Career planning in Spain: Do temporary contracts delay marriage and motherhood?

Sara de la Rica and Amaia Iza[*]

April 25, 2003

Abstract

The aim of this paper is to find an empirical connection between the impressive increase in the use of temporary contracts in Spain and the observed increase in age at marriage and maternity.

Using a pool of the six available waves of individual information from the European Household Panel for Spain, we find that holding temporary contracts rather than permanent ones delays marriage for males, but not for females. Concerning maternity, the labor market situation of both members of the household affects entry into motherhood. In particular, if woman has a temporary contract rather than a permanent one, motherhood is delayed independently of the husband´s contract. As expected, postponement of maternity is not found for non-working women. These results give strong support to the career planning motive to delay maternity in Spain, given that an unstable labor market situation of female workers is found to be the main deterrrent to entry into motherhood.

JEL classification: D1, J1.

Keywords: Postponement of marriage and maternity, temporary contracts, career planning motive.

1 Introduction

At the beginning of the sixties, north-western Europe started a drastic transformation in the pattern of household formation and reproduction, which was reflected in a pronounced increase in the age at first marriage and a clear postponement of fertility. Towards the end of the eighties, these features of behavior had reached some of the Mediterranean countries, such as Portugal, Italy and Spain. Theoretical life-cycle models of fertility have analyzed the factors that may induce families to change their fertility pattern over their life-cycle (Ermisch and Cigno (1989), Cigno (1991), Walker (1995)). Children pose important costs in terms of time, maternal time costs of mothers which vary over their life cycle, and in terms of goods or direct expenditure on children. Therefore, changes in childbearing prices (direct expenditure and opportunity costs) and income over the family life-cycle may result in changes in the timing of fertility (see Hotz et al. (1997)). Women's educational attainment and their participation in the labor market affect childbearing prices (particularly through opportunity costs of childbearing) and household income over their life-cycle differently depending on their educational level. More educated women have a higher value of their time in the labor market at each age, given that if they decide to participate in the labor market, they will face a higher earnings profile than less educated women. Since childbearing takes time, the higher the wages the higher the opportunity cost of childbearing for women (this is the well-known substitution effect). Furthermore, sometimes, there is not only a loss in current income, but also in their future earnings profile due to the depreciation of women's human capital at work during their temporary absence from the labor force for childbearing. The latter are the costs of children on the mother's career, which constitute the main point in the literature of career planning as a motive for postponing maternity (see Joshi (1990, 1994, 1998), Dankmeyer (1996), Gustafsson (1996, 2001)). This effect is particularly important for highly educated women.

The observed postponement of maternity in Spain cannot be explained only by a transition from an early motherhood of less educated women to a late motherhood of more educated women. The reason is that, even though the distribution of more educated women at fertile ages has increased, postponement of motherhood has been observed within each educational level. Recent empirical research (Ahn and Mira (2001)) stresses the connection between unemployment and fluctuations between marriage and fertility in Spain. These authors find an empirical link between high and

2

persistent rate of unemployment and a delay in marriage in Spain during the eighties. From an economic point of view, high and persistent unemployment must be viewed as a drop in current and future expected income, and given that children are normal goods, childbearing is expected to be delayed. This issue is particularly important in economics with imperfect capital markets, where households need savings so as to afford the fixed costs imposed by children (Kalwij (1999)). Furthermore, a world of higher unemployment increases the opportunity cost of childbearing since it makes it more difficult to find a job, which lowers future earnings profile.

The aim of this paper is to find an empirical connection between another particular labor market phenomenon and the delay in marriage and maternity in Spain. The labor market phenomenon we focus on is the impressive increase in the use of temporary contracts that young Spanish workers, in particular, have suffered since the mid eighties. According to the career planning motive for postponing motherhood, women do not decide to form a family until they get established in their job (i.e., choosing the optimal age of birth at which the opportunity cost of childbearing is low enough). Holding a temporary contract increases uncertainty about the future and prevents workers from having a stable labor market situation[1]. In this context, individuals may feel inclined to postpone the decision to marry and have children until their labor market situation becomes more stable. We want to measure the extent to which the type of contracts individuals hold delayed both decisions during the nineties, which is when such contracts were most widely extended. Using a pool of the six available waves of the European Household Panel for Spain, we estimate empirically the impact of the type of contract on postponement of both decisions.

Results reveal that holding temporary contracts rather than permanent ones delays marriage for men, whereas for women, their decision concerning marriage is not greatly affected by their type of contract. This result is consistent with Spain being mainly a male breadwinner system. Concerning maternity, the labor market situation of both members of the household affects entry into motherhood. In particular, if woman has a temporary contract rather than a permanent one, motherhood is delayed independently of the husband´s contract. This result is reasonable given that a temporary contract, rather than a permanent one, has the effect of increasing the opportunity cost of childbearing and lowers the expected future household earnings (those coming

---

[1] Some studies have also estimated an average wage gap between permanent and temporary contracts in Spain of around 15 % for males and 7 % for females (De la Rica and Felgueroso, 2001)).

from the women). However, postponement of maternity is not found for non-working women, which again is expected from the career planning motive for postponing motherhood, given that for non-workers there is no costs to the woman´s career which would make postponing motherhood a desirable option. Finally, when we interact the labor market situation of both spouses, we find that postponement of motherhood is more likely if the woman has a temporary contract and the man has a permanent one than in the reverse situation, which again gives support to the career planning motive for postponing motherhood.

The paper is organized as follows: Section 2 presents the stylized facts concerning the observed increase in the average age at marriage for men and women in Spain, as well as the observed delay in the average age at motherhood from the mid eighties to the late nineties. In section 3, we describe the institutional context regarding temporary contracts in Spain. Section 4 is devoted to describing the data. In section 5 we estimate the impact of the type of contracts individuals (men and women separately) hold for entering into marriage, and for entering into motherhood for married or cohabiting women. Section 6 concludes.

2 Stylized facts

2.1 Observed delay in age at marriage and at motherhood in Spain

Table 1 reports the observed average age at first marriage[2] for men and women in 1985 and 1998, respectively. It can be seen that both have delayed their marriages by around three years on average, which represents a remarkable postponement in such a short period of time.

[Insert Table 1]

With regards to the average age at motherhood, table 2 reveals that for 1985-1998, there is an average postponement of maternity of 3,38 years, and that postponement is longer the higher the educational level of women´s. Although the lack of data for 1985 prevents us from looking at the delay in maternity for women according to their labor market situation, the data for 1998 reveals us that women workers with a stable labor market situation have their first child much earlier on average than those with temporary contracts.

---

[2]Marriage must be understood as either getting married or forming a stable union.

4

[Insert Table 2]

Given these results, the next question we must pose is why do individuals postpone marriage and maternity. Concerning maternity, the fact that more educated individuals delay longer than the less educated ones means that higher educational attainment cannot be the only explanation of the observed average postponement in motherhood. Therefore, there is not only a compositional change, but also a change in behavior within educational levels concerning the optimal time for forming a family. Our hypothesis for that change in behavior is that the impressive increase in the use of temporary contracts between the mid eighties and nineties might offer at least a partial explanation for the delay. As mentioned in the introduction, temporary contracts increase uncertainty with respect to the future and this may lead individuals to postpone their decision to form a family until such uncertainty decreases.

In order to understand the changes that the increase in the use of temporary contracts has brought about in Spain since the mid eighties, section 3 presents the institutional background of temporary contracts in Spain, as well as a description of the notable increase in their use during this period.

3   Temporary contracts in Spain- Institutional background

The basic legal reference point regarding labor contracts in Spain is the Workers 'Statute of 1980 (Estatuto de los Trabajadores, Ley 8/80, March, 10). This law considers that the general contracting framework is one of indefinite contracts, with temporary contracts assumed to be used only for jobs whose nature is temporary (seasonal jobs, temporary substitution of permanent workers, temporary increase in activity, etc). The essence of this law must be understood in a context where unions, which had been legalized in 1977, were trying to achieve higher job protection for workers, and this meant stability on contracts, on the one hand, and high severance payment in case of layoff, on the other. These two aims led the Spanish labor market to face the beginning of the eighties, a period of recession, with a workforce the vast majority of which held permanent contracts with high severance payments in case of dismissal for economic reasons[3]. Some

---

[3] If the dismissal was considered "fair", the worker had the right to receive the wage of 20 days per year of tenure. If considered "unfair" by the labour court, which happened very frequently, the worker had to receive the wage of 45 days per year of tenure. For more details, see Toharia and Malo (1999).

type of flexibility was considered necessary and it is in this context that the reform of 1984 took place. This reform created a new type of temporary contract, called an "employment promotion contract". Such contracts would be temporary, although the type of job associated with them would not necessary be of a temporary nature. These "employment promotion contracts" could be signed for a minimum of six months and a maximum of three years. The contract could not be renewed after three years and the worker had to be either laid off or offered a permanent contract. If the worker was laid off, the firm could not employ another worker for the same job for at least one year. The indemnities at termination for these type of contracts were almost negligible[4]. This reduction of firing costs produced an impressive change in the way firms contracted labor from then onwards. In fact, as Guell and Petrolongo (1998) show, from 1986 to 1992, 98 % of new contracts registered at the employment office were "employment promotion contracts".

This reform brought about an impressive change in the distribution of employment contracts in Spain. Whereas in 1987 only 15 % of all contracts were temporary, by 1991 the figure was 33 %, and the percentage has remained stable since then [5]. However, given that the situation of workers that already held permanent contracts was unaffected by this reform, by the beginning of the nineties academic experts started to advise against the pervasive effects of these temporary contracts (see Segura et al (1991), Bentolila and Dolado (1994), and Jimeno and Toharia (1993)). In particular, they advised against the creation of a segmented labor market with two types of job, good (permanent) ones and bad (temporary) ones, given that workers with temporary contracts might be led to hold unstable, low protected and poorly paid jobs, whereas permanent workers enjoyed high protection and presumably also higher wages .

These perceptions gave rise to the reforms of 1994 and 1997. The spirit of both reforms was to enhance permanent contracts to the detriment of temporary ones, while reducing firing costs of the former. In 1994 the general applicability of fixed-term contracts was virtually eliminated, except for specific groups of workers (over 45´s, disabled and long-term unemployed). In addition, firing procedures were restructured in an attempt to reduce them[6]. Finally, the 1997 reform created a new type of permanent contract, with lower severance payment in case of unfair dismissal (33

---

[4]For more details on severance payments associated with temporary and permanent contracts, see Guell and Petrongolo (1998) and Segura et al (1991).

[5]See Toharia (1996) for a picture of the evolution of temporary contracts from 1987 to 1995.

[6]For more details, see Toharia and Malo (1999).

days' wage per year worked in the firm) and gave fiscal incentives to firms that contracted workers under this form over the first two years of the contract (reductions of employers' social security contribution by 40 percent or by 60 percent for contracting workers who are over 45 or disabled[7]). Recent empirical studies find a positive effect of the reform of 1997 on the hiring of workers (particularly young workers) on a permanent basis, but the overall impact of these reforms is still rather small (see Kugler et al (2002)).

In summary, we can see that whereas in the early 1980s workforce adjustment was in general terms considered rigid, during the eighties and nineties the Spanish pattern was to search for more flexibility. However, we must not forget that this flexibility is only achieved at the margins, i.e., for workers signing new contracts, given that job protection for workers that were already in the labor market holding permanent contracts before the reforms was introduced were unaffected, and therefore they were and are still highly protected against job loss.

Table 3 presents the change in the average use of temporary contracts for different groups of population and for different periods of time. There is an impressive increase in the use of temporary contracts, particularly among the youngest group of population. It can also be seen that the trend was strongly increasing until the beginning of the nineties and since then has remained stable. Finally, the incidence is higher among women than among men, and higher the less educated workers are.

[Insert Table 3]

4   The data

As mentioned in the introduction, the data we use are the six available waves of the Spanish data from the European Household Panel (1994-1999)[8]. This database has some advantages and some drawbacks that have to be mentioned. Among the advantages, we must note that the period under

---

[7] The current contribution of employers to social security is 24 % of wages.

[8] Other available databases are: The sociodemographic survey (1991) and the Fertility Survey (1998), both carried out by the Spanish Institute of Statistics. The former only contains information of the head of the household and given that it is carried out in 1991, offers information regarding basically the seventies and eighties. The Fertility Survey presents the drawback that the type of contract of individuals is only available for the present contract, but not for the contract women had the year prior of entry into motherhood.

analysis seems very suitable for the aim of this paper, given that the nineties is the period when temporary contracts had the greatest impact in the Spanish labor market. On the other hand, extensive information concerning partners' labor market situation, in particular, their types of contract, is available. Such information is clearly relevant in order to learn about the (in)stability of the labor situation of the household, given that although woman labor force participation is increasing at a high pace, Spain is still mainly a male breadwinner system.

But the European Household Panel has some disadvantages which it is important to take into account. The biggest drawback is that the panel is very short, so that we cannot follow individuals along their whole fertile adult life, which would be the best way to proceed in order to look at the factors determining postponement of marriage and motherhood. Moreover, there is no retrospective information regarding the labor market situation before or around marriage or motherhood for those who got married or had their first child before 1994. Given these limitations, the samples we have constructed in order to estimate the impact of temporary contracts on postponement of marriage and motherhood are the following: For the analysis of the determinants of marriage, we take all individuals (men and women separately) who at the time of the first interview have never been married and are not cohabiting. These individuals either do not change their situation while they are observed, and therefore stay in the sample until the last time they are observed, or get married at some point while they are observed, in which case, they disappear from the sample, given that for these individuals, the event under analysis has already taken place. For the analysis of the determinants of motherhood, we take all women who are married (or cohabiting) and childless at the first interview. These women, either have their first child during the observation period or remain childless. The former are removed from the sample once they have their first child, whereas the others remain in the sample throughout the observation period.

The main disadvantage of these samples is that individuals are very heterogeneous from the very first moment they are observed, given that they have different ages, and consequently, very different biological fecundity prospects. Therefore, the standard analysis of duration until an event takes place does not make sense with this data. In this setting, empirical analysis of postponement is more difficult, given that postponement is very closely related to the age at which a particular event takes place. In order to face this difficulty, we have considered three different stages at which events (marriage and motherhood) may take place: (i) An earlier stage of the fertile cycle,

8

when individuals are between 18 and 24 years of age, (ii) at an average stage, when individuals are between 25 and 31 years of age, and finally, (iii) at a later stage, when individuals are older than 31 years of age[9]. By doing this, we can analyze postponement of marriage and motherhood by looking at the effects of the explanatory variables, in particular education and type of contract, at the particular age-interval at which marriage and motherhood take place.

The second disadvantage of the sample that we want to highlight is that data for Spain concerning type of contract are not available until 1995. If we take into account that variables concerning the labor market situation are those referred to the year previous to the current one, given that the decision to form a family is made at least some months in advance of the event taking place, we end up with at most four observations for each individual (1996-1999). Moreover, the panel is highly unbalanced, and given that we want to consider three stages of age in order to look at postponement of marriage and maternity, we have decided to use the data as pooled data, instead of as a panel.

Tables 4A and 4B present the mean of the variables to be included in the empirical analysis. Table 4A presents the means of the sample of single individuals (man and woman) by educational level and type of contract[10], as well as the percentage of marriages that take place in each age interval. It can be seen that there are very few marriages at the earliest stage (18-24), while marriages seem to be concentrated more along the second age interval. Regarding the type of contract, it is interesting to note that the percentage of permanent contracts increases with the age of individuals, whereas the percentage of temporary contracts only decrease when individuals are older than 31. In order to get a more precise idea of the distribution of marriage by education and by type of contract, we present Graphs 1-4, on which the distribution of marriage by education and by type of contract is depicted[11]. In particular, Graphs 1 and 2 present the woman distribution of marriage for different educational levels (graph 1) and for different types of contract (graph 2).

---

[9] We have taken these three intervals in order to consider an equal span of seven years in each. However, minor changes in these periods do not make for significant changes in the empirical analysis.

[10] Concerning the type of contract, we have proceeded as follows: salaried workers with a permanent contract or self-employed are assigned to permanent contracts, salaried workers with a temporary contract, or workers employed in a training regime are assigned to temporary contracts. Regarding the category of non-workers, we have included all those who are unemployed, family help with no pay, inactive or work less than 15 hours a week (the latter are less than 5 percent).

[11] The percentages shown in the graphs are the relative frequency of marriage (motherhood) by age, weighted by the proportion of the sample in each educational level or in each type of contract at each depicted age.

We can see that the higher the educational level, the later marriage takes place, which indicates that higher education seems to be positively correlated with delaying marriage. Regarding the type of contract, graph 2 shows that women who do not work are more likely to get married. However, the pattern of marriage does not seem to differ much between those with temporary and those with permanent contracts. Graphs 3 and 4 present the distribution of marriage by educational level (graph 3) and for type of contract (graph 4) for men. As with women, more educated men seem to marry later. The graph also reveals that men with secondary education seem to present marriage percentages which are smaller than for both primary and university levels. Finally, with regard to the type of contract, we can see in graph 4 that non-workers are those who marry least at every age, as expected, given the Spanish man breadwinner system. Comparing temporary and permanent contracts, we can see that those with permanent contracts marry earlier.

[Insert Table 4A]

[Insert graphs 1-4]

With respect to the sample used to estimate the determinants of entry into motherhood, table 4B presents the means of the most relevant variables. As with the above sample, the sample of childless married (or cohabiting) women who are younger (18-24), are less educated, and mostly do not work. The number of observations under this category is rather small. In the middle age group (25-31) women are much more highly educated, and the percentage of workers increases. The percentage of permanent contracts also increases relative to the younger group. Regarding the husband´s contract, it can be seen that most of the husbands of women over 24 have permanent contracts. To give a better idea of the distribution of motherhood by education, type of contract and husband´s type of contract, we have depicted that distribution in graphs 5-7. Graph 5 presents the distribution of age at motherhood by education, and it can be seen that married (or cohabiting) women tend to have their first child later than women with only primary education or less. Differences are particularly large for women with university studies relative to the others, given that the pattern of motherhood is clearly increasing with age, until 32 years, whereas the pattern of motherhood for women with less than university studies is decreasing from the age of 20 onwards. This is consistent with the already mentioned delay in childbearing of more educated

10

women relative to less educated ones, given that the former´s opportunity costs at early age is higher.

Concerning the type of contract, graph 6 reveals that women who do not work seem to enter into maternity earlier than those who are working, either with temporary or permanent contracts. For non-workers, childbearing only poses direct expenses (there is no substitution effect), and therefore, given that parents value their offspring, we would expect non-working women to find it optimal to have their children early in their fertile cycle.

Regarding workers, we can see that women with temporary contracts are highly unlikely to enter motherhood at any ages. As mentioned in the introduction, for these women uncertainty in the labor market not only affects their expected future earnings, but also their opportunity cost of childbearing (present and future), which makes them postpone maternity. This is not observed for those with permanent contracts, given that although they are observed to delay motherhood longer than non-workers, they present an increasing pattern of motherhood with age (up to 32). Finally, if we look at the distribution of motherhood by the husband´s type of contract, graph 7 reveals that having a husband with a permanent contract seems to be positively correlated with entering into motherhood. A husband a with temporary contract decreases current and expected future household income which leads to a postponement of motherhood compared to husbands with permanent contracts.

[Insert Table 4B]

[Insert graphs 5-7]

5   Estimation

To learn the impact of variables such as education and especially type of contract on getting married and on having a first child for married women, we must isolate the effect of each variable in a multivariate estimation setting. We estimate by maximum likelihood the factors affecting the probability of non-cohabiting men and women getting married (or cohabiting) for different age intervals. For the determinants of entering into maternity, we estimate the probability of married (or cohabiting) women of having a first child also at different age intervals. For both estimations, we use a logistic functional form.

11

Before we present the results, a word must be said concerning the endogeneity of some of the explanatory variables, in particular, education and type of contract, for the estimation of the determinants of forming a family. Concerning education, it is likely that women who engage in higher education behave differently from less educated women regarding chilbearing (they might require more quality for their children which would decrease quantity (Becker and Lewis (1973)), or we might think that due to their higher attachment to the labor force, their preferences for children might be lower (Francesconi (1998)). However, instruments are very difficult to find, given that it is not easy to find variables that affect the level of education individuals finally reach and do not affect directly the decision to form a family. Given that the impact of education is not the main issue of this paper, we have included it in the estimation as if it were exogenous, although we must take into account that its impact could be biased.

Regarding the type of contract, however, we must take into account that every worker prefers a permanent contract to a temporary one. Temporary contracts have no advantage for the worker over permanent ones. The latter are more stable and better paid while the number of hours worked in each type of contract is basically the same. Therefore, any worker would choose a permanent contract if he/she could choose between them. This fact suggests that, for workers, the type of contract is exogenous to them. It is true that individuals might choose not to work and this might be correlated with preferences for entering into motherhood, but given that our main issue is to estimate the impact of having an unstable labor market situation (temporary contract) relatively to a stable one (permanent contract), we think that the issue of endogeneity of the type of contract is of no great concern for the purpose of this paper.

Table 5 presents the estimation of the impact of variables, such as education and type of contract on getting married at an earlier, average or later stage for men and women, separately. Tables 6A and 6B present the results of the impact of these variables on the probability of entering into motherhood at an earlier, average or later age.

5.1 The decision whether to get married

We have estimated the decision whether to get married separately for men and for women, since the fact that Spain is mainly a male breadwinner country, makes it likely that the impact of the

labor market situation will differ greatly with gender. Table 4 presents the results. The dependent variable, getting married, takes the value of one when a never married individual (man or woman) gets married at a particular point of time during the observation period. It takes the value of zero for all remaining cases. Each individual is included in the sample up to the moment of his/her first marriage. Among the independent variables included are age of individuals, educational level, type of contract and six regional indicators[12]. The "type of contract" variable only concerns the labor market situation of each individual, and not of the potential partner, although we are aware that, especially for women, the labor market situation of the potential partner is likely to be a very relevant issue in getting married. Moreover, as mentioned above, each explanatory variable is interacted with three possible age intervals, so as to capture the potential impact of the relevant variables on postponement of marriage.

Starting with men, the first result to note is that, as expected, individuals with higher education get married later than those with lower education. Concerning the type of contract, we observe that holding a temporary contract delays the decision to get married longer than if a permanent contract is held, since the latter represents a much more stable labor market situation. Finally, the lack of a job is clearly a disincentive for marriage for men, which is quite an expected result, given the importance of male wages in the total household income.

Regarding women, table 4 presents a very different picture. As for men, education tends to delay the age at which women decide to get married, but their labor market situation does not seem greatly to affect the decision to get married. Particularly, non-working women do not seem to delay marriage at all. This reflects clearly the role of women as secondary (or non) earners in the household.

5.2   The decision whether to enter into motherhood

With respect to the decision whether to enter into motherhood, tables 5A and 5B present the results for the estimation of the probability of entry into motherhood for those couples who are observed to be childless at the first interview. The dependent variable, having their first child, takes the value of one when a childless woman who cohabits with a partner has her first child. Each

---

[12]Regional unemployment has not been included as an explanatory variable given that the data only provides information regarding seven different regions in Spain.

woman is included in the sample up to that time. The explanatory variables include educational level, as well as variables related to type of contract, not only of the woman but also of her partner. Regarding the "type of contract" variables, table 5A includes (i) only the woman type of contract (column [1]), (ii) only the partner´s type of contract (column [2]), and finally, both types of contract (column [3]). Table 5B presents the impact of these variables, when the type of contract of both the woman and her partner are interacted. Under this specification, we have constructed every possible pair of types of contracts, so as to reflect the importance of different degrees of uncertainty regarding the future labor market situation in the decision whether to have a first child.

Results presented in table 5A reveal that women with university studies delay motherhood for quite a long time, given that compared to those with less than university studies, it is at the later age that they are more likely to have their first child[13]. Regarding their own type of contract, we can see that having a temporary contract discourages entry into motherhood, particularly at young ages (less than 25), compared to having a permanent one. However, not working does not delay motherhood significantly. This is very consistent with a career planning motive for delaying motherhood. Non-working women do not have any incentive to delay motherhood for career planning reasons, whereas for workers temporary contracts mean quite an unstable labor market situation, which clearly discourages motherhood. With respect to the husband´s type of contract, columns 2 and 3 of table 5A show that having a husband who either has a temporary contract or is not working discourages motherhood. Moreover, the disincentive effect of a husband who does not work is higher than that of a husband who has a temporary contract, which again, is a clear, pure, expected income effect.

In order to better capture the potential disincentive that different types of contracts held by the male and female components of the household pose for motherhood, we have constructed all possible types of contracts for men and women, and we have estimated the impact of the different combinations on delaying motherhood. Results are presented in table 5B. The reference category is both women and men with permanent contract, which represents the most stable labor market situation. The first type of contract is the woman's type of contract, and the second, the man´s. The impact of some of the pairs included presents a very high standard error, given that there

---

[13]We have not included secondary education as an additional category because no matter which specification is used, women with secondary education behave identically to those with primary education concerning entry into motherhood.

are very few observations under some categories. This is particularly so for those categories where the man is not working. Therefore, we will concentrate on the comparison of having permanent versus temporary contracts, which is the main issue of the paper. In this line, the most interesting things to highlight from this specification are the following: Compared to both the woman and man having a permanent contract, which is the reference category, both having a temporary contract is the situation which discourages motherhood most. However, if it is the husband who has an unstable situation, while the woman has a stable one, the delay in motherhood is lower than when the labor situation is reversed (woman with unstable and man with stable contract). This again is expected, given that whereas in the former situation there is an income effect which discourages motherhood, in the latter, we face not only that income effect but also the career planning motive of women for delaying motherhood.

6   Conclusion

The aim of this paper is to find an empirical connection between a   particular labor market phenomenon and the delaying of marriage and maternity in Spain. The labor market phenomenon we focus on is the impressive increase in the use of temporary contracts that particularly young Spanish workers have suffered since the mid eighties. Holding a temporary contract increases uncertainty about the future and prevents workers from having a stable labor market situation. In this context, individuals may feel inclined to postpone the decision to form a family until their labor market situation becomes more stable. Using a pool of the six available waves of individual information from the European Household Panel for Spain, we estimate empirically the impact of type of contract on postponement of marriage and maternity in Spain.

Results reveal that holding temporary contracts rather than permanent ones delays marriage for men, whereas for women, their decision concerning marriage is not greatly affected by their type of contract. This result is expected given that Spain is mainly a male breadwinner system. Concerning maternity, the labor market situation of both members of the household affects entry into motherhood. In particular, if the women has a temporary contract rather than a permanent one, she delays motherhood independently of the husband´s contract. As expected, postponement of maternity is not found for non-working women. Moreover, if the husband is the member of the

household whose situation is unstable, but the woman's is stable, the delay in motherhood is less than when the labor situation is reversed (woman with unstable and man with stable contract). All these results give strong support to the career planning motive for delaying maternity in Spain, given that an unstable situation for woman workers is found to be the main deterrent to entry into motherhood.

Bibliography and references

AHN AND MIRA (2001), "Job bust, baby bust? Evidence from Spain", *Journal of Population Economics*, 1 (), pp. 505-522.

BECKER, G.S., AND H.G. LEWIS (1973), "On the interaction between quantity and quality of children", *Journal of Political Economy, 81 , pp: s143-s288.*

BENTOLILA, S. AND J. DOLADO (1994), "Labor flexibility and wages: Lessons from Spain", *Economic Policy,* pp: 54-99.

CIGNO, A. AND J. ERMISCH (1989), "A Microeconomic Analysis of the timing of births", *European Economic Review,* 33, pp: 737-760.

CIGNO, A. (1991), Economics of the Family, Clarendon Press, Oxford.

DANKMEYER, B. (1996), "Long-Run Opportunity-Cost of according to Education of the Mother in the Netherlands" *Journal of Population Economics, 9, pp: 349-361.*

DE LA RICA, S. AND F. FELGUEROSO (2001), "Wage differentials between Permanent and Temporal Contracts: Further Evidence", WP 02-07 DFAE II, Universidad del País Vasco.

FRANCESCONI, M. (1998), "A Joint Dynamic Model of Fertility and Work of Married Women", *Journal of Labor Economics, 20 (2) , pp: 336-380.*

GÜELL, M. AND B. PETRONGOLO (1998), "The transition of workers from temporary to permanent employment: The Spanish evidence", *Working paper 98-91,* Department of Economics, University Carlos III, Madrid.

GUSTAFSSON, S.S. C. WETZELS, J.D. VLASBLOM AND S. DEX (1996), "Women´s Labour Force Transitions in connection with childbirth: A Panel Data comparison between Germany, Sweden and Great Britain", *Journal of Population Economics, 96 (3), pp: 223-246.*

GUSTAFSSON, S. (2001), "Optimal age at motherhood: Theoretical and empirical considerations on postponement of maternity in Europe", *Journal of Population Economics, 14:225-247.*

HOTZ, V. J., J.A. KLERMAN AND R. A. MILLER (1997), "The Economics of Fertility in Developed Countries", in : M.R. Rosenzweig and O. Stark, eds., *Handbook of Population and Family Economics* (Elsevier, Amsterdam), pp. 275-347.

INSTITUTO NACIONAL DE ESTADÍSTICA.- Banco de datos TEMPUS:

JIMENO, J.F. AND L. TOHARIA (1993), "The effects of fixed term employment on wages: Theory and evidence from Spain", *Investigaciones Economicas*, 17, pp: 475-494.

JOSHI, H. (1990), "The Cash Alternative Costs of childbearing: An approach to estimation using British Data", *Population Studies, 44, pp: 41-60.*

JOSHI, H. (1994), "The foregone earnings of Europe´s mothers", in Ekert-Jaffé O (ed), *Standards of living and families: Observation and Analysis,* John Libbey, London 101-134.

JOSHI, H. (1998), "The opportunity costs of childbearting: More than mother´s business", *Journal of Population Economics, 11, pp: 161-183.*

KALWIJ, A.S. (1999), "woman Employment and Fertility Decisions: an Analysis of the Effects of Household Financial Wealth" mimeo, *Institute of Economics and Statistics, University of Oxford.*

KUGLER, A. J.F. JIMENO AND V. HERNANZ (2002), Employment consequences of restrictive permanent contracts: Evidence from Spanish Labor Market Reforms", Discussion Paper, nº. 657.

SEGURA, J., F. DURÁN, L. TOHARIA AND S. BENTOLILA (1991), Analisis de la contratación temporal en España, Colección Economía y Sociología del Trabajo, Ministerio de Trabajo y Seguridad Social, Centro de Publicaciones, Madrid.

TOHARIA, L. (1996), "Empleo y paro en España: Evolución, situación y perspectivas", *Ekonomiaz,* 35, pp: 36-67.

TOHARIA, L. AND M. MALO (1999), The Spanish experiment: pros and cons of the flexibility at the margin", chapter 11 of **Why deregulate labor markets**, Ed. Esping-Andersen and M. Regini, Oxford University Press.

WALKER, J. (1995), "The effect of public policies on recent Swedish fertility behaviour", *Journal of Population Economics*, 8. pp: 223-251.

Table 1: Average Age at First Marriage				
	Men		Women	
	1985	**1998**	**1985**	**1998**
Total	26,88	29,83	24,78	27,78

Source: Spanish Institute of Statistics (INE)

Table 2: Average Age at Motherhood		
All Women		
	1985	**1998**
Average	25,74	29,12
By educational level		
Primary	24,83	26,00
Secondary	25,72	29,79
University	27,85	32,39
By type of contract		
Permanent	—	29,71
Temporary	—	36,33
No work	—	28,45

Source: Encuesta de Fecundidad, INE

Table 3: Incidence of Temporary Contracts (%)			
Years	**1987**	**1990**	**1998**
Average	15,6	29.8	32.9
By educational attainment			
Primary or less	18.0	33.8	35.9
Secondary	19.0	39.1	35.5
University	9.6	20.3	22.9
By age			
16-24	36.2	73.9	73.1
25-34	15.4	37.9	41.2
35-49	9.5	19.1	20.7
By gender			
Men	14.4	27.8	32.1
Women	18.4	34.2	34.4

Source: Spanish labor Market Survey (EPA), 2nd terms.

Table 4A: Descriptive statistics* - (%)					
	Men			**Women**		
	18-24 years	25-31 years	>31 years	18-24 years	25-31 years	> 31 years
Educational level						
University	17.3	32.6	23.9	20.7	43.2	32.4
Secondary	42.8	28.0	17.9	52.7	28.5	18.8
Primary	39.9	39.6	58.2	26.6	28.3	48.7
Type of contract						
Permanent	20.5	29.7	44.3	15.0	20.4	38.8
Temporary	24.4	26.3	19.0	16.0	23.7	18.9
No work	55.1	45.0	36.7	69.0	55.9	42.3
% Marry	0.92	5.42	3.91	2.11	7.54	4.62
N.obs.	2280	3581	1430	2084	2690	1321

* This sample includes all individuals that are observed to be single and with no partner at their first interview. Some of them remain in the same situation throughout the observation period and others get married (or cohabit) at some point during that time. The latter are removed from the sample once they have got married.

Table 4B: Descriptive statistics* - (%)			
	18-24 years	**25-31 years**	**>31 years**
Educational level			
University	13.1	39.3	32.6
Secondary	33.5	26.5	20.2
Primary	53.4	34.2	47.2
Woman´s type of contract			
Permanent	28.0	36.3	36.7
Temporary	21.9	25.4	15.5
No work	50.1	38.3	48.9
Husband´s type of contract			
Permanent	55.7	63.1	75.6
Temporary	32.3	27.5	12.0
No work	12.0	9.4	12.4
% 1st birth	19.9	16.8	9.9
N.obs	343	1168	426

* This sample includes all women who have a partner and are childless at their first interview. Some of them remain childless throughout the observation period, whereas others enter into motherhood. The latter are removed from the sample once they have had their first child.

Table 5 - Probability of Getting Married (or cohabiting)				
Dependent Variable: 1 : Get into Marriage or Cohabitation				
0 = Otherwise				
	Men		Women	
Variables	Coefficient	|z − value|	Coefficient	|z − value|
Age	0.004	0.28	-0.004	0.24
Education (ref. Primary)				
University (18-24)	-2.31	2.28	-0.65	1.85
University (25-31)	-0.06	0.39	0.22	1.32
University (>31)	0.05	0.18	-0.39	1.35
Secondary (18-24)	-1.74	3.27	-1.51	4.42
Secondary (25-31)	-0.27	1.43	0.07	0.40
Secondary (>31)	0.21	0.71	0.08	0.29
Type of contract (ref: Permanent)				
Temporary (18-24)	-0.66	1.83	-0.22	0.56
Temporary (25-31)	0.19	1.14	0.31	1.61
Temporary (>31)	-0.28	0.89	-0.08	0.25
No work (18-24)	-1.69	3.76	-0.30	1.07
No work (25-31)	-0.41	2.35	0.03	0.17
No work (>31)	-1.07	3.31	-0.03	0.10

Estimations are based on the specification of a logistic functional form with the pooled data.
Besides these explanatory variables, six regional indicators are also included.

Table 6A - Probability of having a first child - Married or cohabiting Women			
Dependent Variable: 1 : Have a first child			
0 = Otherwise			
Variables	**[1]**	**[2]**	**[3]**
Age	-0.08	-0.08	-0.09
	(4.67)	(5.67)	(4.94)
Education (ref: less than university)			
University (18-24)	-0.34	-0.41	-0.34
	(0.78)	(0.97)	(0.79)
University (25-31)	-0.12	-0.08	-0.11
	(0.73)	(0.56)	(0.73)
University (> 31)	0.53	0.50	0.51
	(1.90)	(1.81)	(1.80)
Type of contract (ref: Permanent)			
Temporary (18-24)	-0.92	—	-0.85
	(2.46)		(2.20)
Temporary (25-31)	-0.24	—	-0.20
	(1.25)		(1.03)
Temporary (> 31)	-0.11	—	-0.18
	(0.27)		(0.44)
No work (18-24)	-0.39	—	-0.28
	(1.61)		(1.07)
No work (25-31)	-0.28	—	-0.25
	(1.70)		(1.46)
No work (> 31)	-0.27	—	-0.35
	(0.88)		(1.11)
Type of contract of the husband: Ref: Permanent			
Temporary (18-24)	—	-0.52	-0.39
		(1.87)	(1.32)
Temporary (25-31)	—	-0.25	-0.25
		(1.44)	(1.36)
Temporary (25-31)	—	0.10	0.18
		(0.24)	(0.42)
No work (18-24)	—	-0.59	-0.51
		(1.35)	(1.13)
No work (25-31)	—	-0.15	-0.15
		(0.55)	(0.54)
No work (> 31)	—	0.30	0.40
		(0.70)	(0.90)

Estimations are based on the specification of a logit with the pooled data.

Besides these explanatory variables, six regional indicators are also included.

Table 6b - Probability of having a first child- Married or cohabiting Women		
Dependent Variable: 1 : Have a first child		
0 = Otherwise		
Variables	Coefficient	|z − value|
Age	-0.09	4.85
Education (ref: less than university)		
University (18-24)	-0.31	0.70
University (25-31)	-0.11	0.66
University (> 31)	0.51	1.78
Pairs of contracts woman-man (Ref: pp: Permanent-Permanent)		
Temporary-Permanent (18-24)	-0.81	1.81
Temporary-Permanent (25-31)	-0.56	2.20
Temporary-Permanent (> 31)	-0.11	0.23
Temporary-No work (18-24)	-0.94	0.85
Temporary-No work (25-31)	0.23	0.48
Temporary-No work (> 31)	-0.02	0.02
Temporary-Temporary (18-24)	-1.78	2.35
Temporary-Temporary (25-31)	-0.26	0.90
Temporary-Temporary (> 31)	-0.51	0.47
Permanent-Temporary (18-24)	-0.72	1.24
Permanent-Temporary (25-31)	-0.43	1.29
Permanent-temporary (> 31)	0.43	0.62
Permanent-No work (18-24)	-1.25	1.15
Permanent-No work (25-31)	-0.95	1.54
Permanent-No work (> 31)	-0.58	0.54
No work-Permanent (18-24)	-0.51	1.63
No work-Permanent (25-31)	-0.26	1.31
No work-Permanent (> 31)	-0.54	1.39
No work-Temporary (18-24)	-0.58	1.66
No work-Temporary (25-31)	-0.72	2.60
No work-Temporary (> 31)	-0.27	0.42
No work-No work (18-24)	-0.79	1.48
No work (25-31)	-0.45	1.12
No work-No work (> 31)	0.39	0.73

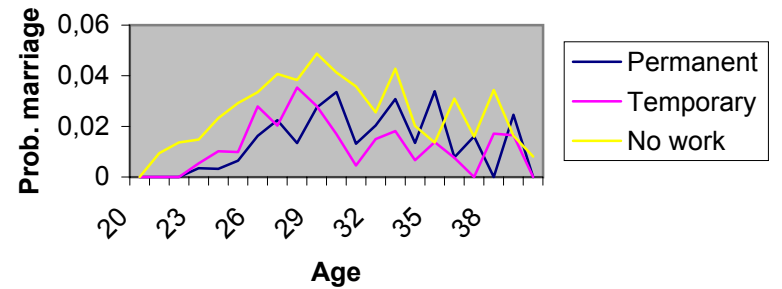Estimations are based on the specification of a logistic functional form with the pooled data.

Besides these explanatory variables, six regional indicators are also included.

The first contract of the pair refers to the woman, and the second, to her husband.
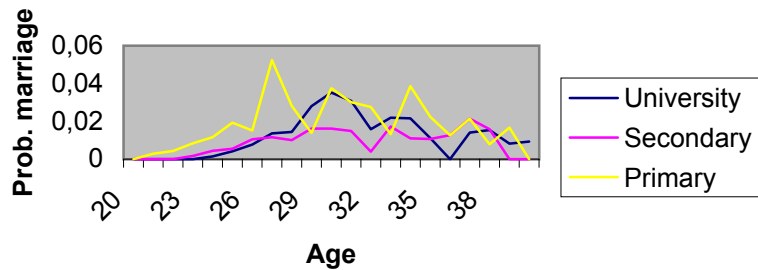
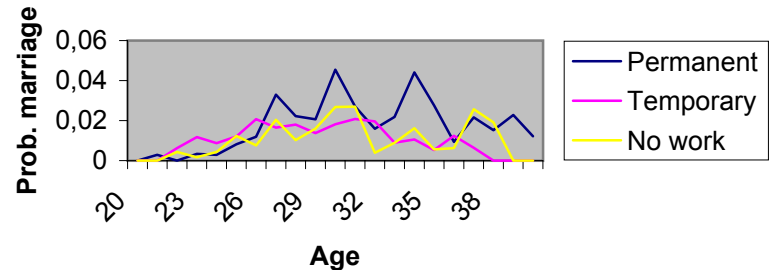**Graph 1: Distribution of marriage by education - Females**

Prob. marriage / Age
Legend: University, Secondary, Primary
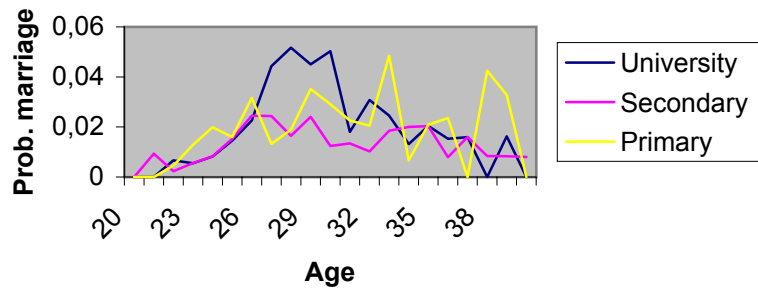
Graph 2: Distribution of marriage by type of contract - Females

Prob. marriage / Age
Legend: Permanent, Temporary, No work

Graph 3: Distribution of marriage by education - Males

Prob. marriage / Age
Legend: University, Secondary, Primary

Graph 4: Distribution of marriage by type of contract - Males

Prob. marriage / Age
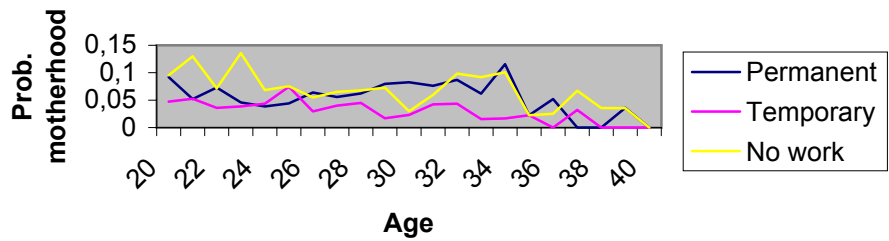Legend: Permanent, Temporary, No work

Graph 5: Distribution of motherhood by education
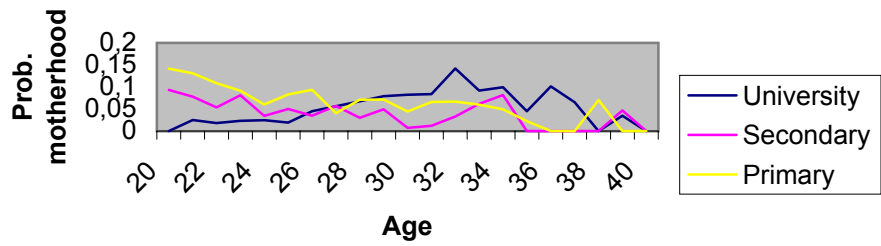
Graph 6: Distribution of motherhood by type of contract

Graph 7: Distribution of motherhood by Husband´s type of contract