Abstract

This paper looks at short employment spells in three European countries: Great Britain, whose labour market is considered the most flexible in the EU; Italy, regarded as the least flexible; and Germany, tightly regulated, but characterised by a deservedly famous apprenticeship system. In particular, it aims to assess whether young people in short-lived jobs stand a better chance of finding a 'good job' compared to their older colleagues. The increasingly held belief that - in modern economies - a 'bad job' at the beginning of one's career is the 'port-of-entry' to stable employment and to upward mobility, makes this assessment particularly relevant; ie it matters greatly if short-duration jobs are entry ports into better employment or become long term-traps. The lack of accepted benchmarks makes it difficult to reach strong conclusions in regard to the 'efficiency' of labour markets, however, this study should help to highlight the effect of different labour market institutions on mobility and on the soundness of the 'port-of-entry' hypothesis.

Short Employment Spells
in Italy, Germany and Great Britain:
Testing the 'Port-of-Entry' Hypothesis

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Introduction

The OECD (Employment Outlook, 1998, Chapter 3) addresses the 'port-of-entry' hypothesis, focusing on the first employment spell after completing education: *'... starting off in the labour market as unemployed, regardless of one's level of education, almost 'guarantees' employment problems in the future. In this context, the role of temporary jobs in easing the initial transition* [from school to the labour market] *is of some interest... But there is also a downside to temporary jobs: some never make the transition to permanent jobs and some bounce back and forth between temporary contracts and unemployment'.*[1] The focus of this paper is precisely the downside of temporary jobs on which the OECD draws attention, namely the transition from short employment spells to 'better' jobs. [2] (The role of the German apprenticeship system will also emerge in this study.)

The precise characterisation of the 'port-of-entry' hypothesis (PEH for short) relates to the fact that nowadays, in the late Nineties, the chance for a young worker of moving into a 'good' job after a period spent in one or many short/temporary jobs is high compared to that of a young worker who has spent the same amount of time in unemployment. Once upon a time - say in the seventies - holding onto a short job or queuing among the unemployed made little difference for youth aiming at a good job.

A cursory look at aggregate indicators of youth unemployment and employment inflows is very supportive of the PEH, aside from, and in addition to, the authority of those who have discussed it in recent times.[3] On the other hand, a micro-based test of this hypothesis would be impossible except in very few countries (no data were available before the Eighties).

In this paper we propose to deal with a corollary of the PEH (PEH-2 for short): if the 'port-of-entry' hypothesis is at work, a relatively high proportion of young people who start

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[1] The Employment Outlook (1998) continues as follows: *'... low skilled French youth employed on a temporary contract during their first year out of school are both less likely to be in a job six years later and, if working, less likely to have a permanent contract compared with those who started in a permanent job.* But [...] *they do considerably better than the unemployed.'* Finally, *'German youth* [who do not go to university] *are more quickly integrated into work. They have higher rates of employment and are much more likely to have been in work 'continuously' over the period.'*

[2] The increasing popularity of the 'port-of-entry' (and related) hypotheses is consequential to the, by-now, accepted idea that there is a certain degree of segmentation in the labour markets of the western world (although the wording segmentation may be no longer fashionable); those who are 'in' are more protected than those who are 'out'. All modern theories of employment and long-term unemployment (insider/outsider, union wage, hysteresis; indirectly also the theory of implicit contracts) point in that direction.

[3] For all, OECD, *Flexibility in the Labour Market* (1986); CEPR, 'Unemployment: Choices for Europe' (1995).

their working career in short / temporary jobs will ultimately end up in more permanent jobs and better prospects. A similar pattern of upward mobility will be more problematic for adult workers: we would, in fact, expect their chance of moving into a 'good' job after a prolonged spell of one or more short / temporary jobs to be substantially smaller compared to their younger counterparts.

This idea may be operationalised as follows. Contrast two conditional probabilities across different age groups (youth versus adults):

- $P(G / S) = P$ [good(t) / short (t-T)] relating to the event of holding a 'good' job in (t) - to be appropriately defined - given that of holding a 'short' job at (t-T). A more extensive conditioning event could be a sequence of 'short' jobs till (t-T);

- $P(G / G) = P$ [good(t) / good (t-T)] relating to the event of holding a 'good' job in (t), given that of holding another 'good' job at (t-T).

We assume, without particular justification, that for all age groups $P(G /S) <= P(G / G)$, ie the probability of getting a 'good' job is higher if a person held a 'good' job in the past.

The conditional probability $P(G / S) = P$[good (t) / short (t-T)] will be larger among youth and smaller among adult workers. In particular, we would expect the inequality:

$$P \text{ [good (t) / good (t-T)]} >= P \text{ [good (t) / short (t-T)]},$$

to hold weakly among youth, and strongly among adults, except in countries where the transition of youth into employment is governed via a highly institutionalised mechanism, such as the apprentice system.[4]

This is the idea that we shall pursue empirically in this paper. There are some additional practical difficulties, the main one being that we cannot observe 'good' jobs as auspicious. A satisfactory characterisation of a 'good' job requires at least two elements: pay and duration. At this stage, we shall have to content ourselves with duration, as pay is observed in our databases, but not as to easily allow comparative analysis. In what follows, therefore, we shall replace 'good' with 'long' (for long-duration job). In particular 'short' jobs are defined as lasting less than 12 months, and 'long' jobs of 12 months or longer.

We study three countries with markedly different institutions, where we expect the positive differential between $P[LONG(t) | LONG(t-T)]$ and $P[LONG(t) | SHORT(t-T)]$ to be particularly large in the following two situations:

i. **In GERMANY, among youth**: with the dual apprentice system, a young person who has completed a training period as an apprentice will have a large advantage on the job market over an individual of the same age who has not. German companies recruit apprentices at age sixteen or seventeen and train them for two or three years. About two-thirds of all teenagers currently participate in the system (Munch, 1991). Apprenticeships are offered in all sectors of the economy, in blue as well as white collar positions and receive both on-the-job and classroom training. Thus 'training-on-the-job' in Germany takes place mainly via internal labour markets. A short employment spell is unlikely to denote a completed apprenticeship period and hence the transition to a long spell is unlikely.

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[4] See below for a discussion of this point.

ii.   **In ITALY, among adults**: short employment spells are usually confined to certain sectors (construction, trades, and seasonal activities, including manufacturing), are frequent in particular regions (South), and among less skilled workers. According to various studies[5] long duration jobs are frequent among prime-age and mature workers in Italy (see Burgess 1998; tables C and D – Italy ranks second in nine countries for the share of jobs with incomplete spells over 10 and 20 years); on the other hand, short duration jobs are numerous and highly concentrated in a relatively small hard core of prime-age and mature workers. Thus persistence in 'short' jobs is a likely occurrence, and the transition from short to long jobs much more problematic than the transition from long to long jobs, especially for adult workers.

In the UK, on the contrary, where the extent of labour market regulation is low and flexibility high, we expect little persistence among both youth and adults. As will be explained, our test of PEH-2 is based on the ratio (denominated P-RATIO) between P[LONG / SHORT] and P[LONG / LONG] (see Table 1). Our prior expectations are as follows:

Italy:	P-RATIO (young)	>	P-RATIO (adults)
Britain:	P-RATIO (young)	>=	P-RATIO (adults)
Germany:	P-RATIO (young)	<	P-RATIO (adults)

1. Data

This work compares three countries, using different data sources. For all countries we restrict attention to the manufacturing, construction and private service sectors. In this section, after describing the datasets, we address issues of data comparability.

ITALY: we use a large random sample of Italian employees of private firms (excluding agriculture) observed between 1985 and 1996. The source is an administrative database (Social Security) that allows us to observe all the individuals' employment spells, including the very short ones. It excludes the public sector (less interesting from the point of view of this study), self employment and – obviously – the black economy. We observe all individuals who work at least one day during year t as employees of private firms, and then select those who have experienced at least one non–part-time 'short employment spell' (lasting less than 12 months) during year t, hereinafter labelled 'short spell'.

BRITAIN: the BHPS (British Household Panel Survey)[6] started in 1991 as an annual survey of each adult (more than 16 years old) member of a nationally representative sample of more than 5,000 households, making a total of about 10,000 individual interviews. There are user-friendly files generated by the project to make access to the BHPS work history data. These files are spell files: that is, for each variable of interest, it is represented by its value for each month from January 1900 (month 1) to December 1996 (month 1,164).[7] Using such a spell file it is possible to compute the tenure at each employer. To obtain the same coverage of the Italian dataset we first select dependent workers of private firms, and then all individuals experiencing at least one 'short spell' in year t.

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[5] Contini, Malpede, Pacelli, and Rapiti, (1996); Burgess (1998).

[6] The BHPS data used in this analysis come from 'Combined Work-Life History Data Files' made available through the ESRC Data Archive.

[7] In most cases the majority of early values is missing, but it is necessary to go back this far for some of the older respondents.

GERMANY: The GSOEP (German Socio-Economic Panel) is a longitudinal dataset which began in 1984 with a sample of about 6,000 households in West Germany. In June 1990 the GSOEP was extended to the GDR. Once a year all members of the households aged 16 or older are questioned. The questions cover economic and social conditions of all household members. Many questions refers to the time of interview, but there are also some retrospective information and spells files. To obtain the same coverage of the Italian dataset from the GSOEP we select dependent workers of private firms, and from these we focus on the individuals experiencing at least one short spell in year t.[8]

There are two main issues about comparability: one is the use of administrative databases versus surveys (with consequences on coverage and short observation spells); and the other the different timing of the business cycle.

Databases versus Surveys

i.   It is important to recall the differences in the databases: for Italy it is a panel based on Social Security Administration (INPS) administrative files. Hence it includes only 'regular' working positions in the private sector (excluding agriculture) and in some public administrations. All jobs in the unofficial (black/grey) economy go unrecorded in this database. For UK and Germany we are using the National Household Surveys, which cover all jobs whether in regular payroll or in the unofficial (unregulated, possibly black) economy, where job volatility is much higher and short job spells more frequent.

A problem that may arise in Italy's database is common to many administrative sources: the definition of job spell that individuals have in mind and declare in a household survey may differ from that observable in the administrative database; if firm A merges with firm B and retains all employees, B's employees will seldom report a job change to the interviewer, but in the administrative records we would normally find a job change from B to A. Thus the frequency of short spells may be overestimated in administrative databases, unless corrections are made to exclude these events from count. The Italian database has been corrected accordingly, but the control may not be perfect. It is therefore possible that short spells could be slightly overestimated in Italy for this reason.

On the other hand, the structure of Germany's GSOEP does not allow the separation of two consecutive employment spells with different employers, unless interrupted by a period of unemployment, training or inactivity. Comparability may be somewhat affected also from this perspective - short spells being here underestimated and long spells overestimated at both ends of the observations period - but, if anything, this will strengthen our conclusions.

The Business Cycle

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[8] We use the ARTKALEN file which reports the answer to the question 'Please think about the entire previous year: we have made a sort of calendar. On the left, we have written things that could have happened last year. Please go through the entire list and check each month, in which, for example, you were employed or unemployed, etc. Please make sure you answer for each month.' The respondent would simply check for each month, the appropriate activities. To generate the spells, all monthly calendars, from previous years as well, are used.

For our analysis we use a spell (monthly) file which looks at spells of activity, such as work, retirement and schooling, over each GSOEP survey year. Each time the spell is interrupted, that spell is terminated and a new spell begins.

ii.   We compare Italy and West Germany in the late Eighties; Italy, Germany and the UK in the early Nineties. The three countries do not face the same phase of the business cycle. If we were to do a sophisticated econometric analysis, we would have to take into explicit account the impact of the cycle (the UK anticipates over Italy and Germany). This is a preliminary investigation of the PEH where the basic data show differences that are much more structural (institution-based) than cycle related. For this reason, there seems to be little scope to go beyond the consciousness that the cycle may matter.

2. Who holds 'short' jobs?

We focus here on the characteristics of workers holding 'short' jobs. In particular, we compare the distribution of 'short' job holders by observable characteristics to the distribution of these characteristics in the population. The latter is estimated on a cross section of people working in May of year t (Italy), or at time of interview (Germany and UK).

It is worth noting that our definition of short employment spell is based on *completed* tenure, not on elapsed tenure at the time of the survey (as in Burgess 1998). Hence our statistics are not comparable to those obtained from answers to the question 'for how long have you been with your current employer?'

A significant fraction of employees holds 'short' jobs (table 2). In Germany there is the lowest percentage of 'short' jobs among the three countries: about 7% in Western Germany before unification, almost 11% in the unified country in 1994. In the UK the percentage is highest, up to 19% in 1994. Italy is in an intermediate position, with a peak at 16.4% in 1989. Focusing on age and gender (table 2), we notice that people experiencing short employment spells are more likely to be young; this is true in every country and year.

Workers under 30 are about 17% of the population in Germany, sharply increasing after unification (1994); in Italy 21% of women and 27% of men; in Britain 29% of women and 26% of men hold a 'short' job during the period. Differences by gender are relevant in UK and Italy: while in the former women are more likely to hold 'short' jobs, the reverse is true in Italy. These percentages control for the lower participation of women in Italy's labour market, but show the effect of the selection process: only 'better' female workers participate and they are more likely to get a 'good' job. Others are probably employed in the Italian black economy, not observable in this dataset.

Among prime age workers, the number of 'short' job holders is still quite 'high': about 10% in Italy and Germany, even higher in the UK. While there is no difference between Italian women and men in this respect, in the other two countries women are much more likely to experience short employment spells.

Even among older workers (above 45 years old) we find significant percentages of people experiencing short employment spells: about 6% in Italy and Germany; about 14% in the UK in 1994. No differences by gender can be detected in the UK, while in Italy and Germany 'older' women are more likely to hold 'short' jobs than 'older' men.

Turning to wages (table 3) we find, as expected, that workers with short spells earn lower mean wages than the population and that their wage distribution is shifted to the left. Focusing on median wages (normalised by the population mean of males 30-45) we notice that among younger workers the penalisation is highest in Germany, almost negligible in Italy, with the UK in intermediate position. Among prime age and older workers the penalisation is highest in Germany, negligible in the UK, with Italy in-between. These data suggest that German workers are the least likely to hold 'short' jobs but if they do they bear the maximum

penalty. On the contrary UK workers can easily experience short employment spells, but the penalty - measured by wages - is negligible.

These represent two extreme cases: on the one hand, a well regulated market in Germany, with a high number of well paid 'insiders' who hold stable jobs, on the other, the low-paid 'outsiders', concentrated in 'short' jobs. On the other hand a very flexible market in Britain, where wage dispersion is high and job security low, but where 'outsiders' (if any) do not pay a high price in terms of pay. Italy is again an intermediate case, where both wage-penalty and job 'insecurity' are significant.

We have also estimated a logit model of Pr (SHORT | X) on pooled short and cross section samples (X being a vector of standard regressors, catching individual and firm characteristics) that completes the description, but does not add significantly to the above story.[9]

3. Persistence and Transitions

Prior to the empirical test of the PEH-2, we present some descriptive statistics on the destination at year (t+3) of workers in short employment spells at year (t) and of workers in long employment spells at (t), for each of the sub-periods considered in this study (table 4). Workers in short (<= 12 months) or long (> 12 months) employment spells in 1986 and 1991 are classified according to their state in 1989 and 1994 respectively. There are three possibilities: i) still in short (long) employment spell; ii) moved into a long (short) spell; iii) moved 'out' of dependent work.

In order to define movements into the 'out' state, we have proceeded as follows: for both Germany and UK all people classified as 'dependent employee' at the beginning of each observation period (1986 and 1991), and either no longer in the same status or no longer in the panel, are assigned to a state denominated 'out'.[10] In this way we establish a meaningful comparability with Italy whose database includes only dependent workers. It has been pointed out elsewhere[11] that, for workers aged 25 through 50, holding short-term jobs and earning modest pay, the vast majority of movements out of dependent work have a strongly negative connotation, even when they do not coincide with outright unemployment. In Italy exit from the panel may signify also work in the irregular, black or grey economy. In Germany and the UK such positions, while not as numerous as in Italy, are probably declared by respondents to the household survey.

Consider workers that initiate from a short spell (see Table 4): Italy and Germany look surprisingly similar in 1986-89: almost 50% of workers are 'out' by 1989; 12-15% are still in short spells; the rest have moved to a long spell. The similarity of Italy and Germany holds in 1991-94, with a slight improvement of prospects for the Italian workers and considerably worse prospects for the Germans (as we shall see, this is not the only trace of post-unification). British workers do better on all counts: fewer drop 'out', many more move into long spells.

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[9] Estimates are not presented here but are available from the authors.

[10] The states other than dependent employment are: unemployment, self-employment, out-of-the labour force, other, both in the GSOEP and in the BHPS.

[11] See Contini and Villosio (1998). In particular, the probability of a move towards self-employment is not negligible only for job holders who are in the upper tail of the wage distribution. This is certainly not the case for workers holding 'short' jobs.

Only small changes are noticeable in the two sub-periods for individuals who start in long spells: persistence in long spells is higher and the frequency of moves 'out' is lower in Italy than Germany. Mobility (in all directions) is higher in Britain.

Tables 5a and b displays the frequencies of 'out' movements, given sex, age and initial state. The following regularities deserve to be mentioned:

- not unexpectedly, P (out / long) are much smaller than P (out / short) for all countries and cuts of the sample;

- P (out / long) is always U-shaped with respect to age: the probability of a transition to 'out' for workers holding a long job is lower at prime age, higher at young and mature age;

- P (out / short) increases with age in Italy in both sub-periods, and in Germany after unification (for men only). It is U-shaped in Germany (before unification), and in the UK;

- the similarity between Italy and Germany finds here additional support.

Tables 6a and b relate to persistence issues, and display the transitions ending into 'short', by sex and age. The reading is very much in line with the previous tables:

- the probability of being trapped in a short spell (ie a transition from short (t) to short (t+3)) is many times higher than that of a transition from long (t) to short (t+3) both for Italy and Germany. The lower degree of labour market regulation in the UK makes the difference;

- the likelihood of a bad transition (for men only) increases dramatically from pre-unification to post-unification Germany, while the up-cycle is evident in Italy;

- the transitions to a short spell are inversely related to age, regardless of the origin.

4. Testing the PEH-2

According to the PEH-2, young people in short-lived jobs stand a better chance of finding - some time thereafter - a 'good job' compared to their older colleagues.

We investigate the issue in two steps:

i.   for each country and sub-period we estimate a binary logit model for two transition probabilities,

$$Pr [LONG (t+3) / SHORT (t), X]$$
$$Pr [LONG (t+3) / LONG (t), X],$$

aimed at measuring and controlling the factors behind the transition from the initial state in t to LONG in t+3. The vector X denotes the observable characteristics of the

workers involved, those of the firm and industry of origin, and of the region where the event is observed.

Estimated probabilities for various age-groups, sex and industry are generated, holding all else constant;

ii. a rough test of the 'port-of-entry' corollary (PEH-2) is constructed as follows. The following inequality must hold for all workers:

Pr [LONG (t+3) / LONG (t), X] > Pr [LONG (t+3) / SHORT (t), X].

If the 'port-of-entry' corollary holds, the inequality should be stronger for the adults, and weaker for the young. In other words, a short spell in year t should be less harming to the worker's employment position in t+3 for young people and more harming for adults. Thus, for given X, the probability ratio,

P-RATIO = Pr [LONG (t+3) / SHORT (t)] / Pr [LONG (t+3) / LONG (t)],

should be a decreasing function of age; large(r) for the young and small(er) for the mature ones.

4.1 Binary logit estimation

The estimated models are simple reduced forms of binary logit specifications: in the first model (A) all sample individuals are in SHORT at time (t); in the second one (B) all are in LONG at time (t).

In model A there are individuals who move to LONG at time (t+3) - [Y = 1] - and others who persist in SHORT or move to OUT at time (t+3) - [Y = 0] .

In model B there are individuals who persist in LONG at time (t+3) - [Y = 1] - and others who move to SHORT or move to OUT at time (t+3) - [Y = 0].

Both models include the following regressors:

- gender
- age and age square (t)
- industry (t)
- skill level (t)   (only Italy)
- education (t)   (Germany and UK)
- firm size (t)
- wage quartile (t)
- geographical area

The dependent variables are the two transition probabilities specified above. Estimation is performed separately for each country and three year-period. In addition we estimate a version with the three countries pooled together.

All the right hand-side variables are exogenous, with the possible exception of the industry and wage quartile in which each individual is found in the initial years 1986 (for

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1986-89) and 1991 (for 1991-94). No correction is made for this, nor for the potential endogeneity of initial conditions.[12]

Overall significance is moderately good in Italy (between 67% and 73% of concordants; Kruskal-Goodman's gamma above 0.35); modest in Germany and the UK (between 55% and 64% of concordants; Kruskal-Goodman's gamma between 0.20 and 0.30). Here follows a summary of significant results (details on the regressions are available in the appendix).

(A) dependent variable: Pr [LONG (t+3) / SHORT (t), X]

1986-89 (Italy and Germany)

-       a strong impact of age (positive) and age square (negative) in both countries. As expected, the transition is easier sometime after entry in the labour market and declines near prime age. While in Italy the peak of the hump is reached around 25 years of age, in Germany the curve turns downwards at age 35;

-       the trade sector reduces the likelihood of the transition;

-       gender is not significant in Germany, while women are penalised in Italy;

-       blue collar jobs have a negative impact (observable only in Italy);

-       transitions are more difficult for workers at small firms in Italy. No impact in Germany;

-       no regional differences in Germany (only West Germany); very significant differences in Italy, with the North-East leading the transition and the Islands trailing behind;

-       last but not least, education (observable only in Germany) is negatively signed, somewhat above significance. Here there could be a problem linked to the endogeneity of initial conditions: a highly educated person who takes up a short (presumably 'bad') job early in his life, may have a particularly hard time in 'reasserting' his status later in his career.

1991-94 (Italy, Germany and UK)

-       age and age square have the same sign and magnitude as in the Eighties in Italy and Germany. Not significant in UK;

-       trades and construction reduce the likelihood of the transition in Italy. No impact elsewhere;

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[12] The correction for endogeneity is more important if the aim is to estimate and interpret the individual regression coefficients. It is less crucial if - as we do here - the aim is to calculate predicted values of the dependent variable, ie benchmark probabilities.

- women are penalised in Italy, while they have better chances of upward mobility in Britain. Again no impact in Germany;

- blue collar jobs have a negative impact in Italy (not observable elsewhere);

- transitions are easier with jobs at larger firms (in Italy). Not significant elsewhere;

- the position in the wage distribution produces a similar impact on the transition in Italy and Britain, none in Germany: a slight penalisation for workers placed in the low tail of the wage distribution in Italy; and a slight advantage for those in the upper tail in Britain;

- regional differences are significant only in Italy (as before);

- again, last but not least, education is no longer significant in Germany. Nor is it in Britain.

In addition:

- no important differences emerge in the regression estimated after pooling all three countries together. The UK dummy is significantly positive (confirming all descriptive statistics), while there is no significant difference between Germany and Italy.

(B) dependent variable: Pr [LONG (t+3) / LONG (t), X]

1986-89 (Germany and Italy)

- as in model A, we find a strong impact of age (positive) and age square (negative) in both countries. Here too, the transition is more likely to occur as one approaches prime age and declines thereafter;

- gender reduces the likelihood of the transition in both countries;

- in the trades and construction sectors, the transition becomes more difficult in Italy. The service industries make it easier in Italy and less likely in Germany;

- blue collar jobs impact negatively (in Italy);

- workers at small firms are less likely to make the transition in Italy and Germany;

- no regional differences in Germany (only West Germany); very significant differences in Italy as in model A: the North-East leads the transition and the Islands trail behind;

- education (observable only in Germany) is not significant;

- low initial earnings reduce the probability of transition in Italy. In Germany the same result is seen where earnings are missing variables (detected by a dummy).

1991-94 (Italy, Germany and UK)

- as in model A, there is a strong impact of age (positive) and age square (negative) in all three countries, indicating that the transition occurs mainly as one approaches prime age;

- women are penalised in Italy and Germany, not in Britain;

- jobs in the service industries are more likely to induce long spells in Italy and Germany;

- blue collar jobs have a negative impact on the transition in Italy (not observable elsewhere);

- transitions are easier with jobs at larger firms (in Italy). Not significant elsewhere;

- the position in the wage distribution has the same impact on the transition in Italy and Britain, but not in Germany: a slight penalisation for workers placed in the low tail of the wage distribution and a slight advantage for those in the upper tail;

- regional differences are significant only in Italy;

- education positively affects the transition in Germany, but not in Britain.

In extreme synthesis, the strongest inference restricts to three points: i) the humped shape impact of age in all countries; ii) the remarkable regional differences in Italy versus the non-significance of territorial dimension in UK and Germany; iii) the gender differentials, present in Italy across all specifications.

4.2   What does the P-RATIO reveal?

Table 7 shows the estimated transition probabilities for one illustrative benchmark.

Recall the basic interpretation of the P-RATIO: if it is close to one, there is no stigma attached to short duration jobs; the smaller the P-RATIO, the higher the penalisation.
Tables 8a and b shows the P-RATIO calculated for different age-groups (same benchmark as above) in the three countries, plus West Germany (excluding the Eastern Laenders) after unification.

The main results are as follows:

- the P-RATIO is very close to one for British women; high, but not as close to one for British men. It is, instead, much smaller in Italy and Germany, especially post-unification;

- in 1986-89 the P-RATIO is larger for male than female workers both in Italy and Germany; in 1991-94 the reverse holds in Germany and Britain, with the differential nearly vanishing in Italy;

-    the P-RATIO is decreasing in age in Italy, for both men and women and in both sub-periods. It is decreasing in age in Germany post-unification (1991-94), whether or not workers of the Eastern Laenders are retained in the sample;

-    the age decreasing pattern is present also in the UK but only to a very slight degree;

-    the P-RATIO is humped-shaped in Germany pre-unification (1986-89), increasing through age 30 to 35 and decreasing from then onwards.

The conclusion of our test suggests that the PEH-2 holds in Italy, and marginally in the UK. It did not hold in Germany before unification in line with our priors, but it does after unification.

While in the period 1986-89 the penalisation attached to short duration jobs was smaller for male workers, whereas in the 1991-94 sub-period the situation is reversed. This is a reflection of relative improvement of employment prospects for women that is taking place in the Nineties.

It is only evident that the institutional setting (and upsetting) has a remarkable impact. Where labour market regulation is loose, as in Britain, the in-and-outs from 'short' jobs are slightly penalising, with age dependence showing only if we contrast the extreme age-groups (20-25 versus 45-50). It is neutral among women (the P-RATIO is close to one), again with a minor difference between the youngest and the oldest.

In Italy, where regulation is tighter, the PEH-2 appears to be fairly well grounded: 'short' jobs in the regular (official) economy are much less of a stigma for young workers on their way to better employment positions, as they appear for adult workers. 'Short' jobs provide forms of training-on-the-job for the young that firms appear to prize by hiring under long(er)-term contracts young workers who have held 'short' jobs in the past.[13] Gender differences are small.

In Germany the traditional 'port-of-entry' to good jobs is its deservedly famous apprentice system, credited with providing German industry with highly-skilled and fungible workforce. Training-on-the-job takes place mainly via internal labour markets, thus removing the need for the PEH-2 to operate efficiently. This pattern seems to be in line with our empirical observation in the 1986-89 period. But in the next 1991-94 sub-period, things change quite drastically: the PEH-2 seems to be at work also in Germany, even after exclusion of the Eastern Laenders. Has the apprentice system lost appeal after unification, or drastically reduced its effectiveness in the aftermath of the new, strongly segmented, labour market of unified Germany? For the time being we can do no better than emphasise the empirical turnabout that reunification may have concurred to set in.

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[13] There was some evidence in the seventies and early eighties that small firms in certain branches of manufacturing (metal-working and engineering) played an important role in providing training-on-the-job for young workers who would eventually move on to larger firms. See Becattini (1998).

Table 1
Comparisons between P[LONG / LONG] and P [LONG / SHORT]

	ITALY	UK	GERMANY
extent of regulation in L.M:	regulation: high	regulation: low	regulation: high
which jobs are observed ?	'REGULAR' jobs (covered by compulsory social security)	ALL JOBS	ALL JOBS
Relevant institutions	no dual apprentice system	no dual apprentice system	with dual apprentice system
Youth	> a substantial advantage being already on regular payroll, even for short periods	>= a modest advantage for those with 'long' L.M. experience	>> apprentice period is an absolute MUST
Adults	>> a major stigma for all workers in short (regular) jobs, skilled or unskilled	> some advantage for the skilled occupations. Little or none for the unskilled	> some advantage for the skilled occupations. Little or none for the unskilled
P-RATIO = =P[LONG|SS] / P[LONG|LONG]	P(young) > P(adults)	P(young) >= P(adults)	P(young) < P(adults)

Table 2
Percentages of short job spells on population by age and gender

		Female			Male			all
	year / age	15-30	30-45	>45	15-30	30-45	>45	all
ITALY	1986	21.15	6.81	6.90	27.67	8.26	6.16	12.8
GERMANY	1986	16.60	9.90	3.90	15.30	2.60	2.60	7.5
ITALY	1989	26.98	10.66	10.62	34.28	10.97	7.30	16.4
GERMANY	1989	12.20	5.60	3.70	17.90	2.00	1.50	6.7
UK	1991	29.4	16.4	8.0	24.4	12.7	9.3	15.6
ITALY	1991	18.6	8.2	7.1	25.6	9.8	6.7	14.5
GERMANY	1991	15.2	9.8	7.0	14.7	4.0	4.1	8.3
UK	1994	28.5	22.5	15.1	28.1	16.2	14.3	18.9
ITALY	1994	16.6	6.5	4.5	21.2	8.1	6.0	11.4
GERMANY	1994	26.1	12.9	6.1	21.4	5.8	3.7	10.8

Table 3

Wage distribution of workers on short employment spells and in the population, as percentage of the population mean of males 30-45 years. (1991)

	Population				Short			
	mean	q25	median	q75	mean	q25	median	q75
ITALY								
Female 15-30	0.64	0.54	0.62	0.71	0.65	0.51	0.60	0.70
Female 30-45	0.80	0.61	0.72	0.90	0.78	0.56	0.65	0.77
Female >45	0.81	0.62	0.72	0.89	0.69	0.52	0.66	0.77
Male 15-30	0.71	0.58	0.67	0.81	0.68	0.52	0.64	0.80
Male 30-45	**1.00**	0.72	0.87	1.11	0.85	0.64	0.78	0.91
Male >45	1.18	0.76	0.92	1.22	0.90	0.67	0.83	0.98
GERMANY								
Female 15-30	0.55	0.36	0.53	0.66	0.29	0.15	0.24	0.35
Female 30-45	0.59	0.36	0.56	0.73	0.46	0.27	0.46	0.63
Female >45	0.59	0.34	0.51	0.73	0.12	0.08	0.17	0.28
Male 15-30	0.69	0.56	0.71	0.85	0.46	0.19	0.35	0.56
Male 30-45	**1.00**	0.77	0.92	1.16	0.73	0.47	0.73	0.85
Male >45	1.11	0.77	0.92	1.21	0.71	0.65	0.73	0.86
UK								
Female 15-30	0.46	0.28	0.41	0.60	0.41	0.17	0.37	0.59
Female 30-45	0.46	0.19	0.36	0.64	0.41	0.15	0.33	0.62
Female >45	0.40	0.16	0.32	0.53	0.48	0.21	0.39	0.63
Male 15-30	0.63	0.41	0.58	0.80	0.56	0.30	0.50	0.71
Male 30-45	**1.00**	0.65	0.88	1.18	0.99	0.65	0.87	1.18
Male >45	0.88	0.59	0.78	1.08	0.88	0.51	0.73	1.05

Table 4
Destination at year (t+3) of workers in short and long employment spells at year (t)

Country, Period	From Short to			From Long to		
	Long	Short	Out	Long	Short	Out
Germany 1986-89	0.42	0.12	0.46	0.69	0.02	0.29
Italy 1986-89	0.37	0.15	0.48	0.78	0.03	0.19
Germany 1991-94	0.32	0.20	0.48	0.69	0.06	0.25
Italy 1991-94	0.39	0.11	0.50	0.79	0.02	0.18
UK 1991-94	0.54	0.21	0.25	0.61	0.13	0.26

Table 5
Freq. (out (t+3) | state (t), age, gender)

a) 1986-1989

	Italy		Germany	
	P(out|long)	P(out|short)	P(out|long)	P(out|short)
female				
age<30	0.21	0.48	0.30	0.52
age30-45	0.16	0.62	0.23	0.42
age>45	0.36	0.75	0.30	0.59
male				
age<30	0.19	0.44	0.18	0.37
age30-45	0.11	0.45	0.15	0.31
age>45	0.30	0.61	0.31	0.38

b) 1991-1994

	Italy		Germany		UK	
	P(out|long)	P(out|short)	P(out|long)	P(out|short)	P(out|long)	P(out|short)
female						
age<30	0.18	0.47	0.29	0.49	0.19	0.28
age30-45	0.14	0.57	0.20	0.41	0.13	0.17
age>45	0.35	0.72	0.32	0.54	0.18	0.25
male						
age<30	0.16	0.47	0.19	0.42	0.09	0.22
age30-45	0.10	0.48	0.16	0.46	0.05	0.15
age>45	0.33	0.65	0.33	0.73	0.21	0.32

Table 6
Freq. (short (t+3)| state(t), age, gender)

a) 1986-1989

	Italy		Germany	
	P(short|long)	P(short|short)	P(short|long)	P(short|short)
female				
age<30	3.26	12.46	3.04	8.4
age30-45	1.64	9.76	2.05	12.04
age>45	1.39	8.61	1.32	0.20
male				
age<30	5.05	15.66	2.63	19.0
age30-45	2.06	19.39	0.84	8.69
age>45	1.45	14.27	0.42	11.29
ALL	**2.64**	**15.07**	**1.64**	**12.13**

b) 1991-1994

	Italy		Germany		UK	
	P(ss|long)	P(ss|short)	P(ss|long)	P(ss|short)	P(ss|long)	P(ss|short)
female						
age<30	3.05	9.47	11.39	17.06	20.11	21.62
age30-45	1.55	9.62	7.0	20.08	14.91	23.56
age>45	1.09	4.91	3.5	12.52	8.22	14.29
male						
age<30	4.16	12.34	8.79	26.74	19.04	24.08
age30-45	2.0	13.03	4.58	20.39	12.77	18.0
age>45	1.48	8.76	3.61	14.16	11.15	13.04
ALL	**2.46**	**11.24**	**5.98**	**19.72**	**13.53**	**20.82**

Table 7
Estimated transition probabilities

	P(long|long)	P(long|short)
Italy 1986-89	0.91	0.53
Germany 1986-89	0.84	0.68
Italy 1991-94	0.92	0.53
Germany 1991-94	0.80	0.37
UK 1991-94	0.66	0.50

Benchmarks:

Italy: 30-35 years old, male, white collar, earning daily wage in the 2nd quartile of the distribution, employed in manufacturing firm, with 20-200 employees, location: centre.
Germany: 30-35 years old, male, with 11 years of schooling, earning monthly wage in the 2nd quartile of the distribution, employed in manufacturing firm, with 20-200 employees, location west Germany.
Britain: 30-35 years old, male, with 11 years of schooling, earning weekly wage in the 2nd quartile of the distribution, employed in manufacturing firm, with 20-200 employees, location Centre.

Table 8
P-ratio by age classes

a) 1986-1989

	Italy 1986		Germany 1986	
	man	woman	man	woman
age20-25	0.64	0.58	0.71	0.55
age25-30	0.61	0.54	0.78	0.63
age30-35	0.59	0.52	0.81	0.66
age35-40	0.56	0.49	0.80	0.65
age40-45	0.52	0.45	0.75	0.60
age45-50	0.49	0.42	0.66	0.49

b) 1991-1994

	Italy 1991		Germany 1991		Germany 1991 WEST only		UK 1991	
	man	woman	man	woman	man	woman	man	woman
age20-25	0.62	0.60	0.51	0.57	0.35	0.48	0.83	0.99
age25-30	0.60	0.57	0.49	0.54	0.34	0.45	0.79	0.94
age30-35	0.57	0.55	0.47	0.51	0.32	0.42	0.76	0.91
age35-40	0.55	0.52	0.44	0.47	0.29	0.38	0.75	0.90
age40-45	0.52	0.50	0.39	0.42	0.24	0.33	0.76	0.91
age45-50	0.50	0.48	0.33	0.36	0.19	0.27	0.78	0.92

Appendix

Table A: Logit Pr (long$_{t+3}$| short$_t$) by country 1986-89

	GER. 1986-89			IT 1986-89		
	Coeff.	s.e.		Coeff.	s.e.	
INTERCPT	-1.209	1.767		-0.499	0.242	*
WOMAN	-0.587	0.304		-0.309	0.050	**
AGE	0.240	0.098	*	0.056	0.014	**
AGE_Q	-0.360	0.140	*	-0.113	0.019	**
CONSTR	-1.677	0.810	*	-0.071	0.061	
COMM	-2.225	0.893	*	-0.476	0.053	**
SERV	13.946	704.400		0.021	0.084	
CICM	-1.209	0.865		-	-	
SCHOOL	-0.185	0.067	**	-	-	
OCCBLUE	-	-		-0.320	0.062	**
OCCAPPR	-	-		-0.245	0.092	**
SIZE1	1.719	0.684	*	-0.047	0.055	
SIZE3	0.600	1.010		-0.141	0.088	
SIZEM	1.202	0.843		-	-	
WNQ1	-0.569	0.456		-0.059	0.058	
WNQ3	0.016	0.660		0.107	0.066	
WNQ4	0.050	0.810		-0.018	0.080	
WAGE0	-0.674	0.448		-	-	
NORTH	0.116	0.413				
SOUTH	0.450	0.561				
NORTH-W				0.384	0.063	**
NORTH-E	-	-		0.485	0.063	**
SOUTH				-0.562	0.069	**
ISLAND	-	-		-0.633	0.083	**
N. Obs						
Y=1	112			4116		
Y=0	140			6473		
-2 LOG L	346.23			14150.41		
Concordant	69.7%			65.1%		
Discordant	29.9%			34.4%		
Somers'D	0.398			0.307		
Gamma	0.399			0.309		
Tau-a	0.197			0.146		
c	0.699			0.654		

** significant at 1%

* significant at 5%

Table B: Logit Pr (long$_{t+3}$ | short$_t$) by country 1991-94

	GER 1991-94			ITA 1991-94			UK 1991-94		
	Coeff.	s.e.		Coeff.	s.e.		Coeff.	s.e.	
INTERCPT	-2.498	0.931	**	-0.369	0.220		0.292	0.848	
WOMAN	0.031	0.156		-0.148	0.046	**	0.493	0.204	*
AGE	0.142	0.044	**	0.044	0.013	**	-0.017	0.050	
AGE_Q	-0.227	0.060	**	-0.092	0.018	**	0.033	0.068	
CONSTR	-0.210	0.388		-0.285	0.053	**	-0.849	0.429	
COMM	0.248	0.255		-0.292	0.049	**	-0.214	0.238	
SERV	-0.335	0.513		-0.094	0.073		-0.033	0.234	
CICM	-0.179	0.317							
SCHOOL	-0.021	0.023					-0.008	0.029	
OCCBLUE				-0.353	0.055	**			
OCCAPPR				-0.218	0.085	*			
SIZE1	0.313	0.347		-0.086	0.045		-0.381	0.211	
SIZE3	0.036	0.205		0.167	0.071	*	-0.003	0.241	
SIZEM	-0.012	0.349							
WNQ1	0.249	0.447		-0.183	0.050	**	0.258	0.260	
WNQ3	0.392	0.684		0.008	0.059		0.756	0.294	*
WNQ4	0.509	0.616		-0.107	0.071		0.419	0.316	
WAGE0	-0.055	0.441					-0.026	0.299	
NORTH	0.431	0.357							
SOUTH	0.007	0.259							
EAST	-0.314	0.708							
NORTH-W				0.384	0.056	**			
NORTH-E				0.519	0.057	**			
SOUTH				-0.213	0.065	**			
ISLANDS				-0.609	0.077	**			
SOUTH-E							-0.230	0.211	
WALES							-0.656	0.450	
SCOTL							-0.038	0.320	
N. Obs									
Y=1	296			5058			295		
Y=0	572			7546			250		
-2 LOG L	1114.001			16978.488			751.811		
Concordant	60.0%			63.9%			63.4%		
Discordant	39.3%			35.6%			36.0%		
Somers'D	0.207			0.284			0.274		
Gamma	0.209			0.285			0.276		
Tau-a	0.093			0.136			0.136		
c	0.604			0.642			0.637		

** significant at 1%

* significant at 5%

Table C: Logit Pr ($long_{t+3}$ | $short_t$) pool of countries

	Coeff.	s.e.		Coeff.	s.e.	
INTERCPT	-0.442	0.331		-0.806	0.338	*
WOMAN	-0.065	0.042		-0.099	0.043	*
AGE	0.049	0.011	**	0.050	0.012	**
AGE_Q	-0.097	0.016	**	-0.097	0.016	**
CONSTR	-0.425	0.051	**	-0.282	0.052	**
COMM	-0.239	0.046	**	-0.270	0.047	**
SERV	-0.062	0.067		-0.074	0.068	
SCHOOL	-0.015	0.014		-0.016	0.017	
OCCBLUE	-0.188	0.269		-0.063	0.272	
OCCAPPR	0.080	0.278		0.098	0.280	
OCCWHITE	0.187	0.271		0.280	0.274	
SIZE1	-0.127	0.043	**	-0.102	0.044	*
SIZE3	0.174	0.063	**	0.135	0.064	*
SIZEM	-0.246	0.166		-0.272	0.168	
WNQ1	-0.215	0.048	**	-0.156	0.048	**
WNQ3	-0.048	0.056		0.043	0.057	
WNQ4	-0.119	0.067		-0.078	0.068	
WAGE0	-0.463	0.170	**	-0.401	0.171	*
UK	0.608	0.320	*			
GER	-0.080	0.321				
I_NOR				0.388	0.056	**
I_SOU				-0.211	0.065	**
I_NE				0.518	0.057	**
I_IS				-0.607	0.077	**
UK_SOU				0.911	0.365	*
WALES				0.356	0.533	
SCOTL				1.047	0.437	*
UK_CEN				0.955	0.342	**
D_SOU				0.218	0.327	
D_EAST				-0.251	0.761	
D_WEST				0.182	0.396	
D_NOR				0.682	0.463	
N. Obs						
Y=1		5649			5649	
Y=0		8368			8368	
-2 LOG L	18900.901			18900.901		
Concordant	59.7%			63.8%		
Discordant	39.5%			35.7%		
Somers'D	0.280			0.203		
Gamma	0.282			0.204		
Tau-a	0.135			0.098		
c	0.640			0.601		

** significant at 1%

• significant at 5%

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