Self-employment in Spain during the Nineties:
An Approach to its Determinants and Success

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Abstract

This paper investigates the determinants of self-employment entry and success in Spain during the Nineties by means of two complementary data sets. The data used come from the European Community Household Panel (ECHP) and from the Spanish Continuous Expenditure Survey (ECPF). Toward this end, different transitions are explicitly considered by means of different starting status –unemployed or paid-employed- and final destinations –employers and own-account workers-. In addition, the decision of entering employership from own-account work is also analyzed, as a sign of success. In conducting this analysis, discrete choice models, including binary and multinomial logit models are applied. We obtain evidence of how all informal processes of acquisition of this capital (i.e. previous experience in the labour market or intergenerational transfers) present stronger effects than those attached to formal education. In addition, and consistent with the idea that self-employment is seen as an alternative to unemployment, transitions from unemployment are much more likely than transitions from paid-employment. Finally, we obtain little evidence in favour of any of the hypotheses of the *push-pull* controversy, which might be explained by the existence of both effects working at the same time (as a result, neither dominates the other).

Keywords: Entrepreneurship, self-employment, unemployment, occupational choice

JEL classification: J24, J64, J68, M13, L26

1. Introduction

Spanish unemployment rate stood at 18,8 percent in the fourth quarter of 2009, the second higher rate in the 27-nation EU, and the highest rate in the 16-nation euro area (Eurostat, 2010) and the number of people out of work rose to 4.3 million, the highest number since 1994:1 (3.9 million). Already in just over a year, Spain had gone from creating over a third of new jobs in the European Union to destroying more than France, Britain and Italy put together. Unfortunately, this phenomenon is not new. Over the last quarter century, the Spanish unemployment trend has been clearly up with a remarkable volatility (see Figure 1).[1]
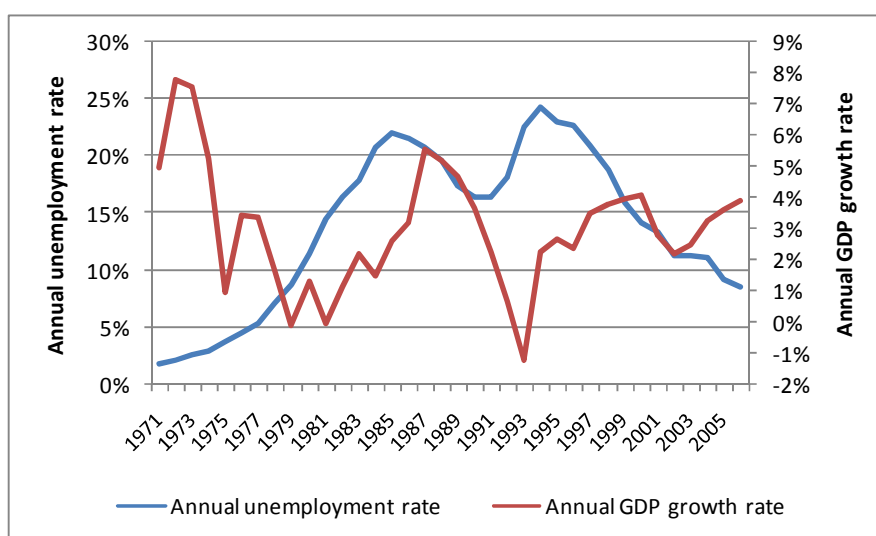

Fig. 1. Unemployment rate and GDP growth rate in Spain, 1971-2006
Data Source: I.N.E., Spanish Labour Force Survey and Spanish National Accounts

Undoubtedly, unemployment was one of the main problems suffered by Spanish Economy during the last decades. Together with the incidence of changes in the demographic and socio-economic structure of the labour force –rises in the labour force participation of women included (Bover and Arellano, 1995)-, the main reason lies with the unemployment-prone nature of Spanish labour institutions, in particular employment protection legislation (EPL), unemployment benefits, and collective bargaining.[2] Indeed, alternative OECD indicators measuring EPL strictness indicates that countries of Southern Europe, especially Spain and Portugal, tend to have the strictest regulations in OECD's countries.[3] In this sense, from 1984 onwards Spanish labour authorities have implemented important actions to reduce labour

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[1] At the end of 1975 the Spanish unemployment rate stood at 3.4%. As Figure 1 shows, it then rose for ten years, peaking at 21.4%, fell back to a through of 16.3% in 1990-91, and shot up again to 24.1% in 1994. Since 1995 it has fallen, to 12.9% in 2001.

[2] The high degree of employment protection, the importance of collective bargaining to establish employment conditions; the low level of functional and geographical mobility reinforced by the need to acquire court's approval for changing job's functional and geographic characteristics; and the generosity of the Spanish unemployment benefit system discouraging the search for employment together a relative large importance of the grey economy have been characteristics of the institutional framework which can help us to understand the persistently high level of unemployment in Spain (Blanchard and Jimeno, 1995; Bover *et al.*, 2002; Bentolila and Jimeno, 2003).

[3] EPL comprises measures designed to protect the rights of employees at work. As defined by the OECD, employment protection refers to regulations about hiring (e.g., rules favouring disadvantaged groups, conditions for using temporary or fixed-term contracts, and training requirements) and firing (e.g., redundancy procedures, mandated pre-notification periods and severance payments, special requirements for collective dismissals, and short-time work schemes).

market rigidities.[4] None of these reforms, however, conclusively achieved the proposed objectives. Therefore, it is hardly surprising the promotion of transitions from unemployment (and other target groups) to self-employment that occurred in Spain during the last two decades (as happened in most European countries). Thus, these incentives became a suitable instrument of the active labour market policy[5], that is, a way to open up new sources of employment which in turn shall help to reduce unemployment.[6]

Hence, all these specific features –extreme economic fluctuations, increasing unemployment trend, small effects of the labour law reforms-, together with the radical changes for the Spanish economy produced by the incorporation to the Single Market in 1986 -appearance of new opportunities and presence of important Structural and Cohesion Funds[7] which resulted in a growth of the existing entrepreneurial dimension[8], resizing of sectors and reallocations of labour-, turned Spain into a paradigmatic object of study in order to detect the underlying determinants of self-employment, as an alternative to unemployment.

Addressing this question is precisely the main aim of this work, that is, to search for the individual determinants of the decision of entering self-employment from unemployment as opposed to the transitions from wage work which are also analyzed. Concerning final destinations, this paper distinguish between own-account worker and employer, related but distinct groups. In addition, as a sign of success and business resizing, this paper analyses the individual decision of hiring employees, that is, the transition from own-account work to employership. This kind of analysis does not exist to date for Spain, to our knowledge.[9] Along this study, we also attempt to contribute with the existing controversy on the role of aggregated economic factors on the individual decision of entering self-employment, that is, to test whether higher or lower unemployment rates lead more people to become self-employed (push and pull hypotheses, respectively).[10]

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[4] Illustrative examples of these policies mention include i) the 1984 Employment Promotion Programme (based on fostering fixed-term employment contracts); the Unemployment Insurance Act in April 1992 (which made eligibility requirements for unemployment insurance more restrictive and curtailed benefit amounts) —See Alba-Ramírez (1999) for a study of the effects of this last action-; iii) the 1994 Labour Market Reform (which allowed Temporary Help Agencies to operate for the first time); iv) or the 1997 Labour Market Reform (which introduced a new typology of permanent contract with lower firing costs targeted at "protected categories" of workers: young people under 30 years, old, long-term unemployed, people above 45 years old, and disabled individuals) —See García-Pérez and Muñoz-Bullón (2005) for an interesting analysis of the effects of 1994 and 1997 reforms-.

[5] These transitions are promoted by advice, training, grants, loans and income support, among others.

[6] Promoting transitions from unemployment to self-employment will reduce unemployment directly (new self-employed people) and indirectly (creating further jobs in the newly-founded firms).

[7] Structural and Cohesion Funds are funds allocated by the European Union. Structural Funds' objectives are i) supporting development in the less prosperous regions, and ii) revitalising areas facing structural difficulties. The Cohesion fund funding is for Member States whose gross national income is below 90% of the EU average, and contributes to interventions in the field of the environment and trans-European transport networks.

[8] An opposite evolution can be observed of both groups' rates within self-employment, that is, own-account workers and employers during the last decades. Thus, the rate of employers increased whereas the proportion of own-account workers decreased (see Figures A1-A3 -Appendix A-). This evolution has supposed a radical change in the self-employment composition.

[9] Congregado *et al*. 2010 investigates the individual decision of becoming self-employed with employees from own-account self-employment in the EU-15.

[10] The theory provides an ambiguous prediction. Thus, the *recession-push* hypothesis states that when prospects on the labour market worsen, people will enter self-employment due to lack of alternative employment options. In contrast, the *prosperity-pull* argument states that individuals will enter self-employment, when prospects in the economy are good because of favourable business conditions and good demand.

This work updates and extends other microeconometric researches devoted to the analysis of transitions to self-employment in Spain (Alba-Ramírez, 1994, based on the Working and Living Conditions Survey –ECVT 85-, Carrasco, 1999, based on the Household Budget Continuous Survey –HBCS or ECPF[11]-; Aguado *et al.*, 2002, Carrasco and Ejrnæs, 2003, Congregado *et al.*, 2005, 2006, and Congregado and Millán, 2008, based on the European Community Household Panel –ECHP-). This work follows the spirit of those works. However, the aim, data and exercises differ from those investigations in some ways. Firstly, the eight available waves of the ECHP panel for Spain (1994-2001) are used, and results are reported from an alternative sample from the Spanish Continuous Expenditure Survey (ECPF). The two samples spread over the Nineties period with some overlapping for the second half of the Nineties. Secondly, different underlying determinants for different transitions are explicity considered by means of different starting status –unemployed or paid-employed- and final destinations –employers and own-account workers-.

Our main empirical results can be summarized as follows. In general, similar results are obtained with the ECPF and the ECHP samples. Regarding human capital, it was noted how all informal processes of acquisition of this capital (i.e. previous experience in the labour market or intergenerational transfers) present stronger effects than those attached to formal education. On the other hand, consistent with the idea that self-employment is seen as an alternative to unemployment, we observe how transitions from unemployment are much more likely than transitions from paid-employment. With respect to the underlying determinants of these transitions, we find higher self-employment chances among men, middle-aged workers, the workers with some self-employed relatives, and those with previous experience within self-employment. Concerning entries from paid-employment, we also obtain higher self-employment likelihood for those with greater capital and property incomes, whereas the presence of unemployment benefits and the length of the unemployment spell seem to decrease unemployment exits. As regards to the decision of entering employership from self-employment without employees, our results also show that males, and those with previous experience as self-employment are more likely to recruit personnel. Finally, we obtain little evidence in favour of any of the hypotheses of the *push-pull* controversy, which might be explained by the existence of both effects working at the same time (as a result, neither dominates the other).[12]

The remainder of this paper is structured as follows. Section 2 briefly describes the data. In Section 3, the econometric framework is described, and Section 4 presents the main empirical results of this work. Finally, the concluding remarks of the study are put forth in Section 5.

2. Data

Our analysis as a whole focuses on self-employed individuals, and differentiates between employers and own-account workers. The data used come from the European Community Household Panel (ECHP 94-01) for Spain, and from the Spanish Continuous Expenditure Survey (ECPF 1990I-1997I). The fact that a relatively long period of data is available allows us to study the influence of, not just personal characteristics, but also changes in the aggregate conditions. Despite the fact that women have lower self-employment rates, our samples include

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[11] The Spanish nomenclature of this survey is "Encuesta Continua de Presupuestos Familiares" (ECPF), that is, Spanish Continuous Family Expenditure Survey which be used hereinafter.

[12] Neither Lin *et al.* (2000) nor Moore and Mueller (2002) present statistical evidence supporting the dominance of the *push* hypothesis over the *pull* in entries into self-employment in Canada. Román *et al.* (2009) tries to conciliate the existing results in the literature and observes that the *recession-push* argument applies for those entering "dependent" self-employment while the *prosperity-pull* hypothesis applies for individuals switching to "independent" self-employment. Hence, during recessionary periods, transitions to "dependent" self-employment in the EU-15 are more probable, while "independent" self-employment likelihood decreases.

men and women aged 21 to 59. We select the 21-59 age band as different rules of behaviour can be expected among the youngest and oldest individuals, which can distort the results. Workers in the agricultural sector and those individuals who are not full-time workers—that is, those working under 30 hours per week—are also excluded when the ECHP is used.[13] Regrettably, the lack of information about the activity sector and the number of working hours within the ECPF obstructs the same exclusion. Finally, when introducing variables measuring individual incomes, they are corrected by consumer price indexes (comparability across time).

2.1. Spanish Continuous Family Expenditure Survey 1990:I-1997:I[14]

The ECPF is a rotating panel based on a survey conducted by the Spanish National Statistics Office (INE-Instituto Nacional de Estadística). The ECPF reports interviews for about 3,200 households every quarter. One eight of the sample is renewed quarterly and hence an individual can be followed for up to eight consecutive quarters. The ECPF started in 1985:I and kept its main structure until 1997:I. However, to account for what occur during the Nineties, the waves from 1990:I up to 1997:I are just used. This survey contains an exhaustive set of demographic characteristics, including information about labour market status, income and wealth.[15] Individuals in our dataset are asked about their employment status: unemployed, paid-employed, own-account worker and employer, which allows the identification of all the considered transition in our analysis from quarter *t-1* to quarter *t*.

2.2. European Community Household Panel (Spanish Data) 1994-2001[16]

The complementary dataset come from the European Community Household Panel (ECHP) for Spain. The ECHP is a full panel survey panel of households in the EU-15, covering the period 1994-2001, which uses harmonized data of 7,200 households covering over 15,900 individuals for Spain (76,500 households covering over 155,000 individuals in the 15 member states). Every year, all members of the selected households in each country are interviewed about issues relating to demographics, labour market, income and living conditions. The same questionnaire is used for all countries, which makes the information directly comparable.

Individuals in our dataset are asked about their employment status, which allows the identification of those paid-employed and unemployed individuals switching to self-employment from period *t-1* to period *t*. The main problem faced when using this sample is how to distinguish between employers[17] and own-account workers.[18] This information is not directly

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[13] Workers in the agricultural sector are excluded as this sector is structurally different from the rest of the economy. We decided not to include part-time employment in our estimations. This is because those individuals working two jobs at the same time might face short-term problems in one of the two activities and look for complementary income for a certain period of time. That would make the determinants of survival of those individuals simultaneously performing both jobs different from the determinants of those who opt for a single activity. We believe, therefore, that part-time self-employment duration needs to be independently analysed.

[14] Tables B1, B2 and B3 (Appendix B) summarize the mean values of the individuals in the ECPF sample.

[15] Another available data set for Spain is the Labour Force Survey (EPA-Encuesta de Población Activa), which allows to observe the labour market situation of an individual for up to six quarters. However, the EPA does not contain information about wealth variables. In this sense, Millán *et al*. (2008) collect, describe and evaluate all the potential statistical sources in order to study self-employment in Spain

[16] By using the ECHP dataset, Tables A6 and A7 (Appendix A) present the distribution of observations across Spanish regions (NUTS 1) for our exercises, and Tables B4, B5 and B6 (Appendix B) summarize the mean values of the individuals in the ECHP sample.

[17] The International Classification by Status in Employment (ICSE-1993) defines employers as those workers who, working on their own account or with one or a few partners, hold a self-employment job and have contracted one or more persons to work for them in their business as employee(s). The remuneration in the job is directly dependent upon the profits and the incumbents make the operational decisions affecting the enterprise.

available in our sample. However, the ECHP asks about the "number of regular paid employees in the local unit in current job. Thus, those self-employed with 0 employees are considered as own-account workers and employers otherwise.[19] Based on this distinction, we are able to distinguish own-account workers and employers as final states, together with transitions from own-account work in period *t-1* to employer in period *t*.

3. Econometric Specification

This section describes the econometric frameworks used in our analysis. By using discrete choice models, some standard binary logit models and multinomial models (Maddala, 1983) are used. Hence, in order to provide a framework for the empirical analysis we assume, as usual, that the probability of switching from the starting status to the final depends on a set of observed individual characteristics and economic variables *X* at *t-1*.[20]

Transitions from Paid-employment and Unemployment to Self-employment

Thus, an individual who is not self-employed at time *t-1* will be observed in self-employment at time *t* if the utility derived from self-employment exceeds that obtained from either paid employment or unemployment. Consequently, the probability of switching can be written as:

$$\Pr(Y_{i,t}=1) = \Pr(S_{i,t}=1 \mid S_{i,t-1}=0) =$$
$$= \Pr(U_{i,t}^{SE} > U_{i,t}^{SS} \mid U_{i,t-1}^{SE} \le U_{i,t-1}^{SS}) =$$
$$= \Pr(\beta' X_{i,t-1} + u_i + \varepsilon_{i,t} > 0) = F(\beta' X_{i,t-1} + u_i),$$

where $Y_{i,t} = 1$ if the individual who was paid-employed (or unemployed) in period *t-1* becomes self-employed in period *t*, and and $Y_{i,t} = 0$ if the individual continues as paid-employed (or unemployed in the second specification) in period *t*.[21] $S_{i,t-1} = 1$ indicates self-employment in time t and $S_{i,t-1} = 0$ non self-employment in time *t-1*. The vector $X_{i,t-1}$ represents individual characteristics and economic conditions in the previous year to move into the new status, β is the associated vector of coefficients to be estimated, u_i is a disturbance term that includes the time-invariant unobserved heterogeneity (the person-specific effect), $\varepsilon_{i,t}$ is a random error term representing not person-specific unobserved variables, and F(.) follows a logit distribution.[22]

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[18] The International Classification by Status in Employment (ICSE-1993) defines own-account workers as those who, working on their own account or with one or more partners, hold a self-employment job and have not contracted on a continuous basis any employees to work for them.

[19] The criterion is not completely satisfactory as the information relating to the number of employees in the establishment is not available for some individuals who declare to be self-employed. However, the number of observations with this problem is small and their exclusion does not affect our results in a significant way.

[20] Some of the wealth variables included when using the ECHP are the annual capital and property incomes and the own-account work incomes. Both variables have been lagged one year (period t-2) due to the obvious endogeneity problem of the changes in wealth related to business start-up and particularly success. In this sense, inheritance is also included in the estimations when analyzing transitions from own-account work to employer by means of the ECPH in order to avoid endogeneity issues.

[21] The labour force status is observed once per year when using the ECHP –once per quarter when using the ECPF-. Thus, if there are additional changes in status within this period, they are missed. We assume there are just a few of these, and that their exclusion does not affect our results.

[22] The same exercises has been reproduced by using a probit and a complementary log log specification of F(.). However, these estimation do not alter our empirical conclusions in any significant way.

Regarding the multinomial logit specifications, standard errors for intra-individual correlation are adjusted, and can be expressed as a function $\Pr(Y_{i,t} = k | X_{i,t-1})$ where $k = 0, 1, 2$, taking the value 1 if the individual who was paid-employed (or unemployed in the second specification) in period *t-1* becomes employer, the value 2 if the individual becomes own-account worker, and 0 if the individual continues as paid-employed (or unemployed) in period *t*.[23] The probability that individual *i,* experiences a transition from paid-employment (or unemployment) to employer is:

$$\Pr(Y_{i,t} = 1) = \frac{\exp(\beta_1' X_{i,t-1})}{1 + \exp(\beta_1' X_{i,t-1}) + \exp(\beta_2' X_{i,t-1})}$$

And the probability that the individual switches from paid-employment (or unemployment) to own-account work is:

$$\Pr(Y_{i,t} = 2) = \frac{\exp(\beta_2' X_{i,t-1})}{1 + \exp(\beta_1' X_{i,t-1}) + \exp(\beta_2' X_{i,t-1})}$$

Finally, the probability that the individual remains as paid-employed (or unemployed) is:

$$\Pr(Y_{i,t} = 0) = \frac{1}{1 + exp(\beta_1' X_{i,t-1}) + exp(\beta_2' X_{i,t-1})}$$

Transitions from Own-account Work to Employer

Similarly, an individual who was own-account worker at time *t-1* will be observed as employer at time *t* if the utility derived from his new role as employer exceeds that obtained from own-account work. Consequently, the probability of switching can be written as:

$$\Pr(Y_{i,t} = 1) =$$
$$= \Pr\left(U_{i,t}^{Emp} > U_{i,t}^{OA} \mid U_{i,t-1}^{Emp} \le U_{i,t-1}^{OA}\right) =$$
$$= \Pr\left(\beta' X_{i,t-1} + u_i + \varepsilon_{i,t} > 0\right) = F\left(\beta' X_{i,t-1} + u_i\right),$$

where $Y_{i,t} = 1$ if the individual who was own-account worker in period *t-1* becomes employer with employees in period *t*, and $Y_{i,t} = 0$ if the individual continues as own-account worker in period *t*.

4. Analysis of Transitions

This section presents the empirical analysis of some transitions for the Spanish labour market. Our results come from the estimation of some binary and multinomial logit models using two samples from the ECPF and the ECHP micro data described in section 2. Subsection 4.1 focuses on the analysis of the transitions from paid employment to self-employment are considered, distinguishing the final state in terms of transitions to own-account worker and to employer. Subsection 4.2 concentrates on the transitions from unemployment to self-employment are

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[23] When focusing on transitions from unemployment, we cannot distinguish among employers and own-account workers as final states when using the ECPF due to the low number of transitions to employer involved. As a consequence, a binomial exercise is just presented, where our dependent variable takes the value 1 if the individual who was unemployed in period *t-1* becomes self-employed in period *t*.

studied and the final state distinguished as described above. Finally, Subsection 4.3 reports the determinants of the transitions from self-employment without employees to employer.

4.1. Transitions from Paid-employment to Self-employment[24]

We are interested in transitions from paid employment to self-employment. From the initial sample of 181,254 observations (115,779 observations when using ECHP), the subsample is selected of individuals who are full-time employees (defined as working 30 or more hours per week) during a particular quarter (year when using ECHP) and either continue in the same state or switch into self-employment next quarter (year when using ECHP). Our final sample, after removing cases with missing data for any of the relevant variables, includes 34,108 observations (16,846 observations when using ECHP) of which 235 -0.69 percent- (330 -1.96 percent- when using ECHP) refer to transitions.[25]

The first two columns of Tables A1 and A2 (see appendix A) show the binomial estimation results of the probability of transition from paid-employment to self-employment, using the ECPF and the ECHP, respectively. The last four columns of both tables report multinomial estimates to account for differences in transitions probabilities to own-account work or to employer. Tables A5 and A8 (see Appendix A) predicted probabilities for individuals with given characteristics of entering into self-employment from paid employment and from unemployment. Finally, by means of the ECHP, predicted probabilities of transitions for individuals living across different Spanish NUTS-1 are presented in Table A9 (see Appendix A).

We start by considering the effect of individual characteristics. The results show that, for both samples, males exhibit a higher probability of transition into self-employment.[26] Both samples also reveal that the probability of becoming own-account worker increases –at a decreasing rate- with age, while those becoming employers are not significantly affected by this variable. The ECPF sample reveals that married individuals are more likely to become self-employed. Furthermore, both samples show that the number of children under fourteen decreases the probability of transition.

Turning to the effect of intergenerational transfers of human capital and entrepreneurial ability, the presence of a relative self-employed is found to increase the probability of transition by means of the ECHP sample.[27] On the other hand, as the ECPF does not contain information concerning the self-employment status of an individual's parents, we try to identify the presence of these transfers by observing the spouse status as a proxy.[28] Thus, the effect is especially

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[24] During the recession period, it was a frequent practice among Spanish firms to convert waged and salaried workers into independent contractors (i.e. own-account workers) in order to lower costs and enhance productivity. Consequently, some of these results might be biased by this fact. Román *et al.* (2009) present an interesting study of this phenomenon.

[25] The differences on these percentages are explained by the fact that the labour force status is observed once per year when using the ECHP, and once per quarter when using the ECPF. Tables B1 and B4 (Appendix B) summarizes the mean values of all self-employment entrants from paid-employment.

[26] The probability of switching to self-employment decreases by 78 % for females, when using our ECPF dataset. Similarly, this probability decreases by 53% by means of the ECPH data. See Tables A5 and A8, respectively (Appendix A). Our result agree with the results obtained by Carrasco and Ejrnaes (2003) who, although did not distinguish the starting state of unemployment from paid-employment, found higher predicted probabilities of entering self-employed on males using a ECHP sample for Spain.

[27] The probability of switching to self-employment increases by 90.4 and 128% with the existence of relatives working as employer and own-account workers, respectively (see Table A8, appendix A).

[28] Falter (2002) observes that those with a self-employment spouse have a higher probability of remaining in business.

relevant in the case of employers but the estimates are not statistically significant for own-account workers.[29]

With respect to the education variables, evidence that non-educated individuals have lower probability of becoming self-employed is obtained. However, our results differ in some sense when using both datasets. On one hand, by means of the ECPF, the presence of secondary education or higher studies has a significant and positive effect on the probability of becoming employer.[30] In the case of transitions to own-account work, the variables measuring formal education do not significantly affect these decisions. However, when we intend to capture this effect by means of the ECHP no direct effect of education is observed over those becoming employers, but we find that relatives with university studies are strongly associated with this probability.[31] Finally, transitions to self-employment without employees are more likely when individuals present secondary education.

The ECHP contains more information than the ECPF, where the focus is on the effect of the individuals' employment characteristics on the probability of transition. Our estimates on the ECPF show a negative effect of previous employment duration on the probability of transition, which is much stronger for employers.[32] Using the ECHP sample, and consistent with that obtained for the EU-15, evidence was found indicating that paid workers in small and medium firms, in the private sector, with higher job status (supervisory or intermediate) and with indefinite contract, are more likely to become self-employed. The effect is especially relevant in the case of employers.[33] Looking at variables related to labour experience, in both samples, workers are more likely to become self-employed when they have been in self-employment in the past.[34]

In line with previous findings in the literature, we find that the coefficients on the wealth variables have important effects on the probability of transition from paid employment to self-employment. Thus, when using the ECPF sample, we observe how people with low wages tend to enter self-employment as these earnings are viewed as the opportunity cost of entering self-employment.[35] However, non-wage incomes appear to support the liquidity constraint hypothesis, by increasing transitions for both samples.[36]

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[29] Transitions to employer increase with a self-employment spouse by almost 113% (see Table A5, Appendix A).

[30] Transitions from paid-employment to employer increase by 820% when paid-employees present higher education (see Table A5, Appendix A).

[31] Paid-employees with relatives with university studies are almost 51% more likely to switch to employer than those without (see Table A8, Appendix A). This result also agrees with the intergenerational transfers of human capital view.

[32] Transitions to employer increase by 346.5% when individuals present 6 quarters of observed job experience, compared with those just presenting one quarter (see Table A5, Appendix A). This difference decreases to 109% for own-account workers.

[33] Individuals working for firms with at least 20 employees are 77% less likely to switch to self-employment, than those working for smaller firms (see Table A8, Appendix A). In this sense, supervisors' probabilities of becoming employer increases by 211%, when compared with non-supervisors (see Table A8, Appendix A). When we focus on those becoming employers, this last effect increases until 386%.

[34] The ECPF shows how the probability of switching to self-employment is multiplied by 19 for those with previous self-employment experience in self-employment (see Table A5, Appendix A). Our estimates for the ECHP support this result. Thus, this probability is multiplied by 10 when individuals have been employers before, and is multiplied by 3 when previous experience consists of past spells as own-account worker (see Table A8, Appendix A).

[35] Transitions to self-employment increase by 183% when individuals divide their wages by two (see Table A5, Appendix A).

[36] When using the ECPF, each additional €1000 in "other family incomes" increases the probabilities of self-employment by 20% (see Table A5, Appendix A). Regarding the ECHP, those individuals receiving

Regarding the effect of business cycle[37], no evidence of this effect is found in the ECHP. Using the ECPF, a direct relationship is obtained between business cycle and the probability of transitions to employer which supports "pull" argument.[38] This result is consistent with that observed by Carrasco and Erjnaes (2003), who find procyclicality of self-employment.

Also interesting is the effect of the size of the town obtained for the ECPF. Thus, those paid-employees living in medium size towns (10,001-50,000 inhabitants) are more likely to switch to employer than those living in other size towns.[39] Finally, we can focus on regional specific effects by means of the ECHP. In this sense, important specific effects for NUTS 1 are not observed in Spain.[40]

4.2 Transitions from Unemployment to Self-employment

This subsection examines self-employment as an alternative for jobless workers. Thus, our interest lies in transitions from unemployment to self-employment. 181,254 observations (115,779 observations when using ECHP) are included in our initial sample. Thus, we selected the subsample of individuals who are unemployed during a particular quarter (year when using ECHP) and either continue as unemployed or switch into self-employment next quarter (year when using ECHP). After filtering, the final sample used for estimation has 3,661 observations (2,958 observations when using ECHP) of which 90 -2.46 percent- (197 -6.66 percent- when using ECHP) refer to transitions.[41]

In this sense, by means of the ECPF and consistent with Carrasco (1999), the probability of switching from unemployment to self-employment (4%) is observed to be close to 17 times the probability of switching from paid-employment (0.24%).[42] Furthermore, consistent with that obtained for the EU-15 the probability of switching from unemployment to self-employment (18%) is observed to be close to 7 times the probability of switching from paid-employment (2.7%) when using ECPH data.[43]

Tables A3 and A4 (see Appendix A) report logit estimates of the probability of transition to self-employment for unemployed individuals for both samples. When possible, the explanatory variables are the same that considered for transitions from paid-employment. For the ECPF, Table A3 show the results of the probability of transition into self-employment, conditional on being unemployed.[44] When focusing on ECHP estimates, the first two columns of Table A4 (see Appendix A) show the logit estimation and the last four columns report multinomial estimates

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an additional €1,000 in capital and property incomes are 4.3% more likely to switch. Furthermore, this effect rises 9.3%% for transitions to employer (see Table A8, Appendix A).

[37] This effect is controlled by means of unemployment rate. Furthermore, we also attempted to control for business cycle conditions by using Unemployment and GDP (both variables in levels and growth rates) obtaining similar results.

[38] Transitions to employer decrease by 93% when individuals face the highest unemployment rates within the sample -24.55%- compared with the lowest rates -15.85%- (see Table A5, Appendix A).

[39] The probability of switching to employer increases by 123% when the individual lives in a medium town (see Table A5, Appendix A).

[40] NUTS-1 -groups of autonomous communities- is the higher disaggregation level which the ECHP offers for Spain. In this sense, results presented in Table A9 -Appendix A- must be cautiously interpreted, taking into account the distribution of observations across regions for our exercises (see, Tables A6 and A7, Appendix A).

[41] The differences on these percentages are explained by the fact that the labour force status is observed once per year when using the ECHP, and once per quarter when using the ECPF. Tables B2 and B5 (Appendix B) summarize the mean values of all self-employment entrants from unemployment.

[42] See Table A5 (Appendix A).

[43] See Table A8 (Appendix A).

[44] The low number of encountered transitions does not allow us to distinguish between employers and own-account workers, as final state for this sample.

in order to account for the differences of those switching to own-account worker, or becoming employers. Tables A5 and A8 (see Appendix A) compare predicted probabilities for individuals with given characteristics of entering into self-employment from paid employment and from unemployment. Finally, predicted probabilities of transitions for individuals living across different Spanish NUTS-1 are presented in Table A9 (see Appendix A).

The effects of the variable unemployment benefits are first considered, which reports one of the most interesting results. Thus, for both datasets and consistent with Carrasco (1999), a strong and negative impact of unemployment insurance on those becoming entrepreneurs is obtained.[45] Furthermore, receiving benefits seems to be particularly harmful for those switching to own-account work.[46] However, the estimates of the liquidity constraints effect are not statistically significant for any of our samples.

Other remarkable results are found in regards to the endowments of human capital. Firstly, the negative quadratic term begins to dominate the positive linear term at roughly the age of 38, indicating that past this age people become less likely to become entrepreneurs.[47] Regarding the effect of formal education, evidence is obtained that non-educated unemployed individuals have a lower probability of entering self-employment.[48] Also the presence of previous spells of self-employment report positive and significant results by means of the ECPF sample.[49] However, as this experience can be distinguished between spells as employer or own-account worker when using the ECHP dataset, we observe how the stronger effects on these transitions are due to previous own-account work.[50] Finally, past spells as paid-employees reduce the probabilities of entering own-account work, while does not alter in a significant way transitions to employer.[51]

The variables describing gender differences and personal characteristics report, in general, consistent results with that obtained for paid workers entering into self-employment. The probability of switching into self-employment is higher for males and those with lower number of children under fourteen. Moreover, when we try to capture the effect of intergenerational transfers of human capital and entrepreneurial ability, evidence supporting that the presence of self-employed relatives increases the chances of self-employment is again found.[52]

On the other hand, unlike Alba-Ramirez (1994), we observe for both datasets how the duration of unemployment significantly decreases the probability of becoming self-employed.[53]

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[45] By means of the ECPF, the presence of benefits reduces the chances of self-employment by 54.6% (see Table A5, Appendix A). When using the ECHP, those unemployed receiving benefits the reduction is very similar -about 49%- (see Table A8, Appendix A).

[46] Transitions to own-account work decreases by 58% when unemployed receive benefits (see Table A8, Appendix A).

[47] However, this result is only significant for the ECHP dataset.

[48] This result is only significant for the ECHP dataset. Thus, we observe how the probability of switching to self-employment increases by 58.4% when the individual presents university studies (see Table A8, Appendix A).

[49] By means of the ECPF, we observe as past self-employment increases the chances of a new self-employment spell by 839% (see Table A5, Appendix A).

[50] By using the ECHP, this probability for those who were own-account workers in the past increases by almost 76% (see Table A8, Appendix A).

[51] Previous paid-employment experiences decreases the transitions to own-account work by 47.6% (see Table A8, Appendix A).

[52] By using the ECPF, transitions to self-employment increases with a self-employment spouse by 77% (see Table A5, Appendix A). Furthermore, the probability of switching to self-employment increases by 20.4 and 62.5% with the existence of relatives working as employer and own-account workers, respectively (see Table A8, Appendix A).

[53] Transitions to self-employment with the ECPF decrease by almost 74% when unemployment duration is five quarters, compared with those whose unemployment duration is one quarter (see Table A5, Appendix A). Regarding ECHP estimates, these transitions decrease by almost 36.5% when

Regarding business cycle, unemployment rates are not statistically significant for any of our samples.

Finally, the results showing the effects of regional specific effects merit some additional comments. Thus, we observe how transitions from unemployment to employer are more likely for individuals living in the Northeast and the East (i.e. for individuals living in the Basque Country, Navarra, La Rioja, Aragón, Catalonia, Comunidad Valenciana or the Balearic Islands) which have traditionally been areas where entrepreneurship were more likely.[54] In this sense, given that all Spanish regions share a common institutional environment, the origin of these differences might be explained by the business economic environment of these areas.[55]

4.3 Transitions from Own-account Worker to Employer

This section focuses on the individual decision of becoming self-employed with employees from own-account self-employment. Thanks to a better understanding about this type of transitions, we will be ready to design incentives and instruments to increase the contribution of the self-employed to the job creation process. We select the subsample of individuals who are own-account workers during a particular quarter (year when using ECHP) and either continue as own-account worker or become employers in the next quarter (year when using ECHP). After filtering, the final sample used for estimation has 8,786 observations (2,386 observations when using ECHP) of which 222 –2.52 percent- (322 –13.5 percent- when using ECHP) refer to transitions.[56]

Tables A10 and A12 (see Appendix A) report the estimates. Tables A11 and A14 (see Appendix A) likewise compare predicted probabilities of becoming an employer for Spanish own-account workers. Finally, by means of the ECHP, predicted probabilities of transitions for individuals living across different Spanish NUTS-1 are presented in Table A15 (see Appendix A).

Results can be summarized as follows. Considering the effect of personal characteristics we do not observe any significant effect of age, marital status, or children. In this sense, only males included in the ECPF sample, and those with relatives working as own-account workers identified by means of the ECHP are more likely to switch.[57] Furthermore, the ECPF sample reveals that the presence of university studies increases the chances of hiring paid-employees.[58] On the other hand, our estimations concerning the ECHP sample support again that those own-account self-employed working in wholesale, hotels, restaurants or transport present lower probabilities of becoming employers.[59] Focusing on previous experience before current status,

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unemployment duration is about 9 years, compared with those whose unemployment duration is about 2 years (see Table A8, Appendix A).

[54] See Table A9 (Appendix A). These results must be cautiously interpreted, taking into account the distribution of observations across Spanish NUTS-1 for our exercises (see Tables A6 and A7, Appendix A).

[55] This result supports the idea of "agglomeration economies" or "entrepreneurial networks externalities or synergies".

[56] The differences in these percentages are explained by the fact that labour force status once per year is observed when using the ECHP, and once per quarter when using the ECPF. Tables B3 and B6 (Appendix B) summarizes the mean values of those who become employers from own-account work in Spain.

[57] By means of the ECPF the probability of becoming employer for females decreases by 34% (see Table A9, Appendix A). When using the ECHP, the probability of switching increases by 28% for those with relatives working as own-account workers (see Table A14, Appendix A).

[58] Transitions to employer increase by 189% when own-account workers present university studies (see Table A11, Appendix A).

[59] Transitions to employer with the ECHP decrease by almost 42% when individuals work in wholesale, hotels, restaurants or transport, compared with those working for other sectors (see Table A14, Appendix A).

own-account workers are more likely to become employers when they have been employers or paid-employees in the past.[60] Furthermore, the presence of liquidity constraints and the importance of the performance of the business is also observed.[61] In addition, our results tally with the "prosperity-pull hypothesis using the ECHP sample.[62] The effect of the size of the town obtained for the ECPF is also interesting. Thus, those own-account workers living in a medium size town (10,001-50,000 inhabitants) are more likely to switch to being an employer than those living in other size towns.[63]

5. Concluding Remarks

Over the last quarter century, the Spanish unemployment trend has been clearly up with a remarkable volatility. In order to combat this trend, Spanish labour authorities have implemented important action to reduce labour market rigidities, obtaining poor results. As a result, the promotion of transitions from unemployment (and other target groups) to self-employment became a suitable instrument of the active labour market policy. All these specific features, together with the radical changes for the Spanish economy produced by the incorporation to the Single Market in 1986 turned Spain into turn Spain into an excellent object of study in order to in order to detect the underlying determinants of self-employment, as an alternative to unemployment.

Thus, this paper empirically investigates examines the influence of the individual characteristics and the business cycle on the probability of becoming self-employed from unemployment, as opposed to the transitions from wage work which are also analyzed. In addition, our analysis includes the decision of entering employership from own-account work, as a sign of success within self-employment. Toward this end, we have used two samples from the ECHP and from the ECPF, which cover the Nineties period for Spain.

Our main empirical results can be summarized as follows. Our results show, in general, great similarities between both samples. Regarding human capital, it was noted how all informal processes of acquisition of this capital (i.e. previous experience in the labour market or intergenerational transfers) present stronger effects than those attached to formal education. Moreover, consistent with the idea that self-employment is seen as an alternative to unemployment in Spain, transitions from unemployment are much more likely than transitions from paid-employment. Furthermore, males, middle-aged individuals and those with some relatives self-employed have also relatively higher probabilities of becoming self-employed. Regarding specific effects for each starting status we observe as those workers with greater capital income are more likely to enter self-employment, while for unemployed people, the chances of self-employment decrease with the presence of unemployment benefits and the length of previous unemployment spells. As regards to the decision of entering employership from self-employment without employees, our results also show that males, and those with previous experience as self-employment are more likely to recruit personnel. When we focus on the effect of business cycle, we obtain little evidence in favour of any of the hypotheses of the

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[60] The ECPF shows that past spells as employer increases the chances of a new spell as employer by 1178% (see Table A11, Appendix A). By using the ECHP, these chances increases by almost 129% (see Table A10, Appendix A). Also for this data set, previous paid-employment experiences increase the transitions to employer by 68% (see Table A10, Appendix A).

[61] When using the ECHP, the presence of inheritance, gift or lottery winnings within the household, increases the probability of becoming an employer by 115% (see Table A14, Appendix A). According to the ECPF, transitions to employer increase by 23% when individuals multiply their earnings by two (see Table A11, Appendix A).

[62] Transitions to employer decrease by 124.5% when individuals face the highest unemployment rates within the sample –19.8%- compared with the lowest rates –11.3%- (see Table A14, Appendix A).

[63] The probability of switching to employer increases by 33% when the individual lives in a medium-sized town (see Table A11, Appendix A).

push-pull controversy, which might be explained by the existence of both effects working at the same time.

Finally, when we attempt to control for differences across Spanish regions, the effects of different business economic environments might emerge for transitions from unemployment to employer where individuals living in the Northeast and the East (which have traditionally been more entrepreneurial areas) present more chances to switch. Nevertheless, the rest of the individual decisions analyzed within this study does not show any evidence of the existence of additional regional specific effects.

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Appendix A: Graphs and Results

Figure A1. Self-employment relative to all in employment in Spain, 1979-2001
Data Source: Labour Force Survey (EPA)
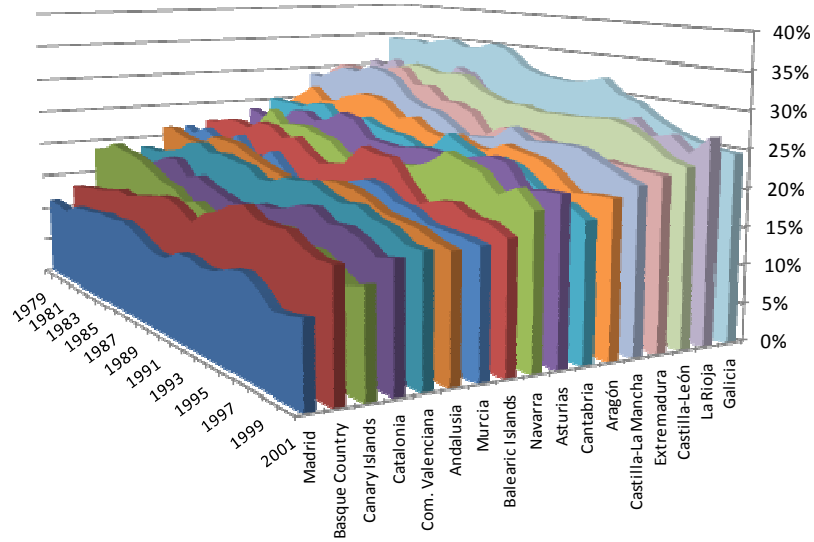
Figure A2. Employers relative to all in employment in Spain, 1979-2001
Data Source: Labour Force Survey (EPA)
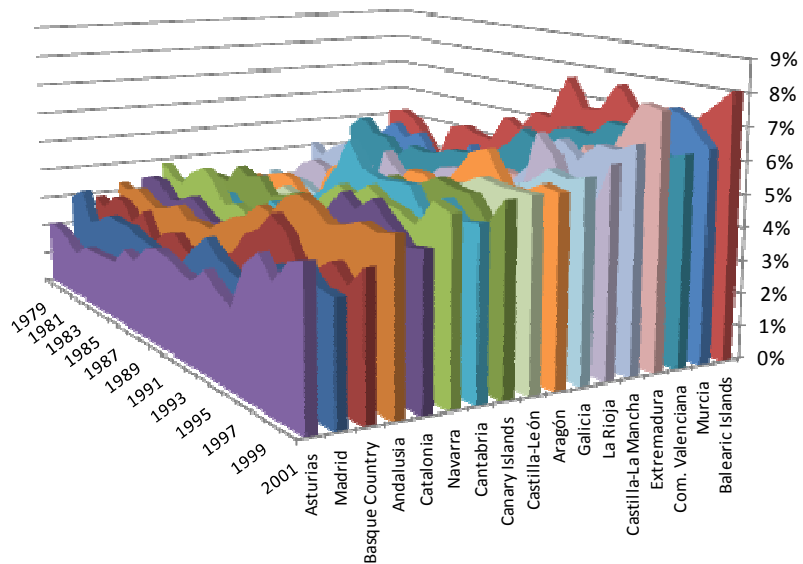
Figure A3. Own-account-workers relative to all in employment in Spain, 1979-2001
Data Source: Labour Force Survey (EPA)

Table A1. Transitions from paid-employment to self-employment
Data Source: Spanish Continuous Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

Variables	Binomial		Multinomial			
	SELF-EMPLOYED (SE)		**EMPLOYER (EMP)**		**OWN-ACCOUNT WORKER (OA)**	
	Prob [SE $_t$ | PW $_{t-1}$]		Prob [EMP $_t$ | PW $_{t-1}$]		Prob [OA $_t$ | PW $_{t-1}$]	
Number of observations	34108		34108			
Number of transitions	235		41		194	
Variables	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**
Constant	-6.1822	(-3.88)***	-5.701	(-1.81)*	-7.0513	(-4.29)***
Demographic characteristics						
Male	0.4218	(2.50)***	0.765	(1.83)*	0.3576	(1.91)*
Age	0.1214	(1.67)*	-0.0396	(-0.27)	0.1666	(2.15)**
Age (squared)	-0.0012	(-1.44)	0.0014	(0.85)	-0.002	(-2.16)**
Married [1]	0.5576	(2.40)**	1.189	(2.67)***	0.4388	(1.74)*
Children under 14	-0.4895	(-2.12)**	-0.7824	(-1.72)*	-0.4337	(-1.76)*
Husband/Wife self-employed	0.1992	(0.83)	0.7548	(1.93)*	0.057	(0.2)
Education						
Secondary schooling [2]	0.1623	(0.94)	1.7778	(3.99)***	-0.154	(-0.84)
University studies [2]	0.4278	(1.65)*	2.2197	(4.43)***	-0.1134	(-0.35)
Employment characteristics						
Observed employment duration	-0.5499	(-3.13)***	-1.2216	(-3.59)***	-0.33	(-1.79)*
Observed employment duration (squared)	0.0504	(2.05)**	0.1429	(3.26)***	0.0198	(0.77)
Previous experience						
Observed previous spell(s) as self-employed	3.0327	(16.67)***	2.4234	(4.95)***	3.1086	(15.59)***
Incomes						
Other quarterly family incomes	1.8E-04	(5.82)***	2.1E-04	(5.95)***	1.7E-04	(4.62)***
Quarterly work incomes	-8.1E-04	(-10.22)***	-3.8E-04	(-2.05)**	-9.7E-04	(-7.49)***
Business cycle						
Quarterly unemployment rate	-0.0043	(-0.19)	-0.1015	(-1.94)*	0.0136	(0.56)
Town size						
Medium town (10,001-50,000 inh..) [3]	0.4032	(2.01)**	0.8704	(1.8)*	0.2772	(1.28)
Large town (50,001-500,000 inh.) [3]	0.0992	(0.51)	-0.2628	(-0.51)	0.1662	(0.81)
Very large town (> 500,000 inh.) [3]	0.1075	(0.42)	0.0281	(0.05)	0.0781	(0.29)
Reference categories: (1) Single. separated. etc., (2) No education or primary schooling, (3) Small town (< 10,001 inh.)						
Log likelihood	-1065		-1136.2			

Notes:
[***] 1 % significativity level; [**] 5 % significativity level; [*] 10 % significativity level

Table A2. Transitions from paid-employment to self-employment
Data Source: European Community Household Panel (ECHP), 1994 – 2001

Variables	Binomial SELF-EMPLOYED (SE) Prob [SE $_t$ | PW $_{t-1}$]		Multinomial EMPLOYER (EMP) Prob [EMP $_t$ | PW $_{t-1}$]		OWN-ACCOUNT WORKER (OA) Prob [OA $_t$ | PW $_{t-1}$]	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Number of observations	16846		16846			
Number of transitions	330		186		144	
Variables	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**
Constant	-9.4333	(-6.76)***	-10.1465	(-5.53)**	-9.8829	(-5.04)***
Demographic characteristics						
Male	0.7721	(4.15)***	0.4593	(1.97)**	1.0896	(3.93)***
Age	0.1247	(1.9)*	0.0456	(0.54)	0.2555	(2.55)**
Age (squared)	-0.0018	(-2.19)**	-0.0007	(-0.66)	-0.0038	(-2.88)***
Cohabiting [1]	0.2514	(1.37)	0.165	(0.68)	0.2918	(1.09)
Number of children under 14	-0.2355	(-2.44)**	-0.1744	(-1.4)	-0.238	(-1.63)
Relative(s) working as employer(s)	0.6696	(2.53)**	0.4728	(1.21)	0.7248	(1.99)**
Relative(s) working as own-account worker(s)	0.8618	(3.79)***	0.6842	(2.08)**	0.8642	(3.09)***
Education						
Secondary education [2]	0.3144	(1.88)*	0.0848	(0.37)	0.4736	(1.95)*
University studies [2]	0.0449	(0.23)	-0.1928	(-0.73)	0.2475	(0.93)
Relatives with university studies	0.2045	(1.34)	0.4164	(2.11)**	-0.0306	(-0.14)
Employment characteristics						
Private sector [3]	0.8242	(2.31)**	1.1935	(2.24)**	0.4502	(1.02)
Industrial sector [4]	-0.0585	(-0.28)	0.1937	(0.7)	-0.3296	(-1.11)
Financial services [4]	-0.3756	(-1.24)	-0.4377	(-1.01)	-0.1332	(-0.33)
Wholesale. hotels. restaurants & transport [4]	0.2717	(1.36)	0.2698	(1.01)	0.2494	(0.95)
Other services [4]	-0.086	(-0.28)	0.1176	(0.28)	-0.1652	(-0.38)
Small firm (1-4 employees) [5]	1.1955	(6.21)***	1.6303	(7.12)***	0.2285	(0.65)
Medium firm (5-19 employees) [5]	0.2322	(1.25)	0.4679	(1.97)**	-0.0122	(-0.05)
Supervisory [6]	1.5043	(8.11)***	1.3376	(5.66)***	1.5455	(6.27)***
Intermediate [6]	1.1163	(6.66)***	1.1064	(5.3)***	0.9778	(4.12)***
Hours of work	0.0155	(2.04)**	0.0313	(3.62)***	-0.0091	(-0.68)
Years of employment experience	0.0011	(0.02)	0.0204	(0.3)	-0.0353	(-0.5)
Years of employment experience (squared)	-0.001	(-0.44)	-0.0019	(-0.59)	0.0007	(0.2)
Indefinite contract [7]	-0.632	(-3.8)***	-0.422	(-1.72)*	-0.7768	(-3.3)***
Previous experience						
Observed previous spell(s) as employer	2.7947	(15.23)***	3.0983	(13.23)***	1.6504	(4.85)***
Observed previous spell(s) as own-acc. worker	1.6119	(7.38)***	1.0411	(2.7)***	1.9389	(6.81)***
Observed previous spell(s) as unemployed	-0.0452	(-0.28)	-0.223	(-1.09)	0.1515	(0.65)
Observed previous spell(s) as inactive	-0.0391	(-0.16)	0.171	(0.43)	-0.2411	(-0.74)
Incomes						
Dwelling owner	-0.0016	(-0.01)	0.0012	(0.01)	0.0529	(0.21)
Annual capital and property incomes (1 lag)	1.1E-04	(2.56)***	1E-04	(2.86)***	8.3E-05	(1.59)
Monthly work incomes	6.3E-05	(0.42)	8.1E-05	(0.51)	6.7E-05	(0.25)
Business cycle						
Annual unemployment rate	5.5E-06	(0.01)	0.0303	(1.03)	-0.0304	(-0.98)
Region						
Northwest [8]	-0.1918	(-0.75)	-0.2403	(-0.7)	-0.1662	(-0.48)
Northeast [8]	0.2704	(1.17)	0.4532	(1.53)	0.0375	(0.12)
Madrid [8]	-0.2331	(-0.84)	-0.3939	(-1.1)	-0.0488	(-0.14)
Center [8]	0.1791	(0.79)	0.3736	(1.21)	-0.1105	(-0.38)
East [8]	-0.047	(-0.22)	-0.1175	(-0.4)	-0.0356	(-0.13)
Canary Islands [8]	-0.275	(-0.81)	0.0933	(0.24)	-0.8233	(-1.51)
Log likelihood	-1218		-1388.9			

Reference categories: (1) Non-cohabiting individuals, (2) No education or primary education, (3) Public sector, (4) Construction sector, (5) Large firm (> 19 employees), (6) Non-supervisory, (7) Non-indefinite contract, (8) South

Notes:
[***] 1 % significativity level; [**] 5 % significativity level; [*] 10 % significativity level
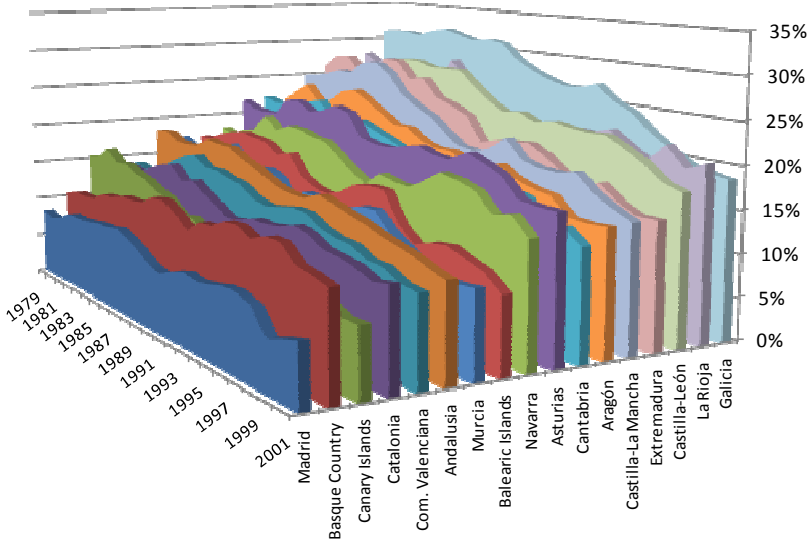
Table A3. Transitions from unemployment to self-employment
Data Source: Spanish Continuous Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	Binomial	
	SELF-EMPLOYED (SE)	
	Prob [SE $_t$	U $_{t-1}$]	
Number of observations	3661	
Number of transitions	90	
Variables	**Coef.**	**t-stat.**
Constant	-3.5307	(-1.59)
Demographic characteristics		
Male	1.5432	(4.98)***
Age	0.0546	(0.52)
Age (squared)	-0.0011	(-0.88)
Married [1]	0.3437	(0.95)
Children under 14	-0.3125	(-0.87)
Husband/Wife self-employed	0.6041	(1.61)
Education		
Secondary schooling [2]	-0.367	(-1.29)
University studies [2]	0.076	(0.17)
Unemployment characteristics		
Observed unemployment duration	-0.7781	(-2.56)***
Observed unemployment duration (squared)	0.097	(2.22)**
Previous experience		
Observed previous spell(s) as self-employed	2.6674	(7.94)***
Incomes		
Other quarterly family incomes	2.3E-06	(0.04)
Receiving unemployment benefits	-0.8117	(-3.3)***
Business cycle		
Quarterly unemployment rate	-0.0258	(-0.67)
Town size		
Medium town (10,001-50,000 inh.) [3]	0.2612	(0.77)
Large town (50,001-500,000 inh.) [3]	0.4807	(1.53)
Very large town (> 500,000 inh.) [3]	0.5506	(1.37)
Reference categories: (1) Single, separated. etc. (2) No education or primary schooling, (3) Small town (< 10,001 inh.)		
Log likelihood	-348.1	

Notes:
(***) 1 % significativity level; (**) 5 % significativity level; (*) 10 % significativity level

Table A4. Transitions from unemployment to self-employment
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Binomial		Multinomial			
	SELF-EMPLOYED (SE)		**EMPLOYER (EMP)**		**OWN-ACCOUNT WORKER (OA)**	
	Prob [SE $_t$ | U $_{t-1}$]		Prob [EMP $_t$ | U $_{t-1}$]		Prob [OA $_t$ | U $_{t-1}$]	
Number of observations	2958		2958			
Number of transitions	197		40		157	
Variables	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
Constant	-7.3695	(-4.97)***	-9.6612	(-3.72)***	-7.209	(-4.53)***
Demographic characteristics						
Male	1.4211	(7.68)***	1.2099	(3.08)***	1.406	(6.69)***
Age	0.2763	(3.74)***	0.2765	(1.99)**	0.2636	(3.28)***
Age (squared)	-0.0037	(-3.77)***	-0.0039	(-2.20)**	-0.0035	(-3.23)***
Cohabiting [1]	0.6115	(2.74)***	0.9921	(1.98)**	0.5109	(1.92)*
Number of children under 14	-0.187	(-1.68)*	-1.0901	(-3.02)***	-0.0529	(-0.47)
Relative(s) working as employer(s)	0.2338	(0.64)	0.1952	(0.28)	0.2465	(0.59)
Relative(s) working as own-account worker(s)	0.6408	(2.81)***	0.1936	(0.37)	0.7049	(2.99)***
Education						
Secondary education [2]	0.3921	(1.89)*	0.7362	(1.73)*	0.3037	(1.35)
University studies [2]	0.6047	(2.77)***	0.8191	(1.78)*	0.5101	(2.14)**
Relatives with university studies	0.0016	(0.01)	-0.196	(-0.48)	0.041	(0.18)
Unemployment characteristics						
Unemployment duration	-0.0717	(-2.92)***	-0.0446	(-0.92)	-0.0759	(-2.39)**
Previous experience						
Observed previous spell(s) as employer	-0.1469	(-0.28)	0.0292	(0.02)	-0.1598	(-0.29)
Observed previous spell(s) as own-account worker	0.7566	(1.95)*	1.0946	(1.21)	0.6944	(1.68)*
Observed previous spell(s) as unemployed	-0.5111	(-2.45)**	-0.7191	(-1.36)	-0.447	(-2.03)**
Observed previous spell(s) as inactive	-0.0024	(-0.01)	0.2127	(0.48)	-0.03	(-0.13)
Incomes						
Dwelling owner	0.0709	(0.35)	-0.2462	(-0.61)	0.1521	(0.68)
Annual capital and property incomes (1 lag)	5.2E-05	(0.78)	9.5E-05	(1.24)	2.7E-05	(0.36)
Receiving unemployment benefits	-0.7331	(-3.5)***	0.3430	(0.82)	-0.9751	(-3.86)***
Business cycle						
Annual unemployment rate	-0.0474	(-1.35)	-0.0101	(-0.16)	-0.0498	(-1.43)
Country						
Northwest [3]	0.066	(0.25)	0.7777	(1.46)	-0.1009	(-0.34)
Northeast [3]	0.374	(1.42)	1.0501	(1.94)*	0.2102	(0.73)
Madrid [3]	0.0069	(0.02)	0.7463	(1.27)	-0.1466	(-0.42)
Center [3]	-0.6237	(-2.12)**	-0.6905	(-0.85)	-0.5964	(-1.94)*
East [3]	0.3044	(1.26)	1.0561	(1.98)**	0.1158	(0.45)
Canary Islands [3]	-0.242	(-0.62)	-0.3189	(-0.30)	-0.2106	(-0.5)
Reference categories: (1) Non-cohabiting individuals, (2) No education or primary education, (3) South						
Log likelihood	-646.2		-731.7			

Notes:
[***] 1 % significativity level; [**] 5 % significativity level; [*] 10 % significativity level

Table A5. Predicted probabilities of switching for individuals with given characteristics
Data Source: Spanish Continuous Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	Transitions to Self-employment FROM					Transitions to Employer FROM			Transitions to Own-account Work FROM	
	E [a]	Δ% [b]	U [a]	Δ% [b]		E [a]	Δ% [b]		E [a]	Δ% [b]
Standard individual (S.I.) [c]	*0.0024*	-----	*0.0402*	-----		*1.06E-04*	-----		*0.0023*	-----
S.I. but female	0.0016	-34.4 %	0.0089	-77.9 %		4.96E-05	-53.4 %		0.0016	-30 %
S.I. with university studies	0.0038	53.2 %	0.0432	7.6 %		9.8E-03	819.9 %		0.0021	-10.8 %
S.I. with previous spell(s) as self-employed	0.0485	1880 %	0.3762	836 %		1.15E-03	974.3 %		0.0491	2032 %
S.I. with husband / wife self-employed	0.003	22 %	0.0712	77.1 %		2.27E-04	112.7 %		0.0024	5.8 %
S.I. with low observed unemployment duration [d, e]	-----	-----	0.0657	63.5 %		-----	-----		-----	-----
S.I. with high observed unemployment duration [d, e]	-----	-----	0.0361	-10.2 %		-----	-----		-----	-----
S.I. but receiving benefits [d]	-----	-----	0.0183	-54.6 %		-----	-----		-----	-----
S.I. with low observed job experience [f, g]	0.0053	117.5 %	-----	-----		4.38E-04	310.6 %		0.0041	77.5 %
S.I. with high observed job experience [f, g]	0.002	-18.5 %	-----	-----		1.45E-04	35.9 %		0.0016	-31.6 %
S.I. but receiving €1,000 more in capital and property incomes	0.0029	20.1 %	0.0403	0.2 %		1.13E-04	23 %		0.0027	17.9 %
S.I. with low work incomes [f, h]	0.0069	183.4 %	-----	-----		1.74E-04	63.1 %		0.008	247.5 %
S.I. with high work incomes [f, h]	0.0003	-87.6 %	-----	-----		3.97E-05	-62.8 %		0.0002	-91.8 %
S.I. with low unemployment rate [i]	0.0025	2 %	0.0459	14.1 %		1.69E-04	58.3 %		0.0022	-5.9 %
S.I. with high unemployment rate [i]	0.0024	-1.8 %	0.037	-8 %		6.97E-05	-34.6 %		0.0024	5.8 %
S.I. but living in a small town (<10.001 inh.)	0.0021	-13.2 %	0.0299	-25.6 %		9.98E-05	-6.3 %		0.002	-13.1 %
S.I. but living in a medium town (10.001-50.000 inh.)	0.0032	29.7 %	0.0385	-4.3 %		2.38E-04	123.5 %		0.0026	14.6 %
S.I. but living in a large town (50.001-500.000 inh.)	0.0023	-4.2 %	0.0475	18.1 %		7.67E-05	-28 %		0.0024	2.6 %
S.I. but living in a very large town (> 500.000 inh.)	0.0024	-3.4 %	0.0507	26.2 %		1.03E-04	-3.7 %		0.0022	-6.1 %

Notes:
[a] E=Employee, U=Unemployed.

[b] Percentage change related to the standard.

[c] Standard individual: male, married, children, no education or primary education, not husband / wife self-employed, and not previous self-employment experience within the sample. With respect to transitions from unemployment, individuals are not receiving benefits. Other variables equals to average values respectively.

[d] Not applicable in transitions from employment.

[e] Low and high observed unemployment duration are 1 and 5 quarters (the 10th and 90th centiles respectively).

[f] Not applicable in transitions from unemployment.

[g] Low and high job experience are 1 and 6 quarters (the 10th and 90th centiles respectively).

[h] Low and high and work incomes are half and double the average ones respectively.

[i] Low and high unemployment rates are 15.85 % and 24.55 % respectively, which are the lowest and the highest values for our sample period.

Table A6. Number of transitions from paid-employment across Spain
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Number of transitions from Paid-Employment TO		
	Paid-employment	Employer	Own-account Work
Spain	*16516*	*186*	*144*
Northwest	1993	20	19
Northeast	2901	36	22
Madrid	2121	16	14
Center	2244	38	22
East	3797	41	33
South	2508	24	30
Canary Islands	952	11	4

Table A7. Number of transitions from unemployment across Spain
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Number of transitions from Unemployment TO		
	Unemployment	Employer	Own-account Work
Spain	*2761*	*40*	*157*
Northwest	391	7	21
Northeast	298	8	23
Madrid	209	5	13
Center	454	2	17
East	446	11	28
South	802	6	46
Canary Islands	161	1	9

Table A8. Predicted probabilities of entering self-employment for individuals with given characteristics
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Transitions to Self-employment FROM					Transitions to Employer FROM					Transitions to Own-account Work FROM			
	E [a]	Δ% [b]	U [a]	Δ% [b]		E [a]	Δ% [b]	U [a]	Δ% [b]		E [a]	Δ% [b]	U [a]	Δ% [b]
Standard individual (S.I.) [c]	*0.0273*	-----	*0.1873*	-----		*0.0109*	-----	*0.0154*	-----		*0.0256*	-----	*0.174*	-----
S.I. but female	0.0128	-53.1 %	0.0527	-71.9 %		0.007	-35.5 %	0.0054	-65.2 %		0.0088	-65.6 %	0.0497	-71.4 %
S.I. with university studies	0.0285	4.5 %	0.2967	58.4 %		0.0089	-18 %	0.0309	99.8 %		0.0326	27.4 %	0.2552	46.7 %
S.I. with relatives with university studies	0.0333	21.9 %	0.1876	0.1 %		0.0164	50.9 %	0.0126	-18.2 %		0.0247	-3.5 %	0.1804	3.7 %
S.I. with observed previous spell(s) as employer	0.3146	1053 %	0.166	-11.4 %		0.1805	1556 %	0.0163	5.6 %		0.0996	289.2 %	0.1521	-12.6 %
S.I. with observed previous spell(s) as own-account worker	0.1233	3517 %	0.3294	75.8 %		0.0263	141.6 %	0.0383	147.9 %		0.1518	493 %	0.2891	66.2 %
S.I. with observed previous spell(s) as paid-employed	-----	-----	0.1215	-35.2 %		-----	-----	0.0081	-47.6 %		-----	-----	0.1197	-31.2 %
S.I. with observed previous spell(s) as unemployed	0.0261	-4.3 %	-----	-----		0.0087	-20.2 %	-----	-----		0.0297	16.1 %	-----	-----
S.I. with observed previous spell(s) as inactive	0.0263	-3.7 %	0.1869	-0.2 %		0.013	19.1 %	0.0191	23.9 %		0.0202	-21.2 %	0.1691	-2.8 %
S.I. with relative(s) working as employer	0.052	90.4 %	0.2255	20.4 %		0.0169	55.2 %	0.0178	15.5 %		0.0511	99.7 %	0.2116	21.6 %
S.I. with relative(s) working as own-account worker	0.0623	128.2 %	0.3043	62.5 %		0.0207	89.5 %	0.0159	2.7 %		0.0581	126.9 %	0.298	71.3 %
S.I. working in the industrial sector [d]	0.0258	-5.5 %	-----	-----		0.0133	22 %	-----	-----		0.0185	-27.7 %	-----	-----
S.I. working in financial services [d]	0.0189	-30.7 %	-----	-----		0.0071	-35 %	-----	-----		0.0226	-11.9 %	-----	-----
S.I. working in wholesale, hotels, restaurants or transport [d]	0.0355	30.1 %	-----	-----		0.0141	29.6 %	-----	-----		0.0325	27 %	-----	-----
S.I. working in other services [d]	0.0251	-8 %	-----	-----		0.0123	12.8 %	-----	-----		0.0218	-15 %	-----	-----
S.I. working whose job status is supervisory [d]	0.0849	210.9 %	-----	-----		0.0529	385.6 %	-----	-----		0.0306	19.5 %	-----	-----
S.I. working in a large size firm (>19 employees) [d]	0.0062	-77.3 %	-----	-----		0.0029	-73 %	-----	-----		0.0056	-78.1 %	-----	-----
S.I. without indefinite contract [d]	0.0147	-46.2 %	-----	-----		0.0073	-33.3 %	-----	-----		0.012	-53.2 %	-----	-----
S.I. with low working hours [d, e]	0.0248	-9.2 %	-----	-----		0.0089	-18.1 %	-----	-----		0.0271	6 %	-----	-----
S.I. with high working hours [d, e]	0.0306	12.2 %	-----	-----		0.0138	26.8 %	-----	-----		0.0239	-6.8 %	-----	-----
S.I. with low job experience [d, f]	0.0294	7.7 %	-----	-----		0.0107	-1.7 %	-----	-----		0.032	25 %	-----	-----
S.I. with high job experience [d, f,]	0.0208	-23.7 %	-----	-----		0.008	-26.9 %	-----	-----		0.0221	-13.7 %	-----	-----
S.I. but receiving benefits [g]	-----	-----	0.0997	-46.8 %		-----	-----	0.0242	56.9 %		-----	-----	0.0731	-58 %
S.I. with low unemployment duration [g, h]	-----	-----	0.2124	13.4 %		-----	-----	0.0165	6.8 %		-----	-----	0.1989	14.3 %
S.I. with high unemployment duration [g, h]	-----	-----	0.1440	-23.1 %		-----	-----	0.0134	-13.3 %		-----	-----	0.1315	-24.4 %
S.I. but receiving €1,000 more in capital and property incomes	0.0303	11.1 %	0.1953	4.3 %		0.012	10.2 %	0.0169	9.3 %		0.0277	8.3 %	0.1776	2.1 %
S.I. with low monthly work incomes [d, i]	0.0265	-3 %	-----	-----		0.0105	-3.9 %	-----	-----		0.0248	-3.2 %	-----	-----
S.I. with high monthly work incomes [d, i]	0.029	6.3 %	-----	-----		0.0118	8.2 %	-----	-----		0.0273	6.7 %	-----	-----
S.I. with low unemployment rate [j]	0.0273	0.002 %	0.235	25.5 %		0.0095	-12.8 %	0.0155	0.1 %		0.0292	14.2 %	0.2215	27.3 %
S.I. with high unemployment rate [j]	0.0273	-0.002 %	0.1703	-9.1 %		0.0123	13.2 %	0.0154	-0.4 %		0.0227	-11.4 %	0.1572	-9.6 %

Notes:

[a] E = Employee, U = Unemployed, and OA = Own-Account Worker.

[b] Percentage change related to the standard.

[c] S. I.= Standard individual: male, cohabiting, one children aged fewer 14, no education or primary education, no relatives with university education within the sample, not previous experience as employer, own-account worker, unemployed or inactive, within the sample, not relatives working as employer or own-account worker, receiving mean capital and property incomes. In transitions from employment, individuals work as non-supervisoriy in the private sector, in small firms, with indefinite contracts, and in the construction sector. With respect to transitions from unemployment, individuals are not receiving benefits. Other variables equals to average values respectively.

[d] Not applicable in transitions from unemployment.

[e] Low and high working hours are 36 and 50 (the 10th and 90th centiles respectively).

[f] Low and high job experience are 1 and 19 years (the 10th and 90th centiles respectively).

[g] Not applicable in transitions from employment.

[h] Low and high unemployment duration are 2 and 9 years, half and double the average ones respectively.

[i] Low and high monthly work incomes are half and double the average ones respectively.

[j] Low and high unemployment rates are 11.3 % and 19.8 % respectively, which are the lowest and the highest values for our sample period.

Table A9. Predicted probabilities of entering self-employment for individuals with given characteristics
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Transitions to Self-employment FROM					Transitions to Employer FROM					Transitions to Own-account Work FROM			
	E [a]	Δ% [b]	U [a]	Δ% [b]		E [a]	Δ% [b]	U [a]	Δ% [b]		E [a]	Δ% [b]	U [a]	Δ% [b]
Standard individual [c]	*0.0273*	-----	*0.1873*	-----		*0.0109*	-----	*0.0154*	-----		*0.0256*	-----	*0.174*	-----
Standard individual but living in the Northwest	0.0228	-16.4 %	0.1995	6.5 %		0.0084	-23.3 %	0.024	55.6 %		0.0238	-6.9 %	0.171	-1.7 %
Standard individual but living in the Northeast	0.0357	30.9 %	0.2533	35.2 %		0.0165	51.3 %	0.0295	91 %		0.0288	12.6 %	0.2182	25.4 %
Standard individual but living in Madrid	0.0219	-19.8 %	0.1903	1.6 %		0.0072	-34.4 %	0.0235	52.1 %		0.0268	4.5 %	0.1648	-5.3 %
Standard individual but living in the Center	0.0327	19.8 %	0.1112	-40.7 %		0.0153	40.5 %	0.0061	-60.8 %		0.025	-2.4 %	0.1139	-34.5 %
Standard individual but living in the East	0.0263	-3.8 %	0.2403	28.3 %		0.0094	-13.7 %	0.0303	95.9 %		0.027	5.6 %	0.2025	16.4 %
Standard individual but living in the South	0.0275	0.7 %	0.1892	1 %		0.0106	-3.1 %	0.011	-28.9 %		0.028	9.2 %	0.1882	8.2 %
Standard individual but living in Canary Islands	0.021	-23 %	0.1548	-17.3 %		0.0118	7.9 %	0.0083	-46.2 %		0.0125	-51.3 %	0.1586	-8.8 %

Notes:
[a] E=Employee, U=Unemployed, and OA=Own-Account Worker.
[b] Percentage change related to the standard.
[c] S. I.= Standard individual: male, cohabiting, one children aged fewer 14, no education or primary education, no relatives with university education within the sample, not previous experience as employer, own-account worker, unemployed or inactive, within the sample, not relatives working as employer or own-account worker, receiving mean capital and property incomes. In transitions from employment, individuals work as non-supervisoriy in the private sector, in small firms, with indefinite contracts, and in the construction sector. With respect to transitions from unemployment, individuals are not receiving benefits. Other variables equals to average values respectively.

Table A10. Transitions from own-account worker to employer
Data Source: Spanish Continuous Family Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	Binomial	
	EMPLOYER (EMP)	
	Prob [EMP $_t$	OA $_{t-1}$]	
Number of observations	8786	
Number of transitions	222	
Variables	**Coef.**	**t-stat.**
Constant	-3.9693	(-2.26)**
Demographic characteristics		
Male	0.4243	(2.19)**
Age	0.0132	(0.17)
Age (squared)	-0.0004	(-0.39)
Married [1]	-0.4369	(-1.6)
Children under 14	-0.0084	(-0.03)
Husband/Wife self-employed	0.004	(0.02)
Education		
Secondary schooling [2]	0.3231	(1.74)*
University studies [2]	1.0801	(4.39)***
Own-account work characteristics		
Own-account employment duration	-0.3014	(-5.68)***
Previous experience		
Observed previous spell(s) as employer	2.6617	(15.7)***
Incomes		
Other quarterly family income	4.6E-05	(1.32)
Quarterly own-account work incomes	1.1E-04	(3.15)***
Business cycle		
Quarterly unemployment rate	0.0011	(0.05)
Town size		
Medium town (10,001-50,000 inh.) [3]	0.4171	(2.24)**
Large town (50,001-500,000 inh.) [3]	0.1978	(1.04)
Very large town (> 500,000 inh.) [3]	-0.3986	(-1.19)
Reference categories: (1) Single, separated, etc., (2) No education or primary schooling, (3) Small town (< 10,001 inh.)		
Log likelihood	-824.9	

Notes:
[***] 1 % significativity level; [**] 5 % significativity level; [*] 10 % significativity level

Table A11. Predicted probabilities of entering employership for individuals with given characteristics
Data Source: Spanish Continuous Family Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	Transitions to Employer FROM	
	OA [a]	Δ% [b]
Standard individual [c] (S.I.)	*0.0091*	-----
S.I. but female	0.0059	-34.4 %
S.I. with university studies	0.0262	189.4 %
S.I. with previous spell(s) as employer	0.1157	1178 %
S.I. with husband / wife self-employed	0.0091	0.4 %
S.I. with low observed own-account work duration [d]	0.0181	99.6 %
S.I. with high observed own-account work duration [d]	0.0041	-55.1 %
S.I. but receiving €1,000 more in other family incomes	0.0095	4.7 %
S.I. with low work incomes [e]	0.0082	-9.9 %
S.I. with high work incomes [e]	0.0111	23.1 %
S.I. with low unemployment rate [f]	0.009	-0.5 %
S.I. with high unemployment rate [f]	0.0091	0.5 %
S.I. but living in a small town (<10,001 inh.)	0.008	-11.7 %
S.I. but living in a medium town (10,001-50,000 inh.	0.0121	33.4 %
S.I. but living in a large town (50,001-500,000 inh.)	0.0097	7.4 %
S.I. but living in a very large town (> 500,000 inh.)	0.0054	-40.6 %

Notes:
[a] Own-account worker.
[b] Percentage change related to the standard.
[c] Standard individual: male, married, children, no education or primary education, not husband / wife self-employed, and not previous experience as employer within the sample. Other variables equals to average values respectively.
[d] Low and high own-account work duration are 1 and 6 quarters (the 10th and 90th centiles respectively).
[e] Low and high own-account work incomes are half and double the average ones respectively.
[f] Low and high unemployment rates are 15.85 % and 24.55 % respectively, which are the lowest and the highest values for our sample period.

Table A12. Transitions from own-account worker to employer
Data Source: European Community Household Panel (ECHP), 1994 – 2001

Variables	Binomial EMPLOYER (EMP) Prob [EMP $_t$ | OA $_{t-1}$]	
Number of observations	2386	
Number of transitions	322	
Variables	**Coef.**	**t-stat.**
Constant	1.3025	(0.93)
Demographic characteristics		
Male	-0.1419	(-0.82)
Born abroad	0.3953	(1.17)
Age	-0.0142	(-0.22)
Age (squared)	9.5E-06	(-0.01)
Cohabiting [1]	0.064	(0.35)
Number of children under 14	-0.0518	(-0.57)
Relative(s) working as employer(s)	-0.3475	(-1.03)
Relative(s) working as own-account worker(s)	0.2789	(1.66)*
Education		
Secondary education [2]	0.2389	(1.35)
University studies [2]	-0,0177	(-0.08)
Relatives with university studies	0.0602	(0.38)
Own-account work characteristics		
Industrial sector [3]	0.1293	(0.5)
Financial services [3]	0.0468	(0.17)
Wholesale, hotels, restaurants & transport [3]	-0.5868	(-2.89)***
Other services [3]	-0.0353	(-0.12)
Hours of work	-0.0012	(-0.21)
Own-account employment duration	-0.0683	(-1.48)
Own-account employment duration (squared)	0.0026	(1.28)
Previous experience		
Previous spell(s) as employer	0.9738	(6.29)***
Previous spell(s) as paid-employed	0.592	(3.19)***
Previous spell(s) as unemployed	-0.0373	(-0.24)
Previous spell(s) as inactive	-0.4849	(-1.75)*
Incomes		
Inherit, gift or lottery winnings	0.8939	(2.06)**
Dwelling owner	-0.0016	(-0.01)
Annual capital and property incomes (1 lag)	8.8E-06	(0.19)
Annual own-account work incomes (1 lag)	9.6E-06	(1.25)
Business cycle		
Annual unemployment rate	-0.1443	(-5.61)***
Region		
Northwest [4]	-0.0491	(-0.21)
Northeast [4]	0.1458	(0.63)
Madrid [4]	0.2032	(0.66)
Center [4]	-0.2155	(-0.85)
East [4]	-0.2754	(-1.22)
Canary Islands [4]	0.1716	(0.57)
Reference categories: (1) Non-cohabiting individuals, (2) No education or primary education, (3) Construction Sector, (4) South		
Log likelihood	-826.4	

Notes:
(***) 1 % significativity level; (**) 5 % significativity level; (*) 10 % significativity level

Table A13. Number of transitions from own-account work across Spanish regions
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Number of transitions from Own-Account Work TO	
	Own-Account Work	**Employer**
Spain	*2064*	*322*
Northwest	374	57
Northeast	326	64
Madrid	122	23
Center	302	39
East	506	67
South	308	47
Canary Islands	126	25

Table A14. Predicted probabilities of entering employership for individuals with given characteristics
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Transitions to Employer FROM	
	OA [a]	Δ% [b]
Standard individual [c] (S.I.)	*0.0955*	-----
S.I. but female	0.1085	13.6 %
S.I. but born abroad	0.1356	41.9 %
S.I. with university studies	0.094	-1.6 %
S.I. with relatives with university studies	0.1009	5.6 %
S.I. with previous spell(s) as employer	0.2185	128.8 %
S.I. with previous spell(s) as paid-employed	0.1603	67.8 %
S.I. with previous spell(s) as unemployed	0.0924	-3.3 %
S.I. with previous spell(s) as inactive	0.0611	-36.1 %
S.I. with relative(s) working as employer	0.0694	-27.3 %
S.I. with relative(s) working as own-account worker	0.1225	28.2 %
S.I. but working in the industrial sector	0.1073	12.3 %
S.I. but working in financial services	0.0997	4.3 %
S.I. but working in wholesale, hotels, restaurants or transport	0.0555	-41.9 %
S.I. but working in other services	0.0925	-3.2 %
S.I. with low working hours [d]	0.0968	1.3 %
S.I. with high working hours [d]	0.0938	-1.8 %
S.I. with low job experience [e]	0.1243	30.1 %
S.I. with high job experience [e]	0.0997	4.4 %
S.I. with inherit, gift or lottery winnings within the household	0.2052	114.8 %
S.I. but receiving €1,000 more in other family incomes	0.0963	0.8 %
S.I. with low work incomes [f]	0.0923	-3.4 %
S.I. with high work incomes [f]	0.1023	7.1 %
S.I. with low unemployment rate [g]	0.1791	87.5 %
S.I. with high unemployment rate [g]	0.0602	-37 %

Notes:
[a] Own-account worker.
[b] Percentage change related to the standard.
[c] S. I.= Standard individual: male, born in the country of present residence, cohabiting, one children aged fewer 14, no education or primary education, no relatives with university education within the sample, not previous experience as employer, paid-employed, unemployed or inactive, within the sample, not relatives working as employer or own-account worker, working in the construction sector, receiving mean capital and property incomes, and without any inherit, gift or lottery winnings within the household. Other variables equals to average values respectively.
[d] Low and high working hours are 40 and 70 (the 10th and 90th centiles respectively).
[e] Low and high own-account work experience are 2 and 19 years (the 10th and 90th centiles respectively).
[f] Low and high and own-account work incomes are half and double the average ones respectively.
[g] Low and high unemployment rates are 11.3 % and 19.8 % respectively, which are the lowest and the highest values for our sample period.

Table A15. Predicted probabilities of entering employership for individuals living across Spanish regions
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	Transitions to Employer FROM	
	OA [a]	Δ% [b]
Standard individual [c]	*0.0955*	-----
Standard individual but living in the Northwest	0.0964	0.9 %
Standard individual but living in the Northeast	0.1147	20.1 %
Standard individual but living in Madrid	0.1207	26.3 %
Standard individual but living in the Center	0.0828	-13.3 %
Standard individual but living in the East	0.0784	-18 %
Standard individual but living in the South	0.1007	5.4 %
Standard individual but living in Canary Islands	0.1174	22.9 %

Notes:
[a] Own-account worker.
[b] Percentage change related to the standard.
[c] S. I.= Standard individual: male, born in the country of present residence, cohabiting, one children aged fewer 14, no education or primary education, no relatives with university education within the sample, not previous experience as employer, paid-employed, unemployed or inactive, within the sample, not relatives working as employer or own-account worker, working in the construction sector, receiving mean capital and property incomes, and without any inherit, gift or lottery winnings within the household. Other variables equals to average values respectively.

Appendix B: Data Description

Spanish Continuous Expenditure Survey (ECPF)

Variable definitions referred to exercises developed with the Household Budget Continuous Survey (HBCS) are reported below.

Dependent variables

Transitions from paid-employment to self-employment:

Binomial case

Dependent variable equals 1 for individuals who are full-time waged workers in quarter *t-1* and become self-employed in quarter *t*. The variable equals 0 for individuals who are full-time waged workers in quarters *t-1* and *t*.

Multinomial case

Dependent variable equals 1 for individuals who are full-time waged workers in quarter *t-1* and become employers in quarter *t*. The variable equals 2 for individuals who are full-time waged workers in quarter *t-1* and become own-account workers in quarter *t*. Finally, the variable equals 0 for individuals which are full-time waged workers in quarters *t-1* and *t*.

Transitions from unemployment to self-employment:

Dependent variable equals 1 for individuals who are unemployed in quarter *t-1* and become self-employed in quarter *t*. The variable equals 0 for individuals who are unemployed in quarters *t-1* and *t*.

Transitions from own-account work to employer:

Dependent variable equals 1 for individuals who are own-account workers in quarter *t-1* and become employers in quarter *t*. The variable equals 0 for individuals who are own-account workers in quarters *t-1* and *t*.

Explanatory variables

Demographic characteristics:

Male	Dummy equals 1 for males.
Age	Age reported by the individual, ranging from 21 to 59.
Married	Dummy equals 1 for married individuals and 0 otherwise.
Children under 14	Dummy for individuals with children aged under than 14.
Husband / Wife self-employed	Dummy equals to 1 for individuals whose husband / wife is self-employed.

Education:

No education and primary schooling	Dummy equals 1 for illiterate, no schooling individuals, and individuals with primary schooling as higher education level achieved, and 0 otherwise Education data of the head of household is used as a *proxy* of education of the husband / wife.
Secondary schooling	Dummy equals 1 for individuals with secondary schooling as higher education level achieved and 0 otherwise. Education data of the head of household is used as a *proxy* of education of the husband / wife.
University studies	Dummy equals 1 for individuals with University studies and 0 otherwise. Education data of the head of household is used as a *proxy* of education of the husband / wife.

Employment characteristics:

Employment duration

Observed number of quarters in present job as paid-employed.

Own-account employment duration

Observed number of quarters in present job as own-account worker.

Unemployment characteristics:

Unemployed duration

Observed number of quarters as unemployed.

Observed previous experience:

Previous spell(s) as self-employed

Dummy equals 1 for individuals with observed previous spell(s) as self-employed.

Incomes:

Quarterly work incomes

Work incomes earned during the previous quarter to the interview, converted to euros of 1992, having been corrected by Consumer Price Index.

Quarterly own-account work incomes

Own-account work incomes earned during the previous quarter to the interview, converted to euros of 1992, having been corrected by Consumer Price Index.

Other quarterly family incomes

Other family income earned during the previous quarter to the interview, converted to euros of 1992, having been corrected by Consumer Price Index. It includes all family incomes but paid-employment work incomes, unemployment benefits, depending on the analyzed transitions.

Receiving unemployment benefits

Dummy equals 1 for individuals receiving unemployment benefits during the previous quarter to the interview, and 0 otherwise.

Business cycle:

Quarterly unemployment rate

National quarterly unemployment rate (source: Labour Force Survey –EPA-).

Town size:

Small town (< 10,000 inh.)

Dummy equals to 1 for individuals living in small size towns and 0 otherwise.

Medium town (10,001-50,000 inh.)

Dummy equals to 1 for individuals living in medium size towns and 0 otherwise.

Large town (50,001-500,000 inh.)

Dummy equals to 1 for individuals living in large size towns and 0 otherwise.

Very large town (> 500,000 inh.)

Dummy equals to 1 for individuals living in very large size towns and 0 otherwise.

Table B1. Descriptive statistics of the transitions from paid-employment to self-employment
Data Source: Spanish Continuous Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	All observations	Non switching observations	Switching to Employer observations	Switching to Own-account Worker observations
Number of observations	34108	33873	41	194
Demographic characteristics				
Females	26.7 %	26.7 %	19.5 %	28.9 %
Average age	41.2 years	41.2 years	44.1 years	40.1 years
Age 21-30 years	13.1 %	13.1 %	22 %	13.9 %
Age 31-40 years	36.1 %	36.2 %	19.5 %	35.1 %
Age 41-50 years	32.4 %	32.4 %	19.5 %	31.4 %
Age 51-59 years	18.4 %	18.3 %	39 %	19.6 %
No education / Primary schooling [*]	44.8 %	44.7 %	24.4 %	60.8 %
Secondary schooling [*]	38.8 %	38.9 %	48.8 %	31.5 %
University studies [*]	16.4 %	16.4 %	26.8 %	7.7 %
Married	43.9 %	43.9 %	48.8 %	45.9 %
Children under 14	35.6 %	35.7 %	26.8 %	33 %
Husband / Wife self-employed	5.9 %	5.8 %	17.1 %	9.8 %
Employment characteristics				
Average observed experience as employee	3.4 quarters	3.4 quarters	2.4 quarters	2.1 quarters
Previous experience within self-employment				
Previous experience as self-employed	1 %	0.8 %	17.1 %	36.1 %
Incomes				
Other quarterly family income	€418	€412	€1,420	€1,319
Average quarterly work income	€2,575	€2,584	€2,142	€1,184
Town size				
Small town (< 10,000 inh.)	19.2 %	19.2 %	14.6 %	22.7 %
Medium town (10,001-50,000 inh.)	20 %	19.9 %	36.6 %	27.8 %
Large town (50,001-500,000 inh.)	43.1 %	43.1 %	29.3 %	37.6 %
Very large town (> 500,000 inh.)	17.7 %	17.8 %	19.5 %	11.9 %

[*] Educational attainment of the head of household is used as a *proxy* of education of the husband/wife.

Table B2. Descriptive statistics of the transitions from unemployment to self-employment
Data Source: Spanish Continuous Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	All observations	Non switching observations	Switching observations
Number of observations	3661	3571	90
Demographic characteristics			
Females	43 %	43.6 %	17.8 %
Average age	41.2 years	41.3 years	39.7 years
Age 21-30 years	19.1 %	19.1 %	20 %
Age 31-40 years	32.2 %	32.1 %	33.3 %
Age 41-50 years	23.4 %	23.3 %	30 %
Age 51-59 years	25.3 %	25.5 %	16.7 %
No education / Primary schooling [*]	59.5 %	59.2 %	66.7 %
Secondary schooling [*]	34.3 %	34.6 %	24.4 %
University studies [*]	6.2 %	6.2 %	8.9 %
Married	45.8 %	45.7 %	50 %
Children under 14	35.4 %	35.4 %	36.7 %
Husband / Wife self-employed	9.6 %	9.5 %	11.1 %
Unemployment characteristics			
Average observed unemployment duration	2.5 quarters	2.5 quarters	1.9 quarters
Previous experience within self-employment			
Previous experience as self-employed	1.7 %	1.1 %	23.3 %
Incomes			
Other quarterly family income	€1,829	€1,831	€1,752
Receiving unemployment benefits	70.7 %	70.7 %	48.9 %
Average quarterly unemployment benefits	€776	784	453
Average quarterly unemployment benefits (those who receive)	€1,098	€1,101	€925
Town size			
Small town (< 10,000 inh.)	26.7 %	26.9 %	20 %
Medium town (10,001-50,000 inh.)	25.2 %	25.3 %	24.5 %
Large town (50,001-500,000 inh.)	33.9 %	33.6 %	42.2 %
Very large town (> 500,000 inh.)	14.2 %	14.2 %	13.3 %

[*] Educational attainment of the head of household is used as a *proxy* of education of the husband/wife.

Table B3. Descriptive statistics of the transitions from own-account worker to employer
Data Source: Spanish Continuous Family Expenditure Survey (ECPF), 1990 (I) – 1997 (I)

	All observations	Non switching observations	Switching observations
Number of observations	8786	8564	222
Demographic characteristics			
Females	32.3 %	32.6 %	20.3 %
Average age	44.6 years	44.6 years	43.5 years
Age 21-30 years	7.9 %	7.9 %	9.5 %
Age 31-40 years	25.6 %	25.5 %	27.5 %
Age 41-50 years)	36.5 %	36.4 %	39.6 %
Age 51-59 years	30 %	30.2 %	23.4 %
No education / Primary schooling [*]	34.3 %	34.3 %	35.6 %
Secondary schooling [*]	25.1 %	25 %	27.9 %
University studies [*]	20.9 %	21 %	18 %
Married	66.7 %	67 %	52.7 %
Children under 14	27.9 %	27.8 %	30.2 %
Husband / Wife self-employed	5.4 %	5.1 %	17.1 %
Previous employment characteristics			
Average observed exp. as own-acc.worker	3.3 quarters	3.4 quarters	2.1 quarters
Previous experience within self-employment			
Previous experience as employer	3.7 %	2.7 %	40.1 %
Incomes			
Other quarterly family income	€1,217	€1,214	€1,309
Average quarterly own-acc. work incomes	€1,869	€1,845	€2,793
Town size			
Small town (< 10,000 inh.)	43.1 %	43.4 %	32 %
Medium town (10,001-50,000 inh.)	24.3 %	24.1 %	30.2 %
Large town (50,001-500,000 inh.)	26 %	25.8 %	31.1 %
Very large town (> 500,000 inh.)	6.7 %	6.7 %	6.8 %

[*] Educational attainment of the head of household is used as a *proxy* of education of the husband/wife.

European Community Household Panel (ECHP)

Variable definitions referring to exercises developed with the European Community Household Panel (ECHP) are reported below.

Explained variables

Transitions from paid-employment to self-employment:

Binomial case

Dependent variable equals 1 for individuals who are full-time waged workers in period *t-1* and become self-employed in period *t*. The variable equals 0 for individuals who are full-time waged workers in periods *t-1* and *t*.

Multinomial case

Dependent variable equals 1 for individuals who are full-time waged workers in period *t-1* and become employers in period *t*. The variable equals 2 for individuals who are full-time waged workers in period *t-1* and become own-account workers in period *t*. Finally, the variable equals 0 for individuals which are full-time waged workers in periods *t-1* and *t*.

Transitions from unemployment to self-employment:

Binomial case

Dependent variable equals 1 for individuals who are unemployed in period *t-1* and become self-employed in period *t*. The variable equals 0 for individuals who are unemployed in periods *t-1* and *t*.

Multinomial case

Dependent variable equals 1 for individuals who are unemployed in period *t-1* and become employers in period *t*. The variable equals 2 for individuals who are unemployed in period *t-1* and become own-account workers in period *t*. Finally, the variable equals 0 for individuals who are unemployed in periods *t-1* and *t*.

Transitions from own-account work to employer:

Dependent variable equals 1 for individuals who are own-account workers in period *t-1* and become employers in period *t*. The variable equals 0 for individuals who are own-account workers in periods *t-1* and *t*.

Explanatory variables

Demographic characteristics:

Male	Dummy equals 1 for males.
Age	Age reported by the individual, ranging from 21 to 59.
Cohabiting	Dummy equals 1 for cohabiting individuals and 0 otherwise.
Number of children under 14	Number of children aged under than 14 living within the household.
Relative(s) working as employer(s)	Dummy equals to 1 if there are any in the household.
Relative(s) working as own-acc. worker(s)	Dummy equals to 1 if there are any in the household.

Education:

No education or primary education	Dummy equals 1 for illiterate, no schooling individuals, or individuals with primary schooling as highest education level achieved, and 0 otherwise.
Secondary education	Dummy equals 1 for individuals with secondary schooling as highest education level achieved and 0 otherwise.
University studies	Dummy equals 1 for individuals with university studies and 0 otherwise.

Relatives with university studies	Dummy equals 1 if there are any in the household.

Employment characteristics:

Private sector	Dummy equals 1 for individuals working in the private sector (versus the public sector).
Construction sector	Dummy equals 1 for individuals whose codes of main activity of the local unit of the business is F (construction), by the "Nomenclature of Economic Activities" (NACE-93).
Industrial sector	Dummy equals 1 for individuals whose codes of main activity of the local unit of the business are C (mining and quarrying), D (manufactures) and E (electricity, gas and water supply), by the "Nomenclature of Economic Activities" (NACE-93).
Wholesale, hotels, restaurants & transport	Dummy equals 1 for individuals whose codes of main activity of the local unit of the business are G (wholesale and retail trade; repair of motor vehicles, motorcycles and personal/household goods), H (hotels and restaurants) and I (transport, storage and communication), by the "Nomenclature of Economic Activities" (NACE-93).
Financial services	Dummy equals 1 for individuals whose codes of main activity of the local unit of the business are J (Financial intermediation) and K (real estate, renting and business activities), by the "Nomenclature of Economic Activities" (NACE-93).
Other services	Dummy equals 1 for individuals whose codes of main activity of the local unit of the business are L (public administration and defense; compulsory social security), M (education), N (health and social work) and O-Q (other community, social and personal service activities; private households with employed persons; extra-territorial organizations and bodies), by the "Nomenclature of Economic Activities" (NACE-93).
Small firm (0-4 employees)	Dummy equals 1 for individuals working in small firms.
Medium firm (5-19 employees)	Dummy equals 1 for individuals working in medium firms.
Large firm (> 19 employees)	Dummy equals 1 for individuals working in large firms.
Supervisory	Dummy equals 1 for individuals whose job status is supervisory.
Intermediate	Dummy equals 1 for individuals whose job status is intermediate.
Non-supervisory	Dummy equals 1 for individuals whose job status is non-supervisory.
Years of employment experience	Number of years in present job as paid-employee or own-account workers.
Hours of work	Hours of work per week.
Indefinite contract	Dummy equals 1 for full-time waged-workers with indefinite contract and 0 otherwise.
Non-indefinite contract	Dummy equals 1 for full-time waged-workers with non-indefinite contract and 0 otherwise.

Unemployment characteristics:

Unemployment duration	Number of years as unemployed.

Observed previous experience:

Previous spell(s) as employer	Dummy equals 1 for individuals with observed previous spell(s) as employer.
Previous spell(s) as own-account worker	Dummy equals 1 for individuals with observed previous spell(s) as own-account worker.
Previous spell(s) as paid-employee	Dummy equals 1 for individuals with observed previous spell(s) as paid-employee.
Previous spell(s) as unemployed	Dummy equals 1 for individuals with observed previous spell(s) as unemployed.
Previous spell(s) as inactive	Dummy equals 1 for individuals with observed previous spell(s) as inactive.

Incomes:

Inherit, gift or lottery winnings	Dummy equals 1 for households where anyone inherit any property capital, or receive a gift or lottery winnings, worth €2,000 or more during period $t-1$, and 0 otherwise.
Dwelling owner	Dummy equals 1 for households owning the dwelling in period $t-1$, and 0 otherwise.
Capital and property incomes (1 lag)	Capital and property incomes, and private transfers received during period $t-2$, having been corrected by Harmonised Consumer Price Index and converted to euros of 1996.
Annual own-account work incomes (1 lag)	Own-account work incomes earned during period $t-2$, having been corrected by Harmonised Consumer Price Index and converted to euros of 1996.
Monthly work incomes	Work incomes earned during the previous month to the interview, having been corrected by Harmonised Consumer Price Index and converted to euros of 1996.
Receiving unemployment benefits	Dummy equals 1 for individuals receiving unemployment benefits in period $t-1$, and 0 otherwise.

Business cycle:

Annual unemployment rate	Standardized annual unemployment rate (source: OCDE)

Region dummies:

Northwest	Dummy equals 1 for individuals living in Galicia, Asturias or Cantabria, and 0 otherwise.
Northeast	Dummy equals 1 for individuals living in the Basque Country, Navarra, La Rioja, or Aragón, and 0 otherwise.
Madrid	Dummy equals 1 for individuals living in Madrid, and 0 otherwise.
Center	Dummy equals 1 for individuals living in Castilla and León, Castilla La Mancha, or Extremadura, and 0 otherwise.
East	Dummy equals 1 for individuals living in Catalonia, Comunidad Valenciana or the Balearic Islands), and 0 otherwise.
South	Dummy equals 1 for individuals living in Andalusia, Murcia, Ceuta or Melilla, and 0 otherwise.
Canary Islands	Dummy equals 1 for individuals living in the Canary Islands, and 0 otherwise.

Table B4. Descriptive statistics of the transitions from paid-employment to self-employment
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	All observations	Non switching observations	Switching to Employer observations	Switching to Own-account Worker observations
Number of observations	16846	16516	186	144
Demographic characteristics				
Females	30.4 %	30.9 %	18.3 %	15.9 %
Average age	37.5 years	37.5 years	37.3 years	33.6 years
Age 21-30 years	29.3 %	29.1 %	30.6 %	45.8 %
Age 31-40 years	32.6 %	32.5 %	34.9 %	33.3 %
Age 41-50 years)	26 %	26.1 %	21 %	17.4 %
Age 51-59 years	12.2 %	12.3 %	13.4 %	3.5 %
No education / Very basic education	47.4 %	47.4 %	48.9 %	46.5 %
Primary schooling / Secondary schooling	21.8 %	21.7 %	26.3 %	29.2 %
University studies	30.8 %	30.9 %	24.7 %	24.3 %
Relatives with university studies	28.4 %	28.3 %	35.5 %	26.4 %
Cohabiting	69.7 %	69.6 %	74.7 %	66.7 %
Average number of children under 14	0.58 children	0.59 children	0.55 children	0.56 children
Relative(s) working as employer(s)	3.4 %	3.3 %	8.1 %	6.9 %
Relative(s) working as own-acc. worker(s)	5.6 %	5.5 %	7.5 %	11.8 %
Employment characteristics				
Private sector	81.4 %	81.1 %	97.3 %	93.8 %
Construction sector	11.8 %	11.6 %	16.1 %	21.5 %
Industrial sector	28.5 %	28.6 %	28.5 %	18.1 %
Financial services	10.7 %	10.8 %	6.5 %	9 %
Wholesale. hotels. restaurants & transport	24.9 %	24.6 %	41.4 %	41 %
Other services	24.1 %	24.4 %	7.5 %	10.4 %
Small firm (0-4 employees)	14.8 %	14.4 %	32.3 %	38.2 %
Medium firm (5-19 employees)	25.6 %	25.2 %	43.5 %	38.2 %
Large firm (>19 employees)	59.7 %	60.4 %	24.2 %	23.6 %
Supervisory	9.2 %	8.8 %	39.2 %	9.7 %
Intermediate	19.5 %	19.6 %	14.5 %	14.6 %
Non-supervisory	71.3 %	71.5 %	46.2 %	75.7 %
Indefinite contract	71.6 %	71.9 %	66.7 %	43.8 %
Average hours of work per week	42.4 hours	42.3 hours	47.4 hours	43.8 hours
Average years of experience as employee	9.1 years	9.2 years	7.4 years	4.9 years
Previous experience				
Previous spell(s) as employer	2.1 %	1.5 %	43.5 %	16 %
Previous spell(s) as own-account worker	2 %	1.7 %	12.9 %	23.6 %
Previous spell(s) as unemployed	50 %	49.9 %	45.7 %	70.1 %
Previous spell(s) as inactive	9.1 %	9.1 %	7.5 %	11.8 %
Incomes				
Dwelling owner	83.8 %	83.9 %	80.6 %	80.6 %
Receiving capital and property incomes	56.5 %	56.3 %	60.8 %	66.7 %
Average annual capital and property incomes	€211	€209	€437	€239
Average annual capital and property incomes (those who receive)	€374	€370	€720	€359
Average monthly work income	€1,004	€1,005	€1,038	€850
Region				
Northwest	12.1 %	12.1 %	10.8 %	13.2 %
Northeast	17.6 %	17.6 %	19.4 %	15.3 %
Madrid	12.8 %	12.8 %	8.6 %	9.7 %
Center	13.7 %	13.6 %	20.4 %	15.3 %
East	23 %	23 %	22 %	22.9 %
South	15.2 %	15.2 %	12.9 %	20.8 %
Canary Islands	5.7 %	5.8 %	5.9 %	2.8 %

Table B5. Descriptive statistics of the transitions from unemployment to self-employment
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	All observations	Non switching observations	Switching to Employer observations	Switching to Own-account Worker observations
Number of observations	2958	2761	40	157
Demographic characteristics				
Females	53.7 %	55.5 %	30 %	18 %
Average age	33.6 years	33.6 years	33.3 years	33.8 years
Age 21-30 years	48.2 %	48.2 %	55 %	47.1 %
Age 31-40 years	27 %	27 %	17.5 %	29.9 %
Age 41-50 years)	16.3 %	16.1 %	22.5 %	19.1 %
Age 51-59 years	8.4 %	8.7 %	5 %	3.8 %
No education / Very basic education	58.3 %	59.1 %	37.5 %	49 %
Primary schooling / Secondary schooling	21.5 %	21.3 %	30 %	24.2 %
University studies	20.2 %	19.6 %	32.5 %	26.8 %
Relatives with university studies	21 %	20.6 %	27.5 %	25.5 %
Cohabiting	50.5 %	50.4 %	52.5 %	52.2 %
Average number of children under 14	0.6 children	0.61 children	0.2 children	0.59 children
Relative(s) working as employer(s)	4.1 %	4 %	5 %	5.7 %
Relative(s) working as own-acc. worker(s)	9.9 %	9.5 %	12.5 %	17.8 %
Unemployment characteristics				
Average unemployment duration	4.4 years	4.5 years	3.6 years	3.4 years
Previous experience				
Previous spell(s) as employer	1.2 %	1.1 %	2.5 %	3.2 %
Previous spell(s) as own-account worker	1.9 %	1.6 %	7.5 %	7 %
Previous spell(s) as unemployed	66.2 %	66.5 %	60 %	62.4 %
Previous spell(s) as inactive	27.8 %	27.9 %	27.5 %	26.1 %
Incomes				
Dwelling owner	77.5 %	77.3 %	75 %	81.5 %
Receiving capital and property incomes	27 %	26.3 %	35 %	36.9 %
Average annual capital and property incomes	€221	€212	€545	€302
Average annual capital and property incomes (those who receive)	€656	€645	€1,246	€654
Receiving unemployment benefits	30.9 %	31.4 %	37.5 %	21 %
Average annual unemployment benefits	€1,374	€1,383	€2,054	€1,043
Average annual unemployment benefits (those who receive)	€3,560	€3,530	€4,386	€3,971
Region				
Northwest	14.2 %	14.2 %	17.5 %	13.4 %
Northeast	11.1 %	10.8 %	20 %	14.6 %
Madrid	7.7 %	7.6 %	12.5 %	8.3 %
Center	16 %	16.4 %	5 %	10.8 %
East	16.4 %	16.2 %	27.5 %	17.8 %
South	28.9 %	29 %	15 %	29.3 %
Canary Islands	5.8 %	5.8 %	2.5 %	5.7 %

Table B6. Descriptive statistics of the transitions from own-account worker to employer
Data Source: European Community Household Panel (ECHP), 1994 – 2001

	All observations	Non switching observations	Switching observations
Number of observations	2386	2064	322
Demographic characteristics			
Females	24.2 %	24.4 %	23 %
Born abroad	3.4 %	3.3 %	4.3 %
Average age	41.2 years	41.5 years	39.4 years
Age 21-30 years	16.3 %	15.4 %	22.4 %
Age 31-40 years	31.1 %	30.5 %	35.1 %
Age 41-50 years	31.6 %	32.6 %	25.8 %
Age 51-59 years	20.9 %	21.6 %	16.8 %
No education / Very basic education	63.8 %	65.1 %	55.6 %
Primary schooling / Secondary schooling	18.6 %	18.1 %	21.7 %
University studies	17.6 %	16.8 %	22.7 %
Relatives with university studies	23.8 %	23.1 %	28.6 %
Cohabiting	78.8 %	79.3 %	76.1 %
Average number of children under 14	0.62 children	0.62 children	0.62 children
Relative(s) working as employer(s)	4.4 %	4.5 %	3.7 %
Relative(s) working as own-acc. worker(s)	17.9 %	17.1 %	22.7 %
Employment characteristics			
Construction sector	12.9 %	12 %	18.6 %
Industrial sector	8 %	7.5 %	11.5 %
Financial services	10.4 %	9.6 %	15.2 %
Wholesale, hotels, restaurants & transport	61.7 %	64.2 %	45.7 %
Other services	7 %	6.7 %	9 %
Average hours of work per week	52.5 hours	52.7 hours	51.2 hours
Average years of employment experience	9.7 years	9.9 years	8.8 years
Previous experience			
Previous spell(s) as employer	15.5 %	12.2 %	37 %
Previous spell(s) as paid-employed	12.5 %	10.2 %	27.3 %
Previous spell(s) as unemployed	39.6 %	38.9 %	44.1 %
Previous spell(s) as inactive	7.4 %	7.4 %	7.5 %
Incomes			
Inherit, gift or lottery winnings	1.4 %	1.2 %	2.8 %
Dwelling owner	84.7 %	84.6 %	85.1 %
Receiving capital and property incomes	55.6 %	54.8 %	60.9 %
Average annual capital and property incomes	€289	€286	€311
Average annual capital and property incomes (those who receive)	€520	€522	€511
Average annual own-account work incomes	€7,862	€7,724	€8,746
Region			
Northwest	18.1 %	18.1 %	17.7 %
Northeast	16.3 %	15.8 %	19.9 %
Madrid	6.1 %	5.9 %	7.1 %
Center	14.3 %	14.6 %	12.1 %
East	24 %	24.5 %	20.8 %
South	14.9 %	14.9 %	14.6 %
Canary Islands	6.3 %	6.1 %	7.8 %