# How do demographic events affect the quality of life? The experience of Italy and France.

Lucia Coppola

lucoppola@tiscali.it

ISTAT- Italian National Institute of Statistics

Stefano Mazzuco

<u>mazzuco@stat.unipd.it</u>

Department of Statistics, Padova University

Francesca Michielin
francesca.michielin@uni-bocconi.it

Istituto Metodi Quantitativi, Bocconi University, Milano

Paper presented at the 2004 Population and American Association Annual Meeting, Session 136: International Perspectives on the Effects of Family Structure, Boston 1-3, 2004.

## How do demographic events affect the quality of life? The experience of Italy and France.

Lucia Coppola, Stefano Mazzuco, Francesca Michielin

(Preliminary version - Please do not quote without the permission of the authors)

#### **Abstract**

During the last decades, many demographic events marking the transition to adulthood have been postponed, and European youths seem to be increasingly attracted by reversible forms of family formation. To partly explain this phenomena, we study the short-term effect of the first marriage and the first childbearing on individual well-being, with respect to satisfaction with the financial situation and with the amount of leisure time. We argue that young individuals might be scared of experiencing these events because they might decrease the level of satisfaction with different aspects of life, and therefore they postpone them.

We consider Italy and France, because the comparison between two countries different both in terms patterns to adulthood and of welfare states, might provide a better inside in the phenomena of interest. Data from the first 7 waves of European Community Household Panel (ECHP) are used. In order to get estimates netted out from self selection we use a matching procedure based on the propensity score combined with a *Difference-in-differences* estimator. Results show that the first marriage and the first childbirth respectively affects positively and do not affect the satisfaction with the financial situation. In contrast, both events affect negatively the satisfaction with the amount of leisure time, showing that these transitions are in conflict with the need for determining one's autonomy. In a period of increasing individualisation the strength of such a conflict might explain why individuals tend to postpone the acquisition of adult roles. Country differences show that gender equity, social acceptance of non traditional family patterns, and the welfare state's support might decrease the negative perception of the effects of these events.

## 1. Introduction

It is likely that demographic events determine dramatic changes in the life of people. Thus, when studying transition to adulthood, researchers pay particular attention to those experiences that force individuals to assume adult roles, as for example leaving parental home, marrying or having a first child (Modell et al., 1976).

The scenario offered by many Western countries evidences big changes in the process of transition to adulthood during the last decades. Such changes may be interpreted in the framework of the Second Demographic Transition's theory (Lesthaeghe and Van de Kaa, 1986). Concerning transition to adulthood, three are the major changes: firstly, most of demographic events are postponed by younger generation (Corijn and Klijzing, 2001, Hill and Yeung 1999), due at least in part to the uncertain economic conditions they face. Indeed, as Easterlin (1980) underlined, the level of prosperity experienced during childhood and adolescence determines economic aspirations which in turn impact for example on the timing of family formation. Since younger generations experienced high living condition standards at early ages, they postpone family formation until they are able to satisfy their high economic aspirations in the new household.

Secondly, empirical analyses showed an increasing destandardisation of life courses, referring to the decreasing uniformity in both the timing of life transitions and their sequencing and patterning (Liefbroer and Dykstra, 2003).

Finally, even the kind of events experienced has somehow changed during time, substituting irreversible choices with reversible ones, which demand lower commitments. As an example, in her study Oppenheimer (1994) found that in the US attitudes toward non-marital cohabitation, non-marital childbearing and divorce have become more permissive over the years, although relatively few Americans prefer singleness to being in couple, and almost everybody declare that having a good marriage and family is important in their lives (i.e. the family still plays an important role, but individuals try to form it passing through intermediate steps and trial periods of cohabitation).

The reactions of the European countries to this generalised process of individualisation and de-institutionalisation (Inglehart, 1997) of demographic choices have widely differed. Various authors identified indeed few national clusters of European countries (Reher, 1998; Vogel, 1998; Billari and Wilson, 2001; Mayer 2001), according to the welfare state systems and the demographic behaviour they share.

In Nordic countries, for instance, characterised by a large social expense, a high level of gender equity, and a low reliance on family ties, (i) marriage has been increasingly substituted by cohabitations, (ii) non-marital parenthood have widespread and (iii) divorce

rate strongly risen. A similar demographic situation, with partnership becoming more varied and fragile, is presented by the United Kingdom, where the market substitutes the state in providing services. At the opposite side, the Southern European countries still show a high attachment to traditional family forms, avoiding having children outside marriage and even cohabitation. The welfare regime in those countries do not provide strong support to family formation, demanding all responsibilities to the family itself. Finally, central European countries, together with France, occupy an intermediate position, where reversible choices like cohabitation are socially accepted, but did not completely substitute marriage (Rydell, 2002), and non-marital childbearing is becoming more widespread (especially in France). As a result, marriage is less and less considered as a founding event, and more and more as a non-necessary step during family life.

In respect to this heterogeneity in family formation patterns, many authors concentrated their attention on causes generating differences, and mechanisms leading individuals choosing in a set of options. Here we follow a different strategy, studying the short-term effect of the first marriage and the first childbearing (irreversible choices) on the subjective perception of the quality of life, with respect to satisfaction with the financial situation and with the amount of leisure time. We indeed assume that demographic events determine some changes in the individual life style as well as in the satisfaction with some life domains. Thus the expectations toward the consequences of these events, determined for instance by the observation of the peers' experiences, affect the willing to experience such events. In other words, we do not only suggest that the age at which peers experience events is important constituting normative expectations toward a "right" age for experiencing an event (as suggested by Heckhausen, 1990), but also that peer's experiences of the consequences of one event influence the willing to experience such event.

In particular, marriage and childbearing are irreversible choices implying a high level of commitment (Giddens, 1992), and therefore their expected consequences may have a stronger impact in the decision of living such events. If the average impact of these events is negative, this can partly explain why young adults are so reluctant to experience events which are hardly reversible such as marriage and transition to parenthood. Moreover, we expect that whenever irreversible choices are experienced, their consequences widely vary

across countries, depending on (i) the country specific social norms (Lestaeghe and Van de Kaa, 1986), and (ii) the social support provided by the welfare state (Esping-Andersen, 1999) to individuals when facing the decision of when and how become an adult. Indeed, if marriage is just one of the possible options available for family formation, and may be preceded by cohabitation – constituting a trial period –, or if the responsibility of having children is shared with the welfare state, also irreversible choices might have reduced effects and appear less dramatic. In these countries, indeed, irreversible choices are experienced only if and when the individual is ready to face them. In contrast, where irreversible choices are the only alternative available, their consequences are assumed only by the individual, and possibly his or her family. For this reason, we compare the perceived consequences of irreversible choices in Italy and France, as two very different countries. In the former cohabitations, and non marital fertility are accepted (Le Goff, 2003), and the welfare state supports individuals' transition to adult roles (Letabelier, 2003). In the latter, marriage represents the first experience of living apart from the family of origin and with a partner (Billari et al. 2001; Dalla Zuanna, 2001), non marital childbearing is not usual (Billari, 2004), and when becoming adult individuals rely mostly on their family (Reher, 1998).

## 2. Marital Status, Parenthood and Well-Being

During the last decades European countries have been witness of an increasing postponement of the transition to adulthood (Liefbroer and Dykstra, 2003), that in the framework of the Second Demographic Transition has been partly explained by changes in value orientations and social norms (Lesthaeghe and Van de Kaa, 1986), towards an increasing emphasis on individual autonomy and well-being (Inglehart, 1997). In western countries, being "irreducible needs" taken for granted, individuals can pay more attention to "higher needs" (Lesthaeghe and Surkyn, 1988) and a wide range of possible ideational goals as self-respect, inner harmony, sense of accomplishment, power, social status, security and pleasure have gained much importance.

At the same time, individuals face an increasing level of uncertainty when becoming adult, (i) because of a weakening of the social norms about age and sequencing of events in the transition to adulthood (Marini, 1984a and 1984b), and (ii) because of a worsening of the labour markets and the consequent higher occupational, and economic instability (Oppenheimer, 1994; Oppenheimer, et al. 1997; Mills and Blossfeld, 2004).

Thus, individual decision making process is influenced by the need for realising self well-being, and is constrained by uncertainty about when and how to experience transition. "Personal life has become an open project, creating new demands and anxieties" (Giddens, 1992: Introduction). As a consequence, individuals tend to postpone transitions, or to experience them in a fuzzy way. For instance, marriage and parenthood are increasingly postponed, because they imply long lasting consequences, and cohabitation increasingly precedes a marriage as a trial of a couple's life style. Both postponement and the choice of flexible family forms are a rational reply to growing uncertainty (Mills and Blossfeld, 2004).

But is the experience of a demographic event so dramatic? Life events have been considered in the psychological literature in terms of *stressors* (Dohrenwend and Dohrenwend, 1974), that might negatively affect individual well-being (Duncan and Morgan, 1980). Nevertheless, the impact of life events on individual well-being has been found to differ considerably depending on their timing and the readiness of the individual to experience them (McLanahan and Soresen, 1985).

As far as the effect of marriage is concerned, it is found to be often associated positively with well-being (Glen, 1975; Gove et al., 1990; Mastekaasa, 1992) and happiness (Williams, 1988; Lee et al., 1991; Stack and Eshleman, 1998). Central is the role of companionship support in determining higher life satisfaction, through reducing stress and facilitating positive affective moods (Wan et al., 1996) in comparison with single people. At the same time, marriage seems to be associated with a higher level of happiness also when compared with cohabitation, partly because married couples provide each other a higher degree of support (Joung et al., 1997).

Another effect of marriage on individual well-being is provided through *financial support*, because married couples, sharing household expenses as well as incomes, have been shown

to enjoy higher living standards. This is due firstly to the economy of scale that makes a marriage more convenient when compared with singleness (Joung et al., 1997), and secondly to an optimised allocation of money and higher agreement over financial expenditure of married couples (Berry and Williams, 1987) in respect to cohabitants (Clarkberg, 1999).

Nevertheless, some sociologists points out that living in a couple does not mean only providing each other support, but also brings to the need for a stressful adaptation process. (Giddens, 1992; Beck and Beck-Gernshein, 1995). Own autonomy and self- development must be contracted with the partner not to violate his or her freedom to determine selfidentity. In other words, people seek for living as a couple while maintaining one's singularity (De Singly, 2000). Thus, when living together, the amount of time each partner spends alone represents part of the resources allocated to one's self, to determine and develop one's interests, activities and identity. In contrast, the increasing amount of time the partners spend together does not contribute completely to realize each partner's wellbeing. De Singly (2000) underlines how the quality time is represented by that spent alone. Concerning the effect of parenthood on well-being, this issue appears to be more complex. On the one hand, in modern societies children are not anymore a material advantage for the household, but rather represent a "psychological utility". Having children might stand for a way of self-realization, of giving one's life root and meaning (Beck and Ceck-Gernsheim, 1995: ch. 4), a strategy to realise one's well-being. Moreover, from the couple's point of view, children might provide shared goals and interests, and in turn increase the partners' satisfaction and stability (Thornton, 1977).

On the other hand, children imply time-consuming tasks, and represent a high investment of economic, psychological, and emotional resources. They involve a high level of responsibility for the parents who need to provide them with an adequate environment (Beck and Ceck-Gernsheim, 1995: ch. 4). Thus, the process of individualization, that western countries support, produces a conflict between the need for determining own autonomy and the assumption of the increasing responsibilities of rearing a child. As a consequence, individual might decide not to have children or might perceive as dramatic the renounce to one's needs when allocating resources to children (Beck and Ceck-

Gernsheim, 1995: ch. 4). Also the relationship with children has become increasingly complex in modern societies, being based not on authority but mainly on trust, being trust not taken for granted but negotiated and bargained for (Giddens, 1992: ch. 6). Thus, parenthood might reduce individual freedom and ability to well play other roles, such as marital roles (Aldous, 1978), and consequently represents a reason for stress and for reducing well-being (Menhagan, 1983). The complexity of the meaning and consequences of parenthood reflects in the contrasting findings of the empirical research. The literature, indeed, does not show a prevalent effect, since parenthood has sometimes found to have a negative impact on well-being, (Miller and Sollie, 1980; Campbell, 1981; Glenn and McLanahan, 1982), as well as a positive one (Chilman, 1980), or even a neutral effect (Marini, 1980). Moreover, those effects might differ depending on other individual characteristics (Glenn and McLanahan, 1982), and on the number and spacing of children (Marini, 1980).

## 3. Italy and France

The effect of demographic events might be reduced or hampered by country specific social norms and values (Van de Kaa, 1986), as well as by the eventual support provided by the welfare state (Esping-Andersen, 1999). Italy and France are very different concerning both demographic behaviour and the welfare state system. To highlight differences (and even some commonality) in terms of demographic behaviour, we refer to some indicators.

As clearly shown in Table 1 (source: Billari, 2004), Italy and France share the same trend of postponement of two basic events: the first marriage and the first birth. In France for instance the mean age at first marriage has shifted from age 23 in 1980 to more than 27 at the end of the 1990s, and Italy seems to follow approximately the same path. An analogous delay characterises the first birth, since the mean age at first birth moved from age 25 to approximately 29 in a couple of decades.

Those apparent similarities hide actually very different contexts: while for instance in France the strong delay in marriage occurred according with an increasing rate of people

choosing to cohabit before marrying, and even cohabiting without marrying, in Italy the delay cannot be associated to the diffusion of other more flexible family forms (with FFS data, the percentage of cohabiting couples amount to the 58% of all couples in France and just the 7% in Italy). Still nowadays in Italy cohabitations are not yet fully socially accepted (Nazio and Blossfeld, 2002), and leaving parental home and marrying are experienced simultaneously by the major part of the population (Dalla Zuanna, 2001; Billari et al, 2002). In contrast, in France family formation has been characterised by an increasing pluralization of family forms (Le Goff, 2002), accompanied by the support of the welfare state, which strongly helps childbearing, regardless the family structure (Letabelier, 2003). Both the labour market and the availability of childcare services as well as economic support via family benefits make the choice of becoming parents easier.

Table 1: The situation of Italy and France through few indicators during time

	France			Italy		
	1980	1990	1999	1980	1990	1999
Mean age at first marriage (women)	23.0	25.6	27.8	23.8	25.5	27.0
Mean age at first birth (women)	25.0	27.0	28.7	25.0	26.9	n.a.
Total divorce rate	0.22	0.32	0.38	0.03	0.08	n.a.
TFR (period)	1.95	1.78	1.89	1.64	1.33	1.24
Percentage of nonmarital births	11.4	30.1	42.6	4.3	6.5	9.7
Incidence of cohabitation	58.2 <sup>(*)</sup>	%ending in marriage	69.5	7.0	%ending in marriage	n.a.

<sup>(\*)</sup> Data referred to the 1990s.

Probably for those reasons, the TFR is much higher in France than in Italy, which is one of the countries with lowest-low fertility. Moreover, while in Italy the relative few children born out-of-wedlock are a sign of strong commitment in the traditional form of the family, in France parenthood is not anymore a prerogative of marriage: in 1999, more than the 40% of births occurred out-of-wedlock.

## 4. Research questions

In this paper we investigate the potential consequences of the first marriage and the first childbirth. These events imply some important changes in individual life styles, and the acquisition of new and unknown roles. As we have discusses in section 2, these events might actually represent stressors and decrease individual well-being, especially if we focus on their effect in the short-term. In particular, we investigate the potential effect of these events on two specific dimensions of the quality of life: the financial situation and the amount of leisure time. The former deals (i) with the amount of economic resources individuals can allocate to activities and goods they are interested in, through which realise one's well-being, and (ii) with the ability of facing economic uncertainty. The latter deals mainly with the amount of time resources individuals can allocate directly for the activities they are interest in, and that are important for determining self-realisation and selfdevelopment. Satisfaction with both aspects contributes to increase individual well-being. Concerning the short-term effect of first marriage on the individual satisfaction with the financial situation, it might depend on life style individuals where experiencing before marrying, i.e. living with parents, living as single on their own, or cohabiting. Firstly, if an individual leaves the parental home when marries for the first time, as in Italy usually happens, we would expect a decrease in the satisfaction with the financial situation, because the individual has to bear some household related costs that were previously carried on by their parents. Secondly, when the individual marries after having lived alone, the satisfaction with the financial situation is likely to increase because, through the economy of scale, the weight of the household costs decreases (Joung et al., 1997). Finally, when a couple marries after a period of cohabitation, the satisfaction with the financial situation should not be strongly affected because the life style does not change dramatically. Nevertheless, in such a case, satisfaction with the financial situation might

increase because, formalising the union by law, individuals might be more willing to allocate resources in an optimised manner in the couple's prospective, instead of dividing expenses by two (Clarkberg, 1999). This would be the case of France, where most of the marriages are preceded by cohabitation.

We expect that there might be some gender differences in the effect of first marriage on satisfaction with the financial situation only if there exist gender differences in the level of earning. Indeed, the partner who earns the less would gain more from the economy of scale and the optimisation of the allocation of economic resources for the couple. Thus, we would expect women to be more satisfied because, also in a period of increasing gender equality, women are still more likely to have lower earnings than men (Zweimuller and Winter-Ebmer, 1994).

As far as the effect of the first marriage on the satisfaction of the leisure time is concerned, we argue that it also might depend on the individual life style before marrying. In Italy a reduction of the satisfaction might be expected because the simultaneity between leaving the parental home and marrying induces (i) a reduction of the free time at disposal given that much time must be allocated to household related activities, (ii) a reduction of the freedom to decide about how to use free time, given that the needs and spaces of the partner must be taken into account (De Singly, 2000). If the individual marries after having lived alone, the satisfaction with the amount of leisure time might be increased through sharing the household related activities with the partner, but might also be decreased by the process of adaptation to the new couple's life style (Hallberg, 2002, also found that married couples tend to synchronise their individual timing of market work and leisure so that they can spend more time together, with probably some consequences on the way they were used to spend free time before marriage). The net effect depends on the balance between these two contrasting effects. In France, where individuals marry after having lived together in a consensual union, we do not expect strong changes in the satisfaction with the amount of leisure time because the allocation to household related activities is likely to remain the same, and because possibly the process of adaptation to each other has already taken place during the trial period of cohabitation.

Also in this case, gender difference might exist as long as gender differences in the allocation of time to household related activities, and in the ability to adapt to the partner, hold. Thus, the partner who better adapts to spend time on household related activities as well as to the spaces to the other, would experience a less dramatic reduction of satisfaction. Thus we expect that women might result less unsatisfied with the eventual reduction of the time they can spend alone, because they are traditionally devoted to taking care of the household as well as of the partner (Jamieson, 1998).

Concerning the potential effect of the first childbirth, we expect that it might produce a decrease in the level of individual satisfaction with the financial situation and with the amount of leisure time because having children always determines a high level of investments in terms of economic, as well as psychological, emotional, and time resources (Beck and Ceck-Gernsheim, 1995: ch. 4). Nevertheless, we expect to find some country and gender differences. In particular we assume that the effect of the first childbirth would be less dramatic in France than in Italy, because in the former country the welfare state supports individuals when having children, regardless to the family structure (Letabelier, 2003). Moreover we expect that as far as the level of satisfaction with the leisure time is concerned, a stronger decrease would be experienced by women than by men, because in both countries a gap in the division of domestic and parental task between women and men still holds, and of course women are more responsible than men for the childrearing (Mencarini, 2003; Algava, 2002).

#### 5. Data and methods

We base our analyses on data coming from the European Community Household Panel (ECHP), a multi-dimensional and multi-purpose survey centrally designed and co-ordinated by the Statistical Office of the European Community (EUROSTAT). The panel started on 1994 and currently it provides yearly information until 2000 about twelve European countries, among which Italy and France. A great advantage of the ECHP is the scope for comparability between countries in the European Union, together with the fact that it

provides up-to-date information. For a general review of the quality of the ECHP see Nicoletti and Peracchi (2002) and Peracchi (2002). The ECHP contains fairly detailed information about the current demographic status, as well as detailed information concerning income, employment, schooling, health, and social relations. It provides also information on the personal satisfaction of individuals regarding to different life domains: the current job (for those who are employed), the main activity, the financial situation, the leisure time, the housing situation, and the health status. Thus, to our purpose, the ECHP represents a precious source providing information about the demographic events we are interested in and their possible effects on levels of satisfaction.

Table 2: Occurrences of weddings and first births broken down by living arrangement, percentages. Source ECHP, 1994-2000

	ITALY		FRANCE		
Liv. Arrangement	Weddings	New births	Weddings	New births	
Single adult	5.16	2.33	1.80	1.15	
Couple without children	0.84	15.64	5.13	10.45	
Other Households	1.82	3.51	2.89	2.06	
Living with parents	2.87	0.64	0.77	0.49	
тот.	1.49 (534)	3.08 (642)	1.86 (381)	3.85 (492)	

Table 2 shows the distribution of events across the living arrangement of the sample: the total number of weddings occurred between 1994 and 2000 is 534 in Italy and 381 in France, whereas the total number of first births are 642 in Italy and 492 in France. Italians are more likely to live alone or with parents before marriage while French are more likely to be already living in couple. New births occur mainly in couples.

The methodological problem we face is that the choice of getting married or of childbearing can be endogenous with respect to satisfaction on various life domains. In this case, ordinary regression produces biased estimates which are not very useful to our purposes since we need to pick the real impact of the events. The most common remedy for this

problem is to use an Instrumental Variable (IV) estimator, in which the endogenous variable, such as demographic status, is instrumented by variables not correlated with the error term in the regression equation. Unfortunately the IV approach is problematical due to the difficulty of finding valid instruments. Often parental characteristics are used to instrument endogenous childbearing events. But this is hard in the ECHP given the general lack of parental and retrospective information. Here we use an alternative solution approximating an experimental environment where treated individuals are compared (matched) with the most similar untreated on the base of observed characteristics. As a consequence, differences in the individual outcome under study would be due only to the treatment. Of course, in our case, the treatment is represented by experiencing the first marriage or the first childbirth, while the outcome of interest is the change in the level of satisfaction with the financial situation and the amount of leisure time. Then, conditioning on possible spurious variables, we are able to control for the bias due to observables, or overt bias (Rosenbaum, 1995). This approach relies on the strongly ignorability assumption, which conjectures that selection occurs only on the base of observed X so that conditioning on X would net out all the bias. However, when the number of covariates we want to condition on is relatively high (more than 3), the matching procedure is difficult and it is not clear what weighting scheme should be applied. Rosenbaum and Rubin (1983) proposed a solution based on the fact that conditioning on a scalar function of covariates X instead of X itself is equivalent if this function satisfies the balancing property. This property ensures that conditional on this function f(X), X is equally balanced between treated and untreated individuals. Formally, we say that

$$(Y_0, Y_1) \perp X \mid f(X). \tag{1}$$

The propensity score (i.e. the propensity for experiencing the event) was shown to satisfy the balancing property. Consequently, individuals are divided into two types: those who experienced the event ( $D_i$ =1) and those who did not ( $D_i$ =0). Individuals having children or getting married (the treated) are matched to those who did not experience the event of

interest (the untreated) by the means of the propensity score, which is based upon *observed* characteristics. The propensity score for the individual *i* is defined as:

$$P(X_i) = Pr(D_i = 1 | X_i) \tag{2}$$

Then our strategy consists on matching treated and untreated on the base of an estimate of the propensity score. The propensity score can be easily estimated by either a probit specification or a logit. Having done so, testing for the balancing property assumption is needed<sup>1</sup>. Provided the latter holds, one may proceed to compute the average effect of treatment on the treated, which is given by:

$$E\{Y_{1i}-Y_{0i}|D_i=1\}=E[E\{Y_{1i}|D_i=1,p(X_i)\}-E\{Y_{0i}|D_i=0,p(X_i)\}|D_i=1]$$
(3)

where  $Y_{Ii}$  and  $Y_{0i}$  denotes the possible outcomes in the two counterfactual situations of treatment and non-treatment and the outer expectation is over the distribution of  $p(X_i)|D_i=1$  (see Becker & Ichino, 2002, for further details and references). Since p(D=1|X) is continuous, it is almost impossible observing two individuals with exactly the same value of the propensity score. Then units are matched with the closest value of p(D=1|X). Many matching methods are possible, but here we use only three of them: the *Nearest Neighbor Matching, the Kernel Matching, and the Stratification Matching*.

The Nearest Neighbor Method (NNM), matches every treated unit i with the set C(i) minimising the distance with the propensity of i. The Kernel method (KM), weights untreated using a kernel function (usually the gaussian density function). Finally in the Stratification Method (SM) the sample is broken down into blocks defined according to the propensity score; then within every block the mean difference between treated and untreated is computed. These intra-block effects are averaged, weighting every block with

15

<sup>&</sup>lt;sup>1</sup> The propensity score does satisfy the balancing property, but its estimate can be unbalanced. This is why we need testing the balancing property of estimated propensity score. If the property is not satisfied we need to change the specification of the probit model (i.e. inserting other covariates as well as interactions).

the corresponding fraction of treated units. Becker & Ichino (2002) give further details on these and other matching methods. In principle the *NNM* matches only a limited number of units to treated individuals, whereas *SM* and *KM* use the whole sample but in *SM* control units in the same block have the same weight whereas in *KM* control units are weighted on the base of their distance (in terms of propensity score) to the treated unit.

The main pitfall of this approach is its assumption, addressed as strong ignorability, that selection occurs only on the base of observable covariates, and then there is no unobserved heterogeneity. This assumption seems to be overly strong especially in social studies. Then we implement a difference-in-differences (DID) estimator which compares the mean change in the outcome of treated occurred before and after the event with the mean change of untreated. Formally this estimator is expressed as:

$$E[Y_t - Y_{t+1} \mid D = 1, p(D = 1 \mid X)] - E[Y_t - Y_{t+1} \mid D = 0, p(D = 1 \mid X)].$$
(4)

The DID estimator can be seen as a fixed-effect estimator, so that unobserved heterogeneity is netted out provided it is time-fixed. This assumption is less demanding than the strong ignorability assumption (see Heckman et al., 1997). Therefore combining the DID estimator with propensity score matching we account for selection due to both unobserved and observed variables.

## 6. Results

As we have just discussed, the construction of the propensity score function is crucial for properly identifying the effect that the first marriage, or the entry into parenthood, has on personal satisfaction in different life domains. The basic idea consists in selecting all the variables whose impact is expected to confound the "real" effect of the treatment. For instance, the existence of a traditional – and commonly accepted – life course pattern may have some impact on individual satisfaction per se. One of the clearest examples of role expectation (Beets et al. 1999) concerns having children, only expected within a stable

married (in Italy) or even cohabiting couple (in France). Thus, the lack of controlling for the current situation of the couple would distort the measurement of the effect that having a child has on life perception.

Similar confounding characteristics can be age (it's likely that older women who have been desiring a child for a long time can be less severe in judging their satisfaction in correspondence with the birth), educational level, working position, and the level of satisfaction prior the event.

Concerning first marriage, we control for age, having cohabited before marriage, the level of education, household or personal income, working hours, health status (i.e. whether individuals are hampered in their daily activities), social relations (i.e. participation to any club), migration trajectory (i.e. whether the individual live in the same region where he or she was born), whether the individual have to look after other family members, and the level of satisfaction (also on housing situation) before the event has occurred.

In order to satisfy the balancing property we plugged in some interactions between variables such as marital status and age, cohabitational status and work. Then the results of DID estimators conditional on the propensity score is as follows.

## Impact of first marriage on satisfaction

Concerning the impact of marriage (Table 2), the major difference is registered between sexes. Women seem to register the highest benefits on perception of financial situation, and this holds both in Italy and in France, although in Italy the effect is stronger. Surprisingly even Italian men declare an increase in the satisfaction toward financial situation, but this is much lower than the one registered by women.

Concerning satisfaction with the leisure time, marriage seems to negatively impact much more in Italy than in France. For France we find, in fact, a weak negative effect significant only for men, whereas in Italy the negative impact for women is as strong as for men

Table 2: Effect of the first marriage

	French	women	Italian women		
	Satisfact	tion with	Satisfaction with		
Matching type	Financial Leisure time situation		Financial situation	Leisure time	
Nearest neighbour	0.323 (2.473)	-0.205 (1.685)	0.412 (4.864)	-0.222 (2.402)	
Kernel method	0.218 (2.464)	-0.080 (0.887)	0.438 (6.316)	-0.135 (1.996)	
Stratification	0.196 (2.018)	-0.053 (0.589)	0.410 (6.727)	-0.148 (1.963)	

	Frenc	h men	Italian men	
	Satisfact	ion with	Satisfaction with	
Matching type	Financial Leisure time		Financial situation	Leisure time
Nearest neighbour	-0.045 (0.368)	-0.266 (1.897)	0.143 (1.693)	-0.242 (2.507)
Kernel method	0.128 (1.161)	-0.123 (1.293)	0.136 (2.529)	-0.131 (1.790)
Stratification	0.137 (1.402)	-0.170 (1.771)	0.160 (2.912)	-0.218 (3.209)

Impact of the first childbirth on satisfaction

Table 3: Effect of the first childbirth

	French	women	Italian women	
	Satisfact	ion with	Satisfaction with	
Matching type	Financial Leisure time		Financial situation	Leisure time
Nearest neighbour	-0.086 (0.946)	-0.233 (2.544)	0.044 (0.445)	-0.611 (5.582)
Kernel method	0.010 (0.153)	-0.269 (3.649)	0.045 (0.668)	-0.695 (8.445)
Stratification	-0.015 (0.215)	-0.273 (3.373)	0.030 (0.390)	-0.699 (10.35)

	Frenc	h men	Italian men	
	Satisfact	tion with	Satisfact	tion with
Matching type	Financial Leisure time situation		Financial situation	Leisure time
Nearest neighbour	-0.121 (1.003)	-0.303 (2.816)	-0.066 (1.019)	-0.118 (1.263)
Kernel method	-0.119 (1.554)	-0.233 (2.459)	0.027 (0.464)	-0.104 (1.505)
Stratification	-0.146 (1.619)	-0.259 (2.627)	-0.022 (0.398)	-0.138 (1.990)

As shown in Table 3, having a first child has a similar impact in France and Italy even though Italy shows some gender differences. Satisfaction toward the financial situation does not seem to be touched for both sexes and for both countries. By contrast, in both countries the satisfaction toward free time decreases with the birth of the first child. In fact in Italy women register the higher differences, while men are just slightly hurt. French couples seem to share the uneasiness more equally. This reflects the degree of gender segregation, much higher in Italy.

## 7. Conclusions

We have argued that the demographic events shaping the transition to adulthood might affect individual well-being (Dohrenwend and Dohrenwend, 1974; Duncan and Morgan, 1980; McLanahan and Soresen, 1985), and we have investigated in particular how the experience of the first marriage and the first childbirth might actually affect the individual satisfaction with the financial situation and with the amount of the leisure time, in Italy and France. We have focused in particular on these two countries because they are witness of different patterns of the transitions to adulthood (Corijn and Kijzing, 2001), as well as different welfare states (Esping-Andersen, 1999). Both these aspects might in turn influence the strength of the effect of the demographic events under study on the satisfactions taken into consideration.

Our findings suggest that both first marriage and first childbirth lead substantial changes in the subjective perception of the financial situation and/or satisfaction with the leisure time. Those changes, however, highly depend on the sex of the respondents and their country of origin.

As discussed before, previous studies have shown a positive association between marriage and financial well-being, while this evidence does not necessarily hold for cohabitations (Clarkberg, 1999; Smock and Manning, 1997). An explanation to such a difference might be found in the different manner married and cohabitant people handle the money. Indeed, the latter are more likely to maintain separate accounts, and to share the expenses just in the

middle (Blumstein and Schwartz, 1983), possibly because less confident in the stability of their relationship in comparison with married individuals (Clarkberg, 2002). In contrast, if married people share earnings and expenses in a way more optimised for the couple, both partners might be better off, even if they do not contribute exactly equally to the costs of the household. Of course, the partner who earns the less gets the greater advantage out of this strategy.

This is confirmed by our findings, since French women appear to be more satisfied with the financial situation after marriage, while this is not true for French men. Exactly the difference in the level of earnings by gender, with women earning less than men, also induces a difference in the perception of the financial situation after marriage.

Marriage takes place without being preceded by cohabitation, since it is associated with a complete change in the life style, and in the allocation of money, that in turn might affect the satisfaction with the financial situation in different ways. On the one hand, single individuals, who usually live on their own, would gain much by marrying, given that most of the household related expenses per person would be strongly reduced by the economy of scale (Joung et al., 1997). On the other hand, individuals living in the parental home before marrying should experience a lower satisfaction with the financial situation after this transition, because they have to allocate some of their earnings to the new household costs, instead of relying on their parents.

These last two situations are more likely to take place in Italy, where couples usually enter the first marriage directly, without experiencing any trial period of cohabitation. In this country we actually find an increase in the level of satisfaction with the financial situation after first marriage for both genders, and such an effect is much stronger for women than for men. This result is conform with what expected for single individuals living on their own, while it is in contrast with what expected for individuals living in the parental home. To interpret our findings we would like to recall what happens among Italians, when they marry, in terms of satisfaction with the leisure time. We have noticed that marriage produce a strong and significant decrease in the satisfaction with leisure time for both men and women, while this is not true in France. This evidence suggests that after marriage Italians change radically their life styles, evidently allocating much less resources to leisure.

Marriage might induce an allocation of money more finalised to household needs instead of individual needs. Therefore, being leisure often expensive, the more sober life style acquired after marriage might produce in turn higher savings and a higher satisfaction with the financial situation. Gender differences hold also in Italy, because the increase in the satisfaction with the financial situation after marriage is much stronger for women than for men, showing possibly the existence of gender differences in the level of earning that sees also in this country women earning less than men.

To interpret the effect of the first marriage on the satisfaction with the amount of leisure time, we refer mainly to the literature that focuses on marriage as a stressing process, through which individuals trade off own space and autonomy with the respect for the other's needs (Giddens, 1992; Beck and Beck-Gernsheim, 1995). In a historical period where increasing emphasis is given to the self-development (Giddens, 1992; Inglehart, 1997), couple's life style determine the burdens of each partner's freedom to choose about the use of time and space. Leisure time might be considered that allocated to own interests, that possibly do not coincide with the partner's interests. Therefore, it might be represented not by the time spent together which of course increases when living together, but by that spent alone that in contrast decreases when sharing the life with somebody else (De Singly, 2000). As a consequence, once living together, individuals might perceive a reduction of leisure time, because less of their time can be allocated to one's self. Our results confirm such a point of view. Indeed, marriage does not affect the satisfaction with the amount of leisure time of French women, and slightly lowers that of French men. In France indeed marriage usually takes place after a trial period of cohabitation, thus adaptation process has already taken place. In Italy, instead, given that marriage is usually the first experience of a couple's life style, such an experience determines a dramatic decrease in the partner's satisfaction with the leisure time. It is worth noting that both countries are witness of a gender difference in the effect of first marriage on the satisfaction with the amount of leisure time, showing that men suffer more from the reduction of the time allocated to own interests, once the marriage occurs. This might be consequence of gender specific value attributed to time spent on one's self and to time spent with the partner. Traditionally women psychologically and emotionally take care of the husband and the children, while

men taking care economically of the household (Jamieson, 1998: ch. 1). Thus, even in a period of increasing gender equality, modern women might perceive as satisfactory or at least not unsatisfactory the time spent with the partner, and in turn the reduction of the time spent alone might affect less strongly women than men.

Concerning the first childbirth, it is surprising that we did not find any significant effect on the financial situation, apart a slightly negative impact on its perception for French men. We were actually expecting a reduction of the satisfaction with the financial situation, being childbearing an expensive venture. Possibly, given that we consider the effect of the event a few months after it is experienced, the parents might be still not completely aware of its consequences on their financial situation. Another interpretation might be that a child determines a new life style that leaves less room to other possibly expensive activities. Thus a different allocation of the economic resources might in turn lower the impact of the childrearing expenses on the global financial situation.

Finally, as far as the effect of the first childbirth on the satisfaction with the amount of leisure time, it is conform with our assumption. Indeed, in both countries and for both genders there is a significant decrease in the level of satisfaction, given that childrearing implies many responsibilities and time consuming tasks, and reduces the amount of time that each of the parents can devote to one's leisure activities (Beck and Ceck-Gernsheim, 1995: ch. 4). In Italy, as we where expecting, there is an evident gender difference in such an effect, showing that women suffer more from the reduction of the leisure time, because they mainly take care of the childrearing. This happens because in Italy there is a low level of gender equality (Mencarini, 2003). In France, indeed, even if some gender differences in the allocation of time to household and children related activities still hold (Algava, 2002), evidently a higher gender equality has been achieved, and childrearing affect both partners similarly.

The empirical findings discussed in this paper show that the demographic events of the first marriage and the first childbirth respectively affect positively and does not affect the satisfaction with the financial situation. In contrast, both events affect negatively the satisfaction with the amount of leisure time, in either Italy or France, and for both genders. Thus, these choices seem to be mainly in conflict with individual's freedom to use own

time, and in turn on the ability to allocate enough resources to one's specific interests, and self-development. The negotiation of commitment with other people, either a partner or a child, determine a reduction of one's autonomy (De Singly, 2000; Giddens, 1992), that is becoming one of the main values in modern societies (Inglehart, 1997; Giddens, 1992). At least in the short term, such a mechanism is possibly not completely compensated by the positive effects due to intimacy with a partner or a child. As a consequence young adults are scared by the idea of reducing own autonomy and freedom, and therefore they try to postpone the commitment as long as possible. In a context where a welfare state supports partly the venture of assuming adult roles, such a postponement might be reduced. An example is represented by France, where the experience of the first childbirth, supported by the welfare state (Letabelier, 2003) reduces the satisfaction with the leisure time to a less extent than in Italy.

## References

Aldous J. 1978. Family Careers: Developmental Change in Families. John Wiley, New York.

Algava E. 2002. Quel temps pour les activités parentales?. Drees, *Etudes et Résultats* n° 162, March.

Beck U., Beck-Gernshein E. 1995. The Normal Chaos of Love. Polity Press, Great Britain.

Becker S, Ichino A. 2002. Estimation of average treatment effects based on propensity scores, *The STATA Journal 2*, 4, 358-377.

Beets GCN, Liefbroer AC, de Jong Gierveld G 1999, Changes in fertility values and behaviour: A life course perspective, in R. Leete (ed.), Dynamics of values in fertility change, Clarendon Press, Oxford, 100-120.

Berry RE, Williams FL. 1987. Assessing the Relationship between Quality of Life and Marital and Income Satisfaction: a Path Analytic Approach, *Journal of Marriage and the Family*, 49, 107-116.

Billari FC, 2004. Choices, opportunities and constraints of partnership, childbearing and parenting: the patterns in the 1990s, solicited background paper, United Nations/Economic Commission for Europe, European Population Forum, Geneva 2004.

Billari FC, Philipov D., Baizàn P. 2001. Leaving Home in Europe. The Experience of Cohorts Born Around 1960. *International Journal of Population Geography*, 7, 339-356.

Billari FC, Castiglioni M, Castro Martìn T, Michielin F, Ongaro F. 2002. Household and union formation in a Mediterranean fashion: Italy and Spain. In Klijzing E, Corijn M (eds.), *Dynamics of fertility and partnership in Europe: insights and lessons from comparative research*, vol. 2. New York/Geneva: United Nations, 17-41.

Billari FC, Wilson C. 2001. Convergence toward diversity? Cohort dynamics in the transition to adulthood in contemporary Western Europe. *MPDIR WP 2001-039*, Max Planck Institute for Demographic Research, Germany.

Blumstein P, Schwartz P. 1983. *American Couples: Money, Work, Sex.* W. Morrow & Co., New York.

Campbell A. 1981. The Sense of Well-Being in America. McGraw-Hill, New York.

Chilman CS. 1980. Parent Satisfactions, Concerns, and Goals for their Children. *Family Relations*, 29, 339-345.

Clarkberg M. 1999. The Price of Partnering: the Role of Economic Well-Being in Young Adults' First Union Experiences. *Social Forces*, 77, 945-968.

Clarkberg M. 2002. Family Formation Experiences and Changing Values: the Effects of Cohabitation and Marriage on the Important Things in Life. In R. Lesthaeghe (ed.), *Meaning and Choice: Value Orientations and Life Course Decisions*, NIDI/CBGS Publications, The Hague/Brussels, 185-215.

Corijn M, Klijzing E. 2001. Transition to adulthood in Europe: conclusions and discussion. In M. Corijn, E. Klijzing (eds.), *Transition to adulthood in Europe*, Kluwer, Dordrecht, 313-340.

Dalla Zuanna G. 2001. The banquet of Aeolus: a familistic interpretation of Italy's lowest low fertility. *Demographic Research*, 4, 133-162.

De Singly F. 2000. Libres ensemble: L'individualisme dans la vie commune, Nathan

Dohrenwend BS, Dohrenwend BP. 1974. Overview and Prospects for Research on Stressful Life Events. In B. S. Dohrenwend, B. P. Dohrenwend (eds.), *Stressful Life Events: Their Nature and Effects*, Wiley, New York, 313-331.

Duncan GJ., Morgan JN. 1980. The Incidence and Some Consequences of Major Life Events, *Mimeo*, presented at the Workshop on Use of the PSID for Life Course Research, Ann Arbor, Michigan

Easterlin RA. 1980. Birth and fortune: the impact of numbers on personal welfare. University Chicago Press.

Esping-Andersen G. 1999. Social Foundations of Postindustrial Economies. Oxford University Press, Oxford.

Glen ND. 1975. The Contribution of Marriage to the Psychological Well-Being of Males and Females. *Journal of Marriage and the Family*, 37, 594-600.

Glenn ND, McLanahan S. 1982. Children and Marital Happiness: a Further Specification of the Relationship. *Journal of Marriage and the Family*, 44, 63-72.

Giddens A. 1992. The Transformation of Intimacy. Polity Press, Great Britain.

Gove WR, Briggs Style C, Hughes M. 1990. The Effect of Marriage on the Well-Being of Adults: a Theoretical Analysis. *Journal of Family Issue*, 11, 4-53.

Hallberg D. 2002. Synchronous leisure, jointness and household labour supply. *Labour economics*, 10, 185-203.

Heckhausen J. 1990. Erwerb und function normativer vorstellungen über den Lebenslauf (Acquisition and functioning of normative beliefs concerning the life course), in Mayer KU eds: *Lebensverlaüfe und sozialer Wandel, Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 31 (special issue) 351-373.

Heckman JJ, Ichimura H, Todd PE. 1997. Matching As An Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme. *Review of Economic Studies*, 64, 605-654.

Hill MS, Yeung WJ. 1999. How has the changing structure of opportunities affected transition to adulthood? In A. Booth, A.C. Crouter, M. J. Shanahan (eds.), *Transition to adulthood in a changing economy: no work, no family, no future?*, Westport: Praeger, 3-39.

Inglehart R. 1997. Modernization and Postmodernization. Cultural, Economic, and Political Change in 43 Societies, Princeton University Press, Princeton.

Jamieson L. 1998. *Intimacy*, Polity Press, Great Britain.

Joung IMA, Stronks K, Van De Mheen H, Van Poppel FWA, Van Der Meer JBW, Machenbach JP. 1997. The Contribution of Intermediary Factors to Marital Status Differences in Self-Reported Health. *Journal of Marriage and the Family*, 59, 476-490.

Lee GR., Seccombe K, Shehan CL. 1991. Marital Status and Personal Happiness: an Analysis of Trend Data. *Journal of Marriage and the Family*, 53, 484-507.

Le Goff JM. 2002. Cohabiting unions in France and West Germany: transitions to first birth and first marriage. *MPIDR Working Paper* WP 2002-25.

Lesthaeghe R, Van de Kaa D. 1986. Twee demografische transities? In Van de Kaa D, Lesthaeghe R (eds.): *Bevolking: groei en krimp, Boekaflevering Mens en Maatschappij*, Deventer: Van Loghum Slaterus, 9-24.

Lesthaeghe R., Surkyn J. 1988. Cultural Dynamics and Economic Theories on Fertility Change. *Population and Development Review*, 14, 1-45.

Letabelier MT. 2003. Fertility and family policies in France. Supplement to Journal of Population and Social Security: Population, 1, 245-261.

Liefbroer A, Dykstra P. 2003. Long-term changes in the transition into adulthood in Netherlands: Putting the process of destandardization into perspective. *Mimeo*, presented at European Population Conference, Varsaw, 26-30 August 2003.

Mayer KU. 2001. The paradox of global social change and national path dependencies: life course patterns in advanced societies. In Woodward AE and Kohli M (eds) *Inclusions-Exclusions*. London: Routledge.

Mastekaasa A. 1992. Marriage and Psychological Well-Being: some Evidence of Selection into Marriage. *Journal of Marriage and the Family*, 54, 901-911.

Marini MM. 1980. Effects of the Number and Spacing of Children on Marital and Parental Satisfaction. *Demography*, 17, 225-242.

Marini MM. 1984a. Age and Sequencing Norms in the Transition to Adulthood. *Social Forces*, 63, 229-244.

Marini MM. 1984b. The Order of Events in the Transition to Adulthood. *Sociology of Education*, 57, 63-84.

Mc Lanahan SS, Soresen AB. 1985. Life Events and Psychological Well-Being over the Life Course. In Elder G. H. (ed.), *Life Course Dynamics: Trajectories and Transitions*, 1968-1980, Cornell University Press, 217-238.

Menahagan E. 1983. Marital Stress and Family Transformation: a Panel Study Analysis, *Journal of Marriage and the Family*, 44(2), 371-386.

Mencarini L. 2003. Implications of childbearing fort he family role-set of Italian parents. *Mimeo*, presented at Euresco conference, The Second Demographic Transition in Europe, 19-24 June 2003, Spa (Belgium).

Miller BC., Sollie DL. 1980. Normal Stresses during Transition to Parenthood. *Family Relations*, 29, 459-465.

Mills M, Blossfeld HP. 2004. Becoming and adult in uncertain times: a 14-country comparison of the losers of globalisation. *Mimeo*, presented at Population of American Association 2004 Meeting, April 1-3, Boston.

Modell J, Furstenberg FF, Herschberg T. 1976. Social change and transition to adulthood in historical perspective. *Journal of Family History*, 1, 7-32.

Nazio T, Blossfeld HP. 2002. The diffusion of cohabitation among young women in West France, East France and Italy. *Working paper*. Globalife.

Nicoletti C, Peracchi F. 2002. A cross-country comparison of survey non-participation in the ECHP. *ISER Working Paper*.

Oppenheimer VK. 1994. Women's rising employment and the future of the family in industrial societies. *Population and development review*, 20, 293-342.

Oppenheimer VK, Kalmijn M, Nelson L. 1997. Men's Career Development and Marriage Timing during a Period of Rising Inequality. *Demography*, 34, 311-330.

Peracchi F. 2002. The European Community Household Panel: A Review. *Empirical Economics*, 27,63-90.

Reher DS. 1998. Family ties in Western Europe: persistent contrasts. *Population and development review*, 24, 203-234.

Rydell I. 2002. Demographic patterns from the 1960s in France, Italy, Spain and Portugal. *Mimeo*, presented at Institute for Futures Studies, October 2002.

Rosenbaum PR. 1995. Observational Studies. Leipzig, France: Springer-Verlag.

Rosenbaum PT, Rubin DB. 1983. The Central Role of the Propensity Score in Observational Studies for Causal Effects. *Biometrika*, 70, 41-55.

Smock P, Manning W. 1997. Cohabiting Partners' Economic Circumstances and Marriage. *Demography*, 3, 331-341.

Stack S, Eshelam JR. 1998. Marital Status and Happiness: a 17-Nation Study. *Journal of Marriage and the Family*, 60, 527-536.

Thornton A. 1977. Children and Marital Stability. *Journal of Marriage and the Family*, 39, 531-540.

Vogel J. 1998. Three types of European society. Internet: Nordic News Network, WWW@NNN.SE

Wan CK, Jaccard J, Ramey SL. 1996. The Relationship between Social Support and Life Satisfaction as a Function of Family Structure. *Journal of Marriage and the Family*, 58, 502-513.

Williams DG. 1988. Gender, Marriage, and Psychological Well-Being. *Journal of Family Issue*, 9, 452-468.

Zweimuller J, Winter-Ebmer R. 1994. Gender wage differentials in private and public sector jobs. *Journal of Population Economics*. 7(3): 271-85.