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Short Employment Spells in Italy, Germany and the UK: Testing the "Port-of-Entry" Hypothesis

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Abstract

This paper looks at short employment spells in three European countries: the UK, 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; i.e. 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: cross-country comparisons help to highlight the effect of different labour market institutions on mobility and on the soundness of the "port-of-entry" hypothesis.

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1. Motivation

It seems that nowadays, in the late Nineties, the chance for a young worker of moving into a permanent job after a period spent in one or many 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 temporary job or queuing among the unemployed made little difference for youth aiming at a permanent job. This increasingly held belief - that a "bad job" at the beginning of one's career is *the "port-of-entry"* to stable employment and to upward mobility - has relevant policy implications and needs to be carefully tested.

The increasing popularity of the port-of-entry 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. This implies that long-term employed are supposed to be the most protected ones, unemployed the least ones, and people alternating temporary jobs and unemployment spells to be somewhere in between.

The OECD (Employment Outlook, 1998, Chapter 3) addresses this point focusing on the first employment spell after completing education, and concludes its statistical analysis writing that "*... 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]

Furthermore, a cursory look at aggregate indicators of youth unemployment and employment inflows is very supportive of the port-of-entry hypothesis, aside and in addition to the authority of those who have discussed it in recent times[2].

On the other hand, a micro-based test of this hypothesis is needed to disentangle the effects of individual self-selection from the effect of labour market segmentation ("stigma") to assess the effectiveness of public policies aimed at fighting unemployment.

In particular, the focus of this paper is the downside of temporary jobs on which the OECD draws attention, namely the transition from short employment spells to "better" jobs. The role of the German apprenticeship system will also emerge in this study. We propose a simple

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

empirical strategy to assess if the port-of-entry hypothesis is at work, exploiting variation across countries and age cohorts.

The paper is organised as follows. Section 2 sketches the theoretical model that supports our empirical strategy. Section 3 discusses the empirical strategy in details. Section 4 presents the three micro-dataset we use. In section 5 we propose some descriptive statistics. Section 6 presents and discusses the empirical results of our estimates. Section 7 concludes. The Appendix includes a detailed presentation of the data-sets and a discussion of comparability issues.

2. The Model

In this section we label jobs as "good" or "bad" in a very loose way. In the section that presents the empirical strategy, we will try to clarify these concepts and to link them to measurable elements.

We can sketch the implications of the port of entry hypothesis as:

$$\Pr(good_t | bad_{t-s}) > \Pr(good_t | unemployed_{t-s}) \quad (1)$$

From the job search literature we know that the probability that a worker gets a "good" match with a firm is an increasing function of the time he/she has spent on the labour market. If job offers arrive at a constant rate, the longer the elapsed time the higher the probability of getting a "good" offer. So we can write

$$\Pr(good) = f(e); \quad f'(e) > 0 \quad (2)$$

where *e* is experience.

This is not enough to generate eq. (1), because it does not discriminate between on the job search and search from unemployment. However, if the "quality" of job offers is proportional to the worker's human capital and the latter depreciates during unemployment spells (for example Booth et al. 1999 assume the same), then in eq.2 *e* represents *actual* experience and it implies eq. (1).

Furthermore, we want to allow for institutions influencing the labour market. In particular we want to mimic the effect of policies aiming at easing young workers into employment. The effect of such kind of policies is to penalise adult workers with respect to younger ones. Hence eq. (2) may become

$$\Pr(good) = f(e,a); \quad f'(e) > 0; \quad f'(a) < 0; \quad (3)$$

where *a* is age. I.e., the younger the worker is, the higher the probability of getting a "good" job; this is the effect of policies targeted to youngsters. Without such policies, age would be redundant in eq. (3); in fact the amount of human capital that the worker has accumulated over time would be the only thing that matters. This implication might be tested. Notice also that if potential experience mattered instead of actual experience, then $f'(a) > 0$ would be the empirical implication. This might be tested as well.

Of course in eq. (3) age may catch just the fact that, conditional on actual experience, the younger the person is, the shorter his/her past unemployment spells were. Hence we need to control for the difference between experience accumulated in a long-term relationship or in several short employment spells alternated to unemployment spells. Furthermore, we expect

persistence in “good” or “bad” positions on the labour market, possibly due to segmentation. Hence we expect:

$$\Pr\left(good_t \middle| permanent_{t-s}\right) > \Pr\left(good_t \middle| temporary_{t-s}\right) \tag{4}$$

To encompass eq. (4), i.e. that it is better to have a “long” job than several “short” ones, we may specify *f(e,a)* as sub-additive in *e*; for example

$$f\left(e_1^2 + e_2^2 \middle| a\right) < f\left(\left(e_1 + e_2\right)^2 \middle| a\right) = f\left(\left(e_1 + e_2 + \beta e_1 e_2\right)^2 \middle| a\right) \tag{5}$$

where e_n are employment spells. This might obviously be tested by $H_0 : \beta = 2$.

If eq. (4) holds conditional on actual experience, i.e. for a given level of general human capital accumulated, then this persistence might be due to individual ability (selection) or to statistical discrimination against “movers” (“stigma”)

To identify the effect of age in this model we need either to follow workers in the same country over time, say before and after the introduction of policies targeted to young workers, or to compare different countries where these policies are/are not attempted.

Unfortunately micro data sets are available only in a few countries and for relatively limited periods of time. Furthermore, they generate serious comparability issues and they limit the scope of the empirical analysis that can be performed and the set of hypotheses that may actually be tested (for example actual experience is not available in most datasets).

Because of these data limitations, in this work we propose to deal with a corollary of the port-of-entry hypothesis.

We focus on the transition from temporary to permanent jobs. Available data do not allow us to deal with the wider issue of comparing transition from temporary to permanent jobs and transition from unemployment to permanent jobs. However, we regard the analysis of the downside of temporary jobs to which the OECD draws attention, i.e. the of risk of being trapped into a series of temporary jobs and unemployment spells, as crucial to assess the effectiveness of any policy aimed at promoting temporary jobs for youngsters.

Our empirical analysis will be based on the implications of the following statement.

Statement 1:

If the port-of-entry hypothesis is at work, a relatively high proportion of young people who start their working career in 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. None of this is true in a competitive labour market.

We would expect adults’ chance of moving into a permanent job after a prolonged spell of one or more temporary jobs to be substantially smaller compared to their younger counterparts. This because in a segmented labour market, adult (maybe male) workers are “insiders”, almost by definition. They hold the most protected set of jobs (in large manufacturing unionised firms for example) and usually do not move voluntarily (see Contini et al. (1996) for statistics on mobility). People that are supposed to be “insiders” due to their observable characteristics, and are on a temporary job instead, are more likely to be at a disadvantage on the labour market. They are more likely to carry a stigma because they have dropped out of the “insider” set, or because they have never joined it. On top of this, there

might be the effect of policies that try to help young workers to get a job, making adults relatively more expensive to hire.

As we said, none of this is true in a competitive labour market. Adult movers do not carry any stigma because there are no "insiders" and "outsiders", and there are no policies targeting youngsters; hence there should be no variation in workers' performance on the labour market by age.

This idea may be operationalised contrasting two conditional probabilities across different age groups (youth versus adults)[3]:

$$\frac{\Pr\left(good_t \middle| temporary_{t-s}, adult\right)}{\Pr\left(good_t \middle| permanent_{t-s}, adult\right)} vs \frac{\Pr\left(good_t \middle| temporary_{t-s}, young\right)}{\Pr\left(good_t \middle| permanent_{t-s}, young\right)} \quad (6)$$

As we said we expect these ratios to be bounded at 1, because of persistence. If statement (1) holds then in a segmented market the second ratio should be closer to 1 than the first, i.e. young workers should carry less stigma due to the fact that they are movers. In a competitive market we should not estimate any significant difference between the two ratios.

An exception might be represented by countries where the transition of youth into employment is governed via a highly institutionalised mechanism, as the apprentice system[4]. There we should expect young drop outs to carry a stigma as well.

3. Empirical strategy

3.2. Foreword

In the previous section we used some slippery concepts, like "good / bad" jobs, stigma, ability, that need to be discussed.

First, we cannot observe "good" jobs as auspicious. Our empirical device is to judge the quality of a job "ex post".

Statement 2:

Conditional on individual ability, in a segmented labour market: by definition, a good job is not easily dominated by other offers; furthermore it implies some degree of security, and hence it will last. On the contrary, a bad job has a low degree of job security and it is easily dominated by other offers, hence it is less likely to last. None of this is true in a competitive labour market.

In fact "short" jobs are likely to be the effect of job shopping activity for young workers, the effect of marginality on the labour market for adults. They are likely to imply little protection, little money. On the contrary, "good" jobs bring higher pay, higher protection, higher expected wage growth. Again, none of this is true in a more competitive labour market.

[3] A more extensive conditioning event could be a sequence of "short" jobs till (t-T).

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

Hence we use observed *completed* (not elapsed) duration of employment spells to separate "good" and "bad" jobs[5]. In what follows, therefore, we shall replace "good" with "long-duration job", and temporary / bad with "short jobs".

Furthermore, we have been using "bad" and "temporary" to indicate the same kind of job. Of course this is not strictly correct. However, it is close to reality in a segmented market. In addition, they both will be labelled "short" in the empirical analysis, because our aim is to point at the precarious condition the worker is in, regardless of the institutional nature of the agreement (fixed term or open-ended contract).

It is clear that no exogenous threshold that we can pick up to separate "short" and "long" employment spells is going to be fully satisfactory. On the other hand it is not the object of this paper to estimate a model on employment duration. Hence we choose the most suitable threshold given the nature of the data we are going to use. "Short employment spells" are defined as those that lasted less than 12 months.

Second, we need counterfactuals to define "stigma". The lack of accepted benchmarks makes it difficult to reach strong conclusions in regard to the "efficiency" of labour markets. Cross-country comparisons may help to highlight the effect of different labour market institutions on mobility and on the soundness of the port-of-entry hypothesis, even if suitable micro data are available only in a few countries, and no data were available before the Eighties. We study three countries with markedly different institutions.

Italy is our main point of interest, because of the ongoing debate about youth unemployment and policies to tackle it. We have evidence of a segmented labour market (see Contini et al 1996), and we expect a strong stigma on adult movers. We expect stigma to be large among adults because short employment spells are usually confined to certain sectors (construction, trades, seasonal activities including manufacturing), are frequent in particular regions (South), and among less skilled workers. On the other hand, long duration jobs are frequent among prime-age and mature workers[6]. Short employment spells 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 United Kingdom there is the most flexible labour market in Europe. We consider it as our benchmark case, in which none of what we expect to be true in a segmented labour market should hold. In particular we expect no stigma on anybody in the UK. Of course this is not strictly true; Booth et al. (1999) find evidence of persistence in unemployment status (those previously unemployed are more likely to become unemployed again). On the other hand, we will focus on *employed* enjoying short versus long employment spells; even if the two things are obviously related it does not imply persistence in holding "short" jobs. Hence, in the UK,

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[5] 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.

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

where the extent of labour market regulation is low and flexibility high, we expect little persistence among both youth and adults employees on short employment spells.

Finally, Germany is a regulated labour market, there is a famous and allegedly efficient apprentice system; hence we expect to find evidence of stigma also on young workers (i.e. those that do not complete the apprentice training)[7]. In fact 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.

To summarise, we expect the difference between $\frac{\Pr\left(good_t \middle| temporary_{t-s}, adult\right)}{\Pr\left(good_t \middle| permanent_{t-s}, adult\right)}$ and $\frac{\Pr\left(good_t \middle| temporary_{t-s}, young\right)}{\Pr\left(good_t \middle| permanent_{t-s}, young\right)}$ to be particularly large in Germany, among youth, and in Italy, among adults.

Table 1 here

Third, we need to disentangle the effect of self-selection, i.e. of unobserved individual ability, from the effect of what we call stigma.

To deal properly with the issue of self-selection versus stigma, we should allow for individual fixed effects. This is not a straightforward thing to do in this context. Ideally, to control for unobservable individual characteristics, we should condition on initial conditions (see Meghir and Whitehouse (1997) for example). However, the best we can do here, given data constraints that do not allow us to use proper instruments, is to control for the status in which we first observe the worker (i.e. on a "long" or "short" employment spell). We acknowledge that this is not perfect, because we control for something that is the outcome of an ongoing process, hence it might be endogenous (see Both and al. 1999 for a more complex econometric approach).

3.3. Estimation method

According to statement 1, young people in short-lived jobs should stand a better chance of finding - some time thereafter - a "good job" compared to their older colleagues. We investigate the issue in two different ways.

First, we select two sub-samples: workers on a short employment spell in t, workers on a long employment spell in t. For each country we estimate a binary logit model for two transition

[7] Mertens (1999) finds some evidence consistent with this hypothesis.

probabilities, aimed at measuring and controlling the factors behind the transition from the initial state in t to "long" in t+3.

$$\Pr\left(long_{t+3} \middle| short_t, X\right)$$
$$\Pr\left(long_{t+3} \middle| long_t, X\right)$$

Estimated probabilities for various age-groups, sex, period and industry are generated, holding everything else constant. The probability ratios

$$\frac{\Pr\left(long_{t+3} \middle| short_t, adult\right)}{\Pr\left(long_{t+3} \middle| long_t, adult\right)} \text{ and } \frac{\Pr\left(long_{t+3} \middle| short_t, young\right)}{\Pr\left(long_{t+3} \middle| long_t, young\right)}$$

are computed. 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)

Second, we estimate one multinomial logit for each country and time period, with all workers sampled at time t. Three outcomes are possible, labelled "long", "short", "out".

"Short" is the baseline category, and we focus on the estimated coefficients of the outcome "long", i.e. on the relative probability of getting a "long" employment spell at time t+3 with respect to a "short" one, controlling for the effect of the third outcome ("out" of the database, to unemployment, self-employment, out of the labour force, or to the public administration). In fact if "short" is the baseline category, then $\ln\left(\frac{P_{iL}}{P_{iS}}\right) = \beta_L^{'} x_i$

The explanatory variables include a quadratic in age and a dummy for the initial state ("short" or "long" employment spell), also interacted with the quadratic in age[8]. If there is persistence, we should estimate a negative coefficient of the dummy "short at t". In fact it would imply $\frac{P_{iL|S}}{P_{iS|S}} < 1$, i.e. the probability to move to a "long" job in t+3 is lower than the probability to get another "short" job in t+3 if the worker holds a "short" job in t, given that the worker has not gone out of the sample in t+3. If statement 1 holds, we should estimate a negative coefficient of "short at t" interacted with age. That would imply $\ln\left(\frac{P_{iL}}{P_{iS}}\right) < \beta_L^{'} age_i * short < 0$, i.e. the older the worker the more difficult to move from a "short" to a "long" job in three years time.

Finally, we add controls for gender, industry, skill level (Italy), education (Germany and UK), firm size, wage quartile, geographical area, all measured at time t. We will briefly discuss also their effect on the estimated probabilities. We are confident that all the right hand-side variables are exogenous, with the possible exception of the industry and wage quartile in

[8] We are grateful to an anonymous referee for this point.

which each individual is found in the initial year. No test or correction is made for this, because of the lack of proper instruments.

4. The 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 we describe the dataset; in the appendix 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 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)[9] 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 spells file. That is, for each variable of interest, it is represented its value for each month from January 1900 (month 1) to December 1996 (month 1164).[10] Using such 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.

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.[11]

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

[10] 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.

[11] 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

5. Descriptive Analysis

5.1. 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 again 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 period.

In Italy 21% of young women and 27% of young men, in Britain 29% of young women and 26% of young 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 relatively "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 on short employment spells earn lower mean wages than the population and that their wage distribution is shifted to the left.

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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.

Focusing on median wages (normalised by the population mean of males 30-45) we notice that among younger workers the penalisation in terms of wage due to a short employment spell 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, along with 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.

5.2. 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 or long 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 the set of employees of private firms.

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".[12] In this way we establish a meaningful comparability with Italy, whose database includes only dependent workers. It has been pointed out elsewhere[13] 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

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

[13] 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.

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.

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” lower in Italy than Germany. Mobility (in all directions) is higher in Britain.

Tables 5a and b display the frequencies of “out” movements, given sex, age and initial state. The following regularities deserve to be mentioned. Not unexpectedly, P (out | long) is much lower 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 (i.e. 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.

6. Results: Testing the port of entry hypothesis

We present with some details the results of the binary logit estimation. Results of the multinomial logit estimation are still very preliminary and will be briefly presented at the end of this section.

6.1. Binary logit estimation

The estimated models are simple reduced forms of binary logit specifications: in the first model all sub-sample individuals are in short employment spells at time (t); in the second one all are in long employment spells at time (t). We estimate the probability to be either in a long employment spell in t+3, or not (i.e. “short” and “out” are considered together). Both models include the following regressors: gender, age and age square (t), industry (t), skill level (t) (only Italy), education (t) (Germany and UK only), 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.

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 is a summary of significant results (details on the regressions are available in the appendix).

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; they are not significant in UK. Trades and construction reduce the likelihood of the transition in Italy, no impact elsewhere. 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. Education is no longer significant in Germany, nor is it in Britain.

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.

Dependent variable: Pr [LONG (t+3) | LONG (t), X]

1986-89 (Germany and Italy)

As above, 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 above: 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 above, 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. 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.

6.2. 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 show the p-ratio computed 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.

The p-ratio is decreasing in age in Italy, for both men and women and in both sub-periods.

The p-ratio is humped-shaped in Germany pre-unification (1986-89), increasing through age 30-35 and decreasing from then onwards. 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 conclusion of our test suggests that statement (1) 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.

We can compare our main results with Booth et al 1999 on the UK and Mertens 1999 on Germany. The overall picture seems well consistent.

The first study applies sophisticate econometric techniques to disentangle the effect of unobserved heterogeneity and of state dependence in unemployment persistence in the UK over the period 1991-1995. They find evidence of stigma (scarring, in their terminology) carried by those previously unemployed, both young and adult workers. They get different patterns or no pattern at all by age in different selections of the dataset used in the empirical analysis. Hence there is some evidence that the UK market is not perfectly competitive; however, no clear pattern by age emerges in their study as well.

Mertens 1999 analyses the pattern of job stability in Germany over time. He finds some evidence of segmentation of the German labour market (insiders and outsiders in his terminology): outsiders face higher risk of job termination compared to insiders. Also Mertens defines short and long employment spells (more or less than 12 months), and he finds that the probability of holding a "short job" has increased after German unification. Another piece of evidence of a changed labour market after unification.

6.3. Multinomial logit estimation

Extremely preliminary results on the period 1991-1994 are presented in the appendix. At this stage we may only conclude from this experiment that there is evidence of the port of entry being at work only in Italy. Most of the other coefficients are not significant, either in Italy or in the other two countries.

This preliminary result is consistent with the binary logit estimation results about Italy and the UK, not about Germany.

7. Conclusions

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 port of entry hypothesis 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.[14] 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 "port of entry" to operate efficiently. This pattern seems to be in line with our

[14] 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).

empirical observation in the 1986-89 period. But in the next 1991-94 sub-period, things change quite drastically: the "port of entry" 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.

8. References

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9. Tables

Table 1: Institutions and P-ratios in Italy, Germany and UK

	ITALY	UK	GERMANY
Extent of regulation in L.M	High	Low	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(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)

	From Short to			From Long to		
Country, Period	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

10. Appendix

10.2. Comparability

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

10.2.1. Databases versus Surveys

It is important to recall the differences in the data-bases: 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.

10.2.2. The Business Cycle

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.

10.1. Descriptive statistics and details about the dataset used

To be done.

10.2. Detailed results of the Logit estimates

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%

10.3. Results of the Multinomial Logit estimates

ITALY

```
Iteration 0:  Log Likelihood =-58486.202
Iteration 1:  Log Likelihood =-50844.005
Iteration 2:  Log Likelihood = -49672.49
Iteration 3:  Log Likelihood =-49630.002
Iteration 4:  Log Likelihood =-49629.686
Iteration 5:  Log Likelihood =-49629.686

Multinomial regression                                  Number of obs =  88779
                                                        chi2(40)      =17713.03
                                                        Prob > chi2   = 0.0000
Log Likelihood = -49629.686                             Pseudo R2     = 0.1514

------------------------------------------------------------------------------
  status |      Coef.   Std. Err.       z     P>|z|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
2        |
   woman |    .038146   .0547447      0.697   0.486      -.0691518    .1454437
     age |   .1294505    .018577      6.968   0.000       .0930403    .1658607
   age_q |  -.1528126   .0252442     -6.053   0.000      -.2022904   -.1033348
   short |   .5074974   .3930203      1.291   0.197      -.2628082    1.277803
   agexs |  -.1298642   .0248194     -5.232   0.000      -.1785094   -.0812191
  ageqxs |   .1484939   .0357883      4.149   0.000       .0783501    .2186377
  constr |  -1.026869    .057558    -17.841   0.000      -1.139681   -.9140578
    comm |  -.4479846   .0571636     -7.837   0.000      -.5600232    -.335946
    serv |  -.0084099   .0863872     -0.097   0.922      -.1777257    .1609058
 occblue |   -.664487   .0679046     -9.786   0.000      -.7975776   -.5313963
 occappr |  -.6374222   .1015638     -6.276   0.000      -.8364835   -.4383609
   size1 |  -.1328593   .0506005     -2.626   0.009      -.2320344   -.0336841
   size3 |    .431243   .0777409      5.547   0.000       .2788736    .5836123
    wnq1 |  -.2005275   .0569734     -3.520   0.000      -.3121933   -.0888617
    wnq3 |   .0488201   .0624571      0.782   0.434      -.0735935    .1712337
    wnq4 |   .1179673    .080235      1.470   0.141      -.0392905    .2752251
   i_nor |   .0053882   .0655478      0.082   0.934      -.1230832    .1338596
    i_ne |  -.1383668   .0661551     -2.092   0.036      -.2680284   -.0087052
   i_sou |  -.4411503   .0707025     -6.240   0.000      -.5797246   -.3025759
    i_is |  -.6680144   .0827226     -8.075   0.000      -.8301478   -.5058811
   _cons |   2.250249   .3321301      6.775   0.000       1.599286    2.901212
---------+--------------------------------------------------------------------
3        |
   woman |   .3100959   .0560076      5.537   0.000        .200323    .4198689
     age |  -.1588434   .0189909     -8.364   0.000      -.1960649   -.1216218
   age_q |   .2806922    .025705     10.920   0.000       .2303113     .331073
   short |  -1.429564   .3924117     -3.643   0.000      -2.198677   -.6604511
   agexs |   .0960024   .0245878      3.904   0.000       .0478112    .1441937
  ageqxs |  -.1639538   .0351089     -4.670   0.000       -.232766   -.0951417
  constr |  -.6959604   .0590589    -11.784   0.000      -.8117138    -.580207
    comm |  -.3160303   .0585997     -5.393   0.000      -.4308836   -.2011769
    serv |  -.3644725   .0889234     -4.099   0.000      -.5387592   -.1901858
 occblue |  -.5366778   .0694886     -7.723   0.000      -.6728729   -.4004827
 occappr |  -.9958129   .1042971     -9.548   0.000      -1.200232   -.7913943
   size1 |    .114884   .0519763      2.210   0.027       .0130124    .2167557
   size3 |   .2694489   .0798019      3.376   0.000       .1130401    .4258577
    wnq1 |   .1034546   .0583975      1.772   0.076      -.0110024    .2179117
    wnq3 |   .0060996   .0641265      0.095   0.924       -.119586    .1317852
    wnq4 |   .0775537   .0819907      0.946   0.344      -.0831451    .2382526
   i_nor |  -.0808432   .0670431     -1.206   0.228      -.2122454    .0505589
    i_ne |  -.4284605   .0680446     -6.297   0.000      -.5618255   -.2950955
   i_sou |  -.0880824   .0719518     -1.224   0.221      -.2291053    .0529405
    i_is |  -.0988042   .0831962     -1.188   0.235      -.2618657    .0642574
   _cons |   4.595698   .3404835     13.498   0.000       3.928363    5.263034
------------------------------------------------------------------------------
(Outcome status==1 is the comparison group)
```

GERMANY

```
Iteration 0:  Log Likelihood = -6878.821
Iteration 1:  Log Likelihood =-6351.9387
Iteration 2:  Log Likelihood =-6328.0044
Iteration 3:  Log Likelihood =-6327.7678
Iteration 4:  Log Likelihood =-6327.7677

Multinomial regression                                Number of obs =   8208
                                                      chi2(42)      =1102.11
                                                      Prob > chi2   = 0.0000
Log Likelihood = -6327.7677                           Pseudo R2     = 0.0801

------------------------------------------------------------------------------
      status |      Coef.   Std. Err.       z     P>|z|       [95% Conf. Interval]
-------------+----------------------------------------------------------------
2            |
       woman |  -.2454291   .0935327     -2.624   0.009      -.4287498   -.0621084
         age |   .1680162   .0309961      5.421   0.000       .1072649    .2287674
       age_q |  -.1823363   .0402717     -4.528   0.000      -.2612673   -.1034053
       short |   1.104967   1.092054      1.012   0.312      -1.035419    3.245353
       agexs |  -.0978204    .064089     -1.526   0.127      -.2234325    .0277917
      ageqxs |   .0771814   .0872634      0.884   0.376      -.0938516    .2482145
      constr |   .1243386   .2027507      0.613   0.540      -.2730455    .5217228
        comm |  -.0489001   .1368393     -0.357   0.721      -.3171001       .2193
        serv |   .4220108    .207042      2.038   0.042       .0162159    .8278056
        cicm |   .0133615   .1590536      0.084   0.933      -.2983779    .3251009
      school |   .0229442   .0136836      1.677   0.094      -.0038751    .0497635
       size1 |    .251117   .1864842      1.347   0.178      -.1143854    .6166194
       size3 |  -.0789841   .1009371     -0.783   0.434      -.2768172     .118849
       sizem |  -.5554585   .2026629     -2.741   0.006      -.9526706   -.1582465
        wnq1 |  -.3864966   .1704476     -2.268   0.023      -.7205678   -.0524255
        wnq3 |  -.0264337   .1940805     -0.136   0.892      -.4068245    .3539572
        wnq4 |   .2118941   .2029316      1.044   0.296      -.1858444    .6096327
       wage0 |  -.3024368   .1846492     -1.638   0.101      -.6643425    .0594689
       d_nor |  -.0188975   .1720938     -0.110   0.913      -.3561951    .3184001
       d_sou |  -.0941034   .1257903     -0.748   0.454       -.340648    .1524411
      d_east |  -.4094258   .3050503     -1.342   0.180      -1.007313    .1884618
       _cons |  -.9471661   .5904158     -1.604   0.109       -2.10436    .2100276
-------------+----------------------------------------------------------------
3            |
       woman |  -.0102088   .0986166     -0.104   0.918      -.2034938    .1830761
         age |  -.0927831   .0321906     -2.882   0.004      -.1558755   -.0296907
       age_q |   .1731439   .0415424      4.168   0.000       .0917224    .2545655
       short |   .3683203   1.031258      0.357   0.721      -1.652908    2.389548
       agexs |  -.0196511   .0597564     -0.329   0.742      -.1367715    .0974692
      ageqxs |   .0071158   .0797855      0.089   0.929      -.1492608    .1634925
      constr |  -.0174855   .2171864     -0.081   0.936      -.4431631    .4081921
        comm |  -.1377991   .1464464     -0.941   0.347      -.4248286    .1492305
        serv |   .1418894   .2214011      0.641   0.522      -.2920489    .5758276
        cicm |   .1381904    .167451      0.825   0.409      -.1900075    .4663884
      school |  -.0050047   .0144917     -0.345   0.730      -.0334079    .0233985
       size1 |   .2528118   .1970694      1.283   0.200      -.1334372    .6390607
       size3 |   -.062847   .1074808     -0.585   0.559      -.2735055    .1478114
       sizem |   -.322103   .2107043     -1.529   0.126      -.7350758    .0908698
        wnq1 |  -.3078064   .1821351     -1.690   0.091      -.6647847    .0491718
        wnq3 |  -.0962633   .2080526     -0.463   0.644      -.5040389    .3115124
        wnq4 |  -.0168276   .2162641     -0.078   0.938      -.4406975    .4070422
       wage0 |  -.2135881   .1961086     -1.089   0.276      -.5979539    .1707776
       d_nor |  -.2450355   .1844755     -1.328   0.184      -.6066008    .1165298
       d_sou |  -.2249257   .1335214     -1.685   0.092      -.4866228    .0367714
      d_east |  -.3577662   .3248968     -1.101   0.271      -.9945522    .2790199
       _cons |   2.525429   .6181698      4.085   0.000       1.313838     3.73702
------------------------------------------------------------------------------
(Outcome status==1 is the comparison group)
```

UK

```
Iteration 0:  Log Likelihood =-2891.5878
Iteration 1:  Log Likelihood =-2824.5647
Iteration 2:  Log Likelihood =-2823.5192
Iteration 3:  Log Likelihood =-2823.5188
Iteration 4:  Log Likelihood =-2823.5188

Multinomial regression                                Number of obs =   3203
                                                      chi2(38)      = 136.14
                                                      Prob > chi2   = 0.0000
Log Likelihood = -2823.5188                           Pseudo R2     = 0.0235

------------------------------------------------------------------------------
      status |      Coef.   Std. Err.       z     P>|z|       [95% Conf. Interval]
-------------+----------------------------------------------------------------
2            |
       woman |  -.0208517   .1198497     -0.174   0.862      -.2557527    .2140493
         age |   .0452053   .0313589      1.442   0.149       -.016257    .1066676
       age_q |  -.0285918   .0407068     -0.702   0.482      -.1083757    .0511921
       short |  -.2346903   1.098511     -0.214   0.831      -2.387733    1.918352
       agexs |  -.0086964   .0666235     -0.131   0.896       -.139276    .1218832
      ageqxs |   .0090601   .0929801      0.097   0.922      -.1731776    .1912978
      constr |  -.1963182   .2291061     -0.857   0.392      -.6453579    .2527215
        comm |   .0421772   .1373902      0.307   0.759      -.2271026     .311457
        serv |   .1444203   .1289343      1.120   0.263      -.1082862    .3971269
      school |  -.0109834   .0216453     -0.507   0.612      -.0534074    .0314406
       size1 |   .0192079   .1217863      0.158   0.875      -.2194888    .2579046
       size3 |   .0192826   .1246066      0.155   0.877      -.2249417     .263507
        wnq1 |   .2117896   .1604823      1.320   0.187      -.1027498    .5263291
        wnq3 |   .0337871    .153821      0.220   0.826      -.2676966    .3352707
        wnq4 |  -.2474701   .1629223     -1.519   0.129      -.5667919    .0718517
       wage0 |   .0879326   .1874327      0.469   0.639      -.2794287    .4552939
      uk_sou |  -.0748001   .1161559     -0.644   0.520      -.3024614    .1528612
       wales |  -.2849455    .222865     -1.279   0.201      -.7217529    .1518618
       scotl |  -.0164615     .17858     -0.092   0.927      -.3664718    .3335489
       _cons |   .3376659   .5927432      0.570   0.569      -.8240894    1.499421
-------------+----------------------------------------------------------------
3            |
       woman |  -.4176601   .1460189     -2.860   0.004      -.7038519   -.1314682
         age |   .0031816   .0373846      0.085   0.932      -.0700909    .0764541
       age_q |   .0238449   .0479907      0.497   0.619      -.0702151    .1179049
       short |  -.1803946    1.27187     -0.142   0.887      -2.673215    2.312425
       agexs |    .016599   .0765836      0.217   0.828      -.1335022    .1667002
      ageqxs |  -.0260045   .1059791     -0.245   0.806      -.2337197    .1817108
      constr |     .21065   .2556383      0.824   0.410      -.2903918    .7116918
        comm |   .0300916   .1653569      0.182   0.856       -.294002    .3541853
        serv |   .0021867   .1575523      0.014   0.989      -.3066102    .3109836
      school |  -.0066766   .0261637     -0.255   0.799      -.0579565    .0446033
       size1 |   .2156248   .1458575      1.478   0.139      -.0702507    .5015003
       size3 |   .0476288   .1523265      0.313   0.755      -.2509257    .3461834
        wnq1 |   .0089706   .1991338      0.045   0.964      -.3813245    .3992656
        wnq3 |   .0573684   .1840852      0.312   0.755       -.303432    .4181688
        wnq4 |   -.441001      .2006     -2.198   0.028      -.8341697   -.0478323
       wage0 |   .6069108   .2103203      2.886   0.004       .1946906    1.019131
      uk_sou |  -.1259993   .1416783     -0.889   0.374      -.4036836    .1516851
       wales |  -.2145229   .2695975     -0.796   0.426      -.7429242    .3138785
       scotl |   .0734611   .2100545      0.350   0.727       -.338238    .4851603
       _cons |  -.1151804   .7161436     -0.161   0.872      -1.518796    1.288435
------------------------------------------------------------------------------
(Outcome status==1 is the comparison group)
```