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In-Work Poverty Persistence: The Influence of Past Poverty on the Present

Permanencia en la pobreza laboral: la influencia de la pobreza pasada en la presente

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Key words

Longitudinal Analysis
- Income
- Labor Market
- Poverty
- Public Policies

Abstract

This dynamic study of poverty offers results that could not have been attained with a cross-cutting approach. In this article, we examine the causes leading individuals to remain in situations of working poverty. The main objective is to analyze the probability of remaining in poverty from one year to another, attempting to determine if it is individual characteristics or the previous poverty experiences that determine the probability of suffering from in-work poverty. The results reveal that individuals experiencing working poverty at a certain time have greater probabilities of experiencing it in the future, thereby detecting a dependency of status mechanism. However, there are also certain specific characteristics related to in-work poverty: those associated with the home or with the receipt of low salaries.

Palabras clave

Análisis longitudinal
- Ingresos
- Mercado de trabajo
- Pobreza
- Políticas públicas

Resumen

El estudio dinámico de la pobreza ofrece resultados que no se consiguen con una perspectiva transversal. En este artículo se estudian las causas que llevan a la permanencia en la situación de pobreza laboral. El principal objetivo es el análisis de la probabilidad de permanecer en la pobreza de un año a otro, intentando determinar si son las características de los individuos o si son las experiencias pasadas en la pobreza lo que determina la probabilidad de sufrir pobreza laboral. Los resultados muestran que las personas que caen en la pobreza laboral en un momento determinado tienen más probabilidades de experimentarla en el futuro, por lo que se detecta un mecanismo de dependencia de estado. Aun así, también hay algunas características específicas relacionadas con la pobreza laboral: las asociadas al hogar o la recepción de bajos salarios.

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Introduction[1]

Poverty and working poverty in Spain are characterized by being some of the highest in all of the European Union (EU) and by having great stability during the first decade of this century, a period in which an expansion has taken place in the economy and in employment. To this, it is also necessary to add the low impact of the Spanish social welfare system and the influence of a dualized labor market. The use of a longitudinal perspective on the study of poverty allows us to conduct analyses that consider the duration of the phenomena. Permanence in poverty is a widespread phenomenon that requires new perspectives in order to make an in-depth analysis of the determinants of these situations. Thus, while it is important to know which workers enter into states of poverty and which do so in a permanent manner; it is even more relevant to determine the mechanisms that lie behind this permanence in the poverty state.

Some recent studies have considered the duration of poverty from a permanence-dependence perspective. The main objective was to analyze the specific characteristics that are determinants of the poverty situation, taking into account the influence of time, given that past poverty experiences may affect the future probability of entering the same situation. The results have revealed a significant state dependence in poverty and other situations related to the labor market (unemployment, low salaries) as well as certain individual and household characteristics (gender, working situation, household composition).

The objective of this article is to determine whether or not working poverty in Spain is the result of state dependence or if other characteristics related to the individual and his/her household may explain the probability of remaining in a state of poverty. So, the main question is: Do workers enter a poverty situation due to their past experiences in that situation or due to certain characteristics that increase their probability of being impoverished? In response to this question, literature on poverty and low salaries has frequently used dynamic, logistic and probability models, on dynamic dependent variables, which are capable of differentiating between *state dependence* controlling for both observed and unobserved heterogeneity as well as endogeneity problems.

The distinction between permanent poverty that is caused by individual and household characteristics and future poverty that is caused by current poverty has major implications for the design of public policies. On the one hand, if poverty leads to poverty, regardless of other determinants, political battles against poverty would have a much greater impact, given that they are not only influencing the current poverty state but also future poverty. At the same time, if there is evidence that poverty tends to reproduce itself, current policies should be reviewed in order to determine to what point they may be part of this mechanism generating permanence (Biewen, 2004). On the other hand, it is possible that poverty is determined by specific individual characteristics and by previous states of poverty. In this case, policies should be directed towards these specific groups and not the general poor population.

In the first section of this article, the Spanish case is contextualized and the potential determinants of permanence in poverty that have been found in available research are presented and discussed. Below we present the analysis strategy and the model used to consider the characteristics of the data used (longitudinal). In the third and fourth sections the descriptive and analytic results are presented, which reveal the influence of variables referring to the individuals,

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their jobs and households, as well as the potential effect of state dependence.

Working poverty in Spain and potential determinants of permanence

Spain is characterized as being a country with one of the highest risks of poverty in the EU, also having high rates of working poverty. At the same time, said rates were stable during the first decade of the century, at around 12%. Studies using a longitudinal perspective (analyzing poverty in periods of over one year) situate Spain as a country with statistically high rates of poverty (around 20%), low permanence (only 2.7% in a period of seven years) and high transience (44% spend at least one year in poverty). In an international perspective, Spain is situated in an intermediate position; despite having a considerably high poverty rate. It also has a high transience rate, reflected by the intermediate or even low rates of persistence (Cantó *et al.,* 2010).

The selected period, between 2003 and 2008, corresponds to a cycle of economic and employment expansion in Spain that did not, however, lead to a decreased risk of poverty for workers during the first decade of the present century. Both facts make it necessary to determine why, in a country where employment and the economy are growing, the risk of poverty in employed individuals is also on the rise (or, at least, remaining stable).

Some authors have explained that this lack of improvement in the risk of poverty rates may be due to a decreased redistributive capacity of the social welfare system, which over recent years, has had a reduced ability to correct inequalities through economic benefits (Ayala *et al.,* 2013). Spanish welfare institutions, of the Mediterranean welfare type, are characterized by their low coverage for working poverty risk situations and a low intensity of social welfare systems (Esping-Andersen, 2000). The level and composition of Spanish in-work poverty is related to the lack of social benefits for households with children, families and employed members and to the limited impact of the same on the reduction of poverty, with minimum guarantee programs that have a very limited impact on poverty risk (Laparra and Ayala, 2009; Rodríguez-Cabrero, 2010 and 2011). It may be concluded that this leads many households to rely exclusively on the salary income in order to avoid this risk of poverty.

Countries from Southern Europe also share characteristics in terms of the dualist structure of their labor markets (Halleröd *et al.,* 2015; Visser, 2009). In Spain, there is strict regulation of the labor market. The strictness of the labor market is mainly due to the dual protection, with differences existing for those having open-ended contracts (with greater social protection, limited cause of dismissal and higher dismissal costs) as opposed to those with temporary contracts (less social protection, greater ease of dismissal and lower costs for the same) (García-Espejo and Gutiérrez, 2011). Thus, welfare provisions are generally organized and fragmented by dual occupation lines: many rights for those in the center of the labor market and few for those along the periphery (Rodríguez-Cabrero, 2011). The dual nature of the Spanish labor market means a high rate of temporary contracts and frequent labor rotation. Thus, the increase in precarious employment or low quality work has increased the risk of poverty suffered by workers.

Over recent years, the number of studies using a dynamic perspective to analyze poverty has increased, given that panel data allows for the resolution of statistical data problems when analyzing variables that changes over time. At the same time, it also permits the inclusion of variables that consider this time and its influence. Diverse studies have been conducted to analyze poverty state dependence and other situa-

tions (low salaries, unemployment). The study conducted by Biewen (2004) examines the influence of poverty state dependence in Germany. The results suggest that, even after controlling for the observed and unobserved heterogeneity, past poverty experiences increase the probability of experiencing future poverty states. Poggi (2003) analyzed the persistence of social exclusion in Spain in a study that presented results on different poverty dimensions. He identified mechanisms of state dependence on social exclusion in Spain, although he also noted the influence of certain characteristics such as education level or household composition (observed heterogeneity).

Approaches considering working poverty have analyzed the persistence of low salaries as an indicator of in-work poverty (Capellari, 2002) or dependence mechanisms that are generated in unemployment situations (Arulampalam *et al.,* 2000). Cappellari (2002) considered persistence-dependence of working poverty in Italy through the estimation of permanence under the low wage threshold (in this case, wages are used as indicators of worker well-being). It was concluded that the degree of state dependence is very high, although there are also other attributes that influence the working poverty/low wage state: gender, education, occupation, occupation sector and region of residence.

Along these lines, the analysis of permanence-dependence is suggested as an approach to the potential first causes of the phenomenon of persistence in in-work poverty, to the mechanisms that generate an ongoing risk of living below the poverty threshold. This persistence is associated with an increased material deprivation and is related to other poverty dimensions that are not directly measured in this work (Berthoud and Bryan, 2010). Thus this approximation of permanence-dependence of working poverty is, in some ways, an approximation to other poverty dimensions.

There are two mechanisms associated with the presence of poverty state dependence (Biewen, 2004). First, it may be the case that the poverty experience in a specific period has a causal effect on future poverty states, known as *state dependence*. The low income is associated, on the one hand, with adverse incentives that make it impossible for the individual to achieve employment if unemployed or to find a better job if having a low wage position; on the other hand, it may be associated with demoralization processes, a loss of motivation or depreciation of human capital, also decreasing the chances of finding employment if unemployed and of improving the unstable and/or unsafe employment situation. Second, it is possible that the poverty of a specific moment takes place because the individuals have certain characteristics that make them especially prone to poverty (observed heterogeneity). As these characteristics continue over time, the possibility of experiencing poverty in future moments increases (Poggi, 2003).

The distinction between these two components is fundamental for the implications of the design of policies to fight poverty (Giraldo *et al.,* 2002; Poggi, 2003; Andriopolou and Tsakloglou, 2011). If poverty is determined by state dependence, policies developed to prevent it should also thereby prevent future poverty. Therefore, it is necessary to break the vicious cycle of poverty, applying, for example, income support policies. In this way, policies may be directed at the set of poor workers and not at specific groups within them (Capellari, 2002). If, on the contrary, poverty harbors a greater influence of individual and household characteristics, policies should be directed towards these risk categories: through, for example, education, training, labor market or home/working life reconciliation policies.

Also, within the framework of the policies that fight working poverty, there are three proposals that have made up the debate over recent years and that should be consid-

ered (Cretazz, 2011): an increase in minimum wage (effectiveness of the measure by which in-work poverty is a problem of low wages), social benefits directed at fighting the specific risks of poor workers (unemployment or benefits that are complementary to wages) and policies designed to maximize working participation of the households (increase in female and under-qualified worker participation). To a greater or lesser extent, the objective of these policies is to fight two of the potential causes of working poverty (Halerröd *et al.,* 2015): unemployment and low wages. Thus, as both variables condition in-work poverty, it would be better to make proposals that are related to the minimum wage (low wages), maximizing work participation (unemployment) or with an increase in social benefits (low salaries and unemployment).

Data and concepts

The European Union Survey on Income and Living Conditions (EU-SILC) is a tool used for the study of the distribution of income and social exclusion in Europe. A survey that, since 2004, has been conducted in all member countries of the EU with the same structure and with the fundamental objective of gathering information on households and individuals from countries outside of the EU, obtaining results that may be comparable and that help determine the current situation of economic activity and the living conditions of the individuals.

The EU-SILC has certain problems that should be taken into account. First, it is a semi-panel sample survey. In other words, different individuals are followed over time, with one fourth of the sample being changed every year. This is called a rotating panel, with four rotation turns: one household, one individual, may be in the sample for only four years. Individuals that remain in the sample continuously were selected, being that they were present in the first year of each observation period. That is, the individuals were analyzed for an observation period of one, two, three or four years, with the requirement that no observations be missed during the period. The individuals of this sample were studied in periods of two years.

On the other hand, the EU-SILC had an inconsistency between the reference periods for some of the variables. Some variables refer to the year prior to the time of the interview (variables referring to income), required in order to create the poverty dimension, whereas others refer to the time of the interview[2]. Therefore, when measuring poverty in the 2004 file, in fact, the economic situation of these households is being measured for the year 2003. Thus, data from the files between 2004 and 2009 were used, but in fact, the period 2003-2008 was being analyzed.

Measurement of working poverty requires the creation of a concept that implies two dimensions: the individual and the household. A poor worker may be considered the worker who lives in a poor household. Based on the Eurostat definition, and for potential use in all countries of the European Union ("EU workers" hereinafter): defining a worker as that individual who, during the reference year, has worked for at least 7 months, at least 15 hours per week. On the other hand, the poor household is defined based on the household income and the composition of the same, that is, taking into account the median income of the household according to the OECD equivalence scale. So, poor households are those that fall below the 60% mark for median equivalent income.

In addition, other complementary concepts related to the work dimension were used, in order to better understand the dif-

[2] All of the variables have been modernized so that they refer to the same year: for example, when analyzing 2004, the variables from this year that refer to the time of the interview are used, while the variables from 2005 referring to the income reference period (which is 2004) are used.

TABLE I. *Main concepts of working poverty*

Selection criteria	Participation in the labor market	Employment
USA Actives (USBLS)	More than half of the reference period (at least 27 weeks)	No
FR Employees (INSEE)	At least half of the period	At least one month
EU Workers (Eurostat)	No	More than half of the period (at least 7 months).
Employed	No	More than half of the period (at least 7 months) working for others.
Self-employed	No	More than half of the period (at least 7 months) self-employed.

Source: Ponthieux (2010). Box 14.1 and own creation.

ferentiated situation of the employed and self-employed workers (prior studies show that the poverty risk for the self-employed is much greater than that for employed workers); and, on the other hand, it is possible to determine if the selection of "in-work" concept conditions the obtained results. Previous studies have shown that differences between the most frequently used employment indicators affect the incidence of the problem, as well as the causes that they identify (Ponthieux, 2010).

As seen in Table I, the term "USA active" is used, based on the definition from the USBLS (United States), for those individuals who have participated in the labor market for over half of the reference period (one year) in a job or unemployment. The sample of "FR employed" was created based on the concept of the INSEE (France): including those who were unemployed for six months but were employed for at least one month and for those who have worked for at least six months. Finally, the "EU worker" population was divided into "employed" and "self-employed" with "employed" referring to those individuals who have spent at least six months working as an employee during the reference period; and "self-employed" refers to those who have spent at least six months in the labor market, working for themselves.

Analysis strategy: dynamic dependent variable probit model

In the poverty literature, and especially, the literature on low wages, many studies have attempted to measure the influence of past states on present situations (Arulampalam *et al.,* 2000; Capellari, 2002; Clark and Kanellopoulos, 2009). Typically, these analyses were conducted using logistics or probit models of dynamic dependent variables that are capable of differentiating between the *state dependence,* controlling for both the observed and unobserved heterogeneity as well as initial conditions problems.

In the analysis presented here, the methodology proposed by Wooldridge (2005) was followed. In these models, the dependent variable is binary, therefore, the value of 1 is used when the person is found to be in working poverty and 0 when not in working poverty. This variable is observed at most during a period of 4 years. The models presented are differentiated by these periods, beginning in 2003, 2004 and 2005 respectively. The model specification for individual at the moment in time is:

$$T_{iit} = x'_{it}\beta + \gamma y_{it-1} + v_{it} \quad i = 1, 2, \ldots, n \text{ y } t = 2, \ldots, T_i$$

Where refers to the unobservable individual propensity to be in working poverty, is a vector of observable characteristics affecting y^*; β is a vector of coefficients associated with and , whereas is the term of unobservable error. It is an unbalanced panel sample (not having the same number of observations for each case, but having between one and four consecutive observations per individual), with the total number of observations per individual being . State dependence is measured with the inclusion of the delayed dependent variable in the right-hand part of the equation (γy_{it-1}).

Assuming that the individual unobservable heterogeneity is invariant in time, the error term may be broken down as

$$v_{it} = \varepsilon_i + u_{it}$$

where is the unobservable individual effect and is random error. is treated as random and a probit model of random effects is used to estimate the probability of being poor, based on the common assumptions of $u_{it} \sim IN(0,\sigma_u^2)$, that is, with being independent of x_{it} for all individuals *(i)* and moments in time *(t)*.

Thus, a random effects probit model (of dynamic dependent variable) was used. The probit models were used to estimate models that measure the influence of diverse independent variables on a binary dependent variable and are based on a normal distribution function for calculating probabilities. The difference between the random and fixed effects lies in the assumption of how the unobservable heterogeneity is distributed: whereas the fixed effect models are based on the idea that unobservable heterogeneity is constant for each individual, random effects models consider that the heterogeneity is randomly distributed around a specific value (where the individual effects are random) (Gutiérrez *et al.,* 2011).

It is useful to mention that there is a complication in the implementation of this type of models, their potential initial conditioning problems (Arulampalam *et al.,* 2000; Capellari, 2002; Clark and Kanellopoulos, 2009). This problem exists because the observation period does not always coincide with the process that generates the poverty. In the case of this study, when a worker is currently in poverty, it may be because he/she has been in this poverty state in the past (but there are no observations to verify this). This problem exists when y_{it} is correlated with x_i and in this article, it is controlled by the type of statistical analysis implemented.

Evidence of permanence-dependence in working poverty. Descriptive approximation

Before discussing the results of the analytical model, it is useful to provide a descriptive introduction of the levels of persistence and mobility in working poverty in the studied period and with the selected definitions of "work". In Table II, different indicators may be observed: column 1 reveals the rates of in-work poverty. Although the data that is derived from longitudinal files of the EU-SILC cannot be interpreted in static terms (because the samples are constructed in order to be representative in a period of four years), the rate of working poverty based on the EU indicator has levels that are very similar to those of the official data (around 12%). The comparison between the incidence of poverty of "EU workers" and "FR employees" does not reveal large differences (also around 12%), while the "USA actives" are around 15%. In the extreme situations, there are the employed workers and the self-employed who have levels around 8 and 31% respectively.

In column 2, the probability of permanence in poverty from one year to another is presented. Data reveals that in a specific year, around 50% of the in-work poor, regardless of the concept of "work" that is used, remain in poverty. This result is an in-

TABLE II. *Probabilities of experiencing working poverty*

		A	B	C	D
Poor workers	2003	11.6	50.1	49.9	5.8
	2004	12.0	49.0	51.0	6.2
	2005	12.4	52.0	48.0	6.7
Poor employees	2003	12.4	49.8	50.2	6.2
	2004	12.8	49.6	50.4	6.5
	2005	13.2	52.2	47.8	7.0
Poor actives	2003	14.7	52.4	47.6	6.9
	2004	15.4	53.4	46.6	7.5
	2005	15.9	55.6	44.4	7.9
Poor employed	2003	7.5	44.5	55.5	3.5
	2004	7.5	47.7	52.3	3.8
	2005	8.2	51.2	48.8	3.8
Poor self-employed	2003	31.6	57.3	42.7	18.5
	2004	32.3	52.1	47.9	20.4
	2005	31.9	55.3	44.7	22.8

(*) PL: Working poverty

A: $P(PL = 1)$

B: $P(PL = 1 \mid PL_{t-1} = 1)$

C: $P(PL_t = 1 \mid PL_{t-1} = 0)$

D: $P(PL_t = 0 \mid PL_{t-1} = 1)$

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

dicator of the high permanence in the short term of Spanish poverty and the low influence of the situation with respect to activity. However, there are differences in the temporal trend of this permanence: the "EU workers" and poor employees suffer from an increase in permanence in the last period taken into account (2005-2008); the poor "USA actives" and "FR employees" also increase their permanence in poverty but during the three analyzed periods; self-employed workers have an unstable tendency with the permanence decreasing between first and second period and increasing in the last period.

In contrast with permanence, in columns 3 and 4, the rates of entry and exit of in-work poverty are presented, as indicators of the poverty mobility of these "work" concepts. The first trend observed is the high mobility of working poverty. The exits do not reveal significant differences between the analyzed concepts although the employed workers exit poverty more than the self-employed, with the actives, employed and workers in an intermediate position. The entries however have a very different pattern: workers, employed workers and actives have an entry rate into working poverty that is around 6%, 7% and 8%, respectively, therefore there are

TABLE III. *Demographic characteristics of working poor (according to concept of "work")**

		EU Worker	FR Employees	Actives USA	Employees	Self-employed
Gender	*Male*	76.33	73.94	69.64	74.55	78.39
	Female	23.67	26.06	30.36	25.45	21.61
Age	*16-24*	5.34	6.58	7.71	8.54	1.53
	25-49	70.71	70.58	67.61	77.24	65.10
	50-64	22.70	21.70	23.11	15.48	31.52
	65 and older	1.25	1.14	1.58	0.75	1.85
Education level	*Primary*	33.14	33.12	34.83	32.89	33.79
	Secondary	54.59	54.55	52.92	55.48	53.17
	Tertiary	12.27	12.33	12.26	11.63	13.05

* The mean of the working poverty rate is presented for the studied period (between 2003 and 2008) for each category of each variable.

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

only slight differences. The self-employed and wage earners are situated in quite different extremes: the former have levels around 20% and the second around 4%. This may indicate that the differences in entry into poverty rates are those explaining the different levels of poverty based on the concepts of "work" that are considered.

Within the descriptive analysis, it is also useful to refer to the composition of working poverty in the sample selected for analysis. On the one hand, this description helps explain some of the results of the models that are presented and, on the other hand, it allows us to determine whether or not the different concepts of work are selecting a very different employed population, that is, if the more or less restrictive concept of work is selecting sectors of the labor market that are more or less stable. Taking into account the determinants that have resulted to be essential in earlier studies, the composition of working poverty is presented in function of individual working and household variables (the results are found in Tables III, IV and V).

The results show that the concepts of "work" tend to select individuals with similar characteristics. In this case, even the self-employed workers have a profile that is similar to those of the other concepts. The selected workers are primarily men, with ages ranging from 25 to 59, having secondary level studies, open-ended contracts that are full time and with a high incidence of low wages. A high percentage of them are workers in the service sector, qualified workers in the industrial sector and unqualified workers. They tend to live in households where not all potentially active members are participating in the labor market (given that these tend to be households with working intensity of greater than 0.5, but less than 1) and with few possibilities of adding to the household income with social benefits.

The more or less restrictive nature of the "work" concept does not reveal significant differences. However, the more restrictive concepts tend to select a greater number of workers with open-ended contracts and with a lower presence of low wages, although not

TABLE IV. *Working characteristics of working poor (according to concept of "work")*

		EU Workers	FR Employees	Active USA	Employees	Self-employed
Type of contract	*Open-ended*	63.58	54.93	52.12	58.14	—
	Seasonal	36.42	45.07	47.88	41.86	—
Working situation*	*With employees*	—	—	—	—	28.89
	Without employees	—	—	—	—	71.11
Receives low salary	*Yes*	40.07	41.60	61.94	40.49	—
	No	33.68	32.74	38.06	33.89	—
Occupation	*Executives and businessmen*	10.81	10.39	9.99	0.45	—
	Technician and professionals	3.54	3.51	3.59	2.53	—
	Support technicians	4.92	4.94	4.87	5.55	—
	Administrative jobs	3.96	3.94	4.25	5.52	—
	Service workers	14.30	14.67	14.90	15.09	—
	Qualified agriculture workers	9.74	9.50	9.27	3.11	—
	Qualified industrial workers	24.10	23.86	23.43	25.88	—
	Operators and assemblers	8.95	8.73	8.67	11.46	—
	Unqualified workers	19.68	20.46	21.04	30.41	—

* Only for self-employed workers.

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE V. *Characteristics and income of households of working poor (according to the concept of "work")*

		EU workers	FR employees	USA Active	Employees	Self-employed
Working intensity	*I.L.=0*	—	—	10,71	—	—
	0< I.L. <0.5	11.34	17.32	19.77	15.75	6.09
	0.5≤ I.L. <1	58.08	55.11	47.79	63.89	50.76
	I.L.=1	30.58	27.57	21.72	20.36	43.15
The household receives benefits:	for unemployment	10.50	12.88	13.92	15.01	4.98
	for inactivity	11.51	12.36	15.81	10.87	12.43
	of another type	13.74	13.58	13.32	16.45	10.05

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

reaching a very pronounced difference. Therefore, it is not anticipated that the use of the different concepts of "work" will lead to very different results. On the other hand, it is expected that the use of these concepts reflects the robustness of the results.

Evidence of permanence-dependence in working poverty. Analytical approach

Below we present the results obtained in order to determine the probability of suffering from working poverty, taking into account the influence of past situations of in-work poverty and the main characteristics that have already had an effect on working poverty. The analysis of different periods is presented (2003/2006, 2004/2007 and 2005/2008) as well as concepts of work, the coefficients and their significance. Its interpretation is as follows: the coefficients that have a negative sign represent a lower probability of experiencing working poverty with respect to the reference category of the analyzed independent variable; the coefficients with positive signs indicate that the studied category has greater possibilities of suffering from working poverty than the reference category.

The results presented in Tables VI-X once again reveal that the differences between the concepts of work are not significant, given that the conditioners of all of the situations taken into account are the same (except for the self-employed workers). Therefore, the results of the work concepts for employed workers, "EU workers", "FR employees" and "USA actives" are considered collectively. This similarity in the results highlights their robustness.

The first significant result is the confirmation of one of the initial hypotheses, the existence of state dependence. Based on prior results from other studies and the persistence of Spanish working poverty, it is expected that the state dependence would be present in this study. In the four cases, the delayed dependent variable is highly significant and positive, indicating a direct influence of past in-work poverty experience on the present situation. Therefore, there is an inherent entrapment mechanism in the in-work poverty experience which should be considered when it comes to designing public policies to alleviate the situation.

The implementation of this model has allowed us to observe the influence of other characteristics that have also been studied from the static perspective. The results reveal that there are some variables that are more associated with the risk of in-work poverty given that, even when controlling for time spent in poverty, they continue to be significant. Some of these determinants confirm results from prior studies. On the one hand, age and gender condition the probability of experiencing working poverty. Age has a significant and direct influence and the group of young people between 16 and 24 had a greater probability of poverty than the other categories. This result is explained by the late emancipation of young Spaniards who remain in the family home until ages that are quite beyond the European average (García-Espejo and Gutiérrez, 2011). As for gender, the model shows that the risk of working poverty is greater for men than for women. This difference, in the case of Spain, is explained by the fact that men have a much higher work participation rate and because working participation by females in many cases, results in the income that is needed to effectively prevent the risk of poverty (Peñas-Casas and Latta, 2004).

On the other hand, the importance of collective work participation by household members has also resulted quite significant and reveals an anticipated trend: those households in which employment potential is exploited to the maximum are more likely to avoid in-work poverty. That is, the double income standard is fundamental for preventing the risk of poverty (Esping-Andersen and Myles, 2008; Allègre and Jaerhling, 2011). Also, the variables referring to benefits received by other household members also are determinants of the probability of suffering from working poverty. Thus, the receipt of unemployment, inactivity or other benefits decreases the probability of suffering from in-work poverty.

Table VI. *"EU workers" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.671***	0.646***	0.948***
Age (Ref. 16-24)				
25-49		0.504	0.630**	0.940**
50-64		0.194	0.418	1.225***
65 and older		0.868	1.851**	2.386***
Gender (Ref. Male)				
Female		–0.543***	–0.388***	–0.260***
Civil state (Ref. Single)				
Married		–0.288	–0.149	–0.262
Separated, divorced or widowed		0.255	0.172	–0.260
Education level (Ref. Primary)				
Secondary		0.395**	0.217	–0.027
Tertiary		0.730*	0.612*	–0.099
Type of contract (Ref. Open-ended)				
Temporal		0.205	0.377**	0.230
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.078	–0.422*	–0.572***
Low salary employee (Ref. No)				
Yes		1.174***	1.671***	1.302***
Number of adults in the household		–0.065	–0.081	–0.146
Number of children in the household		–0.058	–0.215	–0.171
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.605***	–0.923***	–0.847***
I.L.=1		–1.436***	–2.012***	–1.771***
The household receives benefits:	for unemployment	–0.614***	–0.597***	–0.775***
	for inactivity	–0.894***	–1.360***	–1.074***
	of another type	0.041	–0.401***	–0.526***
Rho		0.358	0.450	0.377
Log-likelihood		–62.229	–1230.612	–1581.498
Number of observations		4,673	8,617	10,759
Number of individuals		2,023	4,087	6,066

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE VII. *"FR Employees" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.575***	0.721***	0.946***
Age (Ref. 16-24)				
25-49		0.381	0.409	0.738***
50-64		–0.031	0.135	0.932**
65 and older		0.673	1.528*	2.043**
Gender (Ref. Male)				
Female		–0.491***	–0.375***	–0.240***
Civil state (Ref. Single)				
Married		–0.408	–0.023	–0.266
Separated. divorced or widowed		0.158	0.388	–0.217
Education level (Ref. Primary)				
Secondary		0.349*	0.038	–0.017
Tertiary		0.618	0.263	–0.082
Type of contract (Ref. Open-ended)				
Temporal		0.168	0.377**	0.141
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.116	–0.357	–0.399**
Low salary employee (Ref. No)				
Yes		1.251***	1.565***	1.220***
Number of adults in the household		–0.095	–0.011	–0.149
Number of children in the household		–0.021	–0.127	–0.189
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.793***	–0.911***	–0.907***
I.L.=1		–1.691***	–1.962***	–1.778***
The household receives benefits:	for unemployment	–0.713***	–0.546***	–0.692***
	for inactivity	–0.858***	–1.275***	–0.971***
	of another type	–0.009	–0.377***	–0.464***
Rho		0.396	0.413	0.346
Log-likelihood		–701.689	–1344.381	–1703.836
Number of observations		4,837	8,958	11,127
Number of individuals		2,109	4,280	6,303

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE VIII. *"USA active" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.628***	0.712***	0.947***
Age (Ref. 16-24)				
25-49		0.145	0.407	0.509**
50-64		–0.173	0.199	0.670
65 and older		0.477	1.612	1.923***
Gender (Ref. Male)				
Female		–0.455***	–0.353***	–0.249***
Civil state (Ref. Single)				
Married		–0.299	0.033	–0.249
Separated. divorced or widowed		0.259	0.482	–0.313
Education level (Ref. Primary)				
Secondary		0.303*	0.036	–0.033
Tertiary		0.566	0.184	–0.117
Type of contract (Ref. Open-ended)				
Temporal		0.149	0.354**	0.207
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.308	–0.390*	–0.416**
Low salary employee (Ref. No)				
Yes		1.096***	1.506***	1.208***
Number of adults in the household		–0.075	–0.021	–0.150*
Number of children in the household		–0.116	–0.144	–0.172
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.689***	–1.007***	–0.986***
I.L.=1		–1.614***	–2.050***	–1.881***
The household receives benefits:	for unemployment	–0.629***	–0.522***	–0.724***
	for inactivity	–0.700**	–1.284***	–0.805***
	of another type	0.070	–0.377***	–0.476***
Rho		0.357	0.397	0.332
Log-likelihood		–755.681	–1445.271	–1831.244
Number of observations		5,007	9,280	11,488
Number of individuals		2,204	4,489	6,551

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE IX. *Employed workers poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.696***	0.645***	0.954***
Age (Ref. 16-24)				
25-49		0.521	0.619*	0.931***
50-64		0.233	0.365	1.222***
65 and older		1.135	2.018**	2.361***
Gender (Ref. Male)				
Female		–0.658***	–0.433***	–0.298***
Civil state (Ref. Single)				
Married		–0.216	0.213	–0.162
Separated. divorced or widowed		0.339	0.821*	–0.054
Education level (Ref. Primary)				
Secondary		0.385*	0.218	–0.009
Tertiary		0.705*	0.545	–0.102
Type of contract (Ref. Open-ended)				
Temporal		0.157	0.345**	0.216
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.244	–0.531**	–0.603***
Low salary employee (Ref. No)				
Yes		1.307***	1.634***	1.330***
Number of adults in the household		–0.035	–0.014	–0.152
Number of children in the household		–0.155	–0.179	–0.103
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.551**	–0.907***	–0.822***
I.L.=1		–1.367***	–2.036***	–1.715***
The household receives benefits:	for unemployment	–0.560**	–0.556***	–0.723***
	for inactivity	–0.779**	–1.328***	–0.968***
	of another type	0.072	–0.419***	–0.578***
Rho		0.354	0.456	0.377
Log-likelihood		–603.898	–1156.623	–1493.946
Number of observations		4,550	8,354	10,459
Number of individuals		1,952	3,929	5,877

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE X. *Self-employed workers poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
Self-employed person poor the previous year (Ref. No)				
Yes		–0.151	–0.118	0.300**
Age (Ref. 16-24)				
25-49		–0.003	0.974	0.577
50-64		–0.971	0.587	0.846
65 and older		–1.729	0.946	1.159
Gender (Ref. Male)				
Female		0.007	0.023	–0.35
Civil state (Ref. Single)				
Married		1.385	–0.259	–0.325
Separated. divorced or widowed		2.545	–0.675	–0.234
Education level (Ref. Primary)				
Secondary		0.247	0.050	0.161
Tertiary		0.077	–0.261	–0.016
Working situation (Ref. Open-ended)				
With employees		–0.071	–0.124	–0.188
Without employees		0.149	–0.454	–0.060
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		0.097	–0.064	–0.331
Number of adults in the household		–0.126	0.056	–0.118
Number of children in the household		–0.375	–0.169	–0.357
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.604	–0.622**	–0.346
I.L.=1		–1.195***	–1.191***	–0.847***
The household receives benefits:	for unemployment	–1.192***	–0.932***	–0.841***
	for inactivity	–1.621***	–1.617***	–1.239***
	of another type	–0.617**	–0.516***	–0.306***
Rho		0.579	0.459	0.280
Log-likelihood		–405.917	–864.427	1060.858
Number of observations		870	1,701	1,991
Number of individuals		392	848	1,199

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

The analysis of the labor variables has proven to be less significant and less consistent with the anticipated results. The conclusions of prior research studies reveal that the jobs having the highest probabilities of being associated with poverty risk tended to be atypical ones (that did not include full work days, that were seasonal and/or with low salaries) (Goerne, 2011). In this case, these are also the characteristics associated with insecure employment that influences working poverty, with the low wages being the most important of the analyzed issues, and consistent with all of the implemented models. However, the type of contract and workday does not reveal such robust results (because they are not significant in all of the models), although they do have a certain influence in the anticipated direction: temporary jobs and part time jobs have a greater risk of working poverty.

Although the variables referring to household size (number of dependents and number of adults) were not found to be determinants of a risk of in-work poverty, household configuration and access to resources (labor market and welfare state) are determinants, explaining the decreased influence of atypical jobs on Spanish in-work poverty. On the one hand, the low rate of female participation leads to a lower probability of access to the double income standard, one of the best strategies to prevent poverty. On the other hand, household size in Spain tends to be greater than average, given the late emancipation ages. This, collectively, may lead to a high percentage of poor workers with more stable and secure jobs living in households with incomes that fall below the poverty line (Cretazz, 2011; Halleröd and Ekbrand, 2014).

The model explaining permanence in poverty for self-employed workers has lower explanatory impact. First, there is a lower state dependence. The poverty state from the previous year is only significant in the last period taken into account. Therefore, this result is less robust. Second, of the other observed variables, only those that refer to income (and to work intensity in one of the models) have a relationship with working poverty. Receipt of social benefits for unemployment, inactivity or any other type decreases the probability of poverty for the self-employed in all observed periods. This result indicates the importance of finding new ways of studying the strange situation in which the self-employed in Spain find themselves--having a very high risk of working poverty. It is necessary to search for the conditioning factors of their situation in other areas and, according to the results presented here, it is especially important to determine the other income that they receive in their household. Furthermore, the problem of lower data reliability for this social group, given that they often under-declare their earnings (Martínez-López, 2012), makes it necessary to resolve this issue in order to determine the real risk for this type of workers and to design policies that will better assist their situation of increased instability and persistence in working poverty.

To summarize, there are two employment situations that are very distinct from one another: employed workers and the self-employed. The different "worker" concepts reveal a clear influence of state dependence and of certain characteristics that were expected to be determinants of in-work poverty: those referring to resources and needs. This analysis, therefore, highlights the fact that it is in between the balance between some of these that the probabilities of experiencing poverty exist. It should be highlighted, however, that resources appear to have an increased importance. That is, the level of participation of household members and whether or not this participation ensures the necessary resources, as well as the presence of resources provided by the state (social benefits) is more relevant than the level of household needs. In the case of self-employed workers, this result is even more accentuated:

only two variables referring to the resources coming from the labor market and the welfare state appear to help prevent the risk of labor poverty in the self-employed.

Conclusions

This article examines the knowledge existing on mechanisms causing permanence-dependence in situations of working poverty. Two potential explanations are presented: on the one hand, state dependence: in other words, that poverty occurs in a vicious cycle in which past poverty experiences during a specific period condition the probability of experiencing future poverty states; and on the other hand, the determinants of in-work poverty may be associated with specific characteristics and attributes of the individuals and households that are affected by this poverty.

Our analysis is especially relevant in Spain, given its high rates of poverty, of in-work poverty and of poverty persistence. The low redistributive impact of the Spanish system of social protection requires an increased and improved knowledge of poverty and in-work poverty, indispensable for a better design of the policies that are designed to fight against these risks. The existence of working poverty state dependence may indicate, on the one hand, that participation in the labor market is not sufficient in order to prevent the vicious cycle that may accompany poverty; on the other hand, current social protection mechanisms are not effective when it comes to removing workers from the risk of poverty.

In order to determine the mechanisms that are associated with working poverty in Spain, a probit model was estimated using a dynamic dependent variable to permit the inclusion of an independent variable which had the value of the previous year's dependent variable. This model has allowed us to distinguish between the influence of state dependence and the observed heterogeneity in the probability of experiencing working poverty and has found that both sources of influence are present in the poverty of working individuals. It should be highlighted that state dependence is very significant and robust in all of the models that were considered (except for self-employed workers), thus in-work poverty is seen as a situation with a tendency to continue due to the existence of mechanisms that may define it as a "vicious cycle".

In the case of employed workers, there is also an influence of heterogeneity and some of the independent variables that were taken into account directly affect the probability of experiencing working poverty. On the other hand, certain variables reveal the anticipated influence, in accordance with prior studies: age and gender as well work intensity of the households have all been found to be very significant. Thus, men and employed individuals who are in in central ages of their life and labor cycle have greater probabilities of experiencing poverty, as well as households with a low working participation of its members. At the same time, it highlights the importance of other sources of income given that those households receiving some type of state assistance have lower probabilities of experiencing in-work poverty.

On the other hand, some characteristics have not revealed the anticipated relationship with working poverty: type of contract and workday, although influencing in-work poverty in the anticipated direction (greater risk for temporary and/or part time contracts), do so to a much lower degree than the other variables and with decreased consistency between periods and work concepts. This occurs as a result of the low female participation and late emancipation of the young individuals living in the households with fewer resources (less access to the labor market by the young and females) and increased needs (adult children living in the family household), which leads to house-

holds where normally there is only one employed individual who, even when having a stable position in the labor market, cannot obtain sufficient income to surpass the poverty line (Cretazz, 2011; Halleröd and Ekbrand, 2014).

In this context, given that state dependence is very strong and, even though the characteristics referring to the household are also fundamental when determining the risk of in-work poverty, it would be appropriate to implement policies directed to the general "working" population, emphasizing an increase in household resources. Furthermore, the results have revealed that working poverty in Spain, from a dynamic perspective, has a component associated with low wages (significant result in all models) and unemployment (importance of household work intensity), thus these general policies may be based on both support benefits and income substitution (unemployment and complementary benefits), as well as in the maximization of work participation of all active household members.

As for self-employed workers, they reveal a low state dependence and a greater and unique importance of variables referring to resources (especially the receipt of other forms of household income), therefore an increased importance should be placed on the implementation of policies that are intended to increase the labor intensity of these households and their available income through increased benefits or decreased taxes.

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Permanencia en la pobreza laboral: la influencia de la pobreza pasada en la presente

In-Work Poverty Persistence: The Influence of Past Poverty on the Present

Aroa Tejero

Palabras clave

Análisis longitudinal
- Ingresos
- Mercado de trabajo
- Pobreza
- Políticas públicas

Resumen

El estudio dinámico de la pobreza ofrece resultados que no se consiguen con una perspectiva transversal. En este artículo se estudian las causas que llevan a la permanencia en la situación de pobreza laboral. El principal objetivo es el análisis de la probabilidad de permanecer en la pobreza de un año a otro, intentando determinar si son las características de los individuos o si son las experiencias pasadas en la pobreza lo que determina la probabilidad de sufrir pobreza laboral. Los resultados muestran que las personas que caen en la pobreza laboral en un momento determinado tienen más probabilidades de experimentarla en el futuro, por lo que se detecta un mecanismo de dependencia de estado. Aun así, también hay algunas características específicas relacionadas con la pobreza laboral: las asociadas al hogar o la recepción de bajos salarios.

Key words

Longitudinal Analysis
- Income
- Labor Market
- Poverty
- Public Policies

Abstract

This dynamic study of poverty offers results that could not have been attained with a cross-cutting approach. In this article, we examine the causes leading individuals to remain in situations of working poverty. The main objective is to analyze the probability of remaining in poverty from one year to another, attempting to determine if it is individual characteristics or the previous poverty experiences that determine the probability of suffering from working poverty. The results reveal that individuals experiencing working poverty at a certain time have greater probabilities of experiencing it in the future, thereby detecting a dependency of status mechanism. However, there are also certain specific characteristics related to working poverty: those associated with the home or with the receipt of low salaries.

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Introducción[1]

La pobreza y la pobreza laboral españolas se caracterizan por estar entre las más altas de la Unión Europea (UE) y por su alta estabilidad durante la primera década del presente siglo, un periodo en el que también se produce una expansión de la economía y el empleo. A todo lo anterior, se suma el bajo impacto del sistema de protección social español y la influencia de un mercado laboral muy dualizado. La inclusión de la perspectiva longitudinal en el estudio de la pobreza ha permitido realizar análisis teniendo en cuenta la duración del fenómeno. La persistencia en la pobreza es un fenómeno importante que requiere perspectivas nuevas que analicen en profundidad los determinantes de estas situaciones. En este contexto cobra importancia conocer qué trabajadores caen en la pobreza y quiénes de ellos lo hacen de forma permanente; aún más relevante es saber los mecanismos que se pueden esconder detrás de esa permanencia en la situación de bajos ingresos.

Algunas de las últimas investigaciones que han abordado el estudio de la duración de la pobreza lo han hecho desde la perspectiva de la permanencia-dependencia. El objetivo principal ha sido analizar qué características son determinantes de la situación de pobreza, teniendo en cuenta la influencia del tiempo; cómo las experiencias de pobreza pasadas afectan las probabilidades futuras de caer en dicha situación. Los resultados han mostrado una significativa dependencia de estado en la pobreza y otras situaciones relacionadas con el mercado de trabajo (desempleo, bajos salarios) y de algunas características individuales y de los hogares (sexo, situación laboral, composición del hogar).

El objetivo de este artículo es determinar si la pobreza laboral en España sufre dependencia del estado de pobreza anterior *(state dependence)* o si son otras características relacionadas con el individuo y su hogar las que explican la probabilidad de continuar en la pobreza. Por tanto, la pregunta principal sería: ¿los trabajadores que caen en la situación de pobreza lo hacen debido a sus experiencias pasadas en la misma o debido a que algunas de sus características aumentan su probabilidad de sufrir pobreza? Para responder a esta pregunta, en la literatura sobre pobreza y bajos salarios se han utilizado habitualmente modelos dinámicos, logísticos o probabilísticos, de variable dependiente dinámica, que son capaces de diferenciar la *state dependence* controlando, a su vez, tanto la heterogeneidad observada e inobservada como los problemas de endogeneidad.

La distinción entre la pobreza permanente que se debe a las características individuales y de los hogares y aquella que se debe al efecto causal de la pobreza actual sobre la futura tiene implicaciones importantes para el diseño de políticas públicas. Por un lado, si la pobreza causa pobreza independientemente de otros determinantes, las políticas de lucha contra la pobreza tendrán un impacto mucho mayor, ya que no solo están influyendo en la pobreza actual sino también en la futura. A su vez, si hay evidencia de que la pobreza tiene una tendencia a reproducirse por ella misma, las políticas existentes tienen que ser revisadas con el objetivo de ver hasta qué punto son parte de este mecanismo generador de permanencia (Biewen, 2004). Por otro lado, es posible que la pobreza esté determinada por características concretas de los individuos y no por los estados anteriores de pobreza. En este caso, las políticas deberían ir dirigidas a esos grupos específicos y no a la población pobre en general.

En la primera sección de este artículo se contextualiza el caso español y se exponen y discuten en profundidad los posibles determinantes de la permanencia en la pobreza que se han encontrado en las investigaciones disponibles. A continuación, se expone la es-

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trategia de análisis y se describe el modelo implementado para poder tener en cuenta las características de los datos que se utilizan (longitudinales). En las secciones tercera y cuarta se presentan los resultados descriptivos y analíticos, que muestran la influencia de variables referidas a los individuos, sus trabajos y sus hogares, así como al posible efecto de la dependencia del estado.

Pobreza laboral en España y posibles determinantes de la permanencia

España se caracteriza por ser un país con un riesgo de pobreza entre los más altos de la UE, como también son altas sus tasas de pobreza laboral. A su vez, destaca la estabilidad en dichas tasas durante la primera década del siglo, que oscilan en torno al 12%. Por su parte, las investigaciones que incluyen la perspectiva longitudinal (que analizan la pobreza en periodos de más de un año de duración) sitúan a España como un país con pobreza estática alta (en torno al 20%), permanencia baja (tan solo un 2,7% en un periodo de siete años) y transitoriedad elevada (el 44% pasa al menos un año en la pobreza). En perspectiva internacional, España se sitúa en una posición intermedia; a pesar de tener una tasa de pobreza considerada alta, también tiene una tasa de transitoriedad elevada, lo que se refleja en unas tasas de persistencia intermedias o, incluso, bajas (Cantó *et al*., 2010).

El periodo seleccionado, entre 2003 y 2008, se corresponde en España con un ciclo de expansión de la economía y el empleo que, sin embargo, no se ha traducido en una disminución del riesgo de pobreza para los trabajadores durante la primera década del presente siglo. Ambos hechos motivan que se haga indispensable conocer por qué en un país donde el empleo y la economía están creciendo, también lo hace el riesgo de pobreza para las personas empleadas (o, al menos, se está manteniendo estable).

Algunos autores han explicado que esta ausencia de mejoras en las tasas de riesgo de pobreza se debe a una menor capacidad redistributiva del sistema de protección social, que en los últimos años ha tenido una menor capacidad para corregir las desigualdades a través de las prestaciones monetarias (Ayala *et al*., 2013). Las instituciones del bienestar en España, asociadas a la tipología mediterránea del bienestar, se caracterizan por una baja cobertura de las situaciones de riesgo de pobreza laboral y una baja intensidad de sus sistemas de protección social (Esping-Andersen, 2000). El nivel y la composición de la pobreza laboral española tendrían que ver con la escasez de transferencias sociales para hogares con niños, familias y miembros empleados y con el limitado impacto de las mismas sobre la reducción de la pobreza, con programas de garantía de mínimos que tienen muy poco impacto en su riesgo de pobreza (Laparra y Ayala, 2009; Rodríguez-Cabrero, 2010 y 2011). Se puede concluir que esto origina que muchos hogares dependan exclusivamente de las rentas salariales para enfrentarse al riesgo de pobreza.

Los países del sur de Europa también comparten características en cuanto a la estructura dualista de sus mercados laborales (Halleröd *et al.*, 2015; Visser, 2009). En España se destaca la estricta regulación del mercado laboral. La rigidez del mercado de trabajo se debe, principalmente, a la doble protección con diferencias entre quienes tienen un contrato indefinido (con alta protección social, razones para el despido limitadas y altos costes de despido) y los que tienen uno temporal (menor protección social, más facilidades para el despido y menos cuantía a pagar) (García-Espejo y Gutiérrez, 2011). De este modo, la provisión del bienestar está generalmente organizada y fragmentada por líneas de ocupación de manera dual: muchos derechos para los que están en el centro del mercado de trabajo y pocos

para los de la periferia (Rodríguez-Cabrero, 2011). La dualización del mercado laboral español se traduce así en una alta tasa de temporalidad y en una alta rotación laboral. Como consecuencia, el aumento del empleo precario o de baja calidad ha incrementado el riesgo de pobreza que sufren los trabajadores.

En los últimos años, ha aumentado el número de estudios que utilizan la perspectiva dinámica en el análisis de la pobreza, dado que los datos de panel permiten solventar algunos de los problemas que tienen los datos estáticos a la hora de analizar cualquier variable que sea cambiante en el tiempo. A su vez, también permiten la inclusión de variables que tengan en cuenta ese tiempo y su influencia. Se han realizado diversos estudios que analizan la dependencia de estado en la pobreza y en otras situaciones (bajos salarios, desempleo). La investigación realizada por Biewen (2004) estudia la influencia de la dependencia de estado dentro de la pobreza en Alemania. Los resultados sugieren que, incluso después de controlar por la heterogeneidad observada e inobservada, las experiencias de pobreza en el pasado incrementan las probabilidades de experimentar pobreza en el futuro. Poggi (2003) analiza para España la persistencia de la exclusión social en un estudio que presenta resultados sobre diferentes dimensiones de la pobreza. Identifica mecanismos de dependencia de estado en la exclusión social en España, aunque también señala la influencia de algunas características como el nivel educativo o la composición del hogar (heterogeneidad observada).

Las aproximaciones más cercanas a la pobreza laboral analizan la persistencia de los bajos salarios como indicador de la pobreza laboral (Capellari, 2002) o los mecanismos de dependencia que se generan en la situación de desempleo (Arulampalam *et al.*, 2000). Cappellari (2002) se acerca a la persistencia-dependencia de la pobreza laboral en Italia a través de la estimación de la permanencia por debajo del umbral de bajos salarios (en este caso, los salarios se utilizan como indicador del bienestar de los trabajadores). Concluye que el grado de dependencia de estado es muy alto, aunque también hay otros atributos que influyen en la situación de pobreza laboral/bajos salarios: género, educación, ocupación, sector de ocupación y región de residencia.

En este contexto, se plantea el análisis de la permanencia-dependencia como un acercamiento a las posibles primeras causas del fenómeno de la persistencia de la pobreza laboral, a los mecanismos que generan un riesgo continuado de estar por debajo de la línea de pobreza. La persistencia está asociada a una mayor privación material y está relacionada con otras dimensiones de la pobreza que no se miden directamente en este trabajo (Berthoud y Bryan, 2010). Por lo que esta aproximación a la permanencia-dependencia de la pobreza laboral es, en cierta medida, una aproximación a otras dimensiones de la pobreza.

Hay dos mecanismos asociados a la presencia de la dependencia de estado en la pobreza (Biewen, 2004). En primer lugar, puede que la experiencia de pobreza en un periodo determinado tenga un efecto causal en la pobreza futura, lo que se denominaría *state dependence* o dependencia de estado. El bajo ingreso estaría asociado, por un lado, a incentivos adversos que imposibiliten que el individuo consiga un empleo si está desempleado o que encuentre un empleo mejor, si se tiene un empleo de bajo salario; por otro lado, se puede asociar a procesos de desmoralización, pérdida de motivación o depreciación del capital humano, lo que también disminuye las probabilidades de encontrar empleo si se está en desempleo y de mejorar una situación de empleo inestable y/o insegura. En segundo lugar, es posible que la pobreza de un determinado momento se ocasione porque los individuos tienen características que les hacen particularmente proclives a la pobreza (heterogeneidad observada). En la medida en que estas carac-

terísticas persistan en el tiempo incrementarían la posibilidad de experimentar pobreza en periodos futuros (Poggi, 2003).

La distinción de estos dos componentes es fundamental por las implicaciones que supone para el diseño de políticas de lucha contra la pobreza (Giraldo *et al.*, 2002; Poggi, 2003; Andriopolou y Tsakloglou, 2011). Si la pobreza está determinada por la dependencia de estado, las políticas que eviten la pobreza hoy también estarían combatiendo la pobreza de próximos años. Por ello, resultaría fundamental romper el círculo vicioso de la pobreza aplicando, por ejemplo, políticas de apoyo al ingreso. De este modo, las políticas deberían ir dirigidas al conjunto de los trabajadores pobres y no a grupos específicos dentro de ella (Capellari, 2002). Si, por el contrario, la pobreza alberga una mayor influencia de las características de las personas y los hogares donde viven, las políticas tendrían que ir orientadas hacia esas categorías de riesgo: a través, por ejemplo, de políticas educativas, de formación, del mercado de trabajo o de conciliación de la vida laboral y doméstica.

Además, en el marco de las políticas de lucha contra la pobreza laboral hay tres propuestas que han formado parte del debate en los últimos años y que también hay que tener en cuenta (Cretazz, 2011): aumento del salario mínimo (eficaz en la medida en que la pobreza laboral sea un problema de bajos salarios), transferencias sociales dirigidas a combatir los riesgos específicos de los trabajadores pobres (desempleo o transferencias complementarias a los salarios) y políticas orientadas a maximizar la participación laboral de los hogares (aumento de la participación laboral femenina y de los trabajadores de baja cualificación). En mayor o en menor medida el objetivo de estas políticas es combatir dos de las posibles causas de la pobreza laboral (Halerröd *et al*., 2015): el desempleo o los bajos salarios. Por tanto, en la medida en que ambas variables condicionen la pobreza laboral, será mejor hacer propuestas relacionadas con el salario mínimo (bajos salarios), con la maximización de la participación laboral (desempleo) o con un aumento de las transferencias sociales (bajos salarios y desempleo).

Datos y conceptos

La Encuesta de Condiciones de Vida (ECV) constituye una herramienta para el estudio de la distribución de los ingresos y la exclusión social en Europa. Una encuesta que, desde 2004, han ido realizando todos los países miembros de la UE con la misma estructura y con el objetivo fundamental de poder recabar información sobre los hogares y las personas de los distintos países de la UE obteniendo resultados que pudieran ser comparables y que ayudaran a conocer la actual situación de la actividad económica y las condiciones de vida de las personas.

La ECV presenta algunos problemas que se deben tener en cuenta. En primer lugar, esta encuesta se compone de una muestra considerada semi-panel, es decir, que no son las mismas personas seguidas durante el tiempo, sino que un cuarto de la muestra se renueva anualmente. Es lo que se denomina un panel rotatorio con cuatro turnos de rotación: un hogar, un individuo, podrá estar en la muestra tan solo cuatro años. Se ha seleccionado la muestra de individuos que, estando presentes en el primer año de cada periodo de observación, se mantienen en la muestra de forma continua. Es decir, se analiza a los individuos durante un periodo de observación de uno, dos, tres o cuatro años, pero es imprescindible que no haya observaciones perdidas durante el periodo. Se estudiará a los individuos de esta muestra en periodos de dos años.

Por otro lado, la ECV alberga una inconsistencia entre los periodos de referencia de algunas de las variables. Unas variables hacen referencia al año anterior al momento de la entrevista (variables referidas a los ingresos), necesarias para construir la dimensión de po-

TABLA 1. *Principales conceptos de pobreza laboral*

Criterio de selección	Participación en el mercado laboral	Empleo
Activos USA (USBLS)	Más de la mitad del periodo de referencia (al menos 27 semanas)	No
Empleados FR (INSEE)	Al menos la mitad del periodo	Al menos un mes
Trabajadores UE (Eurostat)	No	Más de la mitad del periodo (al menos 7 meses)
Empleados	No	Más de la mitad del periodo (al menos 7 meses) trabajando por cuenta ajena
Autónomos	No	Más de la mitad del periodo (al menos 7 meses) trabajando por cuenta propia

Fuente: Ponthieux (2010). Box 14.1 y elaboración propia.

breza, mientras que otras se refieren al momento de la entrevista[2]. Por tanto, cuando se esté midiendo la pobreza en el archivo del 2004, en realidad se mide y analiza la situación económica de esos hogares en el 2003. Por lo que se utilizan los datos de los archivos entre 2004-2009, pero realmente se analiza el periodo de ingresos entre 2003-2008.

La medición de la pobreza laboral requiere construir un concepto que implica a dos dimensiones: la individual y la del hogar. Un trabajador pobre será aquel considerado trabajador que, a su vez, viva en un hogar pobre. Siguiendo la definición que ofrece Eurostat, y que es susceptible de ser utilizada en todos los países de la Unión Europea («trabajadores UE» de aquí en adelante): se define como trabajador a aquella persona que, durante el año de referencia, haya trabajado al menos 7 meses, durante al menos 15 horas a la semana. Por otro lado, el hogar pobre está definido en base a la renta del hogar y a la composición del mismo, es decir, que se tienen en cuenta los ingresos medianos del hogar según la escala de equivalencia de la OCDE. Así, se consideran hogares pobres a todos aquellos que se sitúan por debajo del 60% del ingreso mediano equivalente.

Además, también se emplean otros conceptos relativos a la dimensión de trabajo complementarios con el ánimo de, por un lado, conocer mejor la situación diferenciada de los trabajadores por cuenta ajena y propia (estudios anteriores muestran que el riesgo de pobreza de los trabajadores por cuenta propia es mucho mayor que el de los trabajadores por cuenta ajena); y, por otro lado, poder determinar si la elección del concepto de trabajo condiciona los resultados obtenidos. Investigaciones anteriores han mostrado que las diferencias que hay entre los indicadores de empleo más utilizados afectan a la incidencia del problema, así como a las causas que identifican (Ponthieux, 2010).

Como se puede observar en la tabla 1, se denomina población activa («activos USA»), siguiendo la definición de la USBLS (Estados Unidos), a aquellas personas que hayan participado en el mercado de trabajo más de la mitad del periodo de referencia (un año) en el empleo o el desempleo. La muestra de «empleados FR» se construye siguiendo el con-

[2] Para que todas las variables hagan referencia al mismo año, se requiere "contemporarizarlas": por ejemplo, cuando se analice el año 2004 se utilizarán las variables de ese año que se refieren al momento de la entrevista, mientras que se utilizarán las variables del 2005 que se refieren al periodo de referencia de la renta (que es el 2004).

cepto del INSEE (Francia): se incluye a los desempleados durante seis meses que hayan pasado algún mes en el empleo y a las personas que hayan trabajado al menos seis meses. Por último, se divide a la población denominada «trabajadora UE» en «empleados» y «autónomos» y se considera «empleadas» a aquellas personas que hayan pasado al menos siete meses trabajando por cuenta ajena durante el periodo de referencia y «autónomos» a quienes pasen al menos siete meses en el mercado laboral trabajando por cuenta propia.

Estrategia de análisis: modelo *probit* de variable dependiente dinámica

En la literatura sobre pobreza y, especialmente, bajos salarios, hay diversas investigaciones que tratan de medir la influencia de estados pasados en las situaciones presentes (Arulampalam *et al*., 2000; Capellari, 2002; Clark y Kanellopoulos, 2009). Habitualmente se han realizado estos análisis a través de modelos logísticos o probabilísticos *(probit)* de variable dependiente dinámica que son capaces de diferenciar la *state dependence,* o dependencia de estado, controlando, a su vez, tanto la heterogeneidad observada e inobservada como los problemas de endogeneidad *(initial conditions problem)*.

En el análisis que aquí se presenta se sigue la metodología propuesta por Wooldridge (2005). En estos modelos la variable dependiente es binaria, por lo que toma los valores de 1 cuando la persona se sitúa en la pobreza laboral y 0 cuando no lo está. Esta variable se observa como mucho durante un periodo de 4 años. Los modelos que se presentan están diferenciados por dichos periodos, comenzando en 2003, 2004 y 2005 respectivamente. La especificación del modelo para el individuo en el momento del tiempo es:

$$T_{iit} = x'_{it}\beta + \gamma y_{it-1} + v_{it} \quad i = 1, 2,\ldots, n \text{ y } t = 2,\ldots, T_i$$

Donde y^* denota la propensión individual inobservable a estar en la pobreza laboral, es un vector de características observables afectando a y^*; β es un vector de coeficientes asociados con x e y, mientras que ν es el término del error inobservable. La muestra es un panel no balanceado (no se tienen el mismo número de observaciones por cada caso, sino que se tienen entre una y cuatro observaciones consecutivas por individuo), el número total de observaciones por individuo es T_{i-1}. Se mide la dependencia de estado a través de la inclusión de la variable dependiente retardada en la parte derecha de la ecuación (γy_{it-1}).

Asumiendo que la heterogeneidad inobservable específicamente individual es invariante en el tiempo, se puede descomponer el término del error en

$$v_{it} = \varepsilon_i + u_{it}$$

donde ε_i es el efecto individual inobservable y u_{it} es un error aleatorio. Se trata ε_i como aleatorio, y se usa un modelo *probit* de efectos aleatorios para estimar la probabilidad de ser pobre bajo las asunciones comunes de $u_{it} \sim IN(0, \sigma_u^2)$, , es decir, siendo independiente de las x_{it} para todos los individuos *(i)* y momentos *(t)*.

Por tanto, se implementa un modelo *probit* de efectos aleatorios (de variable dependiente dinámica). Los modelos *probit* se utilizan para estimar modelos que midan la influencia de diversas variables independientes sobre una variable dependiente binaria y se basan en una función de distribución normal para el cálculo de las probabilidades. La diferencia entre los efectos aleatorios y fijos reside en la asunción de cómo se distribuye la heterogeneidad inobservable: mientras que los modelos de efectos fijos se basan en que la heterogeneidad inobservable es constante para cada individuo, los modelos de efectos aleatorios consideran que la heterogeneidad está distribuida aleatoriamente alrededor de un valor determinado (donde los efectos individuales son aleatorios) (Gutiérrez *et al*., 2011).

Conviene mencionar que hay una complicación en la implementación de este tipo de modelos, su posible endogeneidad o el problema de las condiciones iniciales *(initial conditions problem)* (Arulampalam *et al*., 2000; Capellari, 2002; Clark y Kanellopoulos, 2009). Este problema se produce porque el periodo de observación no siempre coincide con el proceso que genera la pobreza. En el caso de esta investigación, un trabajador que esté hoy en la pobreza puede que lo esté porque ya haya estado en la pobreza anteriormente (pero no se tienen observaciones para comprobarlo). Este problema se da cuando y_{it} está correlacionado con x_i y en este artículo está controlado por el tipo de análisis estadístico implementado.

Evidencia de la permanencia-dependencia en la pobreza laboral. Aproximación descriptiva

Antes de comentar los resultados del modelo analítico conviene realizar una introducción descriptiva sobre los niveles de persistencia y movilidad de la pobreza laboral en el periodo estudiado y con las definiciones de «trabajo» seleccionadas. En la tabla 2 se pueden observar diferentes indicadores: la

TABLA 2. *Probabilidades de pobreza laboral*

		A	B	C	D
Trabajadores pobres	2003	11,6	50,1	49,9	5,8
	2004	12,0	49,0	51,0	6,2
	2005	12,4	52,0	48,0	6,7
Empleados pobres	2003	12,4	49,8	50,2	6,2
	2004	12,8	49,6	50,4	6,5
	2005	13,2	52,2	47,8	7,0
Activos pobres	2003	14,7	52,4	47,6	6,9
	2004	15,4	53,4	46,6	7,5
	2005	15,9	55,6	44,4	7,9
Asalariados pobres	2003	7,5	44,5	55,5	3,5
	2004	7,5	47,7	52,3	3,8
	2005	8,2	51,2	48,8	3,8
Autónomos pobres	2003	31,6	57,3	42,7	18,5
	2004	32,3	52,1	47,9	20,4
	2005	31,9	55,3	44,7	22,8

* PL: Pobreza laboral.

A: $P(PL = 1)$

B: $P(PL = 1 \mid PL_{t-1} = 1)$

C: $P(PL_t = 1 \mid PL_{t-1} = 0)$

D: $P(PL_t = 0 \mid PL_{t-1} = 1)$

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

columna 1 muestra las tasas de pobreza laboral. Aunque los datos que se derivan de los archivos longitudinales de la ECV no se pueden interpretar en términos estáticos (porque las muestras están construidas para ser representativas en un periodo de cuatro años), la tasa de pobreza laboral basada en el indicador de la UE presenta niveles muy parecidos a los datos oficiales (en torno al 12%). La comparación entre la incidencia de la pobreza de «trabajadores UE» y «empleados FR» no muestra grandes diferencias (también alrededor del 12%), mientras que los «activos USA» se sitúan en torno al 15%. Los asalariados y autoempleados son las situaciones extremas con niveles cercanos al 8 y 31% respectivamente.

En la columna 2 se presenta la probabilidad de permanencia en la pobreza de un año a otro. Los datos muestran que en torno al 50% de los trabajadores pobres en un año determinado, independientemente del concepto de «trabajo» que se utilice, permanece en la pobreza. Este resultado es un indicador de la alta permanencia en el corto plazo que tiene la pobreza española y de la baja influencia que tiene la situación respecto a la actividad. Sin embargo, sí se dan diferencias en la tendencia temporal de esta permanencia: los «trabajadores UE» y los asalariados pobres sufren un aumento de la permanencia en el último periodo tenido en cuenta (2005-2008); los «activos USA» y los «empleados FR» pobres también aumentan su permanencia en la pobreza pero durante los tres periodos analizados; los trabajadores por cuenta propia tienen una tendencia inestable disminuyendo la permanencia entre el primer y el segundo periodo y aumentando en el último.

En contraposición a la permanencia, en las columnas 3 y 4 se presentan las tasas de entrada y salida de la pobreza laboral como indicador de la movilidad de la pobreza de estos conceptos de «trabajo». La primera tendencia que se observa es la alta movilidad de la pobreza laboral. Las salidas no muestran diferencias significativas entre los conceptos analizados aunque los asalariados salen más de la pobreza que los autoempleados, estando los activos, empleados y trabajadores en una posición intermedia. Las entradas, sin embargo, sí tienen un patrón muy diferenciado: los trabajadores, empleados y activos tienen tasas de entrada en la pobreza laboral de en torno al 6, 7 y 8%, respectivamente, por lo que no son muy amplias sus diferencias. Los autoempleados y asalariados vuelven a situarse en posiciones extremas y muy diferentes: los primeros presentan niveles de en torno al 20% y los segundos alrededor del 4%. Esto podría estar indicando que las diferencias en las tasas de entrada en la pobreza son las que explican los distintos niveles de pobreza en función de los conceptos de «trabajo» tenidos en cuenta.

Dentro del análisis descriptivo también conviene hacer referencia a la composición de la pobreza laboral de la muestra elegida para el análisis. Esta descripción ayuda, por un lado, a explicar algunos de los resultados de los modelos que se presentan y, por otro lado, permite determinar si los diferentes conceptos de trabajo están seleccionando a una población empleada muy diferente, es decir, si el concepto de trabajo más o menos restrictivo está seleccionando a sectores del mercado de trabajo más o menos estables. Teniendo en cuenta los determinantes que han resultado fundamentales en anteriores investigaciones, se presenta la composición de la pobreza laboral en función de variables individuales, laborales y del hogar (los resultados se encuentran en las tablas 3, 4 y 5).

Los resultados muestran que los conceptos de «trabajo» tienden a seleccionar a personas con características similares. En este caso, incluso los trabajadores por cuenta propia presentan un perfil similar al resto de conceptos. Los trabajadores seleccionados son mayoritariamente hombres, de edades comprendidas entre los 25 y 59 años, con estudios secundarios, con contrato indefinido a jornada completa y con alta incidencia de los bajos salarios. Son en una proporción

TABLA 3. *Características demográficas de los trabajadores pobres (según concepto de «trabajo»)**

		Trabajadores UE	Empleados FR	Activos USA	Cuenta ajena	Cuenta propia
Sexo	*Hombre*	76,33	73,94	69,64	74,55	78,39
	Mujer	23,67	26,06	30,36	25,45	21,61
Edad	*16-24*	5,34	6,58	7,71	8,54	1,53
	25-49	70,71	70,58	67,61	77,24	65,10
	50-64	22,70	21,70	23,11	15,48	31,52
	65 y más	1,25	1,14	1,58	0,75	1,85
Nivel educativo	*Primarios*	33,14	33,12	34,83	32,89	33,79
	Secundarios	54,59	54,55	52,92	55,48	53,17
	Terciarios	12,27	12,33	12,26	11,63	13,05

* Se presenta la media de la tasa de pobreza laboral para el periodo estudiado (entre el 2003 y el 2008) para cada categoría de cada variable.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 4. *Características laborales de los trabajadores pobres (según concepto de "trabajo")*

		Trabajadores UE	Empleado FR	Activos USA	Cuenta ajena	Cuenta propia
Tipo de contrato	*Indefinido*	63,58	54,93	52,12	58,14	—
	Temporal	36,42	45,07	47,88	41,86	—
Situación laboral*	*Con empleados*	—	—	—	—	28,89
	Sin empleados	—	—	—	—	71,11
Percibe salario bajo	*Sí*	40,07	41,60	61,94	40,49	—
	No	33,68	32,74	38,06	33,89	—
Ocupación	*Ejecutivos y empresarios*	10,81	10,39	9,99	0,45	—
	Técnicos y profesionales	3,54	3,51	3,59	2,53	—
	Técnicos de apoyo	4,92	4,94	4,87	5,55	—
	Empleos administrativos	3,96	3,94	4,25	5,52	—
	Trabajadores de los servicios	14,30	14,67	14,90	15,09	—
	Trabajadores cualificados de la agricultura	9,74	9,50	9,27	3,11	—
	Trabajadores cualificados de la industria	24,10	23,86	23,43	25,88	—
	Operadores y montadores	8,95	8,73	8,67	11,46	—
	Trabajadores no cualificados	19,68	20,46	21,04	30,41	—

* Solo para los trabajadores por cuenta propia.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 5. *Características e ingresos de los hogares de trabajadores pobres (según concepto de «trabajo»)*

		Trabajadores UE	Empleados FR	Activos USA	Cuenta ajena	Cuenta propia
Intensidad laboral	*I.L.=0*	—	—	10,71	—	—
	0< I.L. <0,5	11,34	17,32	19,77	15,75	6,09
	0,5≤ I.L. <1	58,08	55,11	47,79	63,89	50,76
	I.L.=1	30,58	27,57	21,72	20,36	43,15
El hogar recibe prestaciones:	por desempleo	10,50	12,88	13,92	15,01	4,98
	por inactividad	11,51	12,36	15,81	10,87	12,43
	de otro tipo	13,74	13,58	13,32	16,45	10,05

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

comparativamente alta trabajadores de los servicios, trabajadores cualificados de la industria y trabajadores no cualificados. Viven en hogares donde no todos los miembros del hogar potencialmente activos participan en el mercado laboral (ya que son mayoritariamente hogares con intensidad laboral mayor que 0,5, pero menor que 1) y con pocas probabilidades de completar el ingreso del hogar con transferencias sociales.

La mayor o menor restrictividad del concepto de «trabajo» no muestra diferencias significativas. No obstante, los conceptos más restrictivos tienden a seleccionar a un mayor número de trabajadores con contrato indefinido y con menor presencia de los bajos salarios, aunque sin llegar a ser una diferencia muy acusada. Por tanto, no se espera que el uso de los diferentes conceptos de «trabajo» arroje resultados muy diferenciados. Por el contrario, se espera que el uso de dichos conceptos refleje la robustez de los resultados.

Evidencia de la permanencia-dependencia en la pobreza laboral. Aproximación analítica

A continuación se muestran los resultados obtenidos para determinar la probabilidad de sufrir pobreza laboral teniendo en cuenta la influencia de situaciones pasadas de pobreza laboral y de las principales características que ya han mostrado un efecto sobre la pobreza laboral. Se presentan los análisis de diferentes periodos (2003/2006, 2004/2007 y 2005/2008) y conceptos de trabajo, así como los coeficientes y su significatividad. Su interpretación es la siguiente: los coeficientes que obtengan un signo negativo representan una menor probabilidad de pobreza laboral respecto a la categoría de referencia de la variable independiente analizada; los coeficientes con signo positivo indican que la categoría estudiada tiene más posibilidades de sufrir pobreza laboral que la categoría de referencia.

Los resultados en las tablas 6-10 muestran nuevamente que las diferencias entre los conceptos de trabajo no son significativas, ya que los condicionantes de todas las situaciones tenidas en cuenta son los mismos (exceptuando a los trabajadores por cuenta propia). Por tanto, se comentan los resultados de los conceptos de trabajo por cuenta ajena, «trabajadores UE», «empleados FR» y «activos USA» conjuntamente. Esta similitud en los resultados destaca su robustez.

El primer resultado significativo es la confirmación de una de las hipótesis de partida, la existencia de dependencia de estado. En base a resultados anteriores de otras inves-

TABLA 6. *Condicionantes de la pobreza de «trabajadores UE»*

		2003/2006 Coeficiente	2004/2007 Coeficiente	2005/2008 Coeficiente
«Trabajador UE» pobre el año anterior (Ref. No)				
Sí		0,671***	0,646***	0,948***
Edad (Ref. 16-24)				
25-49		0,504	0,630**	0,940**
50-64		0,194	0,418	1,225***
65 y más		0,868	1,851**	2,386***
Sexo (Ref. Hombre)				
Mujer		–0,543***	–0,388***	–0,260***
Estado civil (Ref. Soltero/a)				
Casado/a		–0,288	–0,149	–0,262
Separado/a, divorciado/a o viudo/a		0,255	0,172	–0,260
Nivel educativo (Ref. Primario)				
Secundarios		0,395**	0,217	–0,027
Terciarios		0,730*	0,612*	–0,099
Tipo de contrato (Ref. Indefinido)				
Temporal		0,205	0,377**	0,230
Tipo de jornada (Ref. Hasta 30h/semana)				
Más de 30h/semana		–0,078	–0,422*	–0,572***
Trabajador de bajos salarios (Ref. No)				
Sí		1,174***	1,671***	1,302***
Número de adultos en el hogar		–0,065	–0,081	–0,146
Número de niños en el hogar		–0,058	–0,215	–0,171
Intensidad laboral del hogar (Ref. 0< I.L. <0,5)				
0,5≤ I.L. <1		–0,605***	–0,923***	–0,847***
I.L.=1		–1,436***	–2,012***	–1,771***
El hogar recibe prestaciones:	por desempleo	–0,614***	–0,597***	–0.775***
	por inactividad	–0,894***	–1,360***	–1.074***
	de otro tipo	0,041	–0,401***	–0.526***
Rho		0,358	0,450	0,377
Log-likelihood		–62,229	–1230,612	–1581,498
Número de observaciones		4.673	8.617	10.759
Número de individuos		2.023	4.087	6.066

Nota: *** significación p<0,001, ** p<0,05, * p<0,10.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 7. *Condicionantes de la pobreza de «empleados FR»*

		2003/2006 Coeficiente	2004/2007 Coeficiente	2005/2008 Coeficiente
«Empleado FR» pobre el año anterior (Ref. No)				
Sí		0,575***	0,721***	0,946***
Edad (Ref. 16-24)				
25-49		0,381	0,409	0.738***
50-64		–0,031	0,135	0,932**
65 y más		0,673	1,528*	2,043**
Sexo (Ref. Hombre)				
Mujer		–0,491***	–0,375***	–0,240***
Estado civil (Ref. Soltero/a)				
Casado/a		–0,408	–0,023	–0,266
Separado/a, divorciado/a o viudo/a		0,158	0,388	–0,217
Nivel educativo (Ref. Primario)				
Secundarios		0,349*	0,038	–0,017
Terciarios		0,618	0,263	–0,082
Tipo de contrato (Ref. Indefinido)				
Temporal		0,168	0,377**	0,141
Tipo de jornada (Ref. Hasta 30h/semana)				
Más de 30h/semana		–0,116	–0,357	–0,399**
Trabajador de bajos salarios (Ref. No)				
Sí		1,251***	1,565***	1,220***
Número de adultos en el hogar		–0,095	–0,011	–0,149
Número de niños en el hogar		–0,021	–0,127	–0,189
Intensidad laboral del hogar (Ref. 0< I.L. <0,5)				
0,5≤ I.L. <1		–0,793***	–0,911***	–0,907***
I.L.=1		–1,691***	–1,962***	–1,778***
El hogar recibe prestaciones:	por desempleo	–0,713***	–0,546***	–0,692***
	por inactividad	–0,858***	–1,275***	–0,971***
	de otro tipo	–0,009	–0,377***	–0,464***
Rho		0,396	0,413	0,346
Log-likelihood		–701,689	–1344,381	–1703,836
Número de observaciones		4.837	8.958	11.127
Número de individuos		2.109	4.280	6.303

Nota: *** significación p<0,001, ** p<0,05, * p<0,10.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 8. *Condicionantes de la pobreza de «activos USA»*

	2003/2006 Coeficiente	2004/2007 Coeficiente	2005/2008 Coeficiente
«Activo USA» pobre el año anterior (Ref. No)			
Sí	0,628***	0,712***	0,947***
Edad (Ref. 16-24)			
25-49	0,145	0,407	0,509**
50-64	–0,173	0,199	0,670
65 y más	0,477	1,612	1,923***
Sexo (Ref. Hombre)			
Mujer	–0,455***	–0,353***	–0,249***
Estado civil (Ref. Soltero/a)			
Casado/a	–0,299	0,033	–0,249
Separado/a, divorciado/a o viudo/a	0,259	0,482	–0,313
Nivel educativo (Ref. Primario)			
Secundarios	0,303*	0,036	–0,033
Terciarios	0,566	0,184	–0,117
Tipo de contrato (Ref. Indefinido)			
Temporal	0,149	0,354**	0,207
Tipo de jornada (Ref. Hasta 30h/semana)			
Más de 30h/semana	–0,308	–0,390*	–0,416**
Trabajador de bajos salarios (Ref. No)			
Sí	1,096***	1,506***	1,208***
Número de adultos en el hogar	–0,075	–0,021	–0,150*
Número de niños en el hogar	–0,116	–0,144	–0,172
Intensidad laboral del hogar (Ref. 0< I.L. <0,5)			
0,5≤ I.L. <1	–0,689***	–1,007***	–0,986***
I.L.=1	–1,614***	–2,050***	–1,881***
El hogar recibe prestaciones: por desempleo	–0,629***	–0,522***	–0,724***
El hogar recibe prestaciones: por inactividad	–0,700**	–1,284***	–0,805***
El hogar recibe prestaciones: de otro tipo	0,070	–0,377***	–0,476***
Rho	0,357	0,397	0,332
Log-likelihood	–755,681	–1445,271	–1831,244
Número de observaciones	5.007	9.280	11.488
Número de individuos	2.204	4.489	6.551

Nota: *** significación p<0,001, ** p<0,05, * p<0,10.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 9. *Condicionantes de la pobreza de trabajadores por cuenta ajena*

		2003/2006	2004/2007	2005/2008
		Coeficiente	Coeficiente	Coeficiente
Asalariado pobre el año anterior (Ref. No)				
Sí		0,696***	0,645***	0,954***
Edad (Ref. 16-24)				
25-49		0,521	0,619*	0,931***
50-64		0,233	0,365	1,222***
65 y más		1,135	2,018**	2,361***
Sexo (Ref. Hombre)				
Mujer		–0,658***	–0,433***	–0,298***
Estado civil (Ref. Soltero/a)				
Casado/a		–0,216	0,213	–0,162
Separado/a, divorciado/a o viudo/a		0,339	0,821*	–0,054
Nivel educativo (Ref. Primario)				
Secundarios		0,385*	0,218	–0,009
Terciarios		0,705*	0,545	–0,102
Tipo de contrato (Ref. Indefinido)				
Temporal		0,157	0,345**	0,216
Tipo de jornada (Ref. Hasta 30h/semana)				
Más de 30h/semana		–0,244	–0,531**	–0,603***
Trabajador de bajos salarios (Ref. No)				
Sí		1,307***	1,634***	1,330***
Número de adultos en el hogar		–0,035	–0,014	–0,152
Número de niños en el hogar		–0,155	–0,179	–0,103
Intensidad laboral del hogar (Ref. 0< I.L. <0,5)				
0,5≤ I.L. <1		–0,551**	–0,907***	–0,822***
I.L.=1		–1,367***	–2,036***	–1,715***
El hogar recibe prestaciones:	por desempleo	–0,560**	–0,556***	–0,723***
	por inactividad	–0,779**	–1,328***	–0,968***
	de otro tipo	0,072	–0,419***	–0,578***
Rho		0,354	0,456	0,377
Log-likelihood		–603,898	–1156,623	–1493,946
Número de observaciones		4.550	8.354	10.459
Número de individuos		1.952	3.929	5.877

Nota: *** significación p<0,001, ** p<0,05, * p<0,10.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

TABLA 10. *Condicionantes de la pobreza de trabajadores por cuenta propia*

		2003/2006	2004/2007	2005/2008
		Coeficiente	Coeficiente	Coeficiente
Trabajador por cuenta propia pobre el año anterior (Ref. No)				
Sí		–0,151	–0,118	0,300**
Edad (Ref. 16-24)				
25-49		–0,003	0,974	0,577
50-64		–0,971	0,587	0,846
65 y más		–1,729	0,946	1,159
Sexo (Ref. Hombre)				
Mujer		0,007	0,023	–0,35
Estado civil (Ref. Soltero/a)				
Casado/a		1,385	–0,259	–0,325
Separado/a, divorciado/a o viudo/a		2,545	–0,675	–0,234
Nivel educativo (Ref. Primario)				
Secundarios		0,247	0,050	0,161
Terciarios		0,077	–0,261	–0,016
Situación laboral (Ref. Indefinido)				
Con empleados		–0,071	–0,124	–0,188
Sin empleados		0,149	–0,454	–0,060
Tipo de jornada (Ref. Hasta 30h/semana)				
Más de 30h/semana		0,097	–0,064	–0,331
Número de adultos en el hogar		–0,126	0,056	–0,118
Número de niños en el hogar		–0,375	–0,169	–0,357
Intensidad laboral del hogar (Ref. 0< I.L. <0,5)				
0,5≤ I.L. <1		–0,604	–0,622**	–0,346
I.L.=1		–1,195***	–1,191***	–0,847***
El hogar recibe prestaciones:	por desempleo	–1,192***	–0,932***	–0,841***
	por inactividad	–1,621***	–1,617***	–1,239***
	de otro tipo	–0,617**	–0,516***	–0,306***
Rho		0,579	0,459	0,280
Log-likelihood		–405,917	–864,427	1060,858
Número de observaciones		870	1.701	1.991
Número de individuos		392	848	1.199

Nota: *** significación p<0,001, ** p<0,05, * p<0,10.

Fuente: Elaboración propia a partir de la ECV longitudinal 2004-2009.

tigaciones y a la persistencia de la pobreza laboral española se esperaba que la dependencia de estado estuviera presente en la misma. En los cuatro casos la variable dependiente retardada es altamente significativa y positiva, lo que indica una influencia directa de la experiencia pasada de pobreza laboral en la situación presente. Por tanto, hay un mecanismo de atrapamiento inherente a la experiencia de pobreza laboral que debería tenerse en cuenta a la hora de diseñar políticas públicas que alivien su situación.

La implementación de este modelo ha permitido, a su vez, observar la influencia de otras características que también han sido estudiadas desde la perspectiva estática. Los resultados han mostrado que hay algunas variables que están más asociadas al riesgo de pobreza laboral ya que, aun controlando por el tiempo que se pasa en la pobreza, siguen resultando significativas. Algunos de estos determinantes confirman resultados de investigaciones anteriores. Por un lado, la edad y el sexo condicionan la probabilidad de experimentar pobreza laboral. La edad tiene una influencia significativa y directa y el grupo de jóvenes entre 16 y 24 años tiene una menor probabilidad de pobreza que el resto de categorías. Este resultado se explica por la tardía emancipación de los jóvenes españoles que se mantienen en el hogar familiar hasta edades muy superiores a la media europea (García-Espejo y Gutiérrez, 2011). Respecto al sexo, el modelo muestra que el riesgo de pobreza laboral es mayor para los hombres que para las mujeres. Esta diferencia, en el caso español, se explica porque los hombres tienen una tasa de participación laboral mucho mayor y porque la participación laboral de las mujeres, en muchos casos, resulta en el ingreso necesario para poder evitar de forma eficaz el riesgo de pobreza (Peñas-Casas y Latta, 2004).

Por otro lado, la importancia de la participación laboral conjunta de los miembros del hogar también ha resultado muy significativa y muestra la tendencia esperada: aquellos hogares que explotan en mayor medida su potencialidad de empleo evitan en mayor grado la pobreza laboral. Es decir, el estándar del doble ingreso resulta fundamental para evitar este riesgo de pobreza (Esping-Andersen y Myles, 2008; Allègre y Jaerhling, 2011). Asimismo, las variables referidas a las transferencias recibidas por otros miembros del hogar también resultan determinantes de la probabilidad de sufrir pobreza laboral. De esta manera, la recepción de prestaciones por desempleo, inactividad u otros medios disminuyen la probabilidad de sufrir pobreza laboral.

El análisis de las variables laborales ha mostrado una menor significatividad y, a su vez, menor consistencia con los resultados esperados. Las conclusiones de investigaciones anteriores mostraron que eran los trabajos atípicos (que no cubrían toda la jornada laboral, que eran temporales y/o con bajos salarios) los que mayores probabilidades tienen de asociarse a una situación de riesgo de pobreza (Goerne, 2011). En este caso también son estas características asociadas a los empleos inseguros las que influyen en la pobreza laboral, siendo la recepción de bajos salarios la más importante de las analizadas y consistente con todos los modelos implementados. Sin embargo, el tipo de contrato y de jornada no muestra resultados tan robustos (porque no son significativos en todos los modelos), aunque sí presenta cierta influencia en la dirección esperada: los empleos temporales y a media jornada presentan un mayor riesgo de pobreza laboral.

Aunque las variables referidas al tamaño del hogar (número de dependientes y número de adultos) no han resultado determinantes del riesgo de pobreza laboral, es la configuración de los hogares y su acceso a las diferentes fuentes de recursos (mercado de trabajo y Estado de bienestar) la que explica la menor influencia de los trabajos atípicos en la pobreza laboral española. Por un lado,

la baja tasa de participación femenina se traduce en una menor probabilidad de acceso al estándar del doble ingreso, una de las mejores estrategias para evitar la pobreza. Por otro lado, el tamaño de los hogares en España tiende a ser superior a la media por la tardía emancipación juvenil. Esto, conjuntamente, provoca que haya una alta proporción de trabajadores pobres con empleos más estables y seguros que viven en hogares con ingresos que no consiguen superar la línea de pobreza (Cretazz, 2011; Halleröd y Ekbrand, 2014).

El modelo que explica la permanencia en la pobreza de los trabajadores por cuenta propia tiene un menor impacto explicativo. En primer lugar, hay una menor dependencia de estado. El estado de pobreza en el año anterior solo resulta significativo en el último periodo tenido en cuenta, por lo que este resultado es menos robusto. En segundo lugar, del resto de variables observadas, solo las referidas al ingreso (y a la intensidad laboral en uno de los modelos) muestran una relación con la pobreza laboral. La recepción de transferencias sociales por desempleo, inactividad u otro tipo de prestaciones reduce la probabilidad de pobreza de los autoempleados en todos los periodos observados. Este resultado indica la importancia de encontrar nuevas formas de estudiar la situación tan particular que viven los autoempleados en España que tienen un riesgo muy alto de pobreza laboral. Se requiere encontrar los condicionantes de su situación en otras esferas y, según los resultados aquí expuestos, es especialmente importante conocer el resto de ingresos que se reciben en el hogar. Además, el problema de la menor fiabilidad de los datos para este grupo social, debido a que tienden a una infradeclaración de sus ingresos (Martínez-López, 2012), precisa ser resuelto para poder conocer el riesgo real de este tipo de trabajadores y poder diseñar políticas que ayuden a mejorar su situación de mayor inestabilidad y persistencia en la pobreza laboral.

En suma, hay dos situaciones de empleo totalmente diferenciadas: el empleo por cuenta propia y el empleo por cuenta ajena. Los conceptos de «trabajadores» muestran una influencia clara de la dependencia de estado y de algunas características que se esperaba fueran determinantes en la pobreza laboral: las referidas a los recursos y necesidades. Este análisis, por tanto, destaca que es en el balance entre unos y otros donde se juegan las probabilidades de experimentar pobreza. Hay que destacar, sin embargo, que los recursos parecen tener una importancia mayor, es decir, que es más relevante el grado de participación de los miembros de los hogares y si esa participación procura recursos necesarios, así como la presencia de recursos provenientes del Estado (transferencias sociales), que el nivel de necesidades de los hogares. En el caso de los trabajadores por cuenta propia este resultado es aún más acentuado: únicamente son dichas variables referidas a recursos provenientes del mercado laboral y del Estado de bienestar las que parecen ayudar a evitar el riesgo de pobreza para los trabajadores por cuenta propia.

Conclusiones

En este artículo se ha ahondado en el conocimiento de los mecanismos que causan la permanencia-dependencia en la situación de pobreza laboral. Se han tenido en cuenta dos posibles explicaciones: por un lado, la dependencia de estado, es decir, que la situación de pobreza se articule como un círculo vicioso en el que la misma experiencia de pobreza durante un periodo concreto condicione la probabilidad de que se experimente pobreza en el futuro; por otro lado, los determinantes de la pobreza laboral podrían estar asociados a las características y atributos de los individuos y hogares afectados por la pobreza.

Este análisis es de particular relevancia para España, dadas sus altas tasas de po-

breza, de pobreza laboral y de persistencia en la pobreza. El bajo impacto redistributivo del sistema español de protección social requiere un mayor y mejor conocimiento de la pobreza y la pobreza laboral, indispensable para un mejor diseño de las políticas de lucha contra esos riesgos. La existencia de la dependencia de estado en la pobreza laboral estaría indicando, por un lado, que la participación en el mercado laboral no es suficiente para evitar el círculo vicioso que puede acompañar a la pobreza; por otro lado, que los mecanismos de protección social actuales no son efectivos a la hora de situar a los trabajadores fuera del riesgo de pobreza.

Para determinar qué mecanismos están asociados a la pobreza laboral en España se ha realizado la estimación de un modelo *probit* de variable dependiente dinámica que permite incluir como variable independiente el valor de la variable dependiente en el año anterior. Este modelo ha permitido distinguir la influencia de la dependencia de estado y de la heterogeneidad observada en la probabilidad de experimentar pobreza laboral y ha determinado que ambas fuentes de influencia están presentes en la pobreza de ocupados. Hay que destacar que la dependencia de estado es muy significativa y robusta en todos los modelos tenidos en cuenta (a excepción de los trabajadores por cuenta propia), por lo que la pobreza laboral se configura como una situación con tendencia a continuar debido a la existencia de mecanismos que pueden estar definiendo la pobreza laboral como un «círculo vicioso».

En el caso de los trabajadores por cuenta ajena también hay influencia de la heterogeneidad y algunas de las variables independientes tenidas en cuenta afectan directamente a la probabilidad de experimentar pobreza laboral. Por un lado, hay variables que muestran la influencia esperada según investigaciones anteriores: tanto la edad y el sexo como la intensidad laboral de los hogares han resultado muy significativas. De este modo, los hombres y las personas empleadas que estén en edades centrales de su ciclo vital y laboral tienen más probabilidades de pobreza, así como los hogares con una baja participación laboral de sus miembros. A su vez, destaca la importancia de otras fuentes de ingreso dado que aquellos hogares que reciben algún tipo de ayuda del Estado tienen menos probabilidades de pobreza laboral.

Por otro lado, algunas características no han mostrado la relación esperada con la pobreza laboral: el tipo de contrato y jornada, aunque influye en la pobreza laboral en la dirección esperada (mayor riesgo para los contratos temporales y/o a tiempo parcial), lo hace mucho menos que el resto de variables y con menor consistencia entre periodos y conceptos de trabajo. Esto se produce como consecuencia de la baja participación femenina y tardía emancipación de los jóvenes que configuran hogares con menos recursos (menor acceso al mercado de trabajo por parte de los jóvenes y las mujeres) y más necesidades (hijos adultos conviviendo en el hogar familiar), lo que se traduce en hogares donde normalmente hay solo una persona empleada que, aun teniendo una posición estable en el mercado de trabajo, puede no obtener ingresos suficientes para superar la línea de pobreza (Cretazz, 2011; Halleröd y Ekbrand, 2014).

En este contexto, dado que la dependencia de estado es muy fuerte, y aunque las características que se refieren a los recursos del hogar también son fundamentales a la hora de determinar el riesgo de pobreza laboral, sería adecuado implementar políticas orientadas a la población «trabajadora» en general, incidiendo en un aumento de los recursos de los hogares. Además, los resultados han mostrado que la pobreza laboral en España, desde una perspectiva dinámica, tiene un componente asociado a los bajos salarios (resultado significativo en todos los modelos) y al desempleo (importancia de la intensidad laboral de los hogares), por lo que estas políticas generales podrían basarse

tanto en transferencias de apoyo y sustitución de ingreso (desempleo y transferencias complementarias) como en la maximización de la participación laboral de todos los miembros activos del hogar.

En el caso de los trabajadores por cuenta propia muestran una dependencia de estado baja y una mayor, y única, importancia de las variables referidas a los recursos (especialmente la recepción de otros ingresos en el hogar), por lo que cobraría importancia implementar políticas dirigidas a aumentar la intensidad laboral de estos hogares y sus ingresos disponibles a través de un incremento de transferencias o reducciones de impuestos.

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In-Work Poverty Persistence: The Influence of Past Poverty on the Present

Permanencia en la pobreza laboral: la influencia de la pobreza pasada en la presente

Aroa Tejero

Key words

Longitudinal Analysis
- Income
- Labor Market
- Poverty
- Public Policies

Abstract

This dynamic study of poverty offers results that could not have been attained with a cross-cutting approach. In this article, we examine the causes leading individuals to remain in situations of working poverty. The main objective is to analyze the probability of remaining in poverty from one year to another, attempting to determine if it is individual characteristics or the previous poverty experiences that determine the probability of suffering from in-work poverty. The results reveal that individuals experiencing working poverty at a certain time have greater probabilities of experiencing it in the future, thereby detecting a dependency of status mechanism. However, there are also certain specific characteristics related to in-work poverty: those associated with the home or with the receipt of low salaries.

Palabras clave

Análisis longitudinal
- Ingresos
- Mercado de trabajo
- Pobreza
- Políticas públicas

Resumen

El estudio dinámico de la pobreza ofrece resultados que no se consiguen con una perspectiva transversal. En este artículo se estudian las causas que llevan a la permanencia en la situación de pobreza laboral. El principal objetivo es el análisis de la probabilidad de permanecer en la pobreza de un año a otro, intentando determinar si son las características de los individuos o si son las experiencias pasadas en la pobreza lo que determina la probabilidad de sufrir pobreza laboral. Los resultados muestran que las personas que caen en la pobreza laboral en un momento determinado tienen más probabilidades de experimentarla en el futuro, por lo que se detecta un mecanismo de dependencia de estado. Aun así, también hay algunas características específicas relacionadas con la pobreza laboral: las asociadas al hogar o la recepción de bajos salarios.

Citation

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Introduction[1]

Poverty and working poverty in Spain are characterized by being some of the highest in all of the European Union (EU) and by having great stability during the first decade of this century, a period in which an expansion has taken place in the economy and in employment. To this, it is also necessary to add the low impact of the Spanish social welfare system and the influence of a dualized labor market. The use of a longitudinal perspective on the study of poverty allows us to conduct analyses that consider the duration of the phenomena. Permanence in poverty is a widespread phenomenon that requires new perspectives in order to make an in-depth analysis of the determinants of these situations. Thus, while it is important to know which workers enter into states of poverty and which do so in a permanent manner; it is even more relevant to determine the mechanisms that lie behind this permanence in the poverty state.

Some recent studies have considered the duration of poverty from a permanence-dependence perspective. The main objective was to analyze the specific characteristics that are determinants of the poverty situation, taking into account the influence of time, given that past poverty experiences may affect the future probability of entering the same situation. The results have revealed a significant state dependence in poverty and other situations related to the labor market (unemployment, low salaries) as well as certain individual and household characteristics (gender, working situation, household composition).

The objective of this article is to determine whether or not working poverty in Spain is the result of state dependence or if other characteristics related to the individual and his/her household may explain the probability of remaining in a state of poverty. So, the main question is: Do workers enter a poverty situation due to their past experiences in that situation or due to certain characteristics that increase their probability of being impoverished? In response to this question, literature on poverty and low salaries has frequently used dynamic, logistic and probability models, on dynamic dependent variables, which are capable of differentiating between *state dependence* controlling for both observed and unobserved heterogeneity as well as endogeneity problems.

The distinction between permanent poverty that is caused by individual and household characteristics and future poverty that is caused by current poverty has major implications for the design of public policies. On the one hand, if poverty leads to poverty, regardless of other determinants, political battles against poverty would have a much greater impact, given that they are not only influencing the current poverty state but also future poverty. At the same time, if there is evidence that poverty tends to reproduce itself, current policies should be reviewed in order to determine to what point they may be part of this mechanism generating permanence (Biewen, 2004). On the other hand, it is possible that poverty is determined by specific individual characteristics and by previous states of poverty. In this case, policies should be directed towards these specific groups and not the general poor population.

In the first section of this article, the Spanish case is contextualized and the potential determinants of permanence in poverty that have been found in available research are presented and discussed. Below we present the analysis strategy and the model used to consider the characteristics of the data used (longitudinal). In the third and fourth sections the descriptive and analytic results are presented, which reveal the influence of variables referring to the individuals,

[1] This article is the product of my doctoral thesis, funded by the University Professor Training Program (2009-2013) of the Ministry of Education.

their jobs and households, as well as the potential effect of state dependence.

Working poverty in Spain and potential determinants of permanence

Spain is characterized as being a country with one of the highest risks of poverty in the EU, also having high rates of working poverty. At the same time, said rates were stable during the first decade of the century, at around 12%. Studies using a longitudinal perspective (analyzing poverty in periods of over one year) situate Spain as a country with statistically high rates of poverty (around 20%), low permanence (only 2.7% in a period of seven years) and high transience (44% spend at least one year in poverty). In an international perspective, Spain is situated in an intermediate position; despite having a considerably high poverty rate. It also has a high transience rate, reflected by the intermediate or even low rates of persistence (Cantó *et al.,* 2010).

The selected period, between 2003 and 2008, corresponds to a cycle of economic and employment expansion in Spain that did not, however, lead to a decreased risk of poverty for workers during the first decade of the present century. Both facts make it necessary to determine why, in a country where employment and the economy are growing, the risk of poverty in employed individuals is also on the rise (or, at least, remaining stable).

Some authors have explained that this lack of improvement in the risk of poverty rates may be due to a decreased redistributive capacity of the social welfare system, which over recent years, has had a reduced ability to correct inequalities through economic benefits (Ayala *et al.,* 2013). Spanish welfare institutions, of the Mediterranean welfare type, are characterized by their low coverage for working poverty risk situations and a low intensity of social welfare systems (Esping-Andersen, 2000). The level and composition of Spanish in-work poverty is related to the lack of social benefits for households with children, families and employed members and to the limited impact of the same on the reduction of poverty, with minimum guarantee programs that have a very limited impact on poverty risk (Laparra and Ayala, 2009; Rodríguez-Cabrero, 2010 and 2011). It may be concluded that this leads many households to rely exclusively on the salary income in order to avoid this risk of poverty.

Countries from Southern Europe also share characteristics in terms of the dualist structure of their labor markets (Halleröd *et al.,* 2015; Visser, 2009). In Spain, there is strict regulation of the labor market. The strictness of the labor market is mainly due to the dual protection, with differences existing for those having open-ended contracts (with greater social protection, limited cause of dismissal and higher dismissal costs) as opposed to those with temporary contracts (less social protection, greater ease of dismissal and lower costs for the same) (García-Espejo and Gutiérrez, 2011). Thus, welfare provisions are generally organized and fragmented by dual occupation lines: many rights for those in the center of the labor market and few for those along the periphery (Rodríguez-Cabrero, 2011). The dual nature of the Spanish labor market means a high rate of temporary contracts and frequent labor rotation. Thus, the increase in precarious employment or low quality work has increased the risk of poverty suffered by workers.

Over recent years, the number of studies using a dynamic perspective to analyze poverty has increased, given that panel data allows for the resolution of statistical data problems when analyzing variables that changes over time. At the same time, it also permits the inclusion of variables that consider this time and its influence. Diverse studies have been conducted to analyze poverty state dependence and other situa-

tions (low salaries, unemployment). The study conducted by Biewen (2004) examines the influence of poverty state dependence in Germany. The results suggest that, even after controlling for the observed and unobserved heterogeneity, past poverty experiences increase the probability of experiencing future poverty states. Poggi (2003) analyzed the persistence of social exclusion in Spain in a study that presented results on different poverty dimensions. He identified mechanisms of state dependence on social exclusion in Spain, although he also noted the influence of certain characteristics such as education level or household composition (observed heterogeneity).

Approaches considering working poverty have analyzed the persistence of low salaries as an indicator of in-work poverty (Capellari, 2002) or dependence mechanisms that are generated in unemployment situations (Arulampalam *et al.,* 2000). Cappellari (2002) considered persistence-dependence of working poverty in Italy through the estimation of permanence under the low wage threshold (in this case, wages are used as indicators of worker well-being). It was concluded that the degree of state dependence is very high, although there are also other attributes that influence the working poverty/low wage state: gender, education, occupation, occupation sector and region of residence.

Along these lines, the analysis of permanence-dependence is suggested as an approach to the potential first causes of the phenomenon of persistence in in-work poverty, to the mechanisms that generate an ongoing risk of living below the poverty threshold. This persistence is associated with an increased material deprivation and is related to other poverty dimensions that are not directly measured in this work (Berthoud and Bryan, 2010). Thus this approximation of permanence-dependence of working poverty is, in some ways, an approximation to other poverty dimensions.

There are two mechanisms associated with the presence of poverty state dependence (Biewen, 2004). First, it may be the case that the poverty experience in a specific period has a causal effect on future poverty states, known as *state dependence*. The low income is associated, on the one hand, with adverse incentives that make it impossible for the individual to achieve employment if unemployed or to find a better job if having a low wage position; on the other hand, it may be associated with demoralization processes, a loss of motivation or depreciation of human capital, also decreasing the chances of finding employment if unemployed and of improving the unstable and/or unsafe employment situation. Second, it is possible that the poverty of a specific moment takes place because the individuals have certain characteristics that make them especially prone to poverty (observed heterogeneity). As these characteristics continue over time, the possibility of experiencing poverty in future moments increases (Poggi, 2003).

The distinction between these two components is fundamental for the implications of the design of policies to fight poverty (Giraldo *et al.,* 2002; Poggi, 2003; Andriopolou and Tsakloglou, 2011). If poverty is determined by state dependence, policies developed to prevent it should also thereby prevent future poverty. Therefore, it is necessary to break the vicious cycle of poverty, applying, for example, income support policies. In this way, policies may be directed at the set of poor workers and not at specific groups within them (Capellari, 2002). If, on the contrary, poverty harbors a greater influence of individual and household characteristics, policies should be directed towards these risk categories: through, for example, education, training, labor market or home/working life reconciliation policies.

Also, within the framework of the policies that fight working poverty, there are three proposals that have made up the debate over recent years and that should be consid-

ered (Cretazz, 2011): an increase in minimum wage (effectiveness of the measure by which in-work poverty is a problem of low wages), social benefits directed at fighting the specific risks of poor workers (unemployment or benefits that are complementary to wages) and policies designed to maximize working participation of the households (increase in female and under-qualified worker participation). To a greater or lesser extent, the objective of these policies is to fight two of the potential causes of working poverty (Halerröd *et al.,* 2015): unemployment and low wages. Thus, as both variables condition in-work poverty, it would be better to make proposals that are related to the minimum wage (low wages), maximizing work participation (unemployment) or with an increase in social benefits (low salaries and unemployment).

Data and concepts

The European Union Survey on Income and Living Conditions (EU-SILC) is a tool used for the study of the distribution of income and social exclusion in Europe. A survey that, since 2004, has been conducted in all member countries of the EU with the same structure and with the fundamental objective of gathering information on households and individuals from countries outside of the EU, obtaining results that may be comparable and that help determine the current situation of economic activity and the living conditions of the individuals.

The EU-SILC has certain problems that should be taken into account. First, it is a semi-panel sample survey. In other words, different individuals are followed over time, with one fourth of the sample being changed every year. This is called a rotating panel, with four rotation turns: one household, one individual, may be in the sample for only four years. Individuals that remain in the sample continuously were selected, being that they were present in the first year of each observation period. That is, the individuals were analyzed for an observation period of one, two, three or four years, with the requirement that no observations be missed during the period. The individuals of this sample were studied in periods of two years.

On the other hand, the EU-SILC had an inconsistency between the reference periods for some of the variables. Some variables refer to the year prior to the time of the interview (variables referring to income), required in order to create the poverty dimension, whereas others refer to the time of the interview[2]. Therefore, when measuring poverty in the 2004 file, in fact, the economic situation of these households is being measured for the year 2003. Thus, data from the files between 2004 and 2009 were used, but in fact, the period 2003-2008 was being analyzed.

Measurement of working poverty requires the creation of a concept that implies two dimensions: the individual and the household. A poor worker may be considered the worker who lives in a poor household. Based on the Eurostat definition, and for potential use in all countries of the European Union ("EU workers" hereinafter): defining a worker as that individual who, during the reference year, has worked for at least 7 months, at least 15 hours per week. On the other hand, the poor household is defined based on the household income and the composition of the same, that is, taking into account the median income of the household according to the OECD equivalence scale. So, poor households are those that fall below the 60% mark for median equivalent income.

In addition, other complementary concepts related to the work dimension were used, in order to better understand the dif-

[2] All of the variables have been modernized so that they refer to the same year: for example, when analyzing 2004, the variables from this year that refer to the time of the interview are used, while the variables from 2005 referring to the income reference period (which is 2004) are used.

TABLE I. *Main concepts of working poverty*

Selection criteria	Participation in the labor market	Employment
USA Actives (USBLS)	More than half of the reference period (at least 27 weeks)	No
FR Employees (INSEE)	At least half of the period	At least one month
EU Workers (Eurostat)	No	More than half of the period (at least 7 months).
Employed	No	More than half of the period (at least 7 months) working for others.
Self-employed	No	More than half of the period (at least 7 months) self-employed.

Source: Ponthieux (2010). Box 14.1 and own creation.

ferentiated situation of the employed and self-employed workers (prior studies show that the poverty risk for the self-employed is much greater than that for employed workers); and, on the other hand, it is possible to determine if the selection of "in-work" concept conditions the obtained results. Previous studies have shown that differences between the most frequently used employment indicators affect the incidence of the problem, as well as the causes that they identify (Ponthieux, 2010).

As seen in Table I, the term "USA active" is used, based on the definition from the USBLS (United States), for those individuals who have participated in the labor market for over half of the reference period (one year) in a job or unemployment. The sample of "FR employed" was created based on the concept of the INSEE (France): including those who were unemployed for six months but were employed for at least one month and for those who have worked for at least six months. Finally, the "EU worker" population was divided into "employed" and "self-employed" with "employed" referring to those individuals who have spent at least six months working as an employee during the reference period; and "self-employed" refers to those who have spent at least six months in the labor market, working for themselves.

Analysis strategy: dynamic dependent variable probit model

In the poverty literature, and especially, the literature on low wages, many studies have attempted to measure the influence of past states on present situations (Arulampalam *et al.,* 2000; Capellari, 2002; Clark and Kanellopoulos, 2009). Typically, these analyses were conducted using logistics or probit models of dynamic dependent variables that are capable of differentiating between the *state dependence,* controlling for both the observed and unobserved heterogeneity as well as initial conditions problems.

In the analysis presented here, the methodology proposed by Wooldridge (2005) was followed. In these models, the dependent variable is binary, therefore, the value of 1 is used when the person is found to be in working poverty and 0 when not in working poverty. This variable is observed at most during a period of 4 years. The models presented are differentiated by these periods, beginning in 2003, 2004 and 2005 respectively. The model specification for individual at the moment in time is:

$$T_{iit} = x'_{it}\beta + \gamma y_{it-1} + v_{it} \quad i = 1, 2, \ldots, n \text{ y } t = 2, \ldots, T_i$$

Where refers to the unobservable individual propensity to be in working poverty, is a vector of observable characteristics affecting y^*; β is a vector of coefficients associated with and , whereas is the term of unobservable error. It is an unbalanced panel sample (not having the same number of observations for each case, but having between one and four consecutive observations per individual), with the total number of observations per individual being . State dependence is measured with the inclusion of the delayed dependent variable in the right-hand part of the equation (γy_{it-1}).

Assuming that the individual unobservable heterogeneity is invariant in time, the error term may be broken down as

$$v_{it} = \varepsilon_i + u_{it}$$

where is the unobservable individual effect and is random error. is treated as random and a probit model of random effects is used to estimate the probability of being poor, based on the common assumptions of $u_{it} \sim IN(0,\sigma_u^2)$, that is, with being independent of x_{it} for all individuals *(i)* and moments in time *(t)*.

Thus, a random effects probit model (of dynamic dependent variable) was used. The probit models were used to estimate models that measure the influence of diverse independent variables on a binary dependent variable and are based on a normal distribution function for calculating probabilities. The difference between the random and fixed effects lies in the assumption of how the unobservable heterogeneity is distributed: whereas the fixed effect models are based on the idea that unobservable heterogeneity is constant for each individual, random effects models consider that the heterogeneity is randomly distributed around a specific value (where the individual effects are random) (Gutiérrez *et al.,* 2011).

It is useful to mention that there is a complication in the implementation of this type of models, their potential initial conditioning problems (Arulampalam *et al.,* 2000; Capellari, 2002; Clark and Kanellopoulos, 2009). This problem exists because the observation period does not always coincide with the process that generates the poverty. In the case of this study, when a worker is currently in poverty, it may be because he/she has been in this poverty state in the past (but there are no observations to verify this). This problem exists when y_{it} is correlated with x_i and in this article, it is controlled by the type of statistical analysis implemented.

Evidence of permanence-dependence in working poverty. Descriptive approximation

Before discussing the results of the analytical model, it is useful to provide a descriptive introduction of the levels of persistence and mobility in working poverty in the studied period and with the selected definitions of "work". In Table II, different indicators may be observed: column 1 reveals the rates of in-work poverty. Although the data that is derived from longitudinal files of the EU-SILC cannot be interpreted in static terms (because the samples are constructed in order to be representative in a period of four years), the rate of working poverty based on the EU indicator has levels that are very similar to those of the official data (around 12%). The comparison between the incidence of poverty of "EU workers" and "FR employees" does not reveal large differences (also around 12%), while the "USA actives" are around 15%. In the extreme situations, there are the employed workers and the self-employed who have levels around 8 and 31% respectively.

In column 2, the probability of permanence in poverty from one year to another is presented. Data reveals that in a specific year, around 50% of the in-work poor, regardless of the concept of "work" that is used, remain in poverty. This result is an in-

TABLE II. *Probabilities of experiencing working poverty*

		A	B	C	D
Poor workers	2003	11.6	50.1	49.9	5.8
	2004	12.0	49.0	51.0	6.2
	2005	12.4	52.0	48.0	6.7
Poor employees	2003	12.4	49.8	50.2	6.2
	2004	12.8	49.6	50.4	6.5
	2005	13.2	52.2	47.8	7.0
Poor actives	2003	14.7	52.4	47.6	6.9
	2004	15.4	53.4	46.6	7.5
	2005	15.9	55.6	44.4	7.9
Poor employed	2003	7.5	44.5	55.5	3.5
	2004	7.5	47.7	52.3	3.8
	2005	8.2	51.2	48.8	3.8
Poor self-employed	2003	31.6	57.3	42.7	18.5
	2004	32.3	52.1	47.9	20.4
	2005	31.9	55.3	44.7	22.8

(*) PL: Working poverty

A: $P(PL = 1)$

B: $P(PL = 1 \mid PL_{t-1} = 1)$

C: $P(PL_t = 1 \mid PL_{t-1} = 0)$

D: $P(PL_t = 0 \mid PL_{t-1} = 1)$

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

dicator of the high permanence in the short term of Spanish poverty and the low influence of the situation with respect to activity. However, there are differences in the temporal trend of this permanence: the "EU workers" and poor employees suffer from an increase in permanence in the last period taken into account (2005-2008); the poor "USA actives" and "FR employees" also increase their permanence in poverty but during the three analyzed periods; self-employed workers have an unstable tendency with the permanence decreasing between first and second period and increasing in the last period.

In contrast with permanence, in columns 3 and 4, the rates of entry and exit of in-work poverty are presented, as indicators of the poverty mobility of these "work" concepts. The first trend observed is the high mobility of working poverty. The exits do not reveal significant differences between the analyzed concepts although the employed workers exit poverty more than the self-employed, with the actives, employed and workers in an intermediate position. The entries however have a very different pattern: workers, employed workers and actives have an entry rate into working poverty that is around 6%, 7% and 8%, respectively, therefore there are

TABLE III. *Demographic characteristics of working poor (according to concept of "work")**

		EU Worker	FR Employees	Actives USA	Employees	Self-employed
Gender	*Male*	76.33	73.94	69.64	74.55	78.39
	Female	23.67	26.06	30.36	25.45	21.61
Age	*16-24*	5.34	6.58	7.71	8.54	1.53
	25-49	70.71	70.58	67.61	77.24	65.10
	50-64	22.70	21.70	23.11	15.48	31.52
	65 and older	1.25	1.14	1.58	0.75	1.85
Education level	*Primary*	33.14	33.12	34.83	32.89	33.79
	Secondary	54.59	54.55	52.92	55.48	53.17
	Tertiary	12.27	12.33	12.26	11.63	13.05

* The mean of the working poverty rate is presented for the studied period (between 2003 and 2008) for each category of each variable.

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

only slight differences. The self-employed and wage earners are situated in quite different extremes: the former have levels around 20% and the second around 4%. This may indicate that the differences in entry into poverty rates are those explaining the different levels of poverty based on the concepts of "work" that are considered.

Within the descriptive analysis, it is also useful to refer to the composition of working poverty in the sample selected for analysis. On the one hand, this description helps explain some of the results of the models that are presented and, on the other hand, it allows us to determine whether or not the different concepts of work are selecting a very different employed population, that is, if the more or less restrictive concept of work is selecting sectors of the labor market that are more or less stable. Taking into account the determinants that have resulted to be essential in earlier studies, the composition of working poverty is presented in function of individual working and household variables (the results are found in Tables III, IV and V).

The results show that the concepts of "work" tend to select individuals with similar characteristics. In this case, even the self-employed workers have a profile that is similar to those of the other concepts. The selected workers are primarily men, with ages ranging from 25 to 59, having secondary level studies, open-ended contracts that are full time and with a high incidence of low wages. A high percentage of them are workers in the service sector, qualified workers in the industrial sector and unqualified workers. They tend to live in households where not all potentially active members are participating in the labor market (given that these tend to be households with working intensity of greater than 0.5, but less than 1) and with few possibilities of adding to the household income with social benefits.

The more or less restrictive nature of the "work" concept does not reveal significant differences. However, the more restrictive concepts tend to select a greater number of workers with open-ended contracts and with a lower presence of low wages, although not

TABLE IV. *Working characteristics of working poor (according to concept of "work")*

		EU Workers	FR Employees	Active USA	Employees	Self-employed
Type of contract	*Open-ended*	63.58	54.93	52.12	58.14	—
	Seasonal	36.42	45.07	47.88	41.86	—
Working situation*	*With employees*	—	—	—	—	28.89
	Without employees	—	—	—	—	71.11
Receives low salary	*Yes*	40.07	41.60	61.94	40.49	—
	No	33.68	32.74	38.06	33.89	—
Occupation	*Executives and businessmen*	10.81	10.39	9.99	0.45	—
	Technician and professionals	3.54	3.51	3.59	2.53	—
	Support technicians	4.92	4.94	4.87	5.55	—
	Administrative jobs	3.96	3.94	4.25	5.52	—
	Service workers	14.30	14.67	14.90	15.09	—
	Qualified agriculture workers	9.74	9.50	9.27	3.11	—
	Qualified industrial workers	24.10	23.86	23.43	25.88	—
	Operators and assemblers	8.95	8.73	8.67	11.46	—
	Unqualified workers	19.68	20.46	21.04	30.41	—

* Only for self-employed workers.

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE V. *Characteristics and income of households of working poor (according to the concept of "work")*

		EU workers	FR employees	USA Active	Employees	Self-employed
Working intensity	*I.L.=0*	—	—	10,71	—	—
	0< I.L. <0.5	11.34	17.32	19.77	15.75	6.09
	0.5≤ I.L. <1	58.08	55.11	47.79	63.89	50.76
	I.L.=1	30.58	27.57	21.72	20.36	43.15
The household receives benefits:	for unemployment	10.50	12.88	13.92	15.01	4.98
	for inactivity	11.51	12.36	15.81	10.87	12.43
	of another type	13.74	13.58	13.32	16.45	10.05

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

reaching a very pronounced difference. Therefore, it is not anticipated that the use of the different concepts of "work" will lead to very different results. On the other hand, it is expected that the use of these concepts reflects the robustness of the results.

Evidence of permanence-dependence in working poverty. Analytical approach

Below we present the results obtained in order to determine the probability of suffering from working poverty, taking into account the influence of past situations of in-work poverty and the main characteristics that have already had an effect on working poverty. The analysis of different periods is presented (2003/2006, 2004/2007 and 2005/2008) as well as concepts of work, the coefficients and their significance. Its interpretation is as follows: the coefficients that have a negative sign represent a lower probability of experiencing working poverty with respect to the reference category of the analyzed independent variable; the coefficients with positive signs indicate that the studied category has greater possibilities of suffering from working poverty than the reference category.

The results presented in Tables VI-X once again reveal that the differences between the concepts of work are not significant, given that the conditioners of all of the situations taken into account are the same (except for the self-employed workers). Therefore, the results of the work concepts for employed workers, "EU workers", "FR employees" and "USA actives" are considered collectively. This similarity in the results highlights their robustness.

The first significant result is the confirmation of one of the initial hypotheses, the existence of state dependence. Based on prior results from other studies and the persistence of Spanish working poverty, it is expected that the state dependence would be present in this study. In the four cases, the delayed dependent variable is highly significant and positive, indicating a direct influence of past in-work poverty experience on the present situation. Therefore, there is an inherent entrapment mechanism in the in-work poverty experience which should be considered when it comes to designing public policies to alleviate the situation.

The implementation of this model has allowed us to observe the influence of other characteristics that have also been studied from the static perspective. The results reveal that there are some variables that are more associated with the risk of in-work poverty given that, even when controlling for time spent in poverty, they continue to be significant. Some of these determinants confirm results from prior studies. On the one hand, age and gender condition the probability of experiencing working poverty. Age has a significant and direct influence and the group of young people between 16 and 24 had a greater probability of poverty than the other categories. This result is explained by the late emancipation of young Spaniards who remain in the family home until ages that are quite beyond the European average (García-Espejo and Gutiérrez, 2011). As for gender, the model shows that the risk of working poverty is greater for men than for women. This difference, in the case of Spain, is explained by the fact that men have a much higher work participation rate and because working participation by females in many cases, results in the income that is needed to effectively prevent the risk of poverty (Peñas-Casas and Latta, 2004).

On the other hand, the importance of collective work participation by household members has also resulted quite significant and reveals an anticipated trend: those households in which employment potential is exploited to the maximum are more likely to avoid in-work poverty. That is, the double income standard is fundamental for preventing the risk of poverty (Esping-Andersen and Myles, 2008; Allègre and Jaerhling, 2011). Also, the variables referring to benefits received by other household members also are determinants of the probability of suffering from working poverty. Thus, the receipt of unemployment, inactivity or other benefits decreases the probability of suffering from in-work poverty.

Table VI. *"EU workers" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.671***	0.646***	0.948***
Age (Ref. 16-24)				
25-49		0.504	0.630**	0.940**
50-64		0.194	0.418	1.225***
65 and older		0.868	1.851**	2.386***
Gender (Ref. Male)				
Female		–0.543***	–0.388***	–0.260***
Civil state (Ref. Single)				
Married		–0.288	–0.149	–0.262
Separated, divorced or widowed		0.255	0.172	–0.260
Education level (Ref. Primary)				
Secondary		0.395**	0.217	–0.027
Tertiary		0.730*	0.612*	–0.099
Type of contract (Ref. Open-ended)				
Temporal		0.205	0.377**	0.230
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.078	–0.422*	–0.572***
Low salary employee (Ref. No)				
Yes		1.174***	1.671***	1.302***
Number of adults in the household		–0.065	–0.081	–0.146
Number of children in the household		–0.058	–0.215	–0.171
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.605***	–0.923***	–0.847***
I.L.=1		–1.436***	–2.012***	–1.771***
The household receives benefits:	for unemployment	–0.614***	–0.597***	–0.775***
	for inactivity	–0.894***	–1.360***	–1.074***
	of another type	0.041	–0.401***	–0.526***
Rho		0.358	0.450	0.377
Log-likelihood		–62.229	–1230.612	–1581.498
Number of observations		4,673	8,617	10,759
Number of individuals		2,023	4,087	6,066

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE VII. *"FR Employees" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.575***	0.721***	0.946***
Age (Ref. 16-24)				
25-49		0.381	0.409	0.738***
50-64		–0.031	0.135	0.932**
65 and older		0.673	1.528*	2.043**
Gender (Ref. Male)				
Female		–0.491***	–0.375***	–0.240***
Civil state (Ref. Single)				
Married		–0.408	–0.023	–0.266
Separated. divorced or widowed		0.158	0.388	–0.217
Education level (Ref. Primary)				
Secondary		0.349*	0.038	–0.017
Tertiary		0.618	0.263	–0.082
Type of contract (Ref. Open-ended)				
Temporal		0.168	0.377**	0.141
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.116	–0.357	–0.399**
Low salary employee (Ref. No)				
Yes		1.251***	1.565***	1.220***
Number of adults in the household		–0.095	–0.011	–0.149
Number of children in the household		–0.021	–0.127	–0.189
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.793***	–0.911***	–0.907***
I.L.=1		–1.691***	–1.962***	–1.778***
The household receives benefits:	for unemployment	–0.713***	–0.546***	–0.692***
	for inactivity	–0.858***	–1.275***	–0.971***
	of another type	–0.009	–0.377***	–0.464***
Rho		0.396	0.413	0.346
Log-likelihood		–701.689	–1344.381	–1703.836
Number of observations		4,837	8,958	11,127
Number of individuals		2,109	4,280	6,303

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE VIII. *"USA active" poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.628***	0.712***	0.947***
Age (Ref. 16-24)				
25-49		0.145	0.407	0.509**
50-64		–0.173	0.199	0.670
65 and older		0.477	1.612	1.923***
Gender (Ref. Male)				
Female		–0.455***	–0.353***	–0.249***
Civil state (Ref. Single)				
Married		–0.299	0.033	–0.249
Separated. divorced or widowed		0.259	0.482	–0.313
Education level (Ref. Primary)				
Secondary		0.303*	0.036	–0.033
Tertiary		0.566	0.184	–0.117
Type of contract (Ref. Open-ended)				
Temporal		0.149	0.354**	0.207
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.308	–0.390*	–0.416**
Low salary employee (Ref. No)				
Yes		1.096***	1.506***	1.208***
Number of adults in the household		–0.075	–0.021	–0.150*
Number of children in the household		–0.116	–0.144	–0.172
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.689***	–1.007***	–0.986***
I.L.=1		–1.614***	–2.050***	–1.881***
The household receives benefits:	for unemployment	–0.629***	–0.522***	–0.724***
	for inactivity	–0.700**	–1.284***	–0.805***
	of another type	0.070	–0.377***	–0.476***
Rho		0.357	0.397	0.332
Log-likelihood		–755.681	–1445.271	–1831.244
Number of observations		5,007	9,280	11,488
Number of individuals		2,204	4,489	6,551

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE IX. *Employed workers poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
"EU worker" poor the previous year (Ref. No)				
Yes		0.696***	0.645***	0.954***
Age (Ref. 16-24)				
25-49		0.521	0.619*	0.931***
50-64		0.233	0.365	1.222***
65 and older		1.135	2.018**	2.361***
Gender (Ref. Male)				
Female		–0.658***	–0.433***	–0.298***
Civil state (Ref. Single)				
Married		–0.216	0.213	–0.162
Separated. divorced or widowed		0.339	0.821*	–0.054
Education level (Ref. Primary)				
Secondary		0.385*	0.218	–0.009
Tertiary		0.705*	0.545	–0.102
Type of contract (Ref. Open-ended)				
Temporal		0.157	0.345**	0.216
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		–0.244	–0.531**	–0.603***
Low salary employee (Ref. No)				
Yes		1.307***	1.634***	1.330***
Number of adults in the household		–0.035	–0.014	–0.152
Number of children in the household		–0.155	–0.179	–0.103
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.551**	–0.907***	–0.822***
I.L.=1		–1.367***	–2.036***	–1.715***
The household receives benefits:	for unemployment	–0.560**	–0.556***	–0.723***
	for inactivity	–0.779**	–1.328***	–0.968***
	of another type	0.072	–0.419***	–0.578***
Rho		0.354	0.456	0.377
Log-likelihood		–603.898	–1156.623	–1493.946
Number of observations		4,550	8,354	10,459
Number of individuals		1,952	3,929	5,877

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

TABLE X. *Self-employed workers poverty determinants*

		2003/2006 Coefficient	2004/2007 Coefficient	2005/2008 Coefficient
Self-employed person poor the previous year (Ref. No)				
Yes		–0.151	–0.118	0.300**
Age (Ref. 16-24)				
25-49		–0.003	0.974	0.577
50-64		–0.971	0.587	0.846
65 and older		–1.729	0.946	1.159
Gender (Ref. Male)				
Female		0.007	0.023	–0.35
Civil state (Ref. Single)				
Married		1.385	–0.259	–0.325
Separated. divorced or widowed		2.545	–0.675	–0.234
Education level (Ref. Primary)				
Secondary		0.247	0.050	0.161
Tertiary		0.077	–0.261	–0.016
Working situation (Ref. Open-ended)				
With employees		–0.071	–0.124	–0.188
Without employees		0.149	–0.454	–0.060
Type of workday (Ref. Up to 30h/week)				
Over 30h/week		0.097	–0.064	–0.331
Number of adults in the household		–0.126	0.056	–0.118
Number of children in the household		–0.375	–0.169	–0.357
Work intensity of the household (Ref. 0< I.L. <0.5)				
0.5≤ I.L. <1		–0.604	–0.622**	–0.346
I.L.=1		–1.195***	–1.191***	–0.847***
The household receives benefits:	for unemployment	–1.192***	–0.932***	–0.841***
	for inactivity	–1.621***	–1.617***	–1.239***
	of another type	–0.617**	–0.516***	–0.306***
Rho		0.579	0.459	0.280
Log-likelihood		–405.917	–864.427	1060.858
Number of observations		870	1,701	1,991
Number of individuals		392	848	1,199

Note: Significance p<0.001 (***), p<0.05 (**), p<0.10 (*).

Source: Own calculations based on the EU-SILC longitudinal module 2004-2009.

The analysis of the labor variables has proven to be less significant and less consistent with the anticipated results. The conclusions of prior research studies reveal that the jobs having the highest probabilities of being associated with poverty risk tended to be atypical ones (that did not include full work days, that were seasonal and/or with low salaries) (Goerne, 2011). In this case, these are also the characteristics associated with insecure employment that influences working poverty, with the low wages being the most important of the analyzed issues, and consistent with all of the implemented models. However, the type of contract and workday does not reveal such robust results (because they are not significant in all of the models), although they do have a certain influence in the anticipated direction: temporary jobs and part time jobs have a greater risk of working poverty.

Although the variables referring to household size (number of dependents and number of adults) were not found to be determinants of a risk of in-work poverty, household configuration and access to resources (labor market and welfare state) are determinants, explaining the decreased influence of atypical jobs on Spanish in-work poverty. On the one hand, the low rate of female participation leads to a lower probability of access to the double income standard, one of the best strategies to prevent poverty. On the other hand, household size in Spain tends to be greater than average, given the late emancipation ages. This, collectively, may lead to a high percentage of poor workers with more stable and secure jobs living in households with incomes that fall below the poverty line (Cretazz, 2011; Halleröd and Ekbrand, 2014).

The model explaining permanence in poverty for self-employed workers has lower explanatory impact. First, there is a lower state dependence. The poverty state from the previous year is only significant in the last period taken into account. Therefore, this result is less robust. Second, of the other observed variables, only those that refer to income (and to work intensity in one of the models) have a relationship with working poverty. Receipt of social benefits for unemployment, inactivity or any other type decreases the probability of poverty for the self-employed in all observed periods. This result indicates the importance of finding new ways of studying the strange situation in which the self-employed in Spain find themselves--having a very high risk of working poverty. It is necessary to search for the conditioning factors of their situation in other areas and, according to the results presented here, it is especially important to determine the other income that they receive in their household. Furthermore, the problem of lower data reliability for this social group, given that they often under-declare their earnings (Martínez-López, 2012), makes it necessary to resolve this issue in order to determine the real risk for this type of workers and to design policies that will better assist their situation of increased instability and persistence in working poverty.

To summarize, there are two employment situations that are very distinct from one another: employed workers and the self-employed. The different "worker" concepts reveal a clear influence of state dependence and of certain characteristics that were expected to be determinants of in-work poverty: those referring to resources and needs. This analysis, therefore, highlights the fact that it is in between the balance between some of these that the probabilities of experiencing poverty exist. It should be highlighted, however, that resources appear to have an increased importance. That is, the level of participation of household members and whether or not this participation ensures the necessary resources, as well as the presence of resources provided by the state (social benefits) is more relevant than the level of household needs. In the case of self-employed workers, this result is even more accentuated:

only two variables referring to the resources coming from the labor market and the welfare state appear to help prevent the risk of labor poverty in the self-employed.

Conclusions

This article examines the knowledge existing on mechanisms causing permanence-dependence in situations of working poverty. Two potential explanations are presented: on the one hand, state dependence: in other words, that poverty occurs in a vicious cycle in which past poverty experiences during a specific period condition the probability of experiencing future poverty states; and on the other hand, the determinants of in-work poverty may be associated with specific characteristics and attributes of the individuals and households that are affected by this poverty.

Our analysis is especially relevant in Spain, given its high rates of poverty, of in-work poverty and of poverty persistence. The low redistributive impact of the Spanish system of social protection requires an increased and improved knowledge of poverty and in-work poverty, indispensable for a better design of the policies that are designed to fight against these risks. The existence of working poverty state dependence may indicate, on the one hand, that participation in the labor market is not sufficient in order to prevent the vicious cycle that may accompany poverty; on the other hand, current social protection mechanisms are not effective when it comes to removing workers from the risk of poverty.

In order to determine the mechanisms that are associated with working poverty in Spain, a probit model was estimated using a dynamic dependent variable to permit the inclusion of an independent variable which had the value of the previous year's dependent variable. This model has allowed us to distinguish between the influence of state dependence and the observed heterogeneity in the probability of experiencing working poverty and has found that both sources of influence are present in the poverty of working individuals. It should be highlighted that state dependence is very significant and robust in all of the models that were considered (except for self-employed workers), thus in-work poverty is seen as a situation with a tendency to continue due to the existence of mechanisms that may define it as a "vicious cycle".

In the case of employed workers, there is also an influence of heterogeneity and some of the independent variables that were taken into account directly affect the probability of experiencing working poverty. On the other hand, certain variables reveal the anticipated influence, in accordance with prior studies: age and gender as well work intensity of the households have all been found to be very significant. Thus, men and employed individuals who are in in central ages of their life and labor cycle have greater probabilities of experiencing poverty, as well as households with a low working participation of its members. At the same time, it highlights the importance of other sources of income given that those households receiving some type of state assistance have lower probabilities of experiencing in-work poverty.

On the other hand, some characteristics have not revealed the anticipated relationship with working poverty: type of contract and workday, although influencing in-work poverty in the anticipated direction (greater risk for temporary and/or part time contracts), do so to a much lower degree than the other variables and with decreased consistency between periods and work concepts. This occurs as a result of the low female participation and late emancipation of the young individuals living in the households with fewer resources (less access to the labor market by the young and females) and increased needs (adult children living in the family household), which leads to house-

holds where normally there is only one employed individual who, even when having a stable position in the labor market, cannot obtain sufficient income to surpass the poverty line (Cretazz, 2011; Halleröd and Ekbrand, 2014).

In this context, given that state dependence is very strong and, even though the characteristics referring to the household are also fundamental when determining the risk of in-work poverty, it would be appropriate to implement policies directed to the general "working" population, emphasizing an increase in household resources. Furthermore, the results have revealed that working poverty in Spain, from a dynamic perspective, has a component associated with low wages (significant result in all models) and unemployment (importance of household work intensity), thus these general policies may be based on both support benefits and income substitution (unemployment and complementary benefits), as well as in the maximization of work participation of all active household members.

As for self-employed workers, they reveal a low state dependence and a greater and unique importance of variables referring to resources (especially the receipt of other forms of household income), therefore an increased importance should be placed on the implementation of policies that are intended to increase the labor intensity of these households and their available income through increased benefits or decreased taxes.

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