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Elke Holst
C. Katharina Spieß

The transition into work – specialities for the hidden labour force in comparison to other economically inactive persons

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DIW Berlin

German Institute
for Economic Research

Königin-Luise-Str. 5
14195 Berlin,
Germany

Phone +49-30-897 89-0
Fax +49-30-897 89-200

www.diw.de

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The Transition into Work – Specialities for the Hidden Labour Force

Elke Holst[1 2] and C. Katharina Spiess[1, 3]

[1] DIW Berlin (German Institute for Economic Research Berlin)

[2] Flensburg University [3] Technical University Berlin

Correspondence:

DIW Berlin
Königin-Luise-Str. 5
14195 Berlin
Germany
Emails: eholst@diw.de, kspiess@diw.de

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ABSTRACT

The paper presents a multivariate approach on transitions into work for five non working groups including the unemployed, the *Attached*, people in education, people doing housework and others. The study is based on ECHP data from 1994 to 1998. It is expected that individuals in the *Attached* group have significantly higher transition probabilities into work than others outside the labour force although we control for other socio-demographic, economic factors and some macro indicators. Females overall had a lower transition probability into work in all non working groups compared to males. Females in a more conservative country cluster (compared to a less conservative country cluster) had the lowest transition probabilities of all non employed groups. Gender specific differences arose when we took the need to work into account.

Keywords: Hidden Labour Force, Labour Market Attachment, Employment Transition Rates, Labour Market Performance

JEL Classification: J2, J4, J6

1. Introduction

A high level of persistent unemployment in most European states remains a pertinent issue and is discussed keenly in the literature. Empirical studies have focused on the unemployed defined either by national or international statistics. However, another phenomenon in the group of non workers: the Hidden Labour Force (HLF) has received much less attention.[1] HLF stems from macroeconomic studies of the business cycle. It first became evident during the Great Depression, when a decline in the number employed did not result in an increase in the number unemployed (Hemmer 1935). Macroeconomists modeled the effects of the business cycle on the labour market by accounting for the whole potential labour force. The HLF is estimated in these approaches, put simply, as the "residual" between potential full-employment and the actual labor force. In phases of the economic upswing the HLF is expected to decrease, in phase of economic weakness to decrease. During full employment it is zero i.e. ceases to exist. The HLF is also used for projections of the labour supply (Fuchs 1995, Thon and Bach 1998). One key advantage of these estimations is that they can give a benchmark for the size of the hidden unemployment, whereas the disadvantages can be found in the implications of including the estimation of full employment and also missing structural information about the individuals in hidden unemployment. Most macro studies emphasize a clear difference between individuals in and out of the labor force to define the HLF, meaning that individuals in the hidden labor are neither working nor unemployed.[2]

A clear micro-economic explanation for the HLF can be found within the theory of discouraged and added workers effects. The hypothesis here is "that looking for work in conditions of general unemployment becomes so disheartening that some of the unemployed give up and withdraw from the labor force and that some people who would ordinarily enter the labor force do not do so" (Hamermesh and Ress 1993: 37). Further to this, it is argued that during a recession, when the usual breadwinner loses his/her job, additional members of the household will enter the labour force in an effort to maintain the family's income. The balance of both effects would reflect the hidden unemployment. Micro and macro studies imply that individuals within the HLF group would have worked if there was full employment, i.e. a paid job is available. There is no general consensus regarding a definition of the HLF and "hidden unemployment", so there are a variety of competing definitions of this phenomenon

[1] This is perhaps not at least due to problems in specifying this group empirically. For problems and attempts measuring the non-observed economy see OECD (2002). For an overview over the approaches to cover the hidden labor force see Holst (2000). For a more actual example on a regional data set, see e.g. Beatty and Fothergill (2002).

[2] Following also ILO classifications, Hussmanns et al. (1990), OECD (2002). The German Sachverständigenrat (2003) uses the concept of hidden unemployment and includes for example short-time employees. Based on these numbers further studies of the effects of hidden unemployment are made (e.g. Feld and Kirchgässer 2000).

put forward in the literature. Sometimes it includes only unemployed and discouraged people; other times it includes people who are employed and want to work more hours (involuntary part-time workers; the International Labour Organization (ILO) defines them as visible underemployment).[3]

Germany, where the macro concept of the HLF originally was developed, has also been the home of some micro-economic approaches for the hidden labour force (Stobernack 1991, Pfeiffer 1996, Trabert 1997, Holst 2000). Larger organisations like the ILO (Hussmanns et al. 1990) and Eurostat (2003) provide the number of discouraged workers. The OECD instead developed a "broad unemployment rate" to catch the phenomenon of hidden unemployment (OECD 1996 and 1998); the US Bureau of Labour Statistics (BLS) has a history of estimating (unsuccessfully) the hidden unemployed with a variety of econometric models (Rosen 1973, Mincer 1973).[4] Following on from their experience they developed the concept of a "labour force reserve" (Gellner 1975), which was closely related to the discouraged workers concept. This was also not very useful. For international comparisons they developed the well-known "U7-concept" which distinguished between several kinds of unemployment (Sorrentino 1993). In 1994 the BLS introduced a new definition of discouraged workers with the wider ranging definition entitled "Not-In-The-Labour-Force" (NITLF), which accounted for different reasons for not working, namely "marginally attached" persons (Castillo 1998).

At present, there exists no micro-economic approach which covers the HLF at large, and this study is not an attempt to do so. Nevertheless the importance of the HLF in Europe was shown in a longitudinal study of 12 EU countries for the early 1990's, using the definition of HLF as persons differently attached to the labour market (Holst and Spiess 2002). For the first time to our knowledge the different groups of individuals outside the labour force in EU were examined by their transition rates into and out of the labour market.[5] The study clearly indicated that unemployed persons did not even account for half of

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3 See for an overview of approaches Holst (2000). Barrel and Genre (1999: 66f) compare unemployment, discouraged work, and involuntary part time work in the UK, Denmark, New Zealand and the Netherlands. They find that discouraged workers make the smallest share. Studies are also done on a regional national level. Recent studies include for the UK for example Beatty et al. (2002), Lambert (2000) and for the USA BIDCO (2003), Wadley-Donovan Group (2003), for Germany Ludwig (2003). There also exist empirical studies in the frame of the informal economy in Eastern Europe, for example in Neef and Stanculescu (2002).

4 Blundell (1990) for example used a „Double-Hurdle"-model to estimate female's labour supply, where he explicitly differentiated between discouraged workers and others who don't want to work. For 1981 he found about 15-20% of discouraged workers in the group of married women in England. For a critique see Franz (1990).

5 Other studies, for example Barrel and Genre (1999), also use transitions probabilities from one market labour status to another but do in general not differentiate the "inactives" by special target groups incl. the hidden labour force.

the non working persons who entered into gainful employment.[6] This study however is a bivariate analysis, not controlling for socio-demographic, economic factors and some macro indicators.

In this paper we use the approach of defining the HLF as developed in Holst and Spiess (2002). The so-called "*Attached*" can be only an approximation to this phenomenon. This group covers those from whom we expect to have a stronger labour market attachment as others outside the labour force (see Chapter 3 for details). We present a multivariate approach of five non working groups on transitions into work including the unemployed, the *Attached*, people in education, people doing housework and others. We also provide separate analyses for eleven EU countries, and offer a comparative analysis. The study is based on ECHP data from 1994 to 1998. We are looking at the determinants that drive individuals to take up work and compare the results for different non employed groups. It is expected that individuals in the group of the *Attached* still have significantly higher transition probabilities into work than others outside the labour force although we control for socio-demographic, economic factors and some macro indicators. We also expect that country specific conditions drive the chances of men and women differently.

This paper is divided into five sections. Following from this introduction, we discuss in the second section, gender specific conditions in the European countries and develop country clusters, grouping according to more or less conservative welfare regimes. Thereafter in section three, the data set used is described and also the design of the study. Section four presents the results of the different transitional dynamics in EU countries from probit regressions for transition probabilities into work based on models of different degrees of country aggregations and several explaining variables to control for the socio-demographic, economic factors and some macro indicators. Section five concludes.

2. Basic Gender specific Conditions in the European Countries

Based on the results of Holst and Spiess (2002) we argue that simple macro-economic indicators are not sufficient to describe quantity and behavior of the HLF. Furthermore we put a special focus onto gender specific aspects of the HLF. In this paper we now shift our focus onto gender specific aspects of the HLF. Women provide the highest potential for the HLF due to their comparatively high non-active rates. Their increasing labour market participation in all western industrial countries is one of the most striking changes in the last few decades. Countries across Europe reacted differently to the changing

[6] Also for the EU-15 countries Chagny et al. (2001:7) showed the character of hidden unemployment as a cyclical less responsive component of total unemployment (as compared with 'open unemployment')". Mitchell (1999) showed that hidden unemployment is not only an important phenomenon in Europe but also a significant problem in Australia and the United States. Both studies were based on macro data.

work and life patterns that occurred in all western societies and vary widely in the ways and to the extent in which they implicitly (or explicitly) support or promote gender based divisions of labour in employment and at home, and in their efforts to balance employment and care giving responsibilities (Giele and Holst 2003). Given that specific gender conditions effect the chances of women in obtaining paid work, we are looking for a classification which allows us to cluster the countries in our study with policies more and less gender friendly (or more or less conservative) regimes. In this sense then we are positing an inverse relationship between conservatism and the promotion of gender equality.

Several typologies of Welfare States, which attempt to understand the differences and similarities across different countries' welfare provision, can be found in the literature. One of the most well known is that by Esping-Anderson (1990) who grouped countries into one of three regime categories: the social democratic, the liberal and the conservative regime. Esping-Andersen was criticized especially by feminist researchers for not including gender specific aspects in his research[7]. These criticisms were considered in a recent study by Gornick and Meyers (2003). They found that: "*[S]omewhat surprisingly, subsequent empirical efforts to establish new welfare state typologies that did incorporate gender largely corresponded to Esping-Andersen's classification. That suggests that the welfare state principles underlying these class-based clusters are highly correlated with factors that shape family policy " (2003: 51).*

In the study by Gornick and Meyers (2003), the USA and nine European countries were divided according to differing levels of policy support. The social democratic countries like Denmark, Finland, Norway, and Sweden give the best support and show high levels of gender equality, in paid and unpaid work and also in time to care. The conservative and the liberal country like the United Kingdom are much less supportive. Due to the data limitations, the only country which could be termed social democratic in this particular context that can be included in our study is Denmark.[8] For the same

[7] For example Orloff (1993); Siaroff (1994); Sainsbury (1994,1996). One criticism has been his singular focus on women as workers as opposed to focusing on gender relations and specifically the neglect of attention on women's search for equality (O'Conner et al. 1999). One needs to include gender equality as it is a necessary characteristic to evaluate the chances of women and men in the labour market. Another criticism is that the analysis did not consider shifting boundaries of the public and private sphere, namely to the extent as to how former private tasks - like housework, reproduction and caring - have become public (Sainsbury 1996, Rhodes 1997). Also it was argued that social organization of care, the role of the family as welfare service provider and the role of females as employees should be incorporated (Daly 1994, Bussemaker and Keesbergen 1994).

[8] Finland, which joined the ECHP in 1996, could not be included in the analyses due to data restrictions: Some key-variables for our analyses were completely missing. Furthermore, the data for Sweden, which joined the ECHP in 1997, were not available at the time when we started our analysis.

reason, we also had to drop the UK, an example of a liberal welfare state.[9] However, we were able to incorporate the southern European countries Greece, Italy, Spain, and also Portugal, which are identified generally as conservative. Furthermore we included Ireland, a conservative regime where the church still has some degree of influence and gender equality is less developed, and which experienced a dramatic economic upswing in the years under observation. Because of the restricted number of countries in our data, we decided to control for two kinds of regimes only: the "more" and the "less conservative" one.[10] Taking into account the discussion above, we present the following descriptions of the two groups and the countries which best fit into each. We also defined clusters using the employment rates of females.

Group one: More conservative countries (with relatively low female labour market participation rates):

This group includes Italy, Greece, Spain and Ireland with employment rates for females of 43.7%, 46.9%, 46.2% and 49.2% respectively (European Commission 1999). The welfare policies of these countries can, relatively speaking, be said to be poorly adjusted to the new challenges of changing social demographics especially the increased employment of women with children. In the southern countries traditional family obligations are more important than in other countries and social policy is strongly based on familism (Bonke and Koch-Weser 2003). The system relies strongly on the unpaid work that women within the family household performed. There are not enough institutional care arrangements to "displace" wives, especially mothers. Similar to these countries is Ireland.[11] In the more conservative countries, the promotion of gender equality as well as combining work and family commitments is more difficult than in the less conservative countries (Group two). This often forces women to face the bi-polar decision of "work *or* family".

Group two: Less conservative countries

Denmark, France, Germany, Netherlands, Belgium, Austria and Portugal with employment rates for females of 75.7%, 61.7%, 60.0%, 58.1%, 52.2%, 59.5% and 62.1% respectively, are all countries included in this group (European Commission 1999). Denmark is the most gender neutral regime in this

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9 In contrast to earlier releases of the ECHP, which were used for our first analysis (Holst and Spiess 2002), some countries of the new ECHP release have a substantial proportion of missing in the key-variables of our study. This forced us to exclude United Kingdom from the analysis.

10 We also tested a division of the eleven EU countries in three clusters which did not provide significant differences to the results we present in chapter 4.

11 In the ECHP based analysis of Iacovou (2002) as well as Spiess and Schneider (2003) Ireland was grouped with the southern European countries as well. The reasons were quite similar.

cluster. French family policy is conservative but also strongly incorporates the model of the 'working mother' (Letablier 2003), and the labour market participation of mothers with young children is high. Germany, Austria, Belgium and the Netherlands are conservative regimes but are nevertheless more adjusted to the new demands on policy of working women/mothers than group one. The Netherlands hold high part-time rates even for men. Portugal has high female labour market participation rates (including high full-time participation rates). It has a much more egalitarian division of working time between couples than in the other southern countries (Bielenski et al. 2002:139). The provision of public child care is quite poor (Bielenski et al. 2002: 173), but mothers with younger children seem to find some child care alternatives beside publicly provided day care, for example informal care arrangements with grandmothers.[12]

3. Data Set and Design of the Study

The analysis is based on data from the European Community Household Panel (ECHP), a large-scale longitudinal survey set up and funded by the European Union[13]. The purpose of the ECHP is to gather individual-level information that is comparable across European countries. Topics of interest include employment and unemployment experiences, earnings, household wealth, household expenditures, and household living conditions. The first wave of ECHP data was collected in 1994 in twelve countries of the European Union. As such the panel facilitates comparative analysis. Additional waves covering up to 15 countries were conducted annually in subsequent years. The most recent wave of data that is used in this paper was collected in 1998.

Due to various data limitations not all of these 15 EU countries could be included with all available waves in our longitudinal study. As indicated above Britain and Finland had to be dropped from the analysis entirely, and in addition to these Luxembourg was also dropped, due to significant item non-response problems with key variables of our analysis. For the same reason we could only include the first three waves of the German sub-sample.[14] Thus we provide a micro analysis for eleven EU countries: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, and Spain. Although the ECHP is the only European dataset to describe groups of the HLF, the ECHP

12 Iacovou (2002) provides empirical evidence for this. Her study of the living arrangements of the elderly in Europe shows that Portugal belongs to the group of southern countries which is characterized by a relative high percentage of elderly people living together with their children.

13 Wirtz and Mejer (2002) provide an overview over the ECHP, while Clémenceau and Verma (1996) concentrate on methodological issues of the ECHP.

14 In this particular case the variable indicating the unemployment status of a respondent is missing from the fourth wave onwards.

data has strong limitations for defining the HLF comprehensively. Our aim is to show that there exists a HLF in all European countries and that this should not be neglected.

The rationale behind the systematic general separation between working and not working persons is so that we can define the HLF according to ILO standards (Hussmanns et al. 1990). Employed persons who want to increase their working hours are, in our definition, underemployed and not part of the HLF. To estimate their potential is not an aim of this study. The HLF corresponds exclusively to the non-employed. We include persons in the working age (16 – 59). The reason for setting the upper band below sixty is so as to limit the bias due to different (early) pension regimes in Europe. The analysis is built on the earlier work of Holst and Spiess (2002), who have defined six groups of people in respect to their labour market attachment. The definitions can be summarized as followed:

Work: at least one hour working in the past seven days;
Unemployed: not working and
(a) looking for employment and able to start work within the next two weeks (includes person who were registered unemployed at the time of the survey or have taken active steps to find gainful employment within the last four weeks or have received a job offer during the last four weeks);
(b) not seeking work because they had already found employment that would start later or expected a job offer from previous applications.
Attached: not economically active and
(a) looking for a job, but not unemployed, for example because they were not able to start working within the next two weeks and had not taken any active steps to find gainful employment in the past four weeks etc. or
(b) not looking for work because they did not believe that any adequate positions were available (discouraged workers). In other words a job would be taken if one were available (for example in times of economic recovery).
The remaining non-employed - belonging to the remaining population outside the labour force - are subdivided into three categories:
Education: in education.
Home: not looking for a job because of home/family obligations
Others: others outside the labour force.

For all these groups descriptive and bivariate longitudinal analyses for the EU countries were carried out for the years 1994 to 1996 (Holst and Spiess 2002)[15]. However, it might be helpful in interpreting the multivariate results to be aware of the volume of the different groups in the labour market. As indicated in Holst und Spiess (2002), 62% of the EU-population in working age was in *Work*. Almost 8% were *Unemployed* and 2% belonged to the group of the so-called *Attached*. Almost 9% were in *Education*, 11% belonged to the so-called "*Home"* and the group of *others outside the labour force* was 8%.

In this paper we use a multivariate approach and estimate the transition into work while controlling for other socio-demographic, economic factors and some macro indicators. Our hypothesis is that following the unemployed, *Attached* have the highest labour market attachment. We estimate the probability of being in work in time *t+1* for all respondents who reported to be not employed in time *t*. The control variables we are adopting mainly refer to time t although we use some variables which refer to the period *t-1* (this refers to the information we include concerning a potential previous job). Our final estimations are based on a sample of pooled transitions: Thus for the majority of the countries we can observe four transitions[16].

To explain transitions into work we rely on 'Labour Supply Theory' and chiefly on 'Human Capital Theory' and 'New Home Economics' (for example Becker 1991, Becker 1993, Gronau 1977, and Killingsworth 1983). We include the variables below as covariates. For a summary of the variables definitions see Table A-1 and for the descriptive statistics see Table A-2. The sign in brackets (+/-) indicates the expected effect of the variable on the probability of being in work in t+1, having been not employed in t (dummies in comparisons to the reference group).

- Socio demographic variables: age (-), education (+), nationality (local +), household size (males +, females -), family status married (males +, females -), and number of children under the age of 14 in the household (males +, females -).
- Household income (-).
- Years outside the labour market (-).

[15] This analysis was based on the first release of the ECHP. The analysis of this current paper is based on a more current release (1994 to 1998). Sensibility test comparing the results based on the different releases showed that the size of the group of the *Attached* varied slightly, which is true in particular for the group of the male *Attached*.

[16] Due to data limitations, for Austria and Germany we can only observe three respectively two transitions.

- Reasons related to end the previous job[17]:
  - Exogenous reasons like obliged to stop by employer, end of contract, temporary job, sale/closure of own or family business (+)
  - Family related reasons like marriage, child care, looking after old person (+)
  - Other reasons like own illness, national service, wanted to live off private means (+)
- Macro economic indicators: national unemployment rates of females and accordingly for males (-).
- Calendar effects are controlled by a set of year dummies.

Throughout we provide estimations for separate sub-samples of females and males to show the different influence of the variables on men and women respectively.[18] We concentrate the discussion of the results mainly on females because they provide the highest potential for the HLF. We will however also refer to males when there are interesting aspects to report. Throughout we also provide separate estimations for the five non working groups, controlling for sex. We progress in three steps. Our first step is to estimate the transition probabilities using EU country dummies in addition to the described variables. Following from this in a second step we use a county cluster dummy as developed in section two to test our assumption of (gender) specific differences in transition into work between more and less conservative countries. We expect that women are more successful entering work than in less conservative countries. Finally, our third step is to estimate the probability of people entering work in each country separately. We do this so as to analyse country specific performance and gender differences.

4. Results

4.1 Transition Probabilities into Work - All eleven EU countries together

What drives transition into work?

Tables 1a and 1b show transition probabilities into work for females and males for the entire sample of the eleven EU countries. The results support our classification of the *Attached* group for females as well as for males. The *Attached* have the second highest overall predicted transition probability (females: 17%, males: 26%) behind the *Unemployed* (27%, males: 41%), followed by those in *Education* (11%,

[17] We expect that missing job experience (reference group) will have a most strongest (negative) impact on transitions into work. Insofar the other reasons from below should have positive signs. This will be especially true for groups closely related to the labour market as there is a high competition. This must not be true for individuals who take a job by chance as it might true for individuals with a lower labour market orientation.

[18] Estimations based on the entire sample showed that gender had a significant impact.

males: 14%), the so called *Others* (9%, males: 14%) and those with *Home* duties (7%, males: n.a.). It is evident that females have lower overall transition probabilities in all non working groups compared to males.

Family status had the expected effect in that married women and those living with a partner had significantly lower transition probabilities than those who were single. The corresponding male group shows significantly higher transition probabilities for those who where living with a partner. This underlines the negative effect that traditional gender roles have on female's labour market participation. This is particularly the case for mothers, who are mainly responsible for taking care of the family's needs, which acts as a constraint on taking up work whilst husbands are expected to work and support the family financially.

Table 1a: Transition Probabilities: Probit Regression Models (marginal effects and robust z-statistics in parenthesis), EU females only

Status in t+1: Work					
Status in t:	**Attached**	**Unemployed**	**Home**	**Education**	**Others**
Age	-0.004	-0.004	-0.002	0.005	-0.002
	(5.50)**	(8.71)**	(10.50)**	(5.90)**	(17.69)**
Edu_l	-0.111	-0.090	-0.024	-0.039	-0.044
	(5.58)**	(7.32)**	(3.60)**	(4.59)**	(10.46)**
Edu_m	-0.071	-0.038	-0.016	-0.012	-0.026
	(3.72)**	(3.16)**	(2.49)*	(1.29)	(6.45)**
Foreign	-0.098	-0.013	-0.013	-0.057	-0.029
	(2.79)**	(0.48)	(1.27)	(2.82)**	(3.53)**
Hhsize	-0.003	0.005	0.005	0.005	0.003
	(0.54)	(1.47)	(4.19)**	(1.99)*	(2.45)*
Livingto	-0.055	-0.025	-0.006	-0.014	0.011
	(3.48)**	(2.33)*	(0.92)	(0.96)	(2.84)**
Child14	0.013	-0.014	-0.010	-0.010	-0.006
	(1.58)	(2.32)*	(4.74)**	(1.97)*	(3.63)**
Ehhinclog	-0.002	0.023	-0.011	-0.004	-0.010
	(0.18)	(3.26)**	(5.41)**	(1.08)	(6.19)**
Neperiod	-0.015	-0.016	-0.004	-0.010	-0.007
	(5.06)**	(7.40)**	(6.72)**	(2.26)*	(12.66)**
Miss_neper		-0.161	0.025	-0.049	-0.008
		(2.44)*	(0.74)	(0.84)	(0.35)
Reason_e	0.110	0.142	0.066	0.088	0.102
	(5.95)**	(13.46)**	(8.54)**	(4.57)**	(17.47)**
Reason_f	0.135	0.170	0.063	0.090	0.087
	(3.96)**	(6.78)**	(8.71)**	(1.52)	(12.59)**
Reason_o	0.086	0.147	0.067	0.078	0.068
	(3.32)**	(8.46)**	(7.31)**	(5.50)**	(11.70)**
Austria	-0.146	-0.053	-0.020	-0.072	-0.042
	(3.48)**	(1.27)	(1.79)+	(3.60)**	(4.60)**
Denmark	-0.085	-0.013	-0.011	0.001	0.010
	(2.46)*	(0.43)	(0.67)	(0.05)	(1.07)
Belgium	-0.107	-0.070	-0.036	-0.085	-0.052
	(2.54)*	(2.23)*	(3.61)**	(5.35)**	(6.69)**
Netherlands	-0.097	-0.024	-0.042	0.020	-0.023
	(2.76)**	(0.84)	(5.36)**	(0.82)	(3.11)**
France	-0.003	-0.090	-0.055	-0.117	-0.036
	(0.05)	(2.67)**	(5.95)**	(6.54)**	(3.75)**
Portugal	-0.101	-0.027	-0.025	-0.077	-0.037
	(2.87)**	(0.96)	(3.05)**	(5.23)**	(5.28)**
Greece	-0.096	-0.124	-0.015	-0.099	-0.040
	(1.87)+	(3.77)**	(1.34)	(5.38)**	(4.16)**
Ireland	0.020	0.012	-0.015	-0.035	-0.018
	(0.36)	(0.34)	(1.56)	(1.75)+	(2.10)*
Italy	-0.072	-0.155	-0.038	-0.143	-0.062
	(0.98)	(3.83)**	(2.87)**	(6.55)**	(5.46)**
Spain	0.330	-0.003	0.048	-0.141	-0.003
	(1.20)	(0.03)	(1.05)	(2.44)*	(0.08)
Unrate_f	-0.023	-0.007	-0.005	0.002	-0.004
	(2.19)*	(1.16)	(2.80)**	(0.48)	(2.58)**
Pseudo R2	0.09	0.06	0.05	0.10	0.06
Pred. Prob.	0.17	0.27	0.07	0.11	0.09
Observations	3.993	12.586	28.982	12.261	55.743

+ significant at 10%; * significant at 5%; ** significant at 1%
Other independent variables: Year95, Year96, Year97

Source: ECHP 1994-1998; own calculations

Table 1b: Transition Probabilities: Probit Regression Models (marginal effects and robust z-statistics in parenthesis), EU males only

Status in t+1: Work				
Status in t:	**Attached**	**Unemployed**	**Education**	**Others**
Age	-0.008	-0.007	0.011	-0.004
	(5.90)**	(10.64)**	(7.88)**	(13.16)**
Edu_l	-0.091	-0.090	-0.020	-0.050
	(2.56)*	(5.14)**	(1.80)+	(6.55)**
Edu_m	-0.043	-0.059	-0.041	-0.021
	(1.21)	(3.37)**	(3.66)**	(2.65)**
Foreign	-0.125	-0.082	-0.047	-0.034
	(2.29)*	(2.69)**	(1.85)+	(2.06)*
Hhsize	0.005	-0.002	-0.000	-0.003
	(0.61)	(0.46)	(0.08)	(1.40)
Livingto	0.097	0.145	0.008	0.096
	(2.62)**	(8.86)**	(0.36)	(8.69)**
Child14	-0.002	0.009	-0.002	0.006
	(0.15)	(1.13)	(0.25)	(1.36)
Ehhinclog	0.002	0.004	-0.014	-0.013
	(0.11)	(0.50)	(3.14)**	(3.75)**
Neperiod	-0.024	-0.033	-0.020	-0.020
	(4.48)**	(10.43)**	(3.59)**	(11.96)**
Miss_neper	-0.205	-0.100		-0.087
	(1.51)	(1.03)		(2.04)*
Reason_e	0.114	0.147	0.107	0.148
	(3.46)**	(10.04)**	(4.77)**	(13.44)**
Reason_f	0.081	0.250	0.232	0.223
	(0.53)	(3.13)**	(1.03)	(4.09)**
Reason_o	0.110	0.132	0.090	0.099
	(2.68)**	(6.36)**	(5.69)**	(10.12)**
Austria	0.016	-0.053	-0.078	-0.069
	(0.15)	(0.95)	(3.35)**	(3.89)**
Denmark	0.058	0.079	0.032	0.030
	(0.73)	(1.69)+	(1.13)	(1.48)
Belgium	-0.063	-0.084	-0.093	-0.072
	(0.87)	(1.83)+	(5.33)**	(5.06)**
Netherlands	0.164	0.060	0.062	0.029
	(1.84)+	(1.28)	(2.07)*	(1.61)
France	-0.013	-0.092	-0.145	-0.051
	(0.14)	(2.05)*	(7.96)**	(2.87)**
Portugal	0.087	0.053	-0.092	-0.038
	(1.05)	(1.27)	(5.68)**	(2.63)**
Greece	-0.023	0.008	-0.111	-0.071
	(0.24)	(0.19)	(7.06)**	(5.16)**
Ireland	-0.115	-0.046	-0.036	-0.001
	(1.13)	(0.83)	(1.15)	(0.02)
Italy	-0.106	-0.107	-0.163	-0.101
	(1.41)	(2.68)**	(9.88)**	(7.15)**
Spain	-0.107	-0.021	-0.170	-0.085
	(0.59)	(0.23)	(4.21)**	(2.40)*
Unrate_m	0.010	-0.002	0.007	-0.000
	(0.62)	(0.34)	(1.37)	(0.12)
Pseudo R2	0.08	0.05	0.10	0.08
Pred. Prob.	0.26	0.41	0.14	0.14
Observations	1.683	9.334	10.592	19.893

+ significant at 10%; * significant at 5%; ** significant at 1%
Other independent variables: Year95, Year96, Year97

Source: ECHP 1994-1998; own calculations

Household size had a significant positive impact for those women who were less attached to the labour market, while for the *Attached* and *Unemployed* the coefficients were not significant. Informal child care

possibilities i.e. family support, particularly from older female relatives could perhaps be a factor driving this result. According to the assumptions of the New Household Economics, the number of children under the age of 14 in the household should have a significant negative influence on female's transition probabilities - but not for men. Exceptions to this are the female and male *Attached* who show no significant coefficients for the "child-variables". The years spent outside work have the expected significant negative influence on the transitions probabilities for all groups. This effect is more evident for female groups who are closer to the labour market notably the *Unemployed* and *Attached*. Clearly those who are only loosely attached (if at all) to the labour market might often take a job by chance, while others who are more eagerly looking for work in a highly competitive labour market, experience the disadvantages of having less work experience.

The results underline the expected importance of education for women's labour market participation. Women below secondary education had the lowest transition probability whilst those with a secondary education had lower rates than women with third level education. In most estimates income had the expected negative effect for groups outside the labour force. The income effect for *Unemployed* females however, was surprisingly positive. This might be due to an uncontrolled "partner composition" effect, meaning that women with partners who earn a higher income might have a higher work attachment. Similar unexpected results were found for the UK (Iacovou and Berthoud 2000). Further to this the different reasons for not working had a significant influence on transition into work. A strong positive effect on the transition probability (compared to the reference group) is due mainly to family related reasons for female's who were closely related to the labour market (the group of the *Attached* and the *Unemployed*). This indicates the trend that women return to the labour market after a period of family work (child care for example).[19] *Attached* and *Unemployed* females, who lost their job because of exogenous reasons like redundancy, also had relatively high transition probabilities compared to those non-employed who had more or less work experience.

Chances are constrained in the labour market in times of high unemployment. This is confirmed by the negative sign of the female unemployment variable.[20] Interestingly, the effect was not significant for unemployed females. The unemployment rate for males in our model for males was not significant. There are significant differences in the transition probabilities between the countries (which should reflect the non observed situation in a country). As shown in Holst and Spiess (2002: 62), Germany in

[19] For men family related reasons were not significant for the *Attached* but significant for the *Unemployed* and *Others*.

[20] We also controlled to for male's unemployment rate (additional), which was not significant.

the period under observation, recorded one of the slowest growing economies in the EU. But this does not necessarily mean that the labour market was static. In our sample of the 11 EU countries the opposite is the case as no other country dummy had a significantly higher coefficient than Germany during the time under observation. This is especially true for the results based on the female sub-samples and there are only very few exceptions for males.

4.2 Transition Probabilities into Work - All eleven EU countries together

Which country cluster has higher dynamics into work?

In the second step we examined the potential impact that gender-specific country regimes have on the transition probabilities into work. Our models remain the same as in the first step, but rather than using ten country clusters, we use the "more conservative/less conservative" cluster as described above.[21] The Probit regressions (see Table 2) show that for the more conservative country cluster there was significantly lower transition probabilities than for the less conservative one and that this holds for all non-employed groups. Further, there is an indication that for females in the *Unemployed* group there is a lower probability of finding a job as compared to men. Assuming, ceteris paribus, that the *Unemployed* have the most urgent need to work, these results indicate a worse situation for this group of women again when compared to men. Men appear to have lower transition rates the lesser their attachment to the labour market is. For example, in the group of the *Attached,* male transition probabilities are already somewhat higher than those for females and almost twice as high for the so-called *Others*. Very often it is the case that men have different reasons from women for staying out of the labour market. While women are absent from the labour market more often because of family obligations, men are so, often because of early pension, education or training which may absorb their available time. Therefore men outside the labour force might have lesser labour orientation than women. In other words, if they want to work, they transfer to the group of the Unemployed while females might accept a convenient job by chance. In general, men are more successful in the labour market as the overall transition probabilities show.

Table 2: Transition Probabilities by gender using country clusters: Probit Regression Models (marginal effects and robust z-statistics in parenthesis)

Status in t+1: Work					
Status in t:	**Attached**	**Unemployed**	**Home**	**Education**	**Others**
EU females					
More_cons	-0.083 (4.55)**	-0.096 (7.78)**	-0.003 (0.73)	-0.011 (1.35)	-0.020 (5.86)**

[21] We controlled also for different household compositions within the country clusters by integrating into the model interaction effects between country clusters and (a) number of children as well as (b) number of adults in the household. These results are available from the authors upon request.

Pred. Prob.	0.18	0.27	0.07	0.12	0.09
Pseudo R2	0.07	0.05	0.04	0.06	0.05
Observations	3.993	12.586	28.982	12.261	55.743
EU males					
More_cons	-0.129	-0.034	-	-0.029	-0.042
	(4.07)**	(2.21)*	-	(3.17)**	(6.39)**
Pred. Prob.	0.26	0.41	-	0.15	0.14
Pseudo R2	0.07	0.05	-	0.05	0.06
Observations	1.683	9.334	-	10.592	19.893

+ significant at 10%; * significant at 5%; ** significant at 1%.

Other indepent variables: Age, Edu_l, Edu_m, Foreign, Hhsize, Livingto, Child14, Ehhinclog, Neperiod, Miss_neper, Reason_e, Reason_f, Reason_o, Unrate_f respectively Unrate_m.

Source: ECHP 1994-1998; own calculations

4.3 Transition Probabilities into Work – Separate estimations for two country clusters

Which countries in the clusters have higher dynamics into work?

Turning now the division of the sample into two clusters of countries we estimated the transition probabilities for each particular country in each of the two clusters (see Tables 3a and 3b). The results underline the hypothesis mentioned above that the overall probabilities for females and males are quite lower in each of the more conservative countries than in the ones in the less conservative cluster. Again, differences concerning women are clearly evident for the groups most closely related to the labour market: the *Attached* and *Unemployed*. Their transition probabilities are conspicuously lower in the more conservative countries. The difference in the *Attached* group is certainly manifest. For *Unemployed* men there is only a small difference between the two country clusters in the overall predicted probabilities. Focussing on the countries in the less conservative country cluster for the females, the country dummies indicate that Germany had the highest transition probabilities for the *Attached*; with Austria, Denmark, the Netherlands and Portugal all having significantly lower transition probabilities.

Table 3a: Transition Probabilities by gender and county clusters using country dummies: Probit Regression Models (marginal effects and robust z-statistics in parenthesis)

Status in t+1: Work					
Status in t:	**Attached**	**Unemployed**	**Home**	**Education**	**Others**
EU females – less conservative countries					
Austria	-0.250	-0.171	-0.101	-0.135	-0.099
	(3.85)**	(1.97)*	(3.78)**	(3.54)**	(5.14)**
Belgium	-0.064	0.005	0.071	-0.067	-0.027
	(0.73)	(0.08)	(1.78)+	(1.70)+	(1.43)
Denmark	-0.148	-0.046	-0.039	-0.022	-0.009
	(3.07)**	(1.10)	(1.90)+	(0.73)	(0.67)
France	0.167	0.027	0.086	-0.089	0.030
	(1.19)	(0.28)	(1.50)	(1.46)	(0.99)
Netherland	-0.187	-0.088	-0.081	-0.014	-0.055
	(3.77)**	(1.95)+	(5.65)**	(0.41)	(4.55)**
Portugal	-0.194	-0.089	-0.067	-0.130	-0.068
	(3.67)**	(1.96)*	(3.74)**	(4.92)**	(5.57)**
Pred. Prob.	*0.23*	*0.34*	*0.08*	*0.14*	*0.12*
Pseudo R2	0.08	0.05	0.07	0.08	0.06
Observations	1.823	4.435	8.899	5.412	23.440
EU females – more conservative countries					
Ireland	0.155	0.166	0.003	0.133	0.020
	(3.68)**	(6.07)**	(0.45)	(6.23)**	(3.30)**
Italy	0.034	-0.030	-0.027	-0.062	-0.025
	(1.07)	(1.68)+	(4.82)**	(5.19)**	(5.13)**
Spain	0.266	0.077	0.030	-0.078	0.022
	(1.34)	(0.85)	(0.98)	(1.39)	(0.85)
Pred. Prob.	*0.13*	*0.23*	*0.07*	*0.08*	*0.07*
Pseudo R2	0.07	0.06	0.04	0.10	0.05
Observations	2.170	8.151	20.083	6.849	32.303

+ significant at 10%; * significant at 5%; ** significant at 1%

Other independent variables: Age, Edu_l, Edu_m, Foreign, Hhsize, Livingto, Child14, Ehhinclog, Neperiod, Miss_neper, Reason_e, Reason_f, Reason_o, Unrate_f

Source: ECHP 1994-1998; own calculations

Table 3b: Transition Probabilities: Probit Regression Models (marginal effects and robust z-statistics in parenthesis)

Status in t+1: Work				
Status in t:	**Attached**	**Unemployed**	**Education**	**Others**
EU males – less conservative countries				
Austria	-0.166	0.021	-0.100	-0.085
	(1.20)	(0.23)	(2.29)*	(2.81)**
Belgium	-0.055	-0.109	-0.110	-0.076
	(0.63)	(2.19)*	(4.75)**	(4.24)**
Denmark	-0.046	0.112	0.027	0.030
	(0.51)	(2.20)*	(0.75)	(1.19)
France	0.165	-0.181	-0.201	-0.051
	(1.03)	(2.29)*	(4.54)**	(1.62)
Netherlands	-0.002	0.107	0.057	0.021
	(0.02)	(1.82)+	(1.39)	(0.87)
Portugal	0.026	0.087	-0.123	-0.051
	(0.27)	(1.79)+	(5.32)**	(2.75)**
Pred. Prob.	*0.31*	*0.45*	*0.16*	*0.16*
Pseudo R2	0.12	0.08	0.09	0.08
Observations	734	2.875	4.593	9.311
EU males – more conservative countries				
Ireland	-0.145	-0.041	0.143	0.075
	(1.22)	(0.71)	(3.17)**	(2.52)*
Italy	-0.116	-0.096	-0.064	-0.027
	(1.28)	(2.86)**	(2.97)**	(1.76)+
Spain	-0.221	0.001	-0.055	0.003
	(1.15)	(0.01)	(0.86)	(0.06)
Pred. Prob.	*0.23*	*0.40*	*0.12*	*0.11*
Pseudo R2	0.06	0.05	0.10	0.08
Observations	932	6.454	5.999	10.582

+ significant at 10%; * significant at 5%; ** significant at 1%
Other independent variables: Age, Edu_l, Edu_m, Foreign, Hhsize, Livingto, Child14, Ehhinclog, Neperiod, Miss_neper, Reason_e, Reason_f, Reason_o, Unrate_m.

Source: ECHP 1994-1998; own calculations

4.4 Transition Probabilities into Work for 11 countries separately

Which countries have the highest dynamics into work?

We now evaluate the transition probabilities for each particular country with the view to gaining an insight into the dynamics of the *Attached* (and the other non working groups) in relation to work (see Tables 4a and 4b & Figures 1a and 1b). We still focus on differences and similarities of the countries with regard to our two clusters of countries. The less conservative countries had in the main, higher transitions rates than the more conservative countries. An exception to this is Ireland, perhaps due to the positive economic development in the period of observation, as mentioned above. Germany had one of the highest transition probabilities of all non employed groups. Germany also shows the highest transition probability for the female *Attached*. Those with a lower labour market attachment found a high integration in the labour market in Germany. When it comes to women in *Education*, Denmark, the Netherlands, and again Germany appear to be "leaders". The lowest chances are found in the southern

countries Italy, Greece and Spain and also in France. The situation for men points in the same direction but their transition probabilities are in almost all countries and in almost all non working groups higher than those for females.

The problematic situation for females in comparison to males is also most patent in the southern countries Italy, Greece and Spain. The transition probabilities for the unemployed males are approximately twice as high as those for the unemployed women. Unfortunately the number of observations of the male *Attached* was in many countries too low to make direct comparisons for all countries. But the figures available confirm this pattern for the *Attached* too. This means that when the urge to get a job is especially high – for *Unemployed* and *Attached* – the chances for females are especially low in these more conservative countries.

Table 4a: Predicted Transition Probabilities into Work by Country – females only

Status in t+1: Work										
Status in t:	**Attached**		**Unemployed**		**Home**		**Education**		**Others**	
Country	Prob.	N	Prob.	N	Prob.	N	Prob.	N	Prob.	N
Germany	0.34(1)	104	0.40(1)	452	0.14	1102	0.31(6)	270	0.16	1707
Denmark	0.26(1)	253	0.45(1)	403	0.09(1)	149	0.37(1)	430	0.21(1)	1212
Netherlands	0.23(1)	257	0.36(1)	615	0.08(1)	1264	0.34(3)	262	0.12(1)	4088
Belgium	0.10(1)	206	0.31	494	0.05	939	0.13	756	0.07	2571
France	0.20(1)	505	0.27	1523	0.03(1)	1777	0.08(1)	1868	0.10	6004
Ireland	0.28(1)	171	0.41(1)	529	0.09(1)	3425	0.29(1)	859	0.12(1)	4814
Italy	0.11(2)	1147	0.17	2792	0.05(5)	6013	0.05(3)	2356	0.05(5)	10914
Greece	0.11(3)	266	0.25(1)	1595	0.08(1)	4680	0.08(6)	1181	0.09(1)	6954
Spain	0.14(2)	570	0.26(1)	3230	0.06(1)	5940	0.08(2)	2439	0.07(1)	9588
Portugal	0.26(2)	376	0.38(1)	718	0.12(1)	2463	0.13(6)	1419	0.12	5640
Austria	0.10(1)	122	0.42(1)	219	0.10	1193	0.12(1)	386	0.09	2215

(1) Miss_neper dropped. (2) Miss_neper and Foreign dropped. (3) Miss_neper, Foreign and Reason_f dropped. (4) Reason_f dropped. (5) Foreign dropped. (6) Reason_f and Miss_neper dropped .

Source: ECHP 1994-1998; own calculations

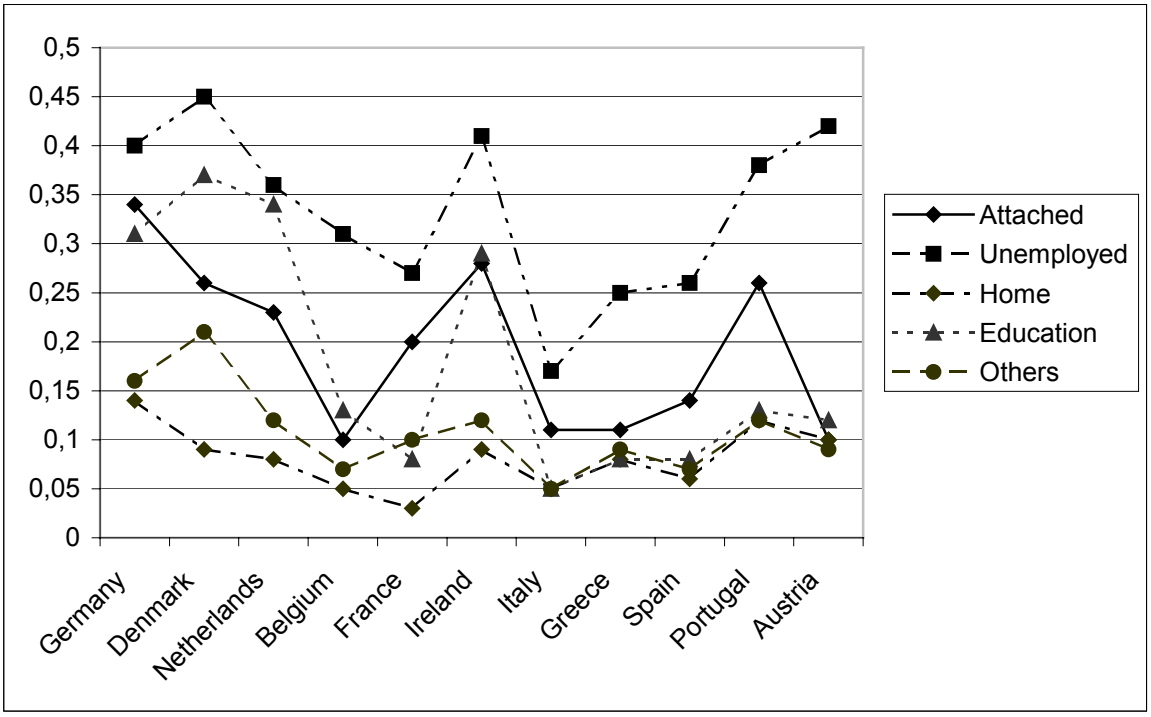
Table 4b: Predicted Transition Probabilities into Work by Country – males only

Status in t+1: Work								
Status in t:	**Attached**		**Unemployed**		**Education**		**Others**	
	Prob.	N	Prob.	N	Prob.	N	Prob.	N
Germany	(7)	43	0.45(6)	241	0.34(6)	322	0.20(1)	574
Denmark	0.31(6)	114	0.57(6)	318	0.43(6)	242	0.24(6)	555
Netherlands	(7)	94	0.50(6)	342	0.40(3)	285	0.19(1)	1231
Belgium	(7)	89	0.36(4)	285	0.16(6)	701	0.11(1)	1144
France	0.29(6)	169	0.36(4)	997	0.09(6)	1515	0.14(4)	2731
Ireland	0.16(3)	219	0.37(1)	855	0.36(6)	912	0.22(6)	1637
Italy	0.21(3)	440	0.32(1)	2458	0.07(3)	2080	0.08 (5)(4)	3975
Greece	(7)	29	0.50(1)	876	0.10(6)	954	0.12(3)	1640
Spain	0.30(3)	231	0.44(1)	2565	0.10(6)	2050	0.11(1)	3300
Portugal	0.38(3)	136	0.53(6)	520	0.15(6)	1199	0.15(1)	2273
Austria	(7)	58	0.44(6)	158	0.16(6)	319	0.11(1)	767

(1) Miss_neper dropped. (2) Miss_neper and Foreign dropped. (3) Miss_neper, Foreign and Reason_f dropped. (4) Reason_f dropped. (5) Foreign dropped. (6) Reason_f and Miss_neper dropped. (7) The predicted probablities are not presented, due to small sample sizes.

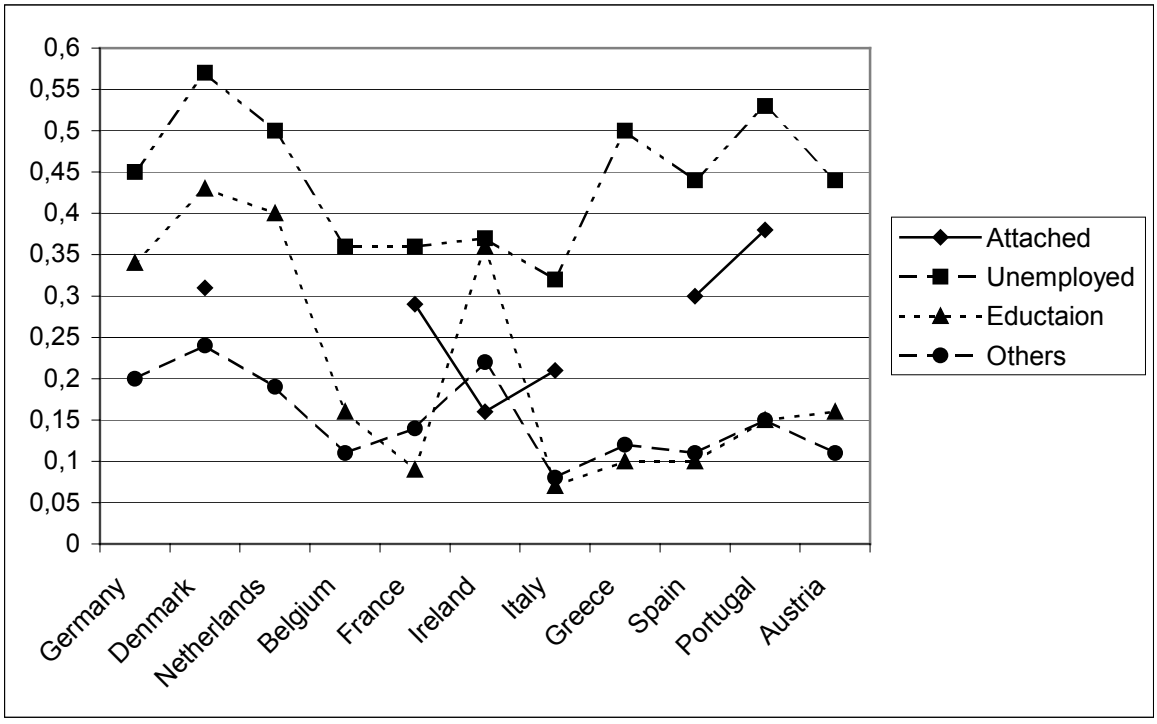
Source: ECHP 1994 - 1998; own calculations

Figure 1a: Predicted Transition Probabilities into Work – females only



Source: ECHP 1994-1998; own calculations

Figure 1b: Predicted Transition Probabilities into Work – males only



Source: ECHP 1994-1998; own calculations

More similarities than differences in the predicted transitions probabilities between the countries – compared to the *Attached* and the *Unemployed* - were found in the group of the so-called *Others*. The variation was comparably small, with Denmark and Germany having the highest transition probabilities

(21% and 16%) and all other countries with transition probabilities of 12% or lower (lowest in Italy with 5%) . Overall the results give the impression that especially in the southern countries from the group more conservative, and here primarily Italy, have severe problems in integrating non working women in the labour market.

5. Conclusions

The aim of this paper was to show that there exists a HLF in all European countries that cannot be ignored, with the proviso as stated above that we cannot provide information as to the extent of this. The results have made clear that this is the case. We identified a group, the *Attached*, who have a stronger attachment to the labour market than others outside the labour force. Therefore they are in "competition" with the unemployed. We also looked for evidence that females and males differ in their transition probabilities into work in the EU in general and in each country in particular. To motivate the topic, we posited that a particular regime is either more or less gender-friendly with respect to inclusion into, and exclusion from the labour market respectively. It would appear that this distinction was valid - although all our estimations controlled for socio-demographic, economic factors and some macro indicators. To show commonalities and differences in the EU and between the countries we estimated a series of probit regression models for all EU countries altogether (including individual country dummies and the two country-cluster dummies as described in chapter 2), for each of the two country clusters, and finally for each specific country separately. In order to get an impression of the gender specific influence of the independent variables on different levels of aggregation all estimations were made for women and men separately.

The regressions for all 11 EU countries together showed clearly the different labour market transition probabilities between females and males, more specifically that females overall had a lower transition probability in all non working groups compared to males. The results also gave support to the proposition that traditional gender roles have a negative effect on female labour market participation. Family status for example, had the expected negative effect for married females and those living together with a partner, whereas a positive effect for the corresponding group of men. Further to this, the number of younger children in the household has a negative effect for mothers but not for fathers.

In grouping countries in the sample into either a more or less conservative country cluster, based on considerations of Esping-Andersen and others, we found significant differences in the group of females. Those in the more conservative cluster had the lowest transition probabilities in all non employed groups. Gender specific differences arose when we took the need to work into account. Women on

average in the *Unemployed* group had a far lower probability of finding a job compared to men which we attribute to family commitments or other structural constraints. Where men's transition probabilities are low, this is probably associated with a lower expressed need to work and lower labour market attachment as opposed to structural constraints. In other words, this could mean that women outside the labour market would be inclined to work more often i.e. they are only unemployed for example because of family commitments, and if it were possible, would take a job when offered, while men would not be inclined to do so as men outside the labour market probably do not want to work. This leads to the proposition that for females and males in the groups with a strong labour market attachment, the chances of men getting a job is higher. While those in the groups of loose or no labour market attachment at all, women have better chances perhaps because they are looking for a job by chance more often.

In the estimations for each country separately one similarity was striking: there was no country in which women were, in their overall transition probabilities into work, better off than men. In almost all non working groups, men's transition probabilities were higher than those for females. Results for each individual country showed that Germany had one of the highest transition probabilities in all of the non-employed groups despite its relatively slack economic performance during the period under observation. This is evidently the case for the female *Attached*, who perform considerably better than those in other countries. Denmark also did quite well, notably when it came to the transition probabilities of the *Unemployed*. For females differentials arise in comparison to males, in the southern countries such as Italy, Greece and Spain. When the urge to get a job is especially high as it is for the *Unemployed* and *Attached*, these countries provided very poor chances for women in comparison to men. These countries do not offer adequate conditions or policies, to enable women to combine family and work.

Our results are only an initial step towards a deeper understanding of the HLF and the labour market dynamics in general in Europe based on micro data. Traditional measures of the labour force have to be re-evaluated and more research is needed to be carried out on this. What is required, we would argue, is an EU data set with a reasonable sample size for a group of *Attached* outside the labour force. Further to this, it must also be able to provide a more comprehensive and sophisticated study of the HLF. We have attempted to deliver an insight into the opportunities that a rich data set could deliver for future research on this important but widely unknown phenomenon.

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Appendix

Table A-1: Definitions and descriptive statistics of independent variables

Variable	Description
Socio-demographic Variables in t	
Age	Age in Years
Edu_l	Less than second stage of secondary education = 1
Edu_m	Second stage of secondary level education = 1
	Reference category: Recognised third level education (Edu_h) = 1
Foreign	Foreigners = 1
Hhsize	Number of persons 18 Years of age or older who live in the household
Livingto	Married or living in consensual unit = 1
Child14	Number of children under the age of 14 in the household
Income Variable in t	
Ehhinclog	Equivalent net household income (in purchasing power parities)
Variables related to previous job before t	
Neperiod	Number of Years outside the labour force since previous job (working 15 hrs/w or more)
Miss_neper	Missing information for "Neperiod" = 1
	Reasons for stopping previous job:
Reason_e	Exogenous reasons: employer related reasons or temporary job =1
Reason_f	Family related reasons = 1
Reason_o	Others = 1
	Reference category: No previous job or previous job started before 1980 *and* person stopped working in last job at the earliest 2 years before it joined the survey.
Country and Year Variables in t	
Den	Denmark = 1
Neth	Netherlands = 1
Belg	Belgium =1
Fran	France = 1
Irel	Ireland = 1
Italy	Italy = 1
Greece	Greece = 1
Spain	Spain = 1
Port	Portugal = 1
Aust	Austria = 1
More_cons	Ireland, Italy, Greece, Spain = 1
	Reference category: Less_cons (Austria, Germany, Denmark, The Netherlands, Belgium, France, Portugal)
Year95	Year t 1995 = 1
Year96	Year t 1996 = 1
Year97	Year t 1997 = 1
	Reference category: Year t 1994 = 1
Labour Market Variables in t	
Unrate_f	Female unemployment rate (national level)
Unrate_m	Male unemployment rate (national level)

Source: Author`s.

Table A-2: Descriptive Statistics of Independent Variables

Variables	All		Females only		Males only	
	mean	s.d.	mean	s.d.	mean	s.d.
Socio-demographic Variables						
Age	36.75	11.781	36.75	11.776	36.75	11.787
Edu_l	0.45	0.498	0.46	0.499	0.44	0.497
Edu_m	0.35	0.477	0.34	0.475	0.36	0.479
Foreign	0.02	0.140	0.02	0.139	0.02	0.141
Hhsize	3.70	1.496	3.68	1.488	3.70	1.504
Livingto	0.66	0.473	0.68	0.468	0.65	0.479
Child14	0.65	0.940	0.65	0.942	0.64	0.938
Income Variables						
Ehhinclog	9.12	0.756	9.11	0.760	9.14	0.750
Variables related to previous job						
Neperiod	2.32	4.280	2.38	4.624	2.26	3.884
Miss_neper	0.01	0.092	0.01	0.098	0.01	0.085
Reason_e	0.17	0.381	0.16	0.366	0.19	0.395
Reason_f	0.87	0.283	0.12	0.325	0.05	0.225
Reason_o	0.07	0.255	0.07	0.257	0.07	0.254
Country and Time Variables						
Deu	0.04	0.207	0.04	0.207	0.04	0.209
Den	0.05	0.211	0.05	0.211	0.05	0.213
Neth	0.09	0.286	0.09	0.290	0.09	0.284
Belg	0.06	0.233	0.06	0.235	0.06	0.232
Fran	0.12	0.327	0.12	0.329	0.12	0.327
Irel	0.07	0.261	0.07	0.258	0.07	0.265
Italy	0.17	0.375	0.17	0.374	0.17	0.377
Greece	0.10	0.300	0.10	0.303	0.10	0.298
Spain	0.14	0.346	0.14	0.345	0.14	0.347
Port	0.10	0.305	0.10	0.306	0.10	0.306
Aust	0.05	0.216	0.05	0.216	0.05	0 .216
Year94	0.27	0.441	0.27	0.441	0.27	0.441
Year95	0.27	0.445	0.27	0.446	0.27	0.446
Year96	0.24	0.426	0.24	0.426	0.24	0.426
Year97	0.22	0.416	0.22	0.416	0.22	0.416
Less_cons	0.52	0.499	0.52	0.499	0.51	0.499
More_cons	0.48	0.499	0.48	0.499	0.49	0.499
Labour Market Variables						
Unrate_f	14.45	7.083			14.49	7.098
Unrate_m	9.18	4.228	9.16	4.222		
Grouping Variables						
Men	0.51	0.499				
Others	0.28	0.445	0.40	0.489	0.15	0.358
Home	0.11	0.318	0.21	0.405	0.00	0.035
Unemployed	0.08	0.278	0.09	0.285	0.07	0.256
Education	0.09	0.279	0.09	0.285	0.08	0.273
Attached	0.02	0.144	0.03	0.168	0.01	0.113

Source: ECHP 1994-1998; own calculations. Note: s.d.=standard deviation