, has been falling since the early 1980s (Mitani 1999).

The extent to which recent declines in the performance of German and Japanese institutions are more than the transient effect of economic stagnation cannot be established until economic growth resumes. From a comparative standpoint, however, their resilience has been impressive. Although the hiring rate for Japanese secondary leavers fell during the 1990s, the rate at graduation – presumably the acid test – was fully 94 per cent in 1999 (and 97 per cent three months later; *ibid.*). Large firms (1,000 plus employees) still provided 26 per cent of first jobs as recently as 1996 (*ibid.*).

The direct transitions to regular employment that most German and Japanese school-leavers still experience compare favourably to their delayed, faltering American and French counterparts. American high schools provide little information to employers on their pupils' aptitudes and achievements; employers take little heed of what is provided when hiring; and

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<sup>43</sup> In 1996, 26 per cent of all accessions, and 36 per cent of those in large firms were school-leavers (Yoshimoto, Kosugi, Takabe and Yokoi 1998, Table A28).

work-bound secondary pupils have little incentive to study hard in school. Information about worker and job attributes depends heavily on search, employment and turnover in early labour market experience (John H. Bishop 1993).

The comparative evidence is however less than conclusive about the merits of school-to-work institutions. Although the Japanese system has been praised for reducing the need for job search by young workers (James E. Rosenbaum 1999), its qualitative efficiency is questionable. It matches jobs and school-leavers across two essentially uni-dimensional rankings – one of school quality and pupil achievement, the other of company job rewards and reputation. The government has criticised it as insensitive to the increasing aspiration of young people – associated with higher incomes, and possibly with changed attitudes to work – for a more bespoke tailoring of jobs and careers.<sup>44</sup> At its worst, it simply bangs square pegs into round holes. Japan's need for more search and matching in the youth market appears to be making its mark, as youth turnover rises. Many unemployed young workers had quit their most recent job.<sup>45</sup>

Similarly, German apprenticeship has been criticised for hindering job search and matching as a result of tying young people to particular employers for extended periods (Heckman, Rebecca L. Roselius and Smith 1994; Daron Acemoglu and Jörn-Steffen Pischke 1998). Apprenticeship also requires a choice of training occupation before starting upper secondary education. After training, apprentices can and do change firms, but changes of occupation, while widespread, are correspondingly costly. It is arguably more efficient to search and match by occupation before doing so by employer, and amongst US youth the former largely precedes the latter (Derek Neal 1999). German apprenticeship may nevertheless impose an excessively early matching by occupation, to the detriment of matching by employer.

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<sup>44</sup> 'Job hopping is a means to find an "ideal job" and policies for restraining it are not necessary' (Ministry of Labour 1995, p.58; see also Ministry of Education 1994). The near-absence of youth labour market programmes in Japan (section 6.2, below) reflects this interpretation of youth unemployment.

<sup>45</sup> In 1998, more than 80 per cent of the previously employed amongst the 15-24 year old unemployed had quit their last job (Mitani 1999, Table 1). Young Japanese workers rate school-based search low relative to work-based search in terms of informativeness about job suitability (Yoshimoto 1996).

The early and lengthy commitment required by apprenticeship also imposes other costs. German students are streamed into the academic and the vocational routes early in their secondary studies. Along the vocational route, expensive careers guidance is required in order to improve occupational matching (Valerie Jarvis 1994). Even then, around half of apprentices are unable to enter their preferred training occupation, and a similar proportion of ex-apprentices subsequently work outside their training occupation (J.C. Witte and Arne L.Kalleberg 1995).

The comparative evidence also warns against drawing conclusions about economic welfare from mobility patterns alone. Youth turnover is partly the contingent by-product of wider economic processes, independent of search and matching considerations. Thus low job turnover may mean high investment in firm-specific skills; conversely, high turnover may mean high worker investment in general skills.<sup>46</sup> Either may be efficient, according to the context. The appeal of German and Japanese transition institutions lies then, for all their drawbacks, not in low youth turnover per se, but in making possible the wholesale transition of school-leavers to employment and work-based training.

The question for other countries is therefore whether institutional changes, such as vocationalising education, providing work experience and careers guidance to students, developing apprenticeship, and promoting school-employer linkages, can expand at acceptable cost the information and opportunities available to young people. The burden of search and matching need then not fall as heavily on early labour market experience as it does in the US.

## **6. Policy: the labour market**

A range of policies has been adopted in response to school-to-work problems. For joblessness, intervention focuses on the labour market, where two categories may be

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<sup>46</sup> Similarly, the turnover properties of multiple equilibria may differ radically. The thin labour market for mid-career workers in Japan is associated with adverse selection into it and low labour quality, which encourages employers to hire school-leavers, and discourages adult employees from quitting. The opposite attributes characterise a 'US' equilibrium (Yukiko Abe 1994).

distinguished: deregulation and labour market programmes. This section discusses the content and effects of intervention in both categories.

## **6.1. Deregulation**

European policy is often characterised in terms of strict regulation, including statutory minimum wages and employment protection law. The OECD *Jobs Study* (1994) depicted existing regulations as damaging to youth employment and training, with deregulation, including increased wage flexibility and reduced employment protection, as the recommended response.

The ‘Eurosclerosis’ picture has however been overdrawn. Public regulation in Europe varies considerably by country (Nickell 1997). Moreover, it is typically least onerous for youth, for whom sub-minimum wages are often stipulated, and fixed-term employment contracts recommended. The questions are: does general deregulation help youth? If not, can youth-specific deregulation do so?

### **6.1.1. Minimum wages**

The threat posed by statutory minimum wages to employment and training is well known. Profit-maximising employers in competitive markets are predicted to respond to an increased minimum wage by reducing employment and work-based training, to the detriment of economic efficiency. The prediction is however contested. The opposite effects are possible if employers possess monopsony power (Card and Alan B. Krueger 1995; Acemoglu and Pischke 1999b).

The attributes of minimum wages vary greatly by country (Table 8). Five out of the seven countries have adopted a minimum wage. Those of France and the Netherlands truncate the pay distribution higher up than do those of Japan, the UK and the US. Statutory wage regulation is absent from Germany and Sweden, but high bargaining coverage and centralisation create higher pay floors than do statutory minima elsewhere (Mary Gregory and Veronique Sandoval 1994).

[Table 8]

A general minimum wage should affect young workers particularly strongly, given their low earning power. The adult minimum amounts to around three quarters of the average pay of young adults in France and the Netherlands, and around one half in the UK and the USA (Table 8). For teenagers and disadvantaged young workers the ratio must be higher still. Consequently, four out of the five countries with statutory minima have adopted youth sub-minimum wages. The attributes of those sub-minima vary greatly. The Dutch sub-minimum goes long and deep: the discount on youth starts at 70% of the adult minimum at age 15 and falls to zero only at age 23. In the UK, the reduction is total for 16-17 year olds, who are not covered, and moderate for 18-22 year olds. The French and US discounts are shallow and short-lived, amounting to at most 20 per cent and applicable only to the youngest workers during the first months after hire.

Policy debate and activism has been widespread. Increases in the minimum wage in France and the US have been criticised for, and sometimes discouraged by, their potential effects on youth. During the employment crisis of 1981-3, the Dutch government extended the age range of the youth sub-minimum, and cut age-scale rates twice.<sup>47</sup> In Britain, employees aged less than 21 were removed from coverage in 1986; and the national minimum wage introduced in 1999 stipulated sub-minima for 16-21 year olds. The uprating of the federal minimum wage in the US was blocked in the late 1980s by conflict over the introduction of a youth sub-minimum.<sup>48</sup>

The employment effects of minimum wages are a chain with two links. The first is the effect of changes in wage minima on pay; the second, that of changes in pay on employment. The chain is as strong as the weaker link. For youth, the first link holds: changes in minimum wages affect youth pay. The elasticity of youth earnings with respect to the minimum wage in France, for example, is estimated at around 0.4 (Stephen Bazen and John P. Martin 1991).

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<sup>47</sup> The unweighted average reduction was 14 percentage points for 15-22 year olds as a whole (E.S. Mot and Coen Teulings 1990).

<sup>48</sup> Deregulation has also been implicit: young French workers who participate in labour market programmes receive allowances lower than the minimum wage (Florence Lefresne 1995).

The second link is more fragile. The effects of minimum wages on employment are disputed empirically as well as theoretically. Estimates of the effect in the US prove sensitive to choice of data and estimation method (Card and Krueger 1995; ILRR 1995; Michael Baker, Dwayne Benjamin and Shuchita Stanger 1999). This empirical pattern has been replicated by European evidence, primarily French, in which estimates of the youth employment effect vary from strongly negative to weakly positive. The large negative estimates tend to be associated with particularly restrictive identifying assumptions; the weakly negative ones (e.g., elasticities around -0.10, on which the US time-series literature converged a decade ago; Alison J. Wellington 1991), with reduced form estimates from aggregate time-series data. Both methods lead to doubt about the robustness of the findings (Card and Krueger 1995).<sup>49</sup>

For Europe as for the US, better data should produce better estimates. A study of separations leading to joblessness for French workers used employees paid just above the adult minimum wage as a comparison group for those paid at or below it. The difference between the separation rates of the two groups increased with the real minimum wage, and the stronger effect was for youths. Even then, the estimated elasticity of youth employment with respect to the minimum wage was only -0.15 (John Abowd, Kramarz, Lemieux and David Margolis 2000).

In these results, as statistical significance need not mean economic importance, the controversy over the minimum wage acquires an unreal quality. From a policy standpoint, there is actually an implicit near-consensus, in European as in US evidence, that the employment effects of adult minimum wages, whether positive or negative, are economically small (Freeman 1994).

Moreover, the focus of the employment effect in empirical work has usually been young workers, not adults, and the effects thereon of the adult minimum wage, not the youth sub-

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<sup>49</sup> Examples of the former include the imposition of (i) counter-factual pay distributions in the absence of statutory regulation (Robert H. Meyer and Wise 1983; van Soest 1994) and of (ii) unitary elasticities of factor substitution (Gilbert Cette, Philippe Cunéo, Didier Eyssartier and Gautié 1996). Reduced form estimates from aggregate time-series data prove as sensitive to choice of sample period, and become as insignificant in recent data, for France as for the US (Gilbert Benhayoun 1994).

minimum. (Effects on adults are implicitly conceded to be negligible). The appropriateness of such a specification is questionable when a youth sub-minimum is present.<sup>50</sup>

Even if an all-age minimum wage does not affect youth employment, a youth sub-minimum may do. Its effects differ in two key respects from those of a general wage floor. Firstly, it involves labour-labour substitution, the technical scope for which and the speed of which are expected to be greater, particularly in less skilled occupations, than for substitution between labour and other inputs (through which an all-age minimum wage operates). Secondly, ‘scale’ effects on employment – which run through the product market, via a sequence comprising higher labour costs, higher output prices, lower output and lower employment – are smaller for the youth sub-minimum wage, given the small youth share of low wage employment.<sup>51</sup> If the substitution effect exceeds the scale one, a youth sub-minimum may increase youth employment even when an all-age minimum wage does not reduce it. The expectation of strong effects from a youth sub-minimum wage is heightened by the large own-price elasticities estimated by econometric studies of youth labour demand (Daniel S. Hamermesh 1994), and by the threat to adult employment that trade unions often perceive from low priced, ‘cheap’ youth labour (Ryan 1995).

Dutch evidence is potentially informative, given the depth of the national sub-minimum and the size of the 1981-3 cuts. It paints however a picture similar to that for the adult minimum: substantial rates-earnings effects along with weak earnings-employment ones. Concerning the former, a significant proportion of Dutch young workers (13 per cent in 1994; Els Vogels and Willem de Vreeze 1994) is paid at sub-minimum rates, and changes in the sub-minimum scale have had significant effects on youth pay. The fall in relative youth earnings during 1981-3

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<sup>50</sup> Thus Baker, Benjamin and Stranger (1999, Figure 3) take the minimum wage that might affect teenage employment in Canada to be the adult one, not the youth sub-minimum that is present and, according to their data, paid to some young workers in most provinces.

<sup>51</sup> For the same reason, macroeconomic effects, via aggregate demand and inflation, which complicate the analysis of general wage minima, are trivial for youth sub-minima.

suggests a rates-earnings elasticity around 0.6 (Mot and Teulings 1990; Wiemar Salverda 1992).<sup>52</sup>

For the latter, changes at occupational level prove revealing. In five youth-intensive occupations with low educational requirements, the sub-minimum cuts of 1981-3 were associated with either a stabilisation of, or a rise in, youth employment shares. In four with higher educational requirements, the antecedent decline in youth shares continued, apparently unaffected (*ibid.*; Juan Dolado, Kramarz, Machin, Alan Manning, Margolis and Teulings 1996). The reduction of the Dutch sub-minimum appears therefore to have increased youth employment, but only in less skilled jobs, and then only weakly.<sup>53</sup>

The weakness of the employment effects of sub-minimum wages in the Netherlands is open to four interpretations. Firstly, the own-price demand for youth labour may simply be low. This appears unlikely, in less skilled occupations at least, both a priori and in view of other econometric evidence on youth labour demand. Secondly, employers may fear employee reactions to the perceived unfairness of paying a youth less than an adult to do the same job. Low take-up of the federal youth sub-minimum in the US results in part from such considerations, though its shallowness and short duration also contribute (Card and Krueger 1995). The substantial earnings-rates elasticity in the Netherlands suggests however that equity constraints need not be binding.

Thirdly, employers may respond to changes in minimum wages by reducing training rather than employment. In competitive models, employers do not provide work-based training,

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<sup>52</sup> By contrast, no changes in youth pay in low paid occupations could be traced to the removal of British youth from minimum wage coverage in 1986 (Garonna and Ryan 1991).

<sup>53</sup> The timing is also problematic. The cuts in the sub-minimum occurred during 1981-3, but the youth employment share continued to fall through 1985, and rose only subsequently (Mot and Teulings 1990, Table 3). A mean lag duration greater than two years is uncomfortably long. Although Baker, Benjamin and Stanger (1999) reconcile differing estimates of the employment effects of adult wage minima in the US in terms of distributed lags with high mean durations, that interpretation is perhaps less plausible for a sub-minimum: labour-labour substitution might be expected to happen quickly as well as strongly.



for general skills at least, if a minimum wage requires them to finance it (Sherwin Rosen 1972).<sup>54</sup> The prediction is again model-dependent. In imperfectly competitive labour markets, employers with monopsony power respond to any compression of skill differentials caused by a rise in the minimum wage by increasing their relative demand for skilled workers, leading them to increase training (Acemoglou and Pischke 1999a).

The evidence on training effects, still based entirely on the US, is thinner than on employment ones, and no more conclusive. Adverse effects have traditionally been inferred from the association between increased minimum wages and reduced pay growth for young workers (Leighton and Mincer 1981), but that evidence is only indirect, and consistent with either theory. An analysis of direct measures of training activity across states in the US concludes that youth training is indeed reduced by adult minimum wages (Neumark and William Wascher 1999). Another, using less restrictive assumptions about unobserved state- and time-specific effects, finds however that work-based youth training is not affected by the adult minimum (Acemoglou and Pischke 1999b). The need is for further research, treating employment and training as jointly dependent on minimum wages (Masanori Hashimoto 1982), allowing for the effects of sub-minima, and drawing on countries other than the US.

Finally, employers who adopt a youth sub-minimum wage may be constrained by labour supply. If monopsony power is present – as the result, e.g., of search costs – the introduction of a youth sub-minimum, given the adult minimum, permits an increase in the exploitation of youth labour, causing youth wages and employment to fall. Some young workers may respond to lower pay by leaving the labour force, but others must stay for the move to be profitable.<sup>55</sup> The possibility is particularly relevant to the Dutch case. Although cuts in youth social security entitlements accompanied the 1981-3 fall in the sub-minimum, in order to maintain work incentives at lower pay, many young people may have refused lower paid employment, preferring

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<sup>54</sup> An increase in youth pay caused by a minimum wage rise may of course encourage young people to sponsor the training themselves, in order to improve their prospects of employment at the new minimum.

<sup>55</sup> In a competitive labour market, excess demand for youth labour would push up youth pay, destroying the link between the sub-minimum and earnings, and weakening the supply constraint on youth employment.

to continue their schooling or remain inactive, relying on parental or other sources of income support.<sup>56</sup> The interpretation is consistent with macroeconomic trends of the period, viz. declining youth employment despite falling adult unemployment (J.J.Graafland 1993).

Whatever the explanation, any adverse effects on youth employment from minimum wages appear as modest in Europe as in the US, but so too do any favourable ones from youth sub-minima. Increased pay flexibility has contributed little to the task of raising youth employment.

### **6.1.2. Employment protection and fixed-term contracts**

Deregulation also includes the weakening of employment protection rules, through the promotion of fixed-term employment contracts aimed at young workers in particular.

Employment protection law, widely adopted in post-war Europe, requires employers variously to give prior notice, consult employee representatives, and make redundancy payments when implementing layoffs. By discouraging layoffs, the rules increase job security for incumbent employees, but they also reduce hiring when labour demand increases and they may cut total employment by raising labour costs. The last two implications affect youth disproportionately, given the high incidence of recent labour market entrants and job seekers in its ranks.

Many governments, notably the French and German, responded to rising youth unemployment in the 1980s by expanding the legal scope for the use of fixed-term employment contracts, to which employment protection rules typically do not apply. Although these changes have not formally been age-specific, they have, as intended, affected youths disproportionately. A large minority of young employees in the European countries, including a majority of teenagers in France, work under fixed-term contracts (Table 9). The incidence of fixed-term contracts is

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<sup>56</sup> In 1985, 96 per cent of 15-19 year old, and 64 per cent of 20-24 year old Dutch males lived with their parents (Bowers, Sonnet and Bardone 1999, Table 3).

much higher for youth than for adults. The differences would be still greater were apprentices and pseudo-employed participants in labour market programmes included.<sup>57</sup>

[Table 9 here]

The spread of fixed-term contracts in youth employment has been criticised, particularly in France, as causing insecurity and social exclusion. The latter fear appears unfounded: in French evidence, employment under fixed-term contracts does not reduce subsequent employment probabilities.<sup>58</sup> But fixed-term employment is indeed associated, *ceteris paribus*, with higher unemployment inflows, which may have lasting personal consequences (Klaus Schömann, Ralf Rogowski and Thomas Kruppe 1995; section 4.2, above).

The effects of employment protection rules on total employment are not well established empirically. Most studies simply regress aggregate labour market outcomes on indices of the strictness of national rules, using time-series data pooled across countries. Some find that employment is lower and unemployment higher when the rules are stricter (Edward P. Lazear 1990; Stefano Scarpetta 1996). Others find no systematic effects (Nickell 1997; OECD 1999c).

The same variety applies to effects on youth, which might be expected to be stronger than on adults. Simple correlations between employment protection and youth unemployment are certainly large, reflecting the combination of tough rules and high youth unemployment in France, Italy and Spain. Some multivariate analysis also finds adverse youth effects (Per Skedinger 1995; Rolf van der Velden and Maarten Wolbers 2000), possibly larger than adult ones (Scarpetta 1996), but other work finds none at all (OECD 1999c). Problems of measurement (strictness of rules) and selection (unobserved country- and time-specific effects) again make for incoherent results.

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<sup>57</sup> By contrast, Japanese employers appear to have made little use of the legal right to use fixed-term contracts for the first year of employment. In the US (and, to a lesser extent, in the UK), weak restrictions on the right to fire weaken the distinction between fixed-term and indefinite employment contracts.

<sup>58</sup> Regular and fixed-term employment refer here to *contrat à durée indéterminée* and *contrat à durée déterminée* respectively. References are as in section 4.2, above.

Were youth employment to be reduced by employment protection, could youth-specific deregulation compensate? Here the same difficulty arises as for the minimum wage. Empirical research has typically related youth outcomes to the overall severity of regulation, without allowing for the youth-oriented derogation associated with fixed-term contracts – although the informality of such derogations certainly impedes such an analysis.

One wider finding is that employment protection increases long-term unemployment in the workforce as a whole, as a result of lower unemployment outflows. The result is expected to apply at least as strongly to youths as to adults. If it does, youth-specific deregulation then reduces long-term youth unemployment, whatever its effects on youth unemployment as a whole. Such a change should be welcome, both for less inequality of unemployment-induced suffering amongst youth,<sup>59</sup> and for limiting any damage to labour quality done by long spell durations.<sup>60</sup>

In sum, employment protection rules as a whole may well reduce youth employment, making deregulation potentially attractive, insofar as youth interests rank higher than adult ones. But the evidence is inconclusive, for general and youth-specific deregulation alike. The case for deregulation comprises primarily the reduction of long-term unemployment, for youths and adults alike. Fixed-term contracts increase insecurity, for youth in particular, but the alternative – more long-term unemployment – is arguably worse.

## **6.2. Labour Market Programmes**

Labour market programmes offer jobless and disadvantaged workers various mixes of job search assistance, work experience, job training, remedial education, and direct job creation.

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<sup>59</sup> Low youth unemployment rates may be accompanied by a highly unequal incidence of unemployment amongst youth. Although only 3 per cent of German early school-leavers spend two or more years unemployed during their first five years in the labour market, they account for 31 per cent of cohort's total unemployment time (Bowers, Sonnet and Bardone 1999, Table 20).

<sup>60</sup> For that, duration dependence must dominate occurrence dependence and increase non-linearly, as when the damage done by a two year spell exceeds that done by two spells of one year each. The evidence cannot as yet validate that possibility (section 4, above).

Leading examples include the Job Corps since the 1960s in the US, the Youth Training Scheme (YTS) and its successors since 1982 in the UK, France's contemporary *Contrats (de Qualification, d'Adaptation, etc.)*, and Sweden's Youth Teams of 1984-92 (David A.Long, Charles D.Mallar and Craig V.Thornton 1981; Marsden and Ryan 1991; Lefresne 1995; Schröder 1996a).

Some countries have adopted intensive youth programmes. In 1997 France spent 0.24 per cent of GDP on youth measures (Table 10),<sup>61</sup> which a majority of secondary-level market entrants has entered at least once (Lefresne 1995). High outlays also characterised mid-1980s Britain and early 1990s Sweden (0.26 and 0.32 per cent of GDP, respectively), though both had fallen by 1997. At the other pole, Germany spends little on youth programmes, as opposed to vocational education, and Japan continues to spend almost nothing, despite rising youth unemployment.<sup>62</sup>

[Table 10 here]

Although youth programmes in France, the UK and Sweden have involved both public and private provision, official concern for 'employability' leads the latter to be generally favoured. Remedial education and public job creation have been correspondingly disfavoured (Edin, Forslund and Holmlund 2000). The problems of disadvantaged youth have featured generally, but in different ways. US programmes have targeted largely high-school dropouts and racial minorities. Germany emphasises remedial education, intended to make low-achievers eligible for recruitment as apprentices (Franz, Inkemann, Pohlmeier and Zimmerman 2000). In France, Sweden and the UK, although high youth joblessness discourages targeting only on the

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<sup>61</sup> Even that level of effort was surpassed by Italy's peak of 0.69 per cent in 1988 (OECD 1991, Note B).

<sup>62</sup> Unemployed Japanese youth do have access, along with other school-leavers, to (one to two year) training courses run by public institutes, as well as to (six month) courses aimed specifically at the unemployed, though few of the latter's clients have been young. A special programme for unemployed university graduates, introduced in 1995, was abandoned in 1997 after having enrolled only 80 young people in its first year of operation. The attributes of youth recruitment in Japan (section 5.2, above), together with the greater problems facing the adult unemployed, in a labour market with limited mid-career options, help explain the weakness of public help for unemployed youth.

disadvantaged, entitlement-based access implicitly favours the disadvantaged, whose ability to find employment unaided is lowest of all.

Have the programmes worked? Evaluations of US programmes suggest that, excepting possibly the Job Corps, they have failed.<sup>63</sup> American programmes often benefit adult females, but rarely young people. The subsequent earnings of participants are either not raised by the programme, or, if they are, not by enough to outweigh the cost of the services (Heckman, Roselius and Smith 1994; Grubb 1996; Howard S.Bloom, Larry S.Orr, George Cave, Stephen H.Bell, Fred Doolittle, Winston Lin and Johannes M.Bos 1997).

Evaluation results for Europe, by now extensive for France, Sweden and the UK (Ryan and Büchtemann 1995; Gautié 1996) differ in a key respect from the US pattern. European programmes are typically found to improve participants' employment prospects, as indicated by the incidence and duration of their subsequent experiences of employment and unemployment (e.g., Niall O'Higgins 1994; Magnac 1997). In Sweden, employment rates are not increased but, once ex-participants have found jobs, they tend to last longer than do those of non-participants (Korpi 1994).

By type of programme, employment benefits are found in France when participants are placed with for-profit employers (*mesure marchande*) but not when placed in the public sector (*mesure non marchande*), which typically leads to worse outcomes than does an equivalent spell of unemployment. The same difference is found between training-intensive programmes, such as the *Contrat de Qualification*, and those with little training content, such as the *Travaux d'Utilité Collective* (Balsan, Hanchane and Werquin 1996; Liliane Bonnal, Fougère and Anne Sérandon 1994).<sup>64</sup>

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<sup>63</sup> The favourable evaluation of the Job Corps by Long, Millar and Thornton (1981) used econometric methods the robustness of whose findings is dubious (section 3, above). The programme is currently undergoing a potentially more conclusive random assignment evaluation.

<sup>64</sup> The European picture for employment effects is not universally favourable. When the outcome criterion for YTS is changed from the probability of employment at a particular date to the time taken to find a job (or a well-paid job), participation means *longer* joblessness than does remaining unemployed,

The picture is much less favourable for pay effects, on which evidence is limited largely to Britain. Several evaluations of YTS have found that it *reduced* participants' earning power (e.g., Martyn Andrews, Steve Bradley and Richard Upward 1999). French youth who incur larger foregone earnings while participating in labour market programmes subsequently earn less, not more (Balsan, Hanchane and Werquin 1994; Forgeot 1997).<sup>65</sup> Less bleakly, Swedish youth programmes of the early 1980s at least had no discernible effect on pay (Ackum 1991).

Negative pay effects are bizarre for YTS-type programmes, which claim to train participants. Actual damage to skills during participation appears unlikely, even if the training content of work-based programmes is often low. Two further interpretations have been suggested. Firstly, a different objective may have been attained: reduced youth pay aspirations, leading to greater subsequent access to employment and training (O'Higgins 1995; Francis Green, Martin Hoskins and Scott Montgomery 1996). Secondly, programmes may fail because they stigmatise participants: potential employers associate participation with the disadvantaged and infer low labour quality from the signal of past participation (Dolton, Makepeace and Treble 1994a; Gautié 1996). Neither interpretation is fully convincing. The first predicts pay reductions during participation but the evidence refers to the period after participation, when skills and earning power should have increased. The second predicts adverse effects for employment-related outcomes, not just pay.<sup>66</sup>

Reduced earning power is more likely to be the illusory product of imperfect econometric controls for adverse selection into programmes that provide little training. The difference between effects on unemployment and pay may then reflect two factors: firstly, the general sensitivity of econometric findings to choice of model and data (Gautié 1996); secondly, the

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even allowing for up to two years on the programme (Dolton, Gerald H. Makepeace and John G. Treble 1994a).

<sup>65</sup> Pay loss during participation was used as the independent variable in these two studies in order to test the prediction of competitive theory that, given public subsidies, higher foregone earnings are associated with receiving more training, and thereby with higher pay after training.

tendency of European programmes to bring young people into contact with low wage employers who offer little training but are prepared to hire many of them afterwards.<sup>67</sup>

Do European programmes, which span a wider range of social background and scholastic achievement than do their US counterparts, help disadvantaged participants in particular? The evidence is again limited and mixed. YTS does appear to have provided greater employment-related benefits to the disadvantaged (Dolton, Makepeace and Treble 1994b; Brian G. Main and Michael A. Shelley 1990). In France, however, the disadvantaged participate more frequently in the programmes that provide lower benefits, and neither females nor less qualified males derive employment benefits from participation, even though already qualified males do (Magnac 1997).

European programmes, like US ones, appear therefore not to increase the pay of the young unemployed after they find work but, unlike US ones, to improve their chances of finding work. As increased employment has been the key *desideratum* in Europe, it is tempting to conclude that youth programmes have succeeded there, even if they have mostly failed in the US.<sup>68</sup>

The difference might be attributable to greater public investments in Europe (Grubb and Ryan 1999). Per capita funding is indeed generally higher in Europe than in the US (Table 10, column 6).<sup>69</sup> If higher outlays mean greater investment in skills, however, gains should be visible in Europe in terms of pay, not just employment rates.<sup>70</sup>

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<sup>66</sup> Bishop (1994) found that participation in JTPA was inversely associated with pay and positively with productivity, suggesting favourable effects on skills alongside unfavourable ones on employer perceptions, but neither effect was statistically significant.

<sup>67</sup> In France, firms with less than ten employees sponsor more than half the participants in workplace-based programmes, as opposed to one quarter of total employment (Ministère de l'Emploi, 2000). Such firms are often interested in participants as cheap labour during participation and potential employees afterwards (Ryan 1994; Andrews, Bradley and Upward 1999).

<sup>68</sup> The goals of US youth programmes also include social (e.g., lower criminality and teenage pregnancy) and educational (e.g., qualifications) outcomes (Grubb 1996). Only the latter has featured in Europe.

<sup>69</sup> Standardisation by national average GDP per worker controls, albeit only bluntly, for differences in the labour cost of programme services. The Swedish index is low for a country which has long spent heavily on labour market programmes; its fall from 10 to 3 during 1993-7 indicates drastic funding cuts.

<sup>70</sup> Indeed, not even Germany's expensive, training-oriented programmes for unemployed adults appear to improve employment prospects, let alone pay (Bernd Fitzenberger and Stefan Speckesser 2000).



Moreover, even if European programmes do increase employment probabilities for participants, that test overstates total employment benefits, insofar as participants displace other workers, young or adult, who would otherwise have acquired the jobs taken by participants. Displacement may occur after participation in any labour market programme. It is particularly likely in the workplace-based programmes that nowadays enjoy priority in Europe. Sponsoring employers have an incentive to retain participants, whom they can screen and train to suit their own requirements. In such programmes, displacement is also likely during participation, as the labour of participants is typically provided free and any training requirements are not easily enforced.

Estimates of displacement are based variously on inter-area regression analysis, macroeconomic simulation, vector autoregression and employer interviews. All have found it to be extensive, amounting variously to: half the teenage summer jobs supported by the SYEP programme in the US during the 1970s (J.Crane and Ellwood 1984); around three-quarters of places on French youth programmes during 1985-94, and of YTS places in the UK in the late 1980s (Didier Eyssartier and Gautié 1996; Iain Begg, Andrew P.Blake and Brian M.Deakin 1991); and between two fifths and all of the places on Swedish youth measures since the early 1980s (Skedinger 1995; Edin, Forslund and Holmlund 2000). These findings are themselves fragile. All entail restrictive assumptions in estimating the counterfactual, i.e., the labour market pattern without the programme in question. Taken as a whole, however, they are distinctly discouraging. To the extent that work-based programmes 'crowd out' regular youth employment, public intervention hurts the clientele that it is supposed to aid, doing little to increase overall youth activity while reducing access to regular employment.

Even then, claims may still be made for youth programmes on equity grounds. Many programmes are manifestly intended to help the disadvantaged, a goal that involves living standards during participation as well as labour market prospects. Even when displacement is substantial, a programme may still spread well being less unequally amongst young people. But do programmes make participants better off, while taking part, even if not afterwards?

The question is rarely asked, but often readily answered, for the US. Many studies permit a comparison of the incomes of participant and control groups during the participation period. The programmes that made their largely disadvantaged clientele better off while taking part, including Supported Work in the 1970s and JTPA Title II-A in the 1990s, were, not surprisingly, those that provided higher allowances to participants. By contrast, those that offered lower ones, including Jobstart in the 1980s and New Chance in the early 1990s, reduced participants' incomes below the expected value of earnings in the comparison group (Ryan and Büchtemann 1996).

For Europe, the question is also rarely asked, but it is less readily answered. The one study to shed light on the issue for YTS, with its low allowances, found that the programme reduced incomes during participation, not just afterwards (Andrews, Bradley and Upward 1999). For France, the evidence is less direct, but equity benefits appear likely. Young workers who do not find employment may enter successive programmes, backstopped by job creation under *Emplois Jeunes*, which offers up to five years of public sector employment, paid at the minimum wage rather than a lower allowance. The guarantee probably increases the incomes of disadvantaged youth (Ministère de l'Emploi 1999a).

Even where equity benefits are present, they do not suffice to justify labour market programmes if there are no downstream benefits for participants. It is then more efficient and no less equitable to abandon the programme in favour of direct income support, which at least saves the cost of providing the services. The point falls, however, if participation alleviates the personal distress caused by unemployment. Evidence on that is thin but encouraging. Participation in Swedish youth programmes reduces, and possibly removes, the adverse effects of unemployment on personal well being, quite apart from any effects on money income (Korpi 1997).

Should that finding apply generally, given that displacement is extensive in workplace-based programmes, the implication is that activities other than work-based training and experience deserve support. The possibilities include the user-friendly and society-friendly public

service activities sponsored by the Youth Service Corps and the Americorps in the US, and the adventure activities offered by some UK charities, with their emphasis on personal development (Robert I.Lerman 1999).

In conclusion, youth labour market programmes may have performed better in Europe than in the US, in terms of subsequent employment, although the statistical basis of the European estimates is fragile. Immediate participant well being, both pecuniary and psychological, is improved by well-designed programmes, which also help to reduce long-term unemployment. Employment benefits appear low for youth as a whole, however, as a result of extensive displacement. British programmes have even reduced youth earnings, both during and after participation. It amounts to a less than illustrious record of public intervention, to which the ability of German and Japanese institutions to help young people to move from school to work compares favourably.

## **7. Policy: schooling**

The disappointing results of labour market policies increase interest in ‘upstream’ interventions, focused on formal education. The substantial benefit of additional years of schooling for individual pay and employment suggest the expansion of post-compulsory education and the educational upgrading of labour market programmes (Grubb 1996; Card 1999).

The relevant educational policies include expanded pre-school programmes, support for higher attainments in general education, and – the focus here – vocationally-oriented reform in secondary schooling. The latter includes upgraded curricula, work experience for students, apprenticeship, and school-employer links (Stern 1999; Stern and Daniel A.Wagner 1999).

The last two decades have seen the rapid expansion of upper-secondary enrolments and attainments in the five European countries, which have overtaken the US and closed on Japan. Even the UK, starting from well behind, has caught up with the US in terms of participation, though not attainments (Table 11, columns 1,2). The policy consensus in favour of expanding

post-compulsory education breaks down however when it comes to methods, particularly curriculum content and the role of the workplace. Japan and Germany, with their impressive school-to-work performance, have both developed effective mass education, with high participation, as well as high means and low variances of achievement in compulsory education.<sup>71</sup> But their upper-secondary education systems differ radically: in Japan, schooling is full-time and curricula are predominantly general; in Germany, in association with apprenticeship, schooling is largely part-time and curricula largely vocational (Table 11, columns 3,4).

[Table 11 here]

The merits of vocational curricula and work-based preparation are particularly difficult to evaluate statistically, given the potential importance of selection around unobservables, the near-absence of experimental evidence, and the paucity of prior labour market experience to use in econometric modelling (section 3, above). Educational selection is notoriously intensive by ability, motivation and social class – variables difficult to measure and control for (Walter Müller and Yossi Shavit 1998). Moreover, the time interval covered by evaluation research is typically too short to permit conclusive answers.<sup>72</sup> A large microeconomic evaluation literature is correspondingly uninformative.

In a context of multiple issues and imperfect evidence, this section considers two traditional dichotomies: that between vocational and general education (section 7.1) and, within the vocational category, that between apprenticeship and full-time schooling (section 7.2). The principal focus is secondary education, but similar issues arise at tertiary level, where vocational

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<sup>71</sup> Japan stands out more than Germany, whose children's mean mathematics score after 8 years of schooling has recently fallen short of the average for OECD countries, despite better performance in other subjects and in other years (OECD 1998; Prais 1993).

<sup>72</sup> If the returns to vocational qualifications accrue earlier but are smaller than for general ones, evaluations confined to early work experience, which is all that longitudinal data generally permit, overestimate the benefits of vocationalism (Robert Bennett, Howard Glennester and Douglas Nevinson 1995). The alternative is to use cross-sectional data covering the entire age spectrum, which poses the difficulty of disentangling cohort, age and time effects.

studies have proliferated. Only economic outcomes are considered, setting aside such issues as personal development and social exclusion.

Both dichotomies have come under challenge. Educationists commonly advocate less separation between general and vocational curricula in full-time schooling, so that vocational students receive technical education rather than mere occupational training, and general students benefit from applying theoretical principles to practical problems. Increased educational content in apprenticeship and mandatory work experience for full-time vocational students have both attracted support. The softening of the traditional dichotomies is reflected in the introduction of: career academies, '2+2' and Tech Prep programmes in US secondary schools (Stern, Neil A.Finkelstein, James R.Stone, John Latting and Carolyn Dornsife 1995); 'integrated' senior high schools in Japan (Yoshimoto 1996); apprenticeship-based routes to public vocational qualifications in France (Yvonne Pérot and Georgie Simon-Zarcia 1998); greater educational content in Dutch apprenticeships (Harm van Lieshout 1997); and mandatory work experience in Swedish upper secondary education (Wadensjö 1996). Although these developments are partial and recent, and most have yet to be evaluated, some broad evidence is still available to inform policy choices.

### **7.1. Vocational vs. general education**

The merits of vocationalism have long been disputed. Vocationalists advocate the use of practical, work-related issues, in order to increase student motivation and understanding. Their opponents point to the low educational ambitions and high cost of traditional vocational education, which often functions as a dead-end for low achievers, and to the higher earnings gains associated with general courses.

US evidence suggests that, allowing for unseen selection processes, traditional vocational curricula are only selectively associated with higher pay. Some participant groups and some occupations benefit, notably females taking commercial courses, particularly those who find employment in the relevant occupation (Joseph G.Altonji 1992; Eric E.Zilbert, James C.Hearn

and Darrell L. Lewis 1992). The absence of more general pay gains typically leads economists to see vocationalism as undesirable, given that vocational courses cost more than equivalent general ones (George Psacharopoulos 1987).<sup>73</sup>

For Europe, amid the welter of empirical studies of the links between educational pathways and labour market outcomes, two studies attempt to control for selection biases, one for France and one for the UK. Both align with the US evidence in estimating that choosing a vocational secondary course means a reduction of around 10 per cent in subsequent earning power. At post-secondary level in France, however, the situation is reversed: graduates of two year vocational programmes earn 21 per cent more than those who complete comparable academic courses. Moreover, the big payoff lies elsewhere, in employment. Vocational secondary studies are associated in both countries with a reduction of around one-third in the incidence of unemployment (Goux and Maurin 1994; Joan Payne 1995).<sup>74</sup>

The validity of this scanty evidence depends on the efficacy of the controls used for selection around unobserved personal attributes. The finding of employment benefits is likely to be robust. As negative selection by ability into the vocational track is expected, the *ceteris paribus* prediction would be lower employment rates for participants were vocational studies to have no effect. The increase associated with vocational studies is therefore likely to be genuine.

The results suggest further questions. Firstly, if vocational curricula produce better employment prospects, why has their share of enrolments at secondary level declined in many countries, including Japan and Germany, and why do vocational secondary students often return to the general track at tertiary level, notably in France (Cahuzac and Jean-Michel Plassard 1997)? The answer is that labour market rewards, including employment probabilities as well as pay, depend on the level as well as the content of qualification, and the former influence is stronger than the latter. As vocational studies rarely offer progression ladders to higher qualifications, they

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<sup>73</sup> 'Equivalent' courses and qualifications are typically those that normally take the same number of years of full-time schooling to complete or acquire.

<sup>74</sup> Outcomes are measured in the UK at age 23, in France, across the entire working life. In the UK, participation, and in France, qualification, is used as the indicator of vocational study.

promote earlier exits from schooling and diminish labour market prospects. The superior option value of general courses, which has eluded the grasp of evaluation research, suggests the desirability of developing qualification ladders in vocational education.<sup>75</sup>

Secondly, if the returns to vocational studies are at least as high at tertiary as at secondary level, as some results for France and the US suggest (Goux and Maurin 1994; Grubb 1997), should vocationalism be encouraged at tertiary rather than secondary level? Tertiary students should be better placed to make lasting occupational matches (Christopher Dougherty 1996). Against that must be set the motivational and cognitive benefits of vocationalism in secondary education, particularly for low achievers, many of whom would otherwise drop out. Policies to raise secondary participation in France and Britain have accordingly promoted vocationalism, even when it costs more. The more appropriate response is therefore to broaden rather than abolish vocational secondary curricula, changing occupational preparation into technical education, as Sweden has already done at upper secondary level (Blomskog and Schröder 1997).

## **7.2. Apprenticeship vs. full-time schooling**

Vocational education is confined in some countries, notably Sweden and Japan, to full-time schooling. In others, notably Germany, part-time schooling predominates, in the shape of apprenticeship. In France, the Netherlands and the UK, a substantial minority of vocational students follows the part-time route (Table 11, columns 4,5).

Policy interest in apprenticeship has soared. In the early post-war period it was often criticised for antiquated, low quality training, inadequate for both the educational needs of youth and the skill requirements of the economy (M.E.Taylor 1981; Ryan 1999). Nowadays it tends to be seen as a means to improved school-to-work transitions and increased skill supplies, one that many governments seek to foster (Martina Ni Cheallaigh 1995). The 1994 School to Work

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<sup>75</sup> The association between qualification level and labour market outcomes is particularly strong in both France and Japan (Müller and Shavit 1998). Perhaps as a result, research on labour market outcomes in both countries focuses more on the level than the content of qualifications (Béret, Anne-Marie Daune-Richard, Arnaud Dupray and Verdier 1997; Ronald Dore and Sako 1998).

Opportunities Act in the US and the 1995 Modern Apprenticeship programme in the UK have both offered public funding for apprenticeship-type work-based learning.

The claims of apprenticeship are a subset of those of vocationalism in general. More contextualised learning – now, to practical problems at the workplace – may deepen understanding and improve motivation, particularly amongst low achievers. But full-time schooling may also have advantages. A more conceptually oriented education, with less routine work, may increase theoretical understanding (Grubb 1995).

This section considers first the effects (section 7.2.1) and then the institutional requirements (section 7.2.2) of apprenticeship.

### **7.2.1. Outcomes**

The best evidence is anticipated where apprenticeship and full-time schooling function as alternative routes to the same qualifications and occupations, as is often the case in France and the Netherlands. Selection problems still arise. In France, selection into apprenticeship at upper-secondary level appears to occur negatively by scholastic achievement but positively by motivation (Sollogoub and Ulrich 1999), but at least outcomes are not blurred by occupation-specific labour market factors. German evidence is less useful, as preparation for particular occupations is usually tied exclusively to one route or the other (e.g., apprenticeship for manual crafts, full-time schooling for public services), and as high participation rates reduce the quality of comparison groups in evaluation research (section 3, above).

Evidence for France, the UK and the USA suggests that, relative to full-time vocational programmes, apprenticeship is associated with selective improvements in early labour market experience. In France, ex-apprentices spend more of their early working lives in employment, but attain lower pay at the end of five years. Acquisition of a vocational qualification matters more than the way in which it is acquired (Sollogoub and Ulrich 1999; Bonnal, Ludovic Fleury and



Marie-Béatrice Rochard 1999).<sup>76</sup> Apprenticeship is also associated with higher employment rates in the UK, though only for moderate and low achievers. It is associated with higher pay in the UK, but only for males; and in the US, where almost all entering apprentices are young adult males, it increases pay strongly, relative to full-time tertiary studies (Payne 1995; Blanchflower and Lynch 1994).

Apprenticeship does less for women than for men, in terms of entry rates, occupational access and subsequent labour market outcomes. In the UK, apprenticeship even appears to reduce female pay significantly (Payne 1995). The exception is Germany, where entry rates have become similar and pay benefits appear similar for men and women, even if occupational segregation remains marked (Schmidt and Zimmerman 1996; Rainer Winkelmann 1994).

The result for British females is probably distorted by uncontrolled occupation-specific pay effects, given that female apprentices are concentrated in hairdressing. Similarly, the concentration of apprentices in manual crafts in unionised construction in the US means that the high estimated returns to apprenticeship probably include occupation-specific rents. Similar problems even arise in France, where apprenticeship leads more often to less skilled qualifications, and to traditional occupations in artisanal firms, than does full-time schooling (Ministère du Travail 1995).

German evidence is informative primarily for the apprenticeships that one-quarter of university students undertake nowadays between full-time secondary and tertiary education, presumably to broaden their skills and reduce labour market risk. This ‘double qualification’ strategy produces modest gains in employment rates and pay in early working life, but its high cost makes it financially rational only for highly risk averse young people (Lutz Bellmann, Klaus Parmentier, Hannelore Pflicht and Franziska Schreyer 1996; Felix Büchel 1997).

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<sup>76</sup> Similarly, Dutch ex-apprentices show more job stability during early working life but lower promotion rates and more frequent occupational downgrading when moving into another occupation (van der Velden and Bob Lodder 1995). The Dutch results may underestimate the benefits of apprenticeship, as controls were not imposed for selection bias.

The limitations of the microeconomic evidence increase interest in international comparisons, which also suggest favourable employment effects. The ratio of German to French unemployment rates is higher at both low and high qualification levels than at intermediate level, and it is the latter that has been stocked primarily from apprenticeship in Germany and from full-time schooling in France. As the difference between the ratio of the two countries' unemployment rates by qualification level is greater for young than for adult workers, the employment benefits of apprenticeship appear particularly strong for young workers (Martine Möbus and Patrick Sevestre 1991). Similarly, European countries with larger apprenticeship systems show superior youth employment patterns, particularly employment shares in skilled occupations and in high wage sectors, than do those with little or no apprenticeship (Marsden and Ryan 1990; van der Velden and Wolbers 2000).

The employment benefits of apprenticeship depend in French evidence partly on improved occupational matching between qualifications and jobs, including lower rates of occupational downgrading in early working life (Joëlle Affichard, Marie-Christine Combes and Yvette Grelet 1992). Placement assistance by the instructor (*maître d'apprentissage*) is also important (Sollogoub and Ulrich 1999). In Germany, where occupational downgrading in general is less common than in France, the fact that it is greater for adults than for youth also suggests that apprenticeship benefits youth employment (Marc Szydlik 1996).<sup>77</sup>

For some young people, the alternative to an apprenticeship is not the full-time school but the labour market, including regular employment, job training, unemployment and participation in labour market programmes. Apprenticeship shows up particularly well in such comparisons, in which it is associated with gains in pay as well as employment (Ryan 1998). In France, low paid young workers who have participated in an apprenticeship are more likely to be employed than those who have taken part in a labour market programme (Abowd, Kramarz, Lemieux and Margolis 2000).

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<sup>77</sup> Although holding a vocational qualification entitles a young German to skilled status and pay when employed in the training occupation, it does not do so when working in a different one. Occupational downgrading amongst German ex-apprentices is sometimes depicted by the qualified bakers who work on automobile assembly lines.

In sum, as for vocational education in general, apprenticeship appears to increase the employment content of early working life. Compared to full-time vocational education, its effects on pay and promotion prospects are less clear, possibly negative; compared to labour market alternatives, positive. If the case for apprenticeship is therefore less than dramatic, it is increased in the European context by the importance of reducing youth joblessness.<sup>78</sup>

### 7.2.2. Mechanisms

The feasibility of instituting or expanding apprenticeship is often questioned. Mass apprenticeship is found only in Germany and, to a lesser extent, Austria and Denmark. Even in Germany, apprenticeship activity has fluctuated considerably, and fears have been raised for its future. Nevertheless, around 60 per cent of young people still entered it during the 1990s.<sup>79</sup> Most larger employers have taken on apprentices, until recently at least (Soskice 1994).

The institutional complexity of German apprenticeship (Wolfgang Streeck, Joseph Hilbert, Karl-Heinz van Kevelar and Frederike Maier 1987) leads some to conclude that apprenticeship can thrive only in the presence of powerful employer associations, social partnership and national skill standards. Such institutional support may be infeasible or undesirable in less regulated economies such as the UK and the USA (Crouch 1993b).

Others doubt the importance of the institutional context. No employer has to sponsor apprentices in Germany, nor any young person to take an apprenticeship. What induces rational agents to do so?<sup>80</sup> The question is particularly pressing for the employer. Human capital theory predicts that in competitive markets employers will not finance general training (i.e., training of

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<sup>78</sup> In the UK, apprenticeship is favoured also for its potential contribution to the national skill supplies, whose deficiencies have been associated with inferior productivity and trade performance, relative to Germany in particular (Prais 1995).

<sup>79</sup> The share of the youth population cohort entering apprenticeship rose from 57 per cent in 1982 to 75 per cent in 1988 before falling back to 57 per cent in 1997 (Althoff 1999).

<sup>80</sup> Profit-maximisation (shareholder value) assumptions may not be appropriate to the stakeholder-type organisation of German and Japanese large companies (Crouch, David Finegold and Sako 1999).

comparable value to many employers), and, if forced to do so by, e.g., minimum wages, will not provide it, preferring to recruit trained workers and substitute away from skilled labour in production.

The willingness of many German firms to offer apprenticeships might reflect low training costs or high skill specificity (to the firm's requirements). Neither explanation is compelling. Estimates of net training costs to firms are negligible, even negative, in smaller artisanal companies, but they are substantial for larger firms in industry and commerce, with their formal and intensive training programmes (Soskice 1994; Acemoglu and Pischke 1999a). Specificity is curbed by the external regulation of training curricula according to national skill standards (Streeck, Hilbert, van Kevelar, Maier and Weber 1987). Labour turnover patterns also suggest low specificity. Even in large firms, one half of ex-apprentices separate within five years of completion. Turnover in early employment is no lower amongst ex-apprentices than amongst vocational school graduates, whose initial qualifications can hardly have been employer-specific (Rainer Winkelmann 1996; Dustmann, Euwals and van Soest 1997). These attributes would be anomalous were apprenticeship highly firm-specific.<sup>81</sup>

If employers do invest in costly general skills, then, other explanations are required. Two are available. The first, here termed 'decentralised', looks to economic rationality and decentralised decision-making alone; the second, here termed 'regulatory', emphasises collective action and regulation external to the firm.

The decentralised approach hinges upon labour market imperfections. Sufficient conditions for employers to finance apprenticeships in potentially general skills are, firstly, that monopsony power be present and, secondly, that it be greater over skilled than unskilled employees. The former allows the employer to extract rent from employees by paying wages below marginal products. The latter means lower skill differentials in pay than in productivity.

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<sup>81</sup> In France, post-training turnover is even higher: only 29 per cent of entrants in 1993 remained with their employer after completion (Annick Violla 1997). Employers commonly recruit apprentice completers rather than similarly qualified graduates of full-time programmes, and apprentices who change occupations are less commonly downgraded (Mansuy 1996).

As greater rents are then secured from skilled than unskilled employees, the firm has an incentive to provide the training. It must also bear some of the cost, as potential apprentices, knowing that in imperfect occupational markets they will not be able to capture all the returns, refuse to accept all of the cost. The potential causes of differential monopsony power and compressed pay differentials include employer-specific information (about apprentice abilities and the content of training), complementarity between general and specific skills, minimum wages, and collective bargaining (Acemoglou and Pischke 1999a).<sup>82</sup>

Supplemented by an analysis of youth demand for training,<sup>83</sup> a decentralised approach can explain why employers might rationally invest in apprenticeship. Differences in apprenticeship activity across countries (Table 11, above) are then explained as multiple equilibria (Franz and Soskice 1995). Thus Acemoglou and Pischke (1998) account for the greater scale of apprenticeship in Germany than in the US with a screening model, in which apprenticeship reveals labour quality to the sponsoring employer (only). When most employers take on apprentices, as in Germany, post-training separations are confined to low quality workers, and the average quality of recruits and pay in the market for skilled workers are both low. That reinforces the decision of the employer to train rather than recruit skilled labour, and that of trained workers not to quit the employer who trained them, even when the match is poor. When few employers offer training, as in the US, average quality and pay in the occupational market are both high, encouraging employers to recruit rather than train, and skilled workers to quit.

A 'regulatory' explanation emphasises regulation external to the firm. One component is collective employer organisation. As training provides external benefits to the other employers who recruit a firm's ex-apprentices, employers who must pay for training do not spontaneously provide enough apprenticeships to meet their collective needs. Uncoordinated decision-making leads firms to prefer skilled recruitment to training. In that context, employer bodies may

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<sup>82</sup> Franz and Soskice (1995) have also pointed to complementarities between specific and general skills and the screening benefits of apprenticeship, and Margaret Stevens (1994) to imperfect skill transferability between firms, as reasons for employers to finance training.

organise the collective pursuit of common interests, encouraging members to train more and recruit less. In Germany, collective action is mobilised by sectoral employers' associations and local Chambers of Industry and Commerce, bodies that enjoy statutory powers over members (and influence over non-members). Both play major roles in the design and running of apprenticeship. Their influence over individual firms must however be more moral than economic, as, construction apart, they lack the power, whether statutory or voluntarily adopted, to impose financial penalties upon inadequate training efforts.

If employer organisation is unlikely to overcome rational egotism by itself, trade union and educational interests can also help. Craft variants apart, trade unions favour extensive training opportunities for young workers. Institutionalised social partnership, functioning in Germany at all levels from national bodies to Works Councils, gives trade unions particular influence. German unions accept low apprentice incomes in return for guarantees of training quality, which limits the payroll costs of training (Marsden and Ryan 1991; Ryan 1994). They use the right of Works Councils to mandatory consultation over training and recruitment to press employers to train (Crouch 1993a). Institutionalised pay setting at sector/region level has made it difficult for employers to raise pay in order to recruit skilled labour (Soskice 1994). Finally, apprenticeship is treated in Germany as part of upper secondary education. The role given to educators in its administration adds another voice in favour of a large, high quality system.

Although the two explanatory approaches, the decentralised and the regulatory, are often treated as alternatives, they are actually complements. Neither stands well on its own. On the one side, the external regulation of employer training becomes easier in the presence of market imperfections. Were labour markets perfectly competitive, firms would choose to finance no general training at all, and the demands posed by collective action would be intolerable. Under imperfect competition, however, as employers spontaneously finance and provide some general training, the demands on collective action are lighter.

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<sup>83</sup> The incentives to young Germans to take apprenticeship include (i) the legal requirement to take part-time schooling until age 18, (ii) the return to skill in the labour market, (iii) the social status attached to

On the other side, a purely decentralised explanation is unconvincing. As an explanation of German apprenticeship, evidence for monopsony theories is as yet only indirect and partial<sup>84</sup>, and the principal putative source of monopsony power – employer specific information on apprentice ability – seems overloaded, in the German context at least.<sup>85</sup> Moreover, for an explanation of apprenticeship activity across countries, the key difficulty is that the technological sources of monopsony power (informational asymmetries, and complementarity between specific and general skills) are unlikely to vary greatly by country, even if the institutional ones (compressed pay structures) appear more promising. The explanation becomes more complicated, but its comparative performance more promising, when regulation external to the firm is taken into account.

An understanding of apprenticeship in terms of both individual rationality and collective action aligns better with cross-national evidence. The influence of employers' associations, unions and educators alike is greater in Germany than in the countries in which apprenticeship has languished, notably the UK and the USA (Howard Gospel 1994; Ryan 2000). Trade unions have traditionally made the improvement of apprenticeship, not higher trainee incomes, their primary objective in Germany, unlike the UK (Ryan 1993, 1999). Educational interests play little role in the governance of apprenticeship in the UK and the US, unlike Germany.

Nevertheless, apprenticeship can prosper without fully Germanic regulation. In France, a small-scale, low status, artisanally focused apprenticeship system has been turned during the past

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acquiring an occupational identity as a qualified skilled worker (Hilary Steedman 1993; Soskice 1994).

<sup>84</sup> Acemoglu and Pischke (1998) find that German apprentices who separate after training earn less, while the subset that leaves for non-economic reasons (military conscription) earns more, than those who stay put. The pattern is consistent with adverse selection in the market for skilled workers, and therefore with scope for employers to underpay skilled workers without inducing quits. The statistical significance of the results is however erratic, other research suggests different pay differentials (Harhoff and Kane 1997), and the evidence bears only indirectly on the theory in the first place.

<sup>85</sup> The contribution of apprenticeship to firm-specific information about worker ability cannot be all that great in Germany. The incidence of apprentice layoffs at contract completion is only ten per cent (Harhoff and Kane 1997). For so low a rejection rate to warrant so large an employer investment in training, the few 'lemons' that it screens out must be much lower in ability than are those who are offered employment contracts, and cheaper alternatives for screening (e.g., during fixed-term employment contracts) must be ineffective. Neither requirement appears plausible.

decade into a route to all public vocational qualifications. Collective funding by employers through a levy-exemption system has been reformed, and public subsidies to sponsoring employers increased. Apprentice numbers expanded steadily during the 1990s, especially for higher qualifications.<sup>86</sup> A minimum of collective action is however required to nurture apprenticeship. The weakness of collective action in the more deregulated UK economy impedes the current policy of reviving apprenticeship. Even in the lightly regulated Irish economy, however, a major reform of apprenticeship has recently been carried through with only limited institutional development (Ryan 2000).

In sum, the benefits of vocationalism for young workers appear greater in Europe than in the US, particularly in employment terms, particularly at upper-secondary and tertiary levels, and particularly when delivered by apprenticeship. Apprenticeship does require particular institutional support in order to flourish, but the scope for expanding it with only limited institutional development deserves consideration.

## **8. Conclusions**

School-to-work problems run wide and deep. Unemployment, long-term unemployment and inactivity amongst young workers variously cause concern in the seven countries considered here. Social disadvantage is associated with greater difficulties in youth labour market. The continuing viability of mass school-to-work transitions in Germany and Japan, the principal national success stories, has become uncertain.

At the same time, the problems are neither as acute nor as universal as might be thought. Social disadvantage does less damage in continental Europe and Japan than in the UK and the US. Widespread insecurity in early working life does cause distress, but for most it is a temporary phase, and for many it offers experiential and matching benefits. The youth labour

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<sup>86</sup> In 1997, 27 per cent of French apprentices were preparing for qualifications at upper secondary (*Baccalauréat*) level or above (Ministère de l'Éducation Nationale 1998).



market has held up well – for males, and relative to its adult counterpart, at least – in Germany, Japan and the Netherlands, where most school-leavers still move directly to regular employment.

Policy successes and failures can both be seen. Amongst the successes, vocational education, apprenticeship, and labour market programmes all appear to increase employment prospects for participants. That applies to Europe at least, where, in the absence of sustained macroeconomic expansion, such interventions, particularly those slanted towards the educational end of the spectrum, remain the preferred option. Labour market programmes and deregulation do not earn much credit, but the former does at least raise employment rates for participants, and both spread unemployment around less unevenly, reducing long-term unemployment.

Policy failure includes both ineffective and damaging interventions. The ineffective category includes particular aspects of most labour market policies. Unlike additional schooling, labour market programmes appear not to raise participants' earning power. The employment effects of changes in minimum wages, both all age and youth-specific, prove marginal in both European and US evidence. Similarly, any damage done to youth by employment protection law is too weak to show up consistently in the evidence.

Policy damage is also apparent in three areas, all linked to labour market programmes. Firstly, some programmes make participants worse off during participation, while doing nothing for their labour market prospects, thereby violating the maxim, 'do no harm'. Secondly, programmes based upon work experience and training at the workplace displace regular youth employment. To the extent that they replace regular employment with low paid, insecure placements, such programmes may make young workers *as a whole* worse off. Finally, the same programmes may contribute to high youth inactivity in the UK and Sweden. The extension of workfare-type requirements to participate in poorly rewarded pseudo-employment in order to qualify for public income support breeds cynicism, perversely encouraging young people to reject the entire benefit-work package in favour of inactivity.

These policy failures point to the distinction between programmes and institutions. Labour market programmes come and go. Institutions develop, adapt and, for the most part, endure. Institutions are often viewed generically, as features either present or absent, stronger or weaker, from country to country. To some extent this is appropriate. The benefits of apprenticeship appear similar across countries. But the school-to-work successes of Germany and Japan are underpinned by nationally specific institutions. Mass apprenticeship in Germany and school-employer recruitment networks in Japan both promote the direct hiring of school-leavers into a wide range of regular and career employment.

Those institutions have allowed Germany and Japan to avoid mass labour market programmes and to concentrate instead on institutional development – improving general education, vocational preparation and job placement, and making it easier for low achievers to participate. Although Japanese and German transition institutions have come under strain, they have adapted well and they continue – thus far at least – to function largely intact.

Differences in national institutions might themselves require explanation. It is hard to understand the success of German and Japanese institutions in purely economic terms, whether individualist or collectivist. They have been mimicked elsewhere without producing comparable benefits. It may be that such institutions can flourish only in societies in which concern for the integration of youth into socio-economic life is widely shared and deeply felt, and that therein lies the fundamental source of their resilience and effectiveness.

That may explain a paradoxical contrast. In France, policy concern for youth is acute, as reflected in mass labour market programmes, youth reception centres, etc.. In Japan, government inactivity might suggest national indifference to the problems of youth. The difference between policy stances in the two countries may however reflect – in addition to more acute transition problems in France – a weaker underlying commitment within civil society to the needs of youth in France, against which government must struggle, albeit with limited success.

An explanation involving a fundamental role for national culture is difficult to test

(Francis Fukuyama 1995). It suggests that the prospects are limited, not just for conventional public policies, but also for institutional development. A less extreme conclusion is however appropriate. German and Japanese transition institutions may well benefit from the national soil in which each is rooted, but each has also been the object of sustained cultivation, including specific interventions. In Japan, the widespread adoption of lifetime employment by large companies in the 1950s, and the handing to schools in the mid-1960s of job placement responsibilities for school-leavers were important milestones (Kariya 1999). In Germany, the 1969 Vocational Training Act, which increased the educational content and deepened the collective regulation of apprenticeship in medium-sized and large firms, constituted a landmark (Thomas Deißinger 1996). Elsewhere, the scope for institutional development more attention, and innovation in labour market programmes less – with the recent reform of French apprenticeship as a case in point.

Finally, much remains to be learned in the school-to-work area. The outstanding questions include:

- How strong is state dependence in youth unemployment, absolutely and relative to adults?
- Why has youth inactivity grown, and youth labour market outcomes deteriorated, in some countries but not in others?
- What is the most desirable means of occupational and job matching for youth?
- Has youth-specific deregulation any more to offer than has general deregulation?
- How do apprenticeship and school-based recruitment networks increase youth employment in Germany and Japan respectively?
- What developments of transition institutions might suit the needs and circumstances of other countries?

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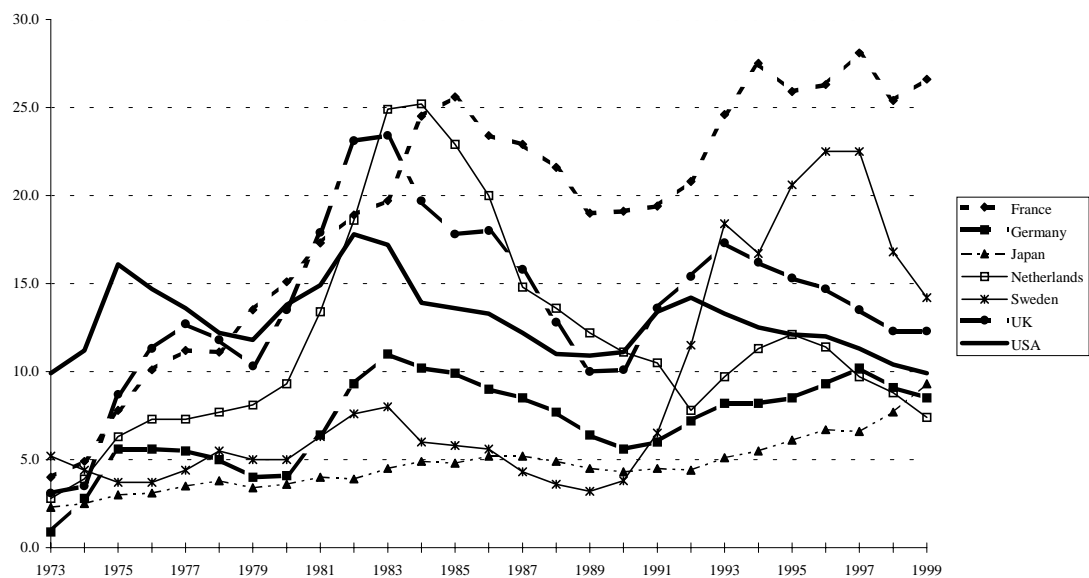
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**Figure 1: Youth (<25 yrs) Unemployment Rates (%)**

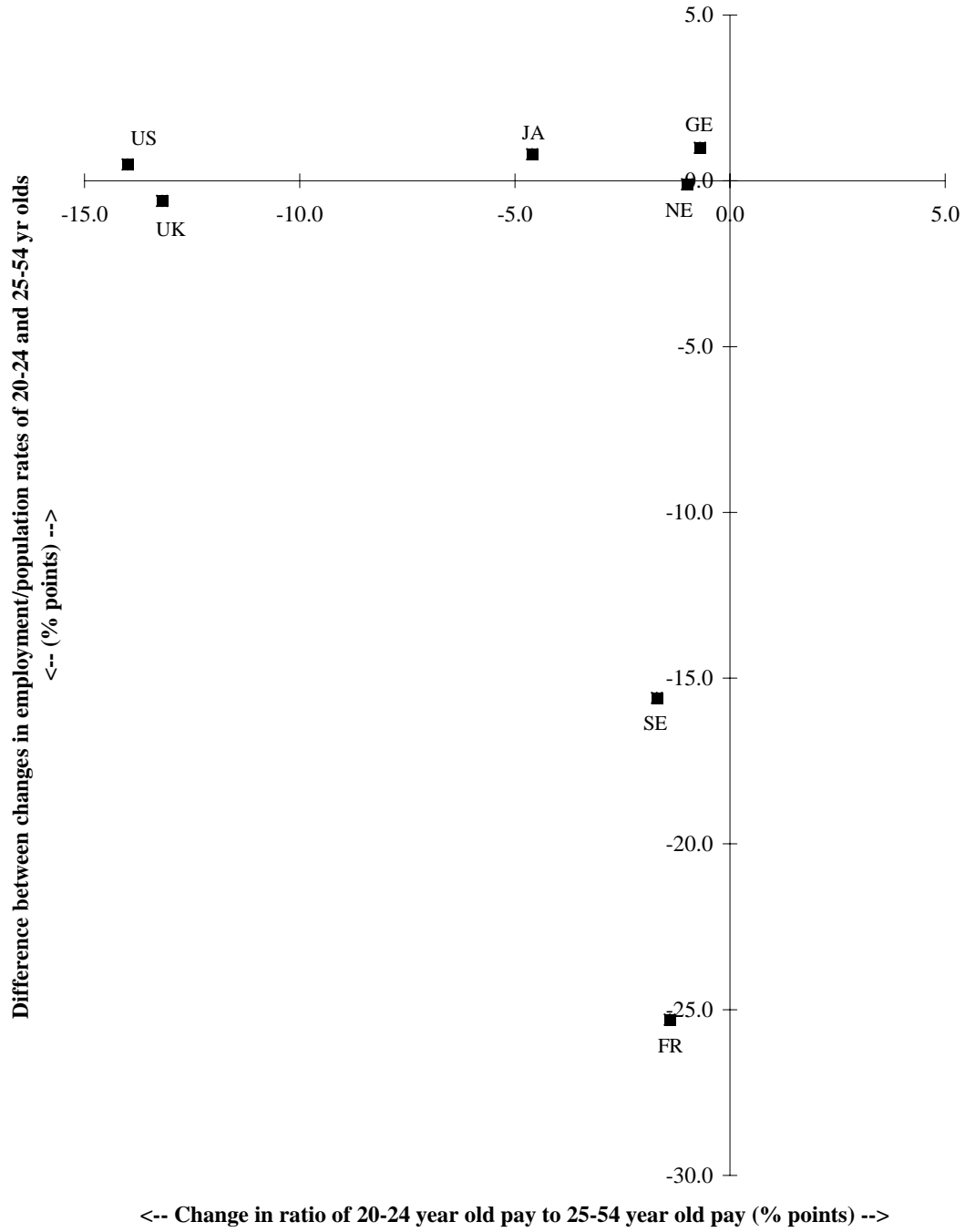


Sources: OECD (1999b), Statistical Annex, Table C, and previous editions; OECD (1999d) and previous editions.

Notes: for both sexes, on ILO/OECD definition; breaks in national time series, indicated in original sources, are incorporated without adjustment



**Figure 2: Changes in relative pay and employment rates of young adults and adults, males, circa 1977-96**



**Figure 2, continued**

Sources and definitions: Tables 4,5

Notes: Age groups are 31-40 years for pay, 35-44 for employment for French adults; and 21-24 and 40-44 years for pay in the Netherlands

The period is 1977-96 except for Sweden (1975-96), Germany (1984-95) and the Netherlands (1984-94), according to the availability of pay data

Pay: national definitions as in Table 5

**Table 1****Unemployment, inactivity and joblessness of young males, and adult unemployment rates, 1987 and 1997**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	16-19 year olds						20-24 year olds					
	(% population)						(% population)					
	Unemployed <sup>a</sup>		Inactive <sup>b</sup>		Jobless <sup>c</sup>		Unemployed <sup>a</sup>		Inactive <sup>b</sup>		Jobless <sup>c</sup>	
	1987	1997	1987	1997	1987	1997	1987	1997	1987	1997	1987	1997
France	8.0	4.5	2.2	2.3	10.2	6.8	14.1	15.4	2.4	2.9	16.5	18.3
Germany	1.9	2.2	1.2	2.4	3.1	4.6	6.2	8.5	2.4	4.0	8.6	12.5
Japan	1.6	1.9	1.2	1.5	2.8	3.4	3.1	4.7	1.4	1.8	4.5	6.5
Netherlands	2.9	1.6	4.4	4.9	7.3	6.5	6.7	2.9	2.3	4.9	9.0	7.8
Sweden	1.6	3.6	3.6	9.9	5.3	13.5	3.7	11.0	7.8	12.1	11.5	23.2
UK	11.4	8.6	1.7	10.8	13.1	19.4	12.7	12.6	2.3	6.1	15.0	18.7
USA	6.8	3.2	1.2	4.5	8.0	7.7	9.0	5.5	1.5	5.4	10.5	10.9

Sources: Bowers, Sonnet and Bardone (1999), Figure 3 (underlying data provided by OECD); Statistics Bureau, Japan (1987), Table 14 and (1997a), Table 14; Statistics Sweden (1997), Tables 1A, 31 (and 1987 equivalent); OECD (1999d), Part III and (1999b), Statistical Annex, Table C

Notes: a. on standard ILO/OECD definition; participants in labour market programmes are excluded

b. not in labour force and not enrolled in an educational course

c. out-of-school jobless, i.e., not employed and not enrolled in an educational course; (= unemployed plus inactive)

d. both sexes

**Table 2**  
**Unemployment durations and flows by age**

	(1)	(2)	(3)	(4)	(5)	(6)
	Long-term unemployment rate <sup>a</sup> (%)			----- Outflow rate <sup>b</sup> ----- (%)		
	-----16-24 -----		25-49	-----16-24 -----		25-49
	1985	1994 <sup>c</sup>	1994	1985	1994	1994 <sup>c</sup>
France	9.6	5.9	4.6	4.5	4.4	2.7
Germany	3.3	1.8	3.0	12.0	13.9	9.0
Japan	0.1	0.6	0.4	28.3	25.5	12.8
Netherlands	7.9	2.6	3.0	10.4	11.4	5.1
Sweden	0.1	1.9	1.2	39.7	28.2	16.5
UK	7.5	5.6	3.9	8.9	11.4	9.1
US	0.7	0.8	0.7	49.6	46.4	33.9

Source: OECD (1995), Tables 1.8, 1.9

Notes: a. Unemployed (male and female) with current spell duration of more than 12 months, as percentage of labour force of relevant age

b. Monthly outflows as percentage of stock of unemployed of relevant age

c Germany, Netherlands and UK: 1993

**Table 3**

**Youth unemployment rates by ethnicity, schooling, gender and age**

*percentages*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
Ethnicity			Schooling			Gender			Age						
Minority category	Unemployment rate various age groups, various years			Minority share <sup>a</sup>	Unemployment rate 20-24 year olds, 1996			Non-completer share <sup>a</sup>	Unemployment rate 20-24 year olds, 1997			Unemployment rate males, 1997			
	Minority	Majority	Δ (2)-(3)		U2 non-completers <sup>b</sup>	U2 completer leavers	Δ (6)-(7)		Female	Male	Δ (10)-(11)	15-19 yrs	20-24 yrs	Δ (13)-(14)	
France	non-EU parents	40	25	15 <sup>c</sup>	6.6	37	24	14	26	32	25	7	20	25	-6
Germany	foreigner	20	10	10 <sup>d</sup>	12.7	15	8	7	14	10	11	-1	8	11	-3
Japan	Korean national	16	8	8 <sup>e</sup>	0.4	5 <sup>j</sup>	3 <sup>j</sup>	2 <sup>j</sup>	7	6	6	0	10	6	4
Netherlands	ethnic minority	16	7	9 <sup>f</sup>	10.9	12	7	5	28	6	6	0	14	6	7
Sweden	non-Eur born	31	14	10 <sup>g</sup>	2.0	31	20	11	13	20	22	-1	28	22	7
UK	non-white	33	15	18 <sup>h</sup>	5.1	28	12	16	13	9	14	-5	18	14	4
USA	black	30	13	17 <sup>i</sup>	n.a.	19	10	10	13	8	9	-1	17	9	8

### Table 3, continued

Sources:

✕ cols (1-4): various (see below); cols (5-8): OECD (1998b), Tables A1.2a, D4.1a; cols (9-13): Bowers, Sonnet and Bardone (1999), Table 12

Notes: unemployment rates are on a labour force basis unless otherwise indicated; large sampling errors may be anticipated for ethnic minority attributes in Japan and Sweden; inter-group differences do not include rounding errors

a. Share of ethnic minority group in youth worker category for ethnicity; share of secondary non-completers in 25-34 year old population without post-secondary schooling

b. Those who did not complete upper secondary education (as opposed to those who completed it and did not continue directly to tertiary education).

c. 'Offspring of parents both of whom were born outside the EU' compared to 'offspring both of whose parents were born in France' (October 1993 status of 1989 cohort of secondary school-leavers; Roxanne Silberman and Irène Fournier 1999, Table 1).

d. 'Foreigners' compared to others, 20-25 year old labour force, April 1998 (Statistisches Bundesamt, population statistics)

e. Resident Korean nationals compared to resident Japanese nationals, 1995; Statistics Bureau (1995), Vol 3.1, Tables 1,13.

f. 'Ethnic minorities and other ethnic groups' compared to 'Dutch nationals born in the Netherlands' in 1998; Ministry of Social Affairs and Employment, unpublished data from *Enquête Beroepsbevolking*, (Labour Force Survey) 1998.

g. Residents of Swedish parental birth compared to residents of non-European parental birth (1995 status of 1988 cohort of secondary school-leavers; Roger Vilhelmsson 1998, Tables 1,11).

h. 'Non-white' compared to 'white' 16-24 year olds, Spring 1995 (EG 1995, Tables 1,3, Figure 2).

i. 'Black' compared to 'white' 16-19 year olds (simple average of rates for both sexes), January 1999; Lynch (1999), Table 6.

k. Non-employment rate: share of population cohort whose usual employment status is 'not employed'; Statistics Bureau (1997b), Table 3.

**Table 4****Employment rates by age, males, 1977-96***percentages of population of age cohort*

	15-19 years <sup>a</sup>			20-24 years			25-54 years		
	1977	1996	change	1977	1996	change	1977	1996	change
France	24.1	7.6	-16.5	76.1	43.0	-33.1	94.2	86.3	-7.8
Germany	46.8	33.2	-14.6	75.1	68.9	-6.2	92.7	86.1	-6.6
Japan	17.3	16.5	-0.8	70.0	70.0	0.1	95.9	95.3	-0.7
Netherlands	23.0	46.7	23.6	75.1	76.1	1.0	90.6	88.7	-1.9
Sweden	52.1	20.1	-32.1	80.5	54.1	-26.4	94.1	83.2	-10.9
UK	56.7	50.7	-6.0	77.4	70.1	-7.3	91.3	84.5	-6.7
USA	50.4	43.6	-6.8	76.4	74.7	-1.7	90.1	87.9	-2.2

Source: OECD (1999d) and earlier editions, Part III (author's calculations)

Notes: a. 16-19 for Sweden, UK, USA

**Table 5**  
**Relative pay of young adult males, circa 1977-96**

*Mean earnings of 20-24 year olds as percentage of those of 35-44 year olds<sup>a</sup>*

	1977	1996	change
France	63.2	61.9	-1.4
Germany (FRG)	64.8 <sup>b</sup>	64.0 <sup>c</sup>	-0.8
Japan	58.7	54.1	-4.6
Netherlands	59.5 <sup>b</sup>	58.5 <sup>d</sup>	-1.0
Sweden	70.7 <sup>b</sup>	69.0 <sup>e</sup>	-1.7
UK	75.6	62.4	-13.2
US	65.3	51.3	-14.0

Source: OECD Earnings Database; *cf.* Bowers, Sonnet and Bardone (1999), Figure 8.

Notes: a. Average gross earnings of full-time employees, measured annually for full year employees (France, Japan and Sweden), monthly (Germany and Netherlands) or weekly (UK and US); adult category is 31-40 years in France, 40-44 years in the Netherlands.

b. 1984

c. 1995

d. 1994

e. 1996



**Table 6****Gender difference in changes in youth labour market outcomes,  
by age and country, circa 1977-96***difference between percentage point changes of females and males*

period		employment rates		relative pay	
		15-19	20-24	15-19	20-24
France	1977-96	2.9	4.5	-8.3	-2.6
Germany (FRG)	1984-95	-0.8	0.2	n.a.	0.3
Japan	1977-96	-3.7	3.7	-11.0	-11.7
Netherlands	1984-94	-3.8	-0.5	-2.8	-2.6
Sweden	1975-96	7.4	6.2	n.a.	-0.4
UK	1977-96	0.1	9.5	-3.8	3.2
US	1977-96	8.5	7.5	-17.7	-4.6

Sources: as Tables 4,5

Notes: negative signs indicate a greater decrease (or lesser increase) for young females than for young males (absolutely, for employment rates; relative to adults of same sex, for pay)

**Table 7**

**Turnover rates in early labour market experience<sup>a</sup>**

	Measurement date	Ages involved	Jobs held per year of experience
France <sup>b</sup>	1986-90	15-21	.63
Germany	1984	16-25	.29
Japan	1985	16-30	.17
Netherlands	n.a.		
Sweden	n.a.		
UK	1990	22-25	.48
USA	1988	16-25	.86

Source: OECD (1996b), Table 4.7; Recotillet and Werquin (1995)

Notes: a. employment contracts held; males only (all youth for France)

b. those who did not complete upper secondary level (Levels V and VI) only, during first 3.5 years after leaving school

**Table 8**

**Minimum wage attributes by country**

	Adult minimum wage relative to mean full-time earnings <sup>a</sup> for:		Youth sub-minimum relative to adult minimum wage		Share low paid <sup>e</sup> in youth employment (%; < 25yrs)
	All ages (%)	20-24 yrs (%)	Scale rate (%)	Applicable ages	
France	46	72	80 90	16 <sup>c</sup> 17 <sup>c</sup>	50
Germany	-	-	-	-	50
Japan	27 <sup>b</sup>	44 <sup>b</sup>	-	-	36
Netherlands	45	76	30 . 45 . 85	15 . 18 . 22	n.a.
Sweden	-	-	-	-	19
UK	36	52	0 83	16-17 18-22	46
US (federal)	31	53	82	16-19 <sup>d</sup>	63

Sources: OECD (1998d), Tables 2.1-2.3; Bowers, Sonnet and Bardone (1999), Table 13; (UK) *New Earnings Survey*, 1998, Tables A1.2, F8.2, updated to April 1999 for growth of average earnings (*Economic Trends*, July 1999, T44)

Notes: most recent information available (for UK, April 1999)

- : not applicable (no statutory minimum or sub-minimum wage); n.a.: not available

a. gross hourly earnings and employer social security contributions of full-time employees

b. employment-weighted average of prefectural minimum wages

c. and less than six months' tenure

d. and less than 90 days tenure; extensions allowed for some training programmes

e. less than two-thirds of median full-time earnings of all employees

**Table 9****Coverage of fixed-term employment contracts by age***Fixed term employment as percentage of total employment in age or experience category*

	(1)	(2)	(3)	(4)
		1991		1992-97
	14-19 yrs	20-24 yrs	40-44 yrs	first five years of labour market experience
France	54	27	4	28
Germany	28	10	3	21
Netherlands	21	15	4	17
Sweden	n.a.	n.a.	n.a.	34
UK	19	6	4	11

Sources: (1)-(3), Schömann, Rogowski and Kruppe (1995), Tables 4.6, 4.9, 4.10; (4), van der Velden and Wolbers (2000), Figure 2

Note: excludes apprentices and participants in labour market programmes

**Table 10****Labour market programmes, 1997-8**

(1)	(2)	(3)	(4)	(5)	(6)
Entrants as share of all-age labour force			Public spending on active labour market measures <sup>c</sup>		
all labour market prog- rammes (%)	youth unemploy- ment and training programmes <sup>b</sup> (%)	youth to total ratio (%)	youth unemploy- ment and training programmes (% GDP)	youth programmes as share of all spending (%)	spendin yout particip (share of per wor (%)

France <sup>a</sup>	11.3	2.9	26	0.24	18	8
Germany <sup>a</sup>	3.6	0.7	19	0.07	6	10
Japan <sup>a</sup>	1.0	0	0	0	0	-
Ned	5.8	0.8	14	0.10	3	13
Sweden	12.1	0.9	7	0.03	2	3
UK <sup>a</sup>	2.4	1.1	46	0.12	29	11
USA	n.a.	0.6	n.a.	0.03	17	5

Source: OECD (1998e), Annex Table J, and (1999b), Annex Table H

Notes: n.a.: not available; col (3) =  $100 \cdot (2)/(1)$ ; (6) =  $100 \cdot (4)/(2)$

a. 1996-7

b. includes measures for unemployed and disadvantaged youth, and some support for apprenticeship and related youth training

c. 'active' measures comprise: public employment services, labour market training programmes for adults, youth programmes, employment subsidies and measures for the disabled

Table 11

## Attributes of Upper Secondary Schooling, 1996

	(1)	(2)	(3)	(4)	(5)
	Educational enrollments <sup>a</sup> , 15-19 years	Upper secondary graduation rate	Share of vocational and technical programmes	Combined school- and work-based programmes <sup>a,b</sup>	Apprent entra (various 1992
	(% population cohort)	(% population cohort)	(% upper secondary enrollments)	(% upper secondary vocational enrollments)	(% pop coh
France	88	85	54	20	20
Germany	88	86	76	68	5
Japan	92 <sup>d</sup>	91	28	0	0
Netherlands	89	81	70	32	1
Sweden	83	81	51	n.a.	0
UK	72	34 <sup>f</sup>	57	n.a.	8
US	73	72	n.a.	n.a.	n.

Sources: OECD (1998b), Tables C1.2, 2.1 and 2.3; Yoshimoto (1996), Tables 1,2,; col (5): Ryan (2000), Table 1; Ministère de l'Éducation Nationale (1999); Ministère du Travail (1999); DfEE (1999), Table 18

Notes: a. includes all programmes in which at least ten per cent of the curriculum comprises school-based instruction (including all secondary level apprenticeships in all countries except the UK)

b. programmes in which less than 75 per cent of the curriculum comprises school-based instruction

c. as to national definitions of apprenticeship; includes those who receive no school-based instruction (UK) and those who aim at a post-secondary qualification (France)

d. 1992 cohort of lower secondary leavers, assuming that all drop-outs from senior high school left at the half-way stage

e. for 1998: (New entrants to apprenticeship)\*(Share of entrants entering for first time)\*2/(average 17-18 year old population)

f. passes in two or more A Level subjects (or AS/GNVQ equivalent), England only