

**The school-to-work transition: problems and indicators**

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**Abstract**

The school-to-work transition differs across countries and periods. Research into such differences raises measurement issues. Two are investigated here. The first is the measurement of youth employment-related problems. A Franco-American comparison is used to show the need for data on unemployment to be supplemented by that on the scale and turnover of out-of-school inactive youth in order for a fuller picture to emerge. The second is the empirical measurement of transition patterns in a particular country at a particular time. An aggregate measure of transition durations, as proposed by the OECD, is evaluated. The need to remove the distorting compositional effects arising associated with differences in the dispersion of school-leaving ages is illustrated. The evidence concerns primarily teenagers in eight advanced economies; the compositional problem is illustrated with historical data for the U.K..

The school-to-work transition is a catch-all term for the activities of young people as they bounce around or struggle along between full-time schooling and full-time, possibly career, employment. The activities in question include vocational education, work experience, unemployment, labor market programs, casual work, and fixed-term employment. The transition has become the focus of considerable interest, both academic and policy-oriented

In some accounts, the school-to-work transition has become longer and more tortuous, in advanced economies at least (Organisation for Economic Co-operation and Development, 1996, 1998). A leading transition attribute, youth status in the labor market, is said to have deteriorated in virtually all OECD countries (Blanchflower and Freeman, 2000). Others emphasize cross-country differences in transition patterns, with German and Japanese institutions performing particularly well (Ryan, 2001).

The accuracy of such generalizations is an empirical issue. Their evaluation would be helped were it possible to quantify transition attributes comprehensively and consistently. This chapter discusses two sets of measurement problems: those involved, firstly, in gauging employment-related difficulties and, secondly, in summarizing national transitions at a particular time in a way that permits comparisons across countries and periods. The evidence concerns teenagers in eight advanced economies, supplemented by historical data for the U.K..

### **Youth employment problems**

The first step in measuring the employment problems facing any age group has traditionally been the unemployment rate: the share of the labor force that lacks paid work, while showing sufficient interest in finding work and availability for work if it is found.

On that criterion, youth employment problems appear serious in many advanced economies. The teenage unemployment rate stood in 1997 in double figures in all eight of the countries in Table 1 except Germany. It was particularly high in southern Europe: in Italy and Spain, around one-third of teenage workers was unemployed. In the same region, female rates were particularly high: unemployment

accounted for around two-fifths of teenage workers in France and Spain, and fully three-fifths in Italy.

The problems facing an assessment of youth employment problems are illustrated here by focusing on two countries, France and the U.S.A., for which the familiar contemporary perception is one of labor market failure and success, respectively. Unemployment rates broadly support that view: teenage unemployment rates were much higher in France than in the U.S. in 1997, particularly for females (Table 1). At the same time, as unemployment rates in the U.S. were hardly low by absolute standards, youth employment problems are apparent there too.

It is widely recognized that unemployment rates provide only a limited indicator of employment difficulties. In the case of young workers, the first limitation concerns the size of the youth labor force. When few young people are members of the labor force, as a result, e.g., of extensive participation in full-time education, not even a high unemployment rate involves many young people.

Returning to the Franco-American comparison, against the much higher female youth rate in France must be set the fact that only 4% of teenage females participate in the labor force in France, as opposed to 51% in the U.S.. The unemployed constitute therefore less than 2% of female teenagers in France, as against nearly 8% in the U.S. (Table 1, columns 4-6). Youth employment difficulties appear less marked from this standpoint in France than in the U.S.. In Spain and the U.K., however, serious problems remain visible, with at least 10% of the teenage population unemployed.

*INSERT TABLE 1 AROUND HERE*

Secondly, even when measured relative to population, unemployment offers only a partial guide to employment problems. The youth labor force shrinks when jobs are hard to find. The main dimension of adjustment is enrolment in full-time education. Enrolments rise as labor market slack increases, driven partly by the difficulty of finding work, and partly by improved prospects of finding work, through increased skills and educational credentials. In the U.S., the effect is weak, as many

students work part-time; in France, strong, as few students do so (Blanchflower and Freeman, 2000).

Our Franco-American comparison of youth unemployment rates, which became more favorable to France when the basis was changed from the labor force to the population, therefore swings back in favor of the U.S.. The smallness of the teenage labor force and the high rate of educational enrolment in France do not just relieve the youth employment problem, they also reflect its severity.

Thirdly, the definition of unemployment requires consideration. How interested in work and available for work must a jobless person be in order to be considered an unemployed member of the labor force rather than an inactive non-member? The ILO/OECD definition of unemployment requires at the time in question both some active job search during the previous four weeks and full readiness to start work during the coming two weeks. If either criterion is not satisfied, a workless individual is classed as inactive rather than unemployed.

The imposition of these interest and availability criteria classes as inactive of people whose labor market attachment fails either test but is not zero on either. Low attachment is more common among the young than the middle aged, reflecting the greater importance of schooling, leisure, and labor market programs for young people, as well as the lower household responsibilities of youth. The issue has attracted particular attention in the U.S., where large numbers of young people, especially non-white inner-city residents, are economically inactive, lacking links either to school or legitimate employment, even in tight labor markets (Rees, 1986).

Even if a young person's work interest and availability are both zero, an employment-related problem may still be judged present. A teenager who is educationally as well as economically inactive may be seen as wasting his or her time at a formative stage of the life-cycle. A government that promotes self-reliance rather than dependence on public income support (or criminality) may view such a choice as mistaken, and seek to move such young people towards the labor market.

Such considerations favor the use of joblessness, a potentially more comprehensive indicator of youth employment problems than unemployment (*ibid.*). One variant is the total non-employment rate, measured on a population basis (i.e.,  $1 - (E/N)$ , where E is employment and N is population). For teenagers, the usefulness of that indicator is reduced by high rates of educational participation, which are only partly attributable to employment problems. A superior indicator is provided by inactive joblessness, with inactivity defined with respect to education as well as to the labor market (i.e.,  $1 - \{(E+S)/N\}$ , where S is non-employed students).

Table 2 juxtaposes the inactive and the unemployed within the out-of-school jobless as a whole. The data are restricted to males, among whom family formation and household responsibilities have less influence on inactivity rates than among females.

*INSERT TABLE 2 AROUND HERE*

Inactivity proves substantial in all eight countries, accounting for around one-half of teenage male joblessness in the group as a whole. Its importance varies considerably across countries. In the U.K. and Sweden, the approximately one-tenth of young males who are inactive actually outnumber their unemployed peers, and constitute a recognized policy problem (Bentley and Gurumurthy, 1999). The inactive also outnumber the unemployed in the U.S. and Germany, although smaller proportions of young people are involved than in Sweden and the U.K.. In Spain and France, by contrast, most jobless youth are unemployed, and unemployment alone provides therefore a less limited guide to youth employment problems than elsewhere.

Revisiting our Franco-American comparison, the higher inactivity rate of youth in the U.S. than in France cancels any U.S. advantage in terms of unemployment alone (Table 1 above). The French joblessness rate of 6.8% in 1997 suggests youth employment problems that—for males at least—were no worse, and possibly slightly better, than their counterparts in the U.S., where the rate was 7.7%.

The pursuit of more accurate measures of youth employment problems must however continue further.<sup>1</sup> Three additional adjustments are potentially important. First, out-of-school inactivity may reflect choices (e.g., leisure and foreign travel) rather than constraints. Where constraints are involved, they may be independent of, rather than encouraged by, labor market slack. The ranks of the inactive should therefore be pared down further, by removing the former category in each dichotomy. The evidence required for the task has yet to be compiled for most countries.

Our Franco-American comparison is potentially affected in this respect by compulsory military service for males in France and exceptionally high incarceration rates among young American males, both of which raise the national youth inactivity rate. An adjustment for these factors would probably favor France, not least because U.S. incarceration rates are themselves more readily attributable, if only in part, to poor youth labor market opportunities than are French conscription rates (Freeman, 1996).

Secondly, in many countries labor market programs take some young people out of unemployment and inactivity without providing regular employment. The share of young people participating in such programs – most of whom would presumably have preferred employment – has been higher in France than in the U.S.. Entrants to youth programs in 1997/98 amounted to 2.9% of (all age) employment in France, as opposed to only 0.6% in the U.S. (OECD, 1999, Annex Table H). Adjustment for public intervention increases the imbalance, in terms of youth employment disadvantages, of France relative to the U.S..

Finally, the dynamics of joblessness are potentially important. Low outflows from joblessness and long spell durations therein are particularly likely to indicate employment problems, such as the inertia, stagnation and waste involved in long-term unemployment. High outflows and short spell durations suggest by contrast not so much employment problems as employment improvement, associated with job search and job-worker matching in the youth labor market.

This consideration pushes the Franco-American comparison even further in favor of the U.S.: in 1994 the outflow rate in youth (16-24 year old) unemployment in the U.S. was more than ten times as large, and the long-term unemployment rate only one-eighth as large, as its French counterpart (OECD, 1995, Tables 1.8, 1.9). Moreover, as France undoubtedly has a higher share of young workers following various sequences of unemployment, inactivity and labor market programs without finding employment, its comparative deficit in terms of long-term joblessness is even greater than that in long-term unemployment.

Our assessment of comparative Franco-American youth employment problems, which moved in favor of France when unemployment was replaced by inactive joblessness as the indicator, has swung back strongly in favor of the U.S. as a result of taking into account labor market programs and turnover among the jobless. A full research project would however be required for an exhaustive assessment of the issue. While this discussion has not attempted that task, it has illustrated the difficulty of measuring youth employment problems, and shown the desirability of supplementing data on youth unemployment with evidence the scale and dynamics of inactive joblessness in particular.

### **The duration of the school-to-work transition**

The OECD paints a picture of 'longer and more complex transitions than existed in the past' (1996, p.41). A tendency for more young people to spend more time bouncing around or struggling along is certainly consistent with such conjunctural and structural developments as depressed labor demand and experience-biased trends in labor demand (Ryan, 2001).

Differences between national transition attributes are also potentially important. At one pole stand the traditional Japanese and British patterns, in which most young people leave school early and move directly to regular employment. The middle ground is occupied by Germany and neighboring countries, many of whose young people spend well defined periods traveling along apprenticeship-based pathways from full-time schooling to employment. At the other pole, stand the late

and prolonged transitions of France, Italy and Spain, in which young people typically percolate through a variety of intermediate statuses in quest of regular employment.

Qualitative evidence can be cited in support of these generalizations. The feasibility of quantitative evidence is also of interest. How might these comparisons of transition patterns across time and place be quantified? Do the generalizations survive quantification?

Quantitative indicators have certainly been widely exploited. For example, the average time taken by French school-leavers to find a permanent job (*contrat à durée déterminée*) in longitudinal microdata has since the early 1970s both increased sharply and become more dependent on prior scholastic qualifications, implying an increase in both the mean and the inequality of transition durations (Affichard, 1981; Minni and Vergnies, 1994). Similar tendencies have been observed in the U.K. (Payne, 1995).

Even in Germany and Japan, countries whose national school-to-work institutions proved particularly resilient during the difficulties of the 1990s, various indicators suggest a lengthening of transitions. In Germany, although apprenticeship still provides a mass vehicle for the school-to-work transition, the growth of multiple pathways (e.g., apprenticeship followed by higher education) and the rise in unemployment among young adults implies some lengthening of average durations and some increase in duration inequalities (Büchel and Helberger, 1995; Franz, Inkemann, Pohlmeier and Zimmerman, 2000). In Japan, placement rates for students graduating from secondary schools and tertiary institutions have declined, and youth employees quit their jobs more often (Kariya, 1999; Mitani, 1999)—though these changes has probably not been enough to have increased the OECD's duration measure.

These symptoms of lengthening transitions are however both partial and nationally specific. Most research has been limited to a single country, occasionally two (Büchtemann, Schupp and Soloff, 1993). The OECD (1996) has however proposed a comprehensive measure of the transition that can be used for comparisons

across time and place. Its approach treats the school-to-work transition as an aggregate national attribute. The transition is defined as starting at the lowest age by which one quarter of the cohort has left full-time schooling, and as ending at the lowest age by which a majority is no longer involved in schooling and has found regular employment. The duration of the transition is defined as the difference between these two ages in the life of a population cohort. Microdata, drawn typically from household surveys, are then used to determine the two ages. The results can be compared across countries and time.

On this definition, in fifteen advanced countries in 1994, the school-to-work transition started at an average age of seventeen and finished at age 23, lasting for an average of six years (Table 3). These estimates do indeed suggest a protracted process.

International differences also correspond to expectation. Although the starting age was similar in all countries in 1984, by 1994 dispersion had increased, with France showing the biggest rise. Differences in the ending age were marked in both years, with Spain, Italy and France as the latest, and the U.S. and the U.K. among the earliest.

Other results were less readily anticipated. The average duration of the transition across countries did not increase, registering six years for both 1984 and 1994—even though the duration estimate increased for the U.K. and Germany. What did change during the period was timing: the average starting age rose from 17 to 18 years, and the ending age from 22 to 23 years.

*INSERT TABLE 3 AROUND HERE*

Nor is the U.K. distinctive nowadays for either the earliness or the brevity of its transition period. Its starting age of 16 was indeed joint earliest in both 1984 and 1994, but neither was exceptional amongst advanced economies. The U.K.'s transition duration was indeed shorter in both years than those of Spain and Italy, but even so it exceeded those of Germany, Ireland and (by 1994) France. Another possibly

surprising feature of Table 3 is that the U.S. did not share the European tendency for either the starting age or the duration of the transition to increase between 1984 and 1994.

The OECD's estimates are valuable for various reasons: for facilitating cross-national and historical comparisons; for painting a vivid and broadly plausible picture; and for correcting some erroneous generalizations. The OECD methodology does however contain a flaw: it picks up not only differences across time and place in individuals' transition patterns—the variable of interest—but also the distorting effects of differences in the dispersion of school-leaving ages.

The problem is illustrated here with historical evidence for the U.K.. The limited availability of longitudinal microdata for earlier periods prevents the measurement of transition patterns on the same basis as for 1984 and 1994. Cross-sectional data on educational participation and unemployment by age in earlier periods provides however a reasonable approximation to longitudinal evidence: the lower the rate of change in transition attributes in a particular period, the better cross-sectional patterns by age mirror the experience of a particular cohort as it ages.

Fifty years ago, in 1951, the share of British—strictly, English—youth enrolled in a school or college declined from 99% at age 14 to 35% at age 15 (Table 4). On the OECD's definition, the start and end of the transition therefore coincided at 15 years, which was when the share of the cohort in full-time schooling fell below 75% while the share (presumed to be) in employment<sup>ii</sup> but not in schooling rose above 50%.

*INSERT TABLE 4 AROUND HERE*

In 1951, the duration of the transition in Britain was therefore a matter of months rather than years, and zero years when rounded to an integer. Most young people left school at the statutory minimum age (15); most who did that went straight to employment; and few who did that continued part-time in education. The situation represented the kind of traditional transition—direct and fast—that the OECD presumably had in mind when depicting transition durations as having increased in

advanced economies in general. The 1951 estimate is certainly much less than the six years estimated for 1984 and 1994, which supports the OECD's generalization, for the UK at least, over a longer period than its own data covered.

Part of an apparent increase of six years for the UK between 1951 and 1984-94 represents however a rise in the dispersion of actual ages of leaving education. The distribution of school-leaving ages became less concentrated at the legal minimum. The evolution of the OECD starting and ending ages illustrate the change. By 1990, the age at which less than 75% of young people remained in schooling had risen to 16, along with the statutory minimum leaving age. More importantly, increased staying on after the minimum age meant that the age at which less than 50% remained in schooling (irrespective of subsequent labor market experience) had risen to 18 (Payne, 1995, Table 1.2). By the mid-1990s, the share of young British people entering higher education had risen to one-third, from only 5% in 1951.

The compositional contribution of increased dispersion in leaving ages to the increase in the OECD duration measure since 1951 can be estimated by considering a counter-factual: continued full employment. School-leavers would then have been able to move directly into work: i.e., school-to-work transitions would have remained near-instantaneous at the individual level—as they have actually continued to be in Japan (Mitani, 1999), a country for which compositional effects would be expected to dominate were suitable data to be analyzed. In that case, the OECD duration measure for the UK would still have risen by two years between 1951 and 1990. The implication is that increased differentiation in school-leaving ages generated roughly one-third of the post-war increase in the OECD duration measure. The remaining four years reflects the pure lengthening of individual transitions, associated with the increased difficulty of finding employment, and a greater incidence of short-term employment contracts and labor market programs.

The compositional change actually occurred in the UK soon after 1951. Similar data for 1957/58 suggest that the terminal age on the OECD definition had already increased to 17 years, assuming that early school-leavers still moved en masse directly into employment during the extended post-war boom (Table 4).<sup>iii</sup> The

increase in transition duration reflected the rapid dissemination of part-time post-compulsory education during the 1950s, primarily in the form of part-time courses taken at further education colleges by young male employees and apprentices.

The OECD's aggregate measure of transition durations suffers therefore from poor focus. It caters to the need for a summary indicator for use in comparisons across time and place, but it requires conversion into a truly aggregative variable, unaffected by changes in the distribution of school-leaving ages. A promising prospect is the simple average of the experiences of individual young people within particular national age cohorts: e.g., how long they spend on average between leaving full-time schooling (or passing the statutory minimum leaving age) and attaining some specified length of service in a regular job while having ended their formal education. Some such adaptation of the OECD's approach is both more promising, and—given that microdata are required anyway for the calculation of the OECD measure—computationally only slightly more arduous.

## **Conclusions**

The difficulties of comparing the school-to-work transition across time and place have been illustrated in terms of two attributes: the extent of youth employment-related difficulties and the duration of the national transition viewed as a whole. Both the benefits and the limits of quantification are visible in each case.

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**Endnotes**

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**Table 1**  
**Teenage Unemployment by Country, 1997**

*16 to 19 year olds; percentages*

	(1)	(2)	(3)	(4)	(5)	(6)
	-----	Males	-----	-----	Females	-----
	Unempl- oyment Rate <sup>b</sup>	Labor Force Particip- ation Rate	Unemploy- ed Share of Popul- ation	Unempl- oyment Rate	Labor Force Particip- ation Rate	Unemploy- ed Share of Popul- ation
	(U/L)	(L/N)	(U/N)	(U/L)	(L/N)	(U/N)
France <sup>a</sup>	19.9	9.4	1.9	38.9	4.3	1.7
Germany <sup>a</sup>	8.3	34.6	2.9	8.8	26.7	2.3
Italy <sup>a</sup>	30.9	21.5	6.6	42.9	16.5	7.1
Japan <sup>a</sup>	10.3	18.9	1.9	10.3	16.8	1.7
Spain	36.5	30.4	11.1	59.3	21.3	12.6
Sweden	28.2	26.2	7.4	26.7	26.2	7.0
U.K.	18.2	63.7	11.6	14.0	60.9	8.5
U.S.A.	16.9	52.3	8.8	15.0	51.0	7.7

Source: Bowers, Sonnet and Bardone (1999), Tables 10, 12 and author's calculations;  
original data taken from OECD *Labour Force Statistics*

Note: U denotes unemployment, L employment, and N population

<sup>a</sup> 15 to 19 year olds

<sup>b</sup> On standardized ILO/OECD definition (i.e., out of work, looked for work in last 4 weeks, ready to start work in next 2 weeks)

**Table 2****Unemployment, Inactivity and Joblessness among Teenage Males, 1997***columns 1-3 are percentages of 16 to 19 year old male population*

	(1)	(2)	(3)	(4)
	Unemployed	Out-of-School Inactive <sup>a</sup>	Jobless	Inactive as Share of All Jobless (%)
			(1)+(2)	(2)/(3)
France	4.5	2.3	6.8	34
Germany	2.2	2.4	4.6	52
Italy	6.8	6.5	13.3	49
Japan	1.9	1.5	3.4	44
Spain	9.7	3.9	13.6	29
Sweden	3.6	9.9	13.5	73
U.K.	8.6	10.8	19.4	56
U.S.A.	3.2	4.5	7.7	59

Source: Bowers, Sonnet and Bardone (1999), Figure 3 (original data provided by OECD from individual country microdata)

<sup>a</sup> Not enrolled in an educational program and not unemployed on ILO definition

**Table 3**  
**Timing and Duration of National School-to-Work Transition**  
**on OECD Definition, by Country, 1984 and 1994**

*ranked by average duration in 1994*

	(1)	(2)	(3)	(4)	(5)	(6)
	Average Starting Age <sup>a</sup>		Average Ending Age <sup>b</sup>		Average Duration (Years of Age)	
					(3)-(1)	(4)-(2)
	1984	1994	1984	1994	1984	1994
Spain	16	17	26	27	10	10
Italy	16	17	23	25	7	8
U.K.	16	16	20	22	4	6
France	17	19	22	24	5	5
Germany	17	17	20	22	3	5
U.S.A.	16	16	21	21	5	5
Ireland	17	18	20	22	3	4
Average <sup>c</sup>	16	17	22	23	6	6

Source: OECD (1996), p. 72

<sup>a</sup> Age at which the share of the cohort that is in full-time schooling and not in employment falls below 75%

<sup>b</sup> Age at which the share of the birth-year cohort that is in employment but not in schooling rises to 50%

<sup>c</sup> Unweighted mean (including eight countries not included here).

**Table 4****Proportion of Age Group in Formal Schooling, Great Britain, 1951 and 1957/8***% population in age-sex group*

Year	Course type	Age <sup>a</sup>	Males	Females	All
1951 <sup>b</sup>	Full-time Only	14	98.7	98.1	98.4
		15	32.7	33.9	33.3
		16	18.6	17.9	18.3
		17	9.7	10.8	10.2
	Full- and Part-time <sup>c</sup>	14	98.7	98.2	98.5
		15	34.8	34.8	34.8
		16	23.4	19.9	21.6
		17	17.3	13.1	15.2
1957/8	Full-time Only	15	39.8	39.7	38.8
		16	22.1	22.0	22.1
		17	13.0	10.8	11.9
		18	7.8	4.7	6.1
	Full- and Part-time <sup>c</sup>	15	80.5	68.0	74.4
		16	71.9	52.8	62.5
		17	61.4	37.1	49.4
		18	43.7	21.5	32.7

Source: General Register Office (1952), Table VIII.1; Ministry of Education (1959), Table 1

<sup>a</sup> age at last birthday

<sup>b</sup> England only

<sup>c</sup> day and evening courses are included in the part-time category

<sup>i</sup> An initial requirement would be to reconcile discrepancies in the data themselves.

The unemployment-population ratios for teenage males differ markedly between

Tables 1 and 2 for some countries, notably France, Sweden and the US. Although

these intra-country discrepancies reflect partly differences in age categories in the two

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tables (15 to 19 as opposed to 16 to 19), divergent definitions and data sources also probably contribute to the discrepancies.

<sup>ii</sup> The conclusion is not based on any direct observation of employment outcomes. Given full employment, however, the vast majority of early school-leavers in 1951 clearly found employment directly. Indirect (if not wholly consistent) evidence is provided by government estimates that amongst 15 year olds during 1951 (i) 456,000 individuals acquired national insurance coverage by entering employment for the first time while (ii) only 425,000 had ceased educational activity (Ministry of Labour, 1952, p.341; General Register Office, 1952, Table VIII.1). The employment condition within the OECD's 'above 50%' criterion for the ending age can therefore be taken to have been satisfied in 1951.

<sup>iii</sup> The conclusion must be qualified in view of: (i) the different geographical coverage of the 1951 and 1957/8 estimates and (ii) the limitations of cross-sectional data as a guide to longitudinal patterns in times of rapid change, such as the 1950s.