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Title: How many labour force states?
An analysis based on the British Household Panel Survey (BHPS)

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Abstract

The motivation of this paper is to investigate the characteristics of the British labour force, using data from the BHPS (British Household Panel Survey). The goal is to examine whether there are statistically significant differences between the unemployed and non participants, as well as inside each of the two groups, considering their transitions in the job market. Using logistic regression for a pooled cross section-time series sample of employed as well as non employed persons, 3 different Out of Work subgroups are identified: *Seeking Out of Work*, *Attached Out of Work*, and V*oluntary Out of Work*. The first group can be broadly assimilated to the official definition of unemployment, ILO unemployment, while all the others are usually classified as economically inactive. Nonetheless, the last two groups are characterised by significantly different transition rates, showing a behaviourally distinct attitude in their labour market dynamics. This result points out that the aggregate *non employment* has several dimensions, which are not caught by the distinction between unemployment and economic inactivity, and should be accounted for by policy makers and researchers.

J.E.L. Code: J21; J82; C23; C25.

Keywords: inactivity; attachment; transition probabilities.

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1. Introduction[1]

The correct measurement of the different employment states is a substantive subject, not only for policy makers but also for economists.

Studies on labour market dynamics are usually based on survey data, and the reliability of individual responses is crucial (Summers and Poterba, 1990) as well as the definition of each labour market status. A reliable interpretation of the structure of labour force is very important to analyse and/or compare labour market dynamics (Bleakley and Fuhrer 1997; Nickell and Van Ours, 2000). An important issue is whether non-employed persons who display a marginal attachment to the labour force (for example, those who desire to work but are not searching for work) should be classified as unemployed or non-participants. This subject has attracted a great deal of interest - see for example Denton (1973), Flinn and Heckman (1982, 1983), Tano (1991), Jones and Riddell (1999), Garrido and Toharia (2004). Jones and Riddell (1999) have carried out empirical tests for Canada, and they found that at least a part of the marginally attached would be more appropriately classified as unemployed rather than out-of-the-labour force. In this paper a similar analysis is performed, focusing on the British labour force, and using data from the BHPS (British Household Panel Survey). The econometric analysis exploits logistic regression to test for the existence of fundamentally different subgroups of people that are currently out of work, and it identifies 3 different subgroups:

1. *Seeking Out of Work*: individuals that are currently not working and looking for a job;
2. *Attached Out of Work*: individuals who aren't looking for a job, but would like to have a paid job;

[1] This paper is based on work carried out during a visit to the European Centre for Analysis in the Social Sciences (ECASS) at the Institute for Social and Economic Research, University of Essex, supported by the Access to Research Infrastructure action under the EU Improving Human Potential Programme. A previous version has been published in the ISER Working Papers series.
I want to thank the staff of the ECASS and of the ISER, and in particular Mark Taylor (ISER) for his supervision during my visiting. I also thank Bruno Chiarini, Franco Peracchi and an anonymous referee for useful comments on an earlier version. All errors are mine.

3. V*oluntary Out of Work*: individuals that are not currently working, and neither looking for nor want a paid job.

Considering standard definitions, only the first group can be broadly assimilated to the official ILO definition of unemployment[2], while all the others represent the economically inactive people. Nonetheless, these groups are all characterised by significantly different transition rates into employment, which point out that the partition between unemployed and non participant doesn't catch the real complexity of the *non employment* composition. The classification suggested is mainly based on the attitude toward *job attachment*, which can be considered as a first step before proceeding to the usual analysis based on age, gender and skills.

The paper is organized as follows. The next section describes the original dataset (BHPS), and the sample considered; section 3 shows the empirical transition rates for the different sample components, while section 4 is a comment of the econometric analysis. Finally, section 5 gives some concluding remarks.

2. The data

2.1 The original dataset

The data used in this research are from British Household Panel Survey (BHPS), a multi-purpose study whose unique value resides in the fact that:

- it follows the same representative sample of individuals - the panel - over a period of years;
- it is household-based, interviewing every adult member of sampled households;
- it contains sufficient cases for meaningful analysis of certain groups such as the unemployed and economically inactive;

[2] The ILO definition of unemployment is more strict than the definition here adopted to identify the group of Seeking Out of Work, because ILO also requires that job seekers must be "immediately" available for work (within 2 weeks). People unable to start "immediately" a job

- it allows for linkage of data both from other surveys and from local area statistics.

The Wave 1 (1991) panel consists of 5,500 households and 10,300 individuals drawn from 250 local authority districts in Great Britain. In the most recent available Wave, 11 (2001), the total sample size is up to 18,869 respondents in 10,632 households.[3]

It is worth noting that the BHPS sample has been enlarged since wave 7, in particular:

- From Wave Seven (1997) the BHPS began providing data for the United Kingdom European Community Household Panel (ECHP). As part of this, it incorporated a sub-sample of the original UKECHP, including all households still responding in Northern Ireland, and a 'low-income' sample of the Great Britain panel.
- A major development at Wave 9 was the recruitment of two additional samples to the BHPS in Scotland and Wales.
- At wave 11 a substantial new sample in Northern Ireland, the Northern Ireland Household Panel Survey (NIHPS) was added.

Since the size and the composition of the yearly samples have changed over time, it has been tested for the significance of being an original sample member in the analysis. The coefficient on this variable is always statistically insignificant, indicating that introducing the additional samples does not bias the results in any way.

2.2 The sample used

The main aim of the present analysis is to compare transition rates into employment among non-working people present at least in two consequent waves. Then, each yearly sample is the sum of individuals that are employed or out of

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consists of those: involved in educational activities, or in maternity duties; waiting to start the military service and also people sick.

[3] This includes the original sample plus booster samples from the European Household Community Panel Survey (ECHP), Scotland, Wales and Northern Ireland.

work at time *t-1* which are also interviewed at the subsequent wave at time *t*[4]. The pooled cross section – time series sample is given by the aggregation of these yearly samples[5]; it implies that each respondent is computed as a different unit of observation as many times as he is present in two subsequent waves.

The BHPS offers a standard range of labour force categories, which are based on subjective classification by the individual. Each respondent is asked to classify himself into a labour force status, measured in variable JBSTAT[6]. However, comparing the results of the subjective classification with the answers to the question about the time devoted to job search during the last four weeks (JULK1 and JULK4), we get the impression that some individuals are misclassified. For example, some people who consider themselves as economically inactive (family care and retired, in the most of cases) have been searching for a job (S*eeking*) or, at least, they declare that they would like to have a paid job (*Attached*). On the contrary, some people who classify themselves as unemployed have not looked for a job during the previous four weeks.

Table 1 presents the composition of the labour force that is the starting point of this analysis. The distinction between unemployed and economically inactive, in the first line, is based on the self-declaration (JBSTAT). The sample includes only people aged over 24 and less than 65 years of age that are present in two subsequent waves[7].

Table 1: Non employment Composition for each couple of matched waves

Year	Unemployed				Economically Inactive			
	Would like have a job	Seeking	Neither like nor seek	Total	Would like have a job	Seeking	Neither like nor seek	Total
1991	51	220	39	310	421	98	742	1261

[4] This may cause some biases resulting from the exit of some people from the sample. The effects of attrition on the transition probabilities will be tested formally in section 4.1.

[5] It has to be stressed that yearly data are not the best basis to afford the analysis of labour market transitions, because they include a large time span during which several changes can occur.

[6] See appendix for a complete description of the questions coded.

[7] The sample excludes people that at time t-1 are aged less than 25 or over 64.

Year	Unemployed				Economically Inactive			
	Would like have a job	Seeking	Neither like nor seek	Total	Would like have a job	Seeking	Neither like nor seek	Total
1992	60	202	51	313	408	86	819	1313
1993	59	193	72	324	389	79	829	1297
1994	77	181	37	295	337	73	860	1270
1995	45	163	48	256	330	73	856	1259
1996	54	132	51	237	291	68	892	1251
1997	60	141	49	250	404	68	1104	1576
1998	50	121	54	225	337	69	1106	1512
1999	70	179	107	356	406	74	1780	2260
2000	88	157	94	339	410	63	1785	2258

Table 1 shows that self-classification can be misleading: people actively looking for a job (columns 2 and 6) not necessarily declare to be unemployed; conversely, some people claiming to be unemployed do not actively search for a job (columns 1 and 3); besides, among the non participants, some would like to have a paid job (columns 5).

Given this evidence, it is advisable to ignore self-classification and to sort out respondents on the basis of their interest in labour market participation (*attachment* to labour market), considering: the active search as the most high expression of attachment, the desire to work as an intermediate level of attachment, and the absence of both of these characteristics as the lowest level of interest in having a job. Following this rule and the evidence of table 1, non-working individuals present in the sample are listed into one of the subsequent groups:

1. *Seeking Out of Work*: These individuals are currently not working but they had looked for a job in the four weeks preceding the interview (columns 2 and 6). To distinguish this group of people, I used the BHPS questions, "Have you looked for any kind of paid work in the last week/four weeks?" (code JULK1/4); respondents are people not currently working.
2. *Attached Out of Work*: These individuals had not looked for a job in the last four weeks, but would like to have a job (columns 1 and 5). To define this

group of people, I used the BHPS question, "Although you are not looking for paid work at the moment, would you like to have a regular paid job even if only for a few hours a week?" (code JULKJB)[8].

3. *Voluntary Out of Work*: These individuals are not currently working, and neither looking for nor want a paid job (columns 3 and 7).

The first group can be broadly[9] assimilated to the official definition of unemployment -which, as to the ILO definition of unemployment, refers to people without a job who had looked for job in the four weeks preceding the interview and who were also available to start a work in the two weeks following their Labour Force Survey interview- while all the other categories are commonly classified as economically inactive (ILO standard).

Of course, in the subsequent analysis there is a fourth group, that is Employed, which are those declaring to have done paid work during the week preceding the interview (question code JBHAS).

The sample composition for each wave as well as for the pooled sample is described in **Table 2**.

Table 2: Sample composition (units of respondents).

Year	Employed	Seeking Out of Work	Attached Out of Work	Voluntary Out of Work	ALL
1991	4201	321	473	1049	6044
1992	4090	289	468	1063	5910
1993	4085	276	450	1093	5904
1994	4003	256	415	1097	5771
1995	4069	238	376	1118	5801
1996	4200	200	347	1154	5901
1997	4831	210	466	1369	6876
1998	4761	195	391	1416	6763
1999	6621	266	482	2172	9541
2000	6722	230	510	2198	9660
Pooled sample	47583	2481	4378	13729	68171

[8] This definition is analogous to Jones and Riddell (1999).
[9] See footnote n.1.

2.2.1 Gender composition

It is interesting to look at the gender composition of these four groups identified, as shown in the subsequent table for the pooled sample.

Table 3: Gender Composition of the sample

	Absolute			Percentage		
	Male	Female	All	Male	Female	All
Employed	24976	22607	47583	52.48	47.52	100
Seeking Out of Work	1444	1037	2481	58.20	41.8	100
Attached Out of Work	1259	3119	4378	28.76	71.24	100
Voluntary Out of Work	4256	9473	13729	31.00	69.00	100

Labour market status refers to time *t-1*

Looking at the composition of the first group, Employed, there is a quite equivalent distribution between men and women, while the active search of a job is an attitude mainly observed among men, even though the gap is not dramatic (second row of the table). By contrast, it is evident a strong prevalence of women, 71%, among people not actively searching for a job but declaring to desire a paid job, *Attached Out of Work*, referable to the high percentage of women in family care. The same explanation can be addressed to explain, among the *Voluntarily Out of Work*, the high percentage of women.

Therefore, there is a slight dominance of men among the *Seeking Out of Work*, while a very large part of the British non-participants consists of women; nonetheless, a considerable percentage of women economically inactive present in the sample still desire/need to have a job. As we will see later (table 5), they are also quite able in finding a job, compared to men in a similar condition.

2.2.2 Attached Out of Work

The sample composition of the group of A*ttached Out of Work* (that is, individuals economically inactive who still would like to have a job) and its

evolution over time is reported in **Figure 1**, which illustrates the temporal path of this group components for each wave of the survey[10].

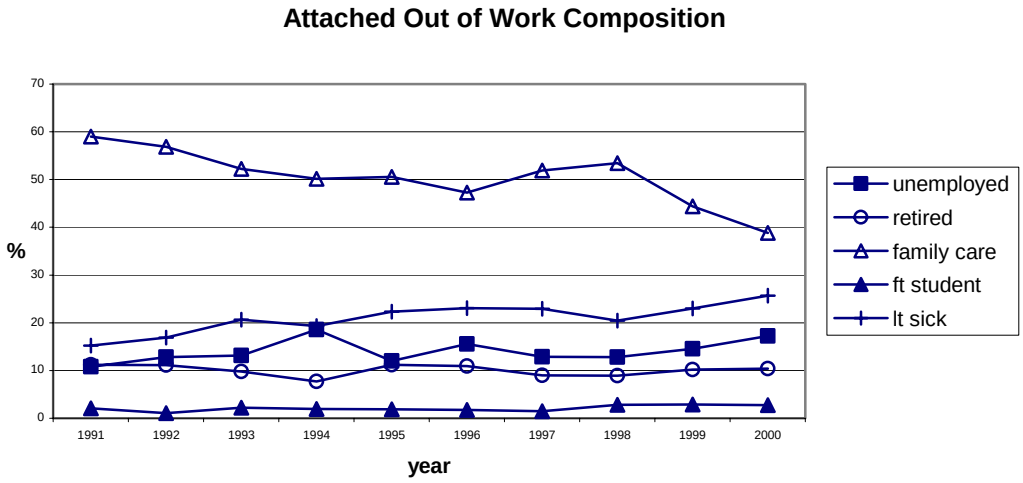

Figure 1

Figure 1 shows that individuals in family care are the single largest group in percentage terms, covering more than one half of the whole group, even though their relative size has fallen during recent years. The long term sick or disabled is the only group which grows during the whole period of the survey, while retired people are quite stable in their relative importance. The large proportion involved in family care clearly shows that gender has important implications in the decision to enter into the active labour market for this specific group. As to the other components, they could have no significant impact on labour market given their very low size (students and government training schemes) and their specific nature (age for retired and health condition for long term sick).

[10] Figure 1 classification is based on self-classification (question code JBSTAT) of respondents declaring to be out of work who would like to have a job (question codes JBHAS and JULKJB).

3. Empirical transition rates

The first step in the study of transition rates into the employment status among different labour force groups is the analysis of empirical transitions. **Table 4** lists the observed transition rates using both the respondents claims about their labour market status, in the first row, and the proposed definitions for the subgroups, reported in the second row. Then, the first 4 columns of the table show the observed transition probabilities for individuals who declare to be unemployed, while the last four consider people who classify themselves as non participant.

Table 4: Empirical transition rate into employment at t by employment status at t-1

Year	Unemployed				Economically Inactive			
	Would like have a job	Seeking	Neither like nor seek	Total	Would like have a job	Seeking	Neither like nor seek	Total
1991	0.08	0.39	0.23	0.32	0.12	0.37	0.07	0.11
1992	0.13	0.32	0.23	0.27	0.12	0.36	0.10	0.12
1993	0.25	0.35	0.29	0.32	0.15	0.42	0.08	0.12
1994	0.18	0.42	0.22	0.33	0.14	0.34	0.11	0.13
1995	0.24	0.41	0.23	0.35	0.14	0.37	0.07	0.11
1996	0.26	0.44	0.25	0.36	0.14	0.41	0.07	0.10
1997	0.35	0.40	0.28	0.37	0.15	0.31	0.08	0.11
1998	0.16	0.43	0.28	0.33	0.19	0.30	0.09	0.12
1999	0.11	0.39	0.25	0.29	0.17	0.35	0.09	0.11
2000	0.20	0.49	0,21	0.34	0.14	0.57	0.08	0.10
Average	0.19	0.4	0.24	0.32	0.14	0.37	0.08	0.11

Table 4 shows that neither respondents' classifications nor the Ilo definition are completely satisfying, even though for different motivations. In fact, considering only respondent's classification, we should stop at the analysis of the fourth and last column, implicitly accepting a strong unhomogeneity inside each group: people claiming to be inactive experience, on average, transition probabilities which go from a minimum of 8% to a maximum of 37% (columns 7 and 6), while for individuals declaring to be unemployed, we can see that the active search of a job results in a gap of almost 20 percentage points (first and second columns), increasing the transition rate from 19 to 40% on average. On the other hand,

focusing on the ILO classification, we should consider people looking for a job as a unique category, which is a plausible option (columns 2 and 6), but it would also imply to consider, as an homogenous group, all the remaining economically inactive, which seems a less plausible assumption, considering that table 3 shows a wide range of transition probabilities (from 8% to 24%).

At a first glance it seems that the hypothesis about the four different groups is confirmed, even though based on this simple descriptive statistics[11]. The main conclusions that we can derive so far are:

1. Self classification can be highly misleading;
2. Searching is the best way to get a job, and empirical figures show that active searching makes the difference;
3. Among not searching people there are several different subgroups, which experience different transition rates.

Table 5 describes the empirical transition rates in employment controlling for gender. For each group of non employed people, as just identified, it is possible to compare their situation at two consecutive time period, *t-1* and *t*, for the pooled sample. The most interesting evidence is about the group Attached Out of Work: a larger proportion of women than men out of work at time t-1 are subsequently employed at t, 0.18 versus 0.10.

Table 5: Observed transition rates into employment by gender

	Women			Men		
At t=1:	Employed	Not employed	% of employment	Employed	Not employed	% of employment
At t=0:						
Employed	19580	3027	0.87	23040	1936	0.92
Seeking Out of Work	445	592	0.43	539	905	0.37

[11] A doubt is about the classification of people claiming to be unemployed who neither look for nor want a paid job. Given the classification criterion here adopted, they are included into the group classified as *Voluntary Out of Work*, even though they experience quite high transition rate into employment. In section 4.3 I will go deeper into the question.

	Women			Men		
At t=1:	Employed	Not employed	% of employment	Employed	Not employed	% of employment
At t=0:						
Attached Out of Work	550	2569	0.18	129	1130	0.10
Voluntary Out of Work	1814	7659	0.19	1042	3214	0.24

Pooled sample

This, of course, does not change the fact that they experience a very low transition rate compared to people who are currently looking for a job, as confirmed also in **Table 5**.

4. Econometric analysis

In this section formal test are adopted to verify, using micro-econometric tools, the existence of four different states in the labour market: employed (**E**), people looking for a job (**Seeking-S**), people not looking for a job but willing to have a job (**Attached-A**), and people not looking nor willing to have a paid job (**Voluntary Out of Work – VOUT**).

In a first step the effects of attrition on the selected sample are investigated, to proceed, in a second step, with the binomial logit models.

4.1 Effects of attrition on transition rates

Following the analysis by Jimenez-Martin and Peracchi (2002), I compared the transition rates of full-time respondents, that is people interviewed in all the eleven waves of the BHPS here considered, with the transition rates of people which are interviewed for only few waves. As the estimations are based only on matched data, that is on people observed in two subsequent waves, the null hypothesis to test is that exit from the sample is random and "not related to the response variable of interest" (Jimenez-Martin and Peracchi, 2002).

Partitioning the pooled sample into two groups -full-time respondents (**FULL**) and few-time respondents (**FEW**)- and considering the observed transition rates

for both the groups, it is possible to test non-parametrically the existence of statistically significant differences between the two groups. Under the null hypothesis that attrition does not cause a bias in observed transition rates from state *I* at time *t-1* to state *J* at time *t*, indicated as $p_{I,J}$, the test statistic:

$$Test = p_{IJ}^{FULL}(x) - p_{IJ}^{FEW}(x) \qquad (1)$$

divided by its standard error has a Student's t distribution (x is a set of conditioning variables).

Figure 2 plots the calculated statistic *Test,* divided by its standard error, for all the possible transitions, controlling for the age of respondents.

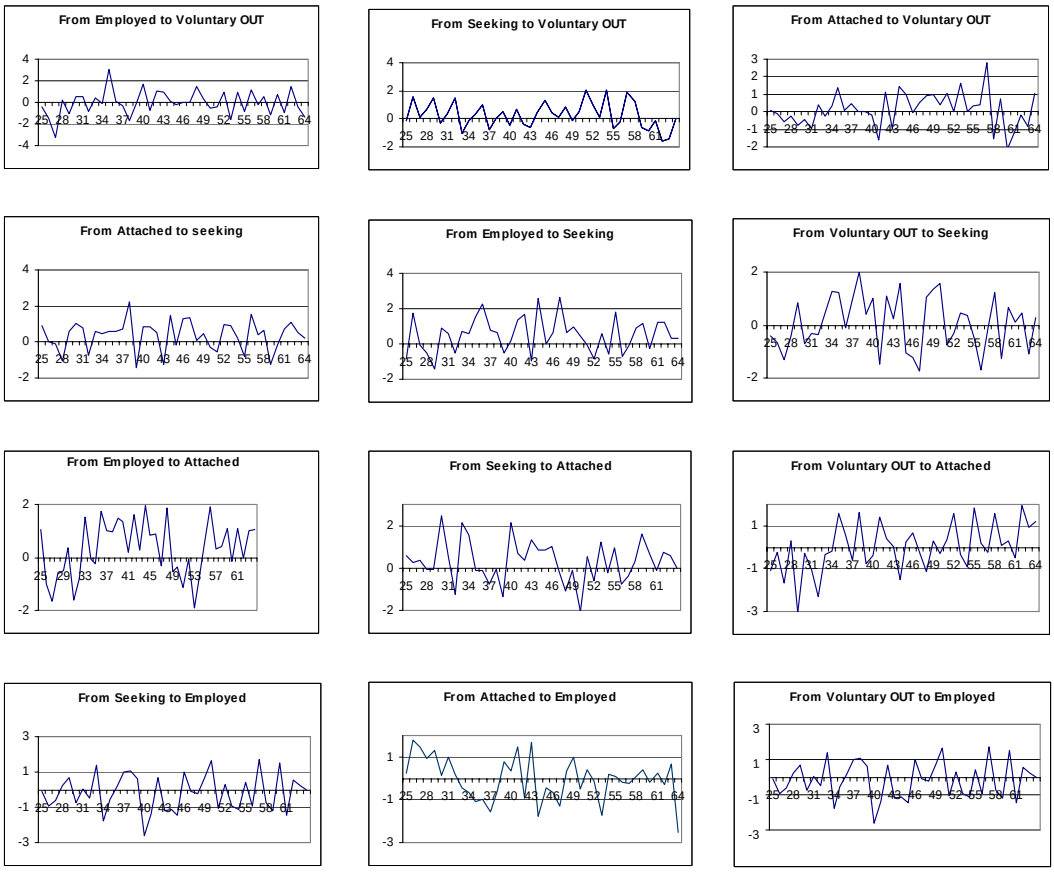

Figure 2

The statistic reported in **Figure 2** is distributed, under the null hypothesis of random attrition, as a *Student's t*, with usual interval of confidence. In most of

cases the statistic is less than 2 in absolute value, confirming the null hypothesis[12]. This result allows to proceed in the econometric analysis, with a reasonable confidence that the observed sample transitions, $p_{I,J}$, are a good approximation of the true transition of the population, $\pi_{I,J}$.

4.2 A formal econometric analysis of labour market's states

Given the evidence just illustrated, the labour market dynamics can be summarized by a 4x4 matrix of transition Π (Jones and Riddell,1999), where the single probability to move form state *i* at time *t-1* to state *j* at time *t* is given by p_{IJ}, and the subscripts *I,J* stand for the 4 possible states: E, S, A, VOUT. Summarising:

$$\Pi = \begin{pmatrix} p_{E,E} & p_{E,S} & p_{E,A} & p_{E,VOUT} \\ p_{S,E} & p_{S,S} & p_{S,A} & p_{S,VOUT} \\ p_{A,E} & p_{A,S} & p_{A,A} & p_{A,VOUT} \\ p_{VOUT,E} & p_{VOUT,S} & p_{VOUT,A} & p_{VOUT,VOUT} \end{pmatrix} \qquad (2)$$

In this framework, two labour market states, say *I* and *J*, can be considered behaviourally equal if the equation:

$$p_{IJ} = p_{KJ} \qquad (3)$$

applies for each possible $J \neq I, K$.

To test equation (3) I estimated separate binomial logits for each pair of origin states and then I estimated an additional logit, using a pooled sample of the two origin states[13]. A likelihood-ratio test is then run to test whether the constrained model (the pooled one) and the unconstrained model (the two logits estimated separately) can be considered the same. Each test involves three regressions, and it is repeated for every possible destination state.

Results are summarized in **Table 6**, in which the likelihood-ratio tests are listed.

[12] The aim of the test is to compare the transition rates of the two samples: the full sample and the few sample. Transition rates can be considered as frequencies, and, in presence of large sample, their difference is distributed as a normal. Sample dimension is quite low when considering transition from states Seeking and Attached, especially for more aged people, so implying that, in these cases, results shown in figure 2 must be interpreted more carefully.

[13] See appendix for more details on the regression. Complete estimation are available upon request.

Table 6: Summary of Likelihood-ratio Tests

H0	Women		Men	
	LR test	Degree of freed.	LR test	Degree of freed.
	Equivalence between Seeking and Attached			
$P_{S,E}=P_{A,E}$	166.64**	21	100.25**	21
$P_{S,VOUT}=P_{A,VOUT}$	100.45**	21	118.08**	21
	Equivalence between Seeking and Employed			
$P_{S,A}=P_{E,A}$	438.64**	16	528.65**	16
$P_{S,VOUT}=P_{E,VOUT}$	78.55**	17	83.19**	18
	Equivalence between Seeking and Voluntary Out of Work			
$P_{S,E}=P_{VOUT,E}$	471.52**	18	179.15**	18
$P_{S,A}=P_{VOUT,A}$	60.84**	18	91.59**	18
	Equivalence between Attached and Employed			
$P_{A,S}=P_{E,S}$	256.49**	16	223.29**	16
$P_{A,VOUT}=P_{E,VOUT}$	1039.53**	17	726.61**	18
	Equivalence between Employed and Voluntary Out of Work			
$P_{E,S}=P_{VOUT,S}$	84.69**	16	122.50**	16
$P_{E,A}=P_{VOUT,A}$	863.27**	16	561.29**	16
	Equivalence between Attached and Voluntary Out of Work			
$P_{A,E}=P_{VOUT,E}$	136.95**	18	24.75	18
$P_{A,S}=P_{VOUT,S}$	96.07**	18	68.95**	18

χ^2 threshold for α=0.01 and 16 degree of freedom is 32; with 17, 18, 19, 21 degrees of freedom the thresholds are, respectively: 33.409, 34.805, 36.191 and 38.93.

The LR tests reported in **Table 6** clearly show that the four groups are behaviourally distinct states of the labour market; in fact, the null hypothesis of equivalence between each possible couple of states is always rejected, either for women or for men. A single exception occurs for men; in fact, the test doesn't refuse the equivalence of the transition rate into employment between *Attached Out of Work* and *Voluntary Out of Work*.

4.3 Self-classification and labour market states

The econometric analysis just commented has considered four subgroups identified using some specific questions of the BHPS (see also the appendix) without using information from self-classification. Nonetheless, it is possible to exploit subjective as well as objective information to identify labour market status. In this case the analysis turned out to be more articulated, because the starting number of states is 6 (as they are reported in table 4), whereas still

confirming the existence of an intermediate group between the Unemployed and the Inactive: the Attached Out of Work. The main ascertained difference is that the *Attached* group also includes people claiming to be unemployed, which neither search for a job, nor declare to be willing to have a paid job[14]. This finding is very interesting, due to the fact that, as already pointed out in section 3, this group of people show surprisingly high transition rates into employment (see table 4 column 3). **Table 7** summarises the LR test to investigate the equivalence between the Attached Out of Work (A), and people claiming to be Unemployed but not seeking nor declaring to want a job (UNS); in other terms the test is:

$$p_{A,J} = p_{UNS,J} \qquad (3)$$

for each possible $J \neq A, UNS$.

Table 7: Summary of Likelihood-ratio Tests for the equivalence between Attached and Unemployed Not Seeking

H0	LR test	Degree of freedom
$P_{A,E}=P_{UNS,E}$	19.12	19
$P_{A,S}=P_{UNS,S}$	17.07	18
$P_{A,VOUT}=P_{UNS,VOUT}$	34.95	19

χ^2 threshold for α=0.01 and 19 degree of freedom is 36.191; with 18 degrees of freedom the threshold is 34.805.

Likelihood ratio tests demonstrate that the two groups show no statistically significant difference in their transition rates, so that they can be considered an homogeneous group. It suggests that the marginal attachment to labour market is quite an oblique concept, difficult to sketch, as it refers to subjective attitudes as well as to objective behaviours.

[14] The complete set of regressions, available upon request, basically confirm the existence of 4 states: Employed, Attached, Seeking, Voluntary Out of Work; some differences arise between men and women. I chose to not report the results because they are less reliable, due to the fact that self classification and the relevant question to identify Seeking Out of Work and Attached Out of Work refer to a different period of time: the time of the interview, as to self-classification, and the week preceding the interview, for questions about the search of a job.

5. Conclusions

The main goal of this paper was to identify and test differences between individuals that are out of work. Based on the transition rates into employment and using econometric analysis, it has been possible to distinguish 4 different groups using data from the BHPS: *Employed*, *Seeking Out of Work*, *Attached Out* of *Work*, and *Voluntary Out of Work*. The labour market dynamics is, then, characterized by a 4x4 matrix of transitions, more articulated than the usual matrix of transitions adopted by standard definitions of labour force states. The existence of a third behaviourally distinct group of people out of work, the *Attached Out of Work*, in addition to the groups of Unemployed and Non Participant, is based on marginal attachment to the labour market. This group would be classified, as to the ILO standard, among the economically inactive, while the analysis presented in this paper suggests that it has its own characteristics, worthy to be investigated further. In point of fact, the three groups reflect a different level of interest in labour market participation (*attachment* to labour market), and in particular: the active search is the most high expression of attachment, claims of unemployment as well as the desire to work represent an intermediate level of attachment, and the absence of all these characteristics distinguishes people with the lowest level of interest in having a job.

Differently from the analysis of Jones and Riddell (1999), the analysis based on BHPS does not support the idea that marginally attached people should be better classified as unemployed, because searching for a job is proven to be a specific and qualifying way to differentiate workers. Nonetheless, the evidence reported seems to neither support completely the results in Flinn and Heckmann (1983), because it verifies that the simple distinction between the categories Unemployed and Non participant is not enough, and that job search and the desire for work are both two important indicators to understand attitude of workers. The results here shown seems to be more coherent with the analysis of the Iberian labour market

realized by Garrido and Toharia (2004), as well as with the recent analysis on the "grey area" of the Italian labour market (Istat, 2005; Brandolini et alii, 2004).

The ascertained heterogeneity among non-employed, and, above all, among non participants, could have important implications both for researchers and for policy makers. The complexity of the labour market deserves an accurate analysis of its real dynamics and composition, which cannot be simply based on the unemployment ratio. An high rate of inactivity, beyond signalling a bad performance of the labour market, able to shrink a positive trend of the unemployment ratio, asks for an *ad hoc* analysis. The simplifying assumption of a single and homogeneous group of non participant hides a multiplicity of different causes. In fact, inactivity can be traced back to two main reasons, discouragement and free choice, which, of course call for different interventions. In particular, discouragement can originate from institutional rigidities (supply as well as demand side), social traditions, inadequate educational level (see Bowen and Finegan, 1969; Killingsworth, 1983). In this case, the inactivity would be a suffered choice, which, in some contexts, can also conceal, and/or spur, underground labour activities.

According to Lisbon strategy, focused on targets broader than unemployment, such as employment-population ratio and female employment rate, the recommended approach would be to keep the existent ILO standards, necessary and useful for international comparisons, whilst improving the investigation on the nature and composition of non-participation.

National surveys already include questions able to comprehend the nature of the inactivity (for instance Italian survey). It enables to obtain a more realistic vision of the labour market's "health", allowing, in the meanwhile, to adopt more correct strategies of intervention, especially in areas where inactivity is remarkably widespread.

APPENDIX

List of BHPS Question relevant for identification of labour market states

JBSTAT: Please, look at this card and tell me which best describes your current situation (list of category: Self Employed; In paid employment, Unemployed; Retired; Family care; FT student; Long term sick/disable.; On maternity leave; Government training scheme; Something else) ALL RESPONDENTS
JBHAS: Did you do any paid work last week that it in the seven days ending last Sunday either as an employee or self employed? ALL RESPONDENTS
JULK1_4: Have you looked for any kind of paid work in the last week (four weeks), that is the 7 days ending yesterday? ASKED IF THE RESPONDENT IS NOT CURRENTLY WORKING
JULKJB: Although you are not looking for paid work at the moment, would you like to have a regular paid job even if only for a few hours a week? ASKED IF THE RESPONDENT IS NOT CURRENTLY WORKING AND HAS NOT LOOKED FOR PAID WORK IN LAST FOUR WEEKS.

List of variable selected for logit regression

Sex; age; race; marital status; level of education; number of children; presence of children younger than 12/16; presence of a working partner in the household; number of years since last job; having ever worked; lowest weekly pay acceptable; whether looking for a particular job; dummies for each wave.

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