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Happy Families: types, ties and multidimensional wellbeing*

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The literature has already highlighted the positive role of marriage on objective wellbeing. Indeed, married couples earn more, are less likely to be unemployed, live longer and healthier lives, and so on. Married couples also show higher levels of subjective wellbeing, as revealed in several happiness studies. These previous studies typically offer a single, often generic measure of happiness. The novel contribution of this paper is to offer a more comprehensive perspective of various dimensions of subjective wellbeing. The hypothesis under analysis concerns whether, and if so, how different family types (single, cohabiting, married) and stronger family ties (defined by the presence of children and religious observance) impact the dimensions of subjective wellbeing (satisfaction with economic resources, health, relations, leisure and labour) using Italian data between 2000 and 2015. Our findings shows that married subjects display a consistently higher probability of being satisfied with health, relationships among family and friends, whereas those defined as single display a higher probability of being satisfied with leisure time and to a lesser extent with their work. Finally, married couples also show a higher probability of being satisfied with their economic resources.

Keywords: family, gender, happiness, wellbeing

JEL classification: I31; J12; H12.

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1 Introduction

Family is the building block of society and any changes that affect families have important consequences for society as a whole. Many branches of social sciences have been studying the transition from “traditional” family - a model consistently characterized by married parents who have many children, and often live in the same house across several generations - to “modern” nuclear families in which the presence of children and the act of marriage have ceased to be necessary conditions. Happiness studies have already tackled the question of how these “modern” family types impact social and economic outcome on an individual level, as well as individual subjective wellbeing. Previously conducted research has focused on the effect of marriage on the objective outcomes of a single person’s life (e.g. health, earning, employment) (Frisch and Simonsen 2013; Zissimopoulos et al. 2015), while other studies have considered overall wellbeing with particular reference to synthetic subjective measures (happiness and life satisfaction) as outcome variables, or with a focus on one separate dimension of subjective wellbeing (e.g. family satisfaction or health perception) (Gove et al. 1990; Liu et al. 2013; Blanchflower and Oswald 2004). To the best of our knowledge, there is no contribution that offers an exhaustive analysis of the effect of family on wellbeing in its multidimensional complexity. This paper intends to fill this gap by investigating the role of family as a determinant of multidimensional subjective wellbeing.

The work relies on a comprehensive and integrated vision of multidimensional wellbeing and studies the role of family, family types and family ties in its various forms, with respect to a range of dimensions highlighting life satisfaction (namely, satisfaction concerning health, economics, social relations, work and leisure). We test whether deeper family ties constitute a stronger determinant for each of the life domains and try to address the following research questions: in which aspects of life do people who are part of a network of strong family ties experience higher satisfaction? What are the dimensional trade-offs among different types of family? Results show that married subjects display a consistently higher probability of being satisfied with health, relationships among family and friends. By contrast, those defined as single display a higher probability of being satisfied with leisure time and, to a lesser extent, with their work. Finally, married couples reveal a higher probability of being satisfied with economic resources.

The paper is structured as follows. Section 2 provides a literature review on the link between marriage, family and wellbeing. Sections 3 and 4 show the data and the method of the study. Section 5 provides comments on our main findings and section 6 reports the closing remarks of the study.

2 Literature review

The link between marital unions and other family types with regards to wellbeing has been widely studied. Researchers have explored the effects of marriage on both objective measures of wellness such as health and income as well as subjective measures such as happiness, social wellbeing and psychological health. A broad range of literature

supports the link between health and social ties: compared with those who enjoy few social ties, people are less likely to die prematurely if supported by close relationships with friends, family members, or members of other support groups (Cohen 1998; House et al. 1988). On the other hand, when social ties break down (the passing of a spouse, the loss of work, or the event of a divorce) people become increasingly vulnerable to disease (Dohrenwend and Dohrenwend, 1982). For instance, heart attack patients who lived alone were found to be twice as likely to have a second attack within six months in comparison to other patients (Case et al., 1992), whereas among the leukemia patients preparing to undergo bone marrow transplants, patients with a high level of perceived social support had improved survival (Colón et al., 1991). A more recent study in Denmark followed 122.5 million Danes between 1982 and 2011 and found that opposite-sex marriages resulted in consistently lower mortality rates than those in other marital status categories (Frisch and Simonsen, 2013). Similarly, Rendall et al. (2011) found higher rates of survival for married couples, with an additional survival “premium” for married men. A number of studies in the field of psychology examined the relation between marital status, family types and psychological distress, all of which found that married men and women have better mental health and present lower distress outcomes compared to their unmarried counterparts (Pearlin and Johnson 1977; Gove et al. 1983, 1990; Ross and Mirowsky 1989).

When disentangling the various dimensions that aim to capture the functioning and the realization of a person’s potential (e.g. competence, emotional stability, engagement, meaning and purpose in life, optimism, accomplishment, social relationships, self-esteem and vitality) the relation between marriage and wellbeing still holds true (Gove et al. 1983, 1990). Moreover, marriage represents a protective factor against suicide with unmarried, widowed or divorced/separated individuals reporting higher suicide rates (Masocco et al., 2008).

Economic prosperity is another objective measure used in these studies. Korenman and Neumark (1991) collected data from a company personnel files to investigate differences in income between married and unmarried subjects. They found that married workers reported higher productivity rates and had a marital pay premium, that remained even within a single firm for a relatively homogeneous group of occupations (managers and professionals). Moreover, if lifetime earnings were considered, married men reported higher earnings than unmarried men; the disparity proved to be even more pronounced for women. Furthermore, the length of marriage is also a key factor, as longer marriages were associated with increases in wealth (Zissimopoulos et al., 2015).

A wealth of literature also exists that analyzes the relation between family types and a range of measures on subjective wellbeing, such as happiness and life satisfaction. Allen and Price (2015) found that the happiest university students were those who displayed greater satisfaction in their relationship, while subjects enjoying close relationships were found to better tackle stressful situations (Abbey and Andrews 1985; Perlman and Rook 1987). Focusing on marital relations, a number of studies support the idea that compared to single, widowed, but also divorced and separated people, married couples are happier and more satisfied with life (Gove et al. 1990; Inglehart 1990). Also Liu et al.

(2013) studied how both marital status and marital quality affect life satisfaction in China, and found that marriage protects couples from the stressful consequences of external threats; this is especially true for men, while marital quality proved to be of greater significance for women's overall happiness. Stack and Eshleman (1998) tested the relationship between marital status and happiness financial satisfaction and perceived health in 17 nations and found that in 16 of the nations in the study, married people were significantly happier than both single and cohabiters, and were significantly better off in terms of finances and health compared to the remaining categories. Blanchflower and Oswald (2004) found that, both in the US and the UK, reported wellbeing (happiness and life satisfaction) was highest among women, married couples, the highly educated, and those whose parents did not divorce. They also reported that second and subsequent marriages were less happy than first marriages, and that a lasting marriage is worth \$100,000 per annum in comparison to being widowed or divorced.

Bierman et al. (2006) found that those who had been married for long periods revealed a significantly higher purpose in life than all other groups (controlling for age, race, and the presence of children). The latter advantage was reduced for the remarried. Shapiro and Keyes (2008) registered a modest social wellbeing advantage for married people over those defined as single, with cohabiters being the least well-off (in this setting social wellbeing is defined, according to the validation from Keyes (1998), as people's valuation of their circumstances and functioning in society). A more contrasting picture emerges from the study of Marks and Lambert (1998). The authors found that, although transition to separation/divorce or widowhood was consistently associated with negative effects across a number of dimensions concerning mental wellbeing, marriage did not always have a strongly positive influence on each dimension. In fact, cases were also reported in which unmarried people reported greater wellbeing than their married counterparts (e.g., in autonomy and personal growth dimensions), suggesting that marriage may have complex effects on a range of dimensions concerning psychological wellbeing.

In recent years several papers have investigated the cohabitation gap, that is to say the observed pattern that married people are better off than cohabiters across multiple dimensions (Stack and Eshleman, 1998; Shapiro and Keyes, 2008; Soons and Kalmijn, 2009; Lee and Ono, 2012). More recent papers have studied the stability over time (Pirani et al. 2014), finding that the gap may be closing over time for both groups, and the determinants of such closing gap, at least for women, largely depends on culture (Stavrova et al. 2012). Soons and Kalmijn (2009) shows that, in countries where cohabitation is uncommon, those who self-select into cohabitation have significantly different characteristics from the majority of the population, which may in turn account for the result. Speaking of self-selection and reverse causality, Stutzer and Frey (2006) tested the possibility of selection bias in marriage, finding that those who got married younger were, on average, people with higher levels of life satisfaction even before marriage.

Finally, several papers have studied how children affect the wellbeing of single, cohabiting and married parents. The evidence is mixed: one group of researchers found a positive relationship between parenthood and subjective wellbeing, with parents reporting higher levels of happiness, life satisfaction, self-esteem, positive emotions and

meaning in life (Stutzer and Frey 2006; Haller and Hadler 2006; Hansen et al. 2009; Angeles 2010; Nelson et al. 2013; Aassve et al. 2012). Kohler et al. (2005) highlighted a significant and positive effect on happiness only for the first child, whereas Herbst and Ifcher (2016) indicated that parents become happier than non-parents when a longer time span is examined, while non-parents' happiness steadily declines. On the contrary, other researchers reported that having children is negatively related to subjective wellbeing and that the negative relation is mostly explained by the negative impact on financial satisfaction (Stanca 2012; Beja 2015; Bhargava et al. 2014).

3 Data

The empirical application of this study is based on a harmonized dataset deriving from the Italian National Survey "Aspects of Daily Life" that has been carried out each year since 1993 by the Italian National Statistics Institute (ISTAT). The survey collects information on citizens' habits and the problems they encounter on a daily basis. The survey investigates an array of information ranging from economic issues to subjects' social lives, health status, lifestyles and how they spend their leisure and work time, as well as individuals' personal satisfaction regarding various aspects of life and the quality of public services in the area in which they live. The dataset provides objective and subjective measures with the aim of gaining a general insight into quality of life in Italy as a whole. The timeframe for the empirical analysis ranges from the years 2000 to 2015. The dependent variables capture individual wellbeing in terms of satisfaction within six life domains: (1) household economic conditions; (2) health; (3) family relations; (4) friendships; (5) leisure time; (6) work.¹

The major variable of interest concerns the strength of ties within the immediate family. This statement certainly deserves further discussion. In the last decades the traditional concept of family has changed dramatically. Marriage rates have been steadily decreasing while cohabitation and living alone have become the prevalent status in many countries, while non-traditional family forms are becoming increasingly common. Our variable of interest tries to capture this complexity by resorting to the Johnson (1973, 1999) commitment framework, by which three types of marital commitment can be defined: personal, moral, and structural. Personal commitment refers to the extent an individual wishes to stay in the relationship, whereas moral commitment refers to the extent an individual believes he or she ought to stay in the relationship. These variables are internal forms of commitment and depend on one person's own attitudes and values. On the other hand, structural commitment is external and refers to the constraints that would make leaving the relationship costly. There are several motives that may encourage individuals to feel personally, morally or structurally committed to a relationship. Among them, the presence of children is generally associated with greater commitment

¹The respondent is asked to answer the following question on a scale from 1 (very satisfied) to 4 (not satisfied) : With reference to the last 12 months, are you satisfied with the following aspects related to your life? The aspects are: household's economic conditions; health; family relations; friends' relations; leisure time and work

and represents a stabilizing factor in cohabiting relationships (Brown and Booth, 1996). Similarly, the degree of religious observance affects the extent of moral commitment in such a way that religious marriages are more stable than civil marriage (Stanley et al., 2004; ISTAT, 2016; Perry, 2016). A third source of commitment may come from the legal constraints and the social pressure usually associated with the marriage contract; indeed, ample evidence of the link between the legal status (married vs. cohabiting) and the stability of unions can be found (Osborne et al., 2007). Although these three sources of commitment are certainly not the only sources available, they are the only ones that match data availability. Our main dependent variable of family type is thus built around the idea that one or more factors of commitment strengthen family ties, which in turn may impact subjective wellbeing. Accordingly, the strength of family ties is modeled on factors concerning moral commitment, namely the presence of children and adherence to religious observance, and factors concerning structural constraints, namely legal marital status. Therefore, religious married couples and married couples with children are assumed to display stronger family ties than cohabiters both with and without children. Furthermore, single parents and individuals are assumed to face lower/absent family ties. Therefore, the variable of family structure is shaped as follows: 1) married couples (with or without children; religious and non-religious); 2) cohabiting couples (with or without children; religious and non-religious); 3) single mothers and fathers, and 4) single individuals (adults living alone or with other relatives or friends).

Covariates include a set of individual characteristics (age, gender, divorced/widowed status, education, working condition and working position, leisure activities and social interactions), a set of regional characteristics (regional divorce rate, the ratio between religious and civil marriages, and an indicator capturing the degree of institutionalization of cohabitation as a percentage of cohabiting couples over the total number of couples). These data are meant to capture both the traits of respondents' local belief systems and cultural traits related to family values that might affect the extent of co-habitation (Lee and Ono, 2012; Stavrova et al., 2012) and originate from ISTAT territorial accounts. The sample includes individuals belonging to one of the categories described insofar. Descriptive statistics are presented in Table 1. The full description of variables is presented in Table 6 in the Appendix

4 Model Specification

In the original dataset the dependent variables of the different life satisfaction domains are all measured on a 1-4 likert scale. In our dataset, the variables have been dichotomized for modeling purposes.² Indeed, our beta coefficients of interest are expressed in terms of Odd Ratio, as the probability of being more (or less) satisfied than the reference category. The first three model specifications consider satisfaction in six different life domains as probabilistic functions of family types, individual and local char-

²The original variables are as follows: 1 = very satisfied; 2 = satisfied; 3 = unsatisfied; 4 = very unsatisfied. We construct dummy variables equal to one if the individual answers 1 or 2, zero otherwise.

Table 1: Summary statistics

VARIABLES	N	Mean	Std. Dev.	Min	Max
Economic satisfaction	576,224	0.528	0.499	0	1
Health satisfaction	576,134	0.821	0.384	0	1
Family satisfaction	575,414	0.931	0.253	0	1
Friend satisfaction	575,357	0.858	0.349	0	1
Leisure satisfaction	574,840	0.664	0.472	0	1
Work sat	312,265	0.772	0.419	0	1
Married	678,021	0.750	0.433	0	1
Cohabitors	678,021	0.0324	0.177	0	1
Single parents	678,021	0.0425	0.202	0	1
Singles	678,021	0.130	0.337	0	1
Age	678,021	30.68	23.53	1	108
Female	678,021	0.514	0.500	0	1
Marriage length	669,284	18.69	17.64	0	79
Working position	429,139	4.017	2.318	1	13
Employment status	583,366	1.941	0.960	1	3
Education	642,779	1.782	0.593	1	3
Economic condition	671,772	0.601	0.490	0	1
Religiosity	627,507	2.791	1.288	1	6
Children	678,021	0.520	0.500	0	1
Friends	637,559	0.724	0.447	0	1
Social interaction	678,021	0.422	0.494	0	1
Cohabitation rate	678,021	0.0415	0.0276	0.001	0.134
Divorce rate	678,021	0.179	0.0642	0.053	0.412
Unemployment rate	678,021	9.406	5.285	2.543	24.12

acteristics, with region and time fixed effects. Life satisfaction in six different domains is our measure of individual wellbeing, while the family type is our focal variable and consists of a set of dummies as modeled in Section 3. Individual characteristics represent individual objective factors such as age, gender, education, working position, working conditions, religiosity, etc. The aim is to highlight the average effect of different family types on subjective wellbeing. In particular:

$$\begin{aligned}
LS_{domains_{irt}} = & \alpha + \beta_1 \text{ married couples}_{irt} + \beta_2 \text{ cohabiters}_{irt} \\
& + \delta IC + \xi RC + \mu_r + \lambda_t + \epsilon_{irt}
\end{aligned} \tag{1}$$

This baseline specification considers married couples and cohabiting couples as comparable to the benchmark of single parents and single individuals. IC represents the vector of individual characteristics, RC the set of regional characteristics, while μ_r and λ_t represent region and time fixed effects, respectively. The hypothesis to be tested is that in cases of stronger family ties, the probability of being satisfied is higher. Therefore, married couples should display higher odds ratios (OR) than other family forms in all domains of life satisfaction.

$$\begin{aligned}
LS_{domains_{irt}} = & \alpha + \beta_1 \text{ married with children}_{irt} \\
& + \beta_2 \text{ cohabiters with children}_{irt} + \beta_3 \text{ married without children}_{irt} \\
& + \beta_4 \text{ cohabiters without children}_{irt} + \beta_3 \text{ single parents}_{irt} + \\
& \delta IC + \zeta RC + \mu_r + \lambda_t + \epsilon_{irt}
\end{aligned} \tag{2}$$

The second specification differentiates the standard family types by the presence of children (below the age of 24) in the household. Therefore, married couples with children and cohabiters with children are compared to married couples and cohabiters without children and single parents to those defined as single. The assumption in this case is that family ties increase with the presence of children so that couples with children are expected to display a higher OR. However, it is worth noting that empirical findings show contrasting results on the link between the presence of children and subjective wellbeing, as highlighted in Section 2.

$$\begin{aligned}
LS_{domains_{irt}} = & \alpha + \beta_1 \text{ religious married}_{irt} + \\
& \beta_2 \text{ non - religious married}_{irt} + \beta_3 \text{ religious cohabiters}_{irt} + \\
& \beta_4 \text{ non - religious cohabiters}_{irt} + \delta IC + \zeta RC + \mu_r + \lambda_t + \epsilon_{irt}
\end{aligned} \tag{3}$$

The third specification instead differentiates family types according to religious observance. We define a family to be religious if its members declare that they go to church (or other places of worship) several times per year, or on a regular basis. Here, married religious couples are compared to married non-religious couples and religious cohabiters to non-religious cohabiters with respect to those defined as single (single parents and

single persons). In this case, the hypothesis is that religious couples display stronger family ties compared to non-religious couples and therefore their OR should present higher values with respect to the other family configurations. It is worth noting that, in the absence of longitudinal data and appropriate instrumental variables, possible unobservable heterogeneity was controlled through a time and spatially fixed effect and the set of individual characteristics. It remained impossible to tackle the effects of individual behaviour within heterogeneity and the model specifications only take average effects into account.

5 Results

We begin by observing the results (in Table 7) of the average effect of different family types on subjective life satisfaction domains over time. The hypothesis is that stronger family ties are associated with a higher probability of wellbeing. Cohabiting and married individuals score the highest level of satisfaction in all but the leisure time domain. Married couples score the best in the domains of economic resources, familiar relations and, at least for some periods, in the domains of friendship and leisure time as well.

Table 2 tests the descriptive results of married couples and reports logistic estimates for equation 1 expressed in odds ratios. The first two rows display the probability of being satisfied for married and cohabiters with respect to the benchmark case of singles (both single parents and those defined as single living alone). Married couples report a significantly higher probability of being more satisfied with their economic resources (namely a higher probability by 14 per cent), with health (59 per cent), and both with relationships among family and friends, than those who are not in relationships. Similarly, cohabiters report higher satisfaction with health and relationships. On the contrary, both married and cohabiters groups display lower satisfaction with leisure time (a 19 per cent and 8 per cent lower probability of being satisfied with leisure, respectively), and cohabiters are also less satisfied with their job status (8 per cent less) and economic conditions (5 per cent less) than single individuals. Sharing the burden of life with a partner results in an improved quality of life across the majority of the life satisfaction domains. On the other hand, the coefficients of married couples differ statistically from the coefficients of cohabiters, with married couples being more satisfied than cohabiters in all domains. This latter result confirms the presence of a cohabitation gap in our data. All the individual covariates are statistically significant and it is worth mentioning two figures: on one hand, the probability of being satisfied for those who identify as religious is consistently higher than for non-religious, while on the other hand, having children increases the probability of being satisfied with health and reduces the probability of being satisfied with economics resources, work and friendships.

The second specification of our model aims to study the role of children in different family types and their impact on parents' life satisfaction. In our context, married couples with children represent 38 per cent of the sample, whereas 54 per cent of cohabiters report having children. Following the commitment theory of Johnson (1973), children deepen family ties and thus the presence of children should improve parents' life satis-

Table 2: Life Satisfaction of of different family types

VARIABLES	(1) Economic satisfaction	(2) Health satisfaction	(3) Family satisfaction	(4) Friend satisfaction	(5) Leisure satisfaction	(6) Work satisfaction
Married	1.140*** (0.019)	1.595*** (0.039)	2.549*** (0.061)	1.439*** (0.034)	0.818*** (0.013)	1.027 (0.021)
Cohabitors	0.951** (0.020)	1.189*** (0.035)	2.067*** (0.071)	1.146*** (0.032)	0.924*** (0.018)	0.923*** (0.024)
Age	1.005*** (0.000)	0.980*** (0.000)	1.001 (0.001)	0.996*** (0.001)	0.997*** (0.000)	1.001 (0.001)
Female	1.043*** (0.008)	0.845*** (0.008)	1.013 (0.014)	0.922*** (0.010)	0.760*** (0.006)	0.928*** (0.010)
Divorced	0.848*** (0.014)	0.911*** (0.020)	0.556*** (0.012)	0.940*** (0.021)	0.860*** (0.014)	1.047** (0.023)
Widowed	1.184*** (0.022)	0.695*** (0.014)	1.314*** (0.037)	0.839*** (0.019)	1.028 (0.018)	1.154*** (0.043)
Marriage length	1.002*** (0.000)	0.986*** (0.001)	1.001** (0.000)	0.996*** (0.001)	1.006*** (0.000)	1.001** (0.000)
Working position	0.982*** (0.002)	1.004* (0.002)	0.998 (0.003)	1.001 (0.002)	0.959*** (0.002)	0.990*** (0.002)
Employment status	1.050*** (0.006)	1.422*** (0.009)	1.089*** (0.010)	1.127*** (0.008)	0.686*** (0.004)	1.226*** (0.012)
Education	1.310*** (0.010)	1.318*** (0.012)	1.051*** (0.014)	1.061*** (0.011)	1.027*** (0.008)	1.160*** (0.013)
Economic condition	7.047*** (0.054)	1.837*** (0.017)	1.698*** (0.022)	1.422*** (0.014)	1.500*** (0.011)	2.540*** (0.026)
Religiosity	1.120*** (0.003)	1.129*** (0.004)	1.166*** (0.007)	1.150*** (0.005)	1.067*** (0.003)	1.124*** (0.005)
Children	0.905*** (0.009)	1.151*** (0.016)	1.001 (0.017)	0.955*** (0.013)	0.806*** (0.007)	1.006 (0.012)
Friends	1.136*** (0.009)	1.536*** (0.015)	1.404*** (0.019)	4.615*** (0.047)	2.061*** (0.016)	1.203*** (0.014)
Social interaction	1.198*** (0.010)	1.513*** (0.018)	1.134*** (0.017)	1.431*** (0.017)	1.362*** (0.011)	1.053*** (0.012)
Coabh. ratio	1.573 (0.625)	0.210*** (0.103)	0.132*** (0.092)	0.275** (0.145)	0.981 (0.373)	0.252** (0.141)
Divorce rate	0.827 (0.133)	1.869*** (0.369)	0.547** (0.154)	0.655** (0.139)	0.700** (0.107)	1.588** (0.355)
Unemployment rate	1.001 (0.003)	1.007* (0.004)	0.996 (0.005)	0.998 (0.004)	1.000 (0.003)	0.997 (0.004)
Constant	0.155*** (0.009)	1.283*** (0.094)	2.846*** (0.285)	1.307*** (0.099)	2.913*** (0.155)	0.671*** (0.054)
Observations	408,497	408,276	407,789	407,809	407,531	256,520
Wald $\chi^2(50)$	86459	45720	12615	34393	33111	13980
Prob > χ^2	0	0	0	0	0	0
Pseudo R-squared	0.193	0.155	0.0619	0.122	0.0700	0.0572
χ^2 test: married=cohab	63.81***	78.55***	31.07***	54.02***	33.17***	15.26***

Note: significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Coefficients expressed in terms of OR. Test on equality of coefficients: the null is coefficients of married and cohabiters are equal.

faction. Yet it is worth noting that, as mentioned in Section 2, previous empirical results on this particular point are mixed. Thus, Table 3 reports estimates from Equation 2. Results are consistent with the previous specification when comparing the OR of family structures with those of single people. Indeed, either married people with or without children or cohabiters with or without children display higher probabilities of being satisfied with health and relationships than single individuals, and lower probabilities of being satisfied with work and leisure time. As with previous specifications, the probabilities of being economically satisfied are positive for married and negative for cohabiters. Indeed, the former display an 8 per cent higher probability of being satisfied with economic resources, whereas the latter display an 11 per cent lower probability of being satisfied (regardless of children). Furthermore, focusing on the effect of children across homogeneous familiar categories, married couples with children report a higher probability of being satisfied with health than married couples without children (coefficients are statistically different from each other), whereas married couples without children have a statistically higher OR with economic resources and relationship satisfaction than those who are married with children. Similarly, cohabiters with children display a statistically significantly higher probability of being satisfied with health than cohabiters without children, confirming the consistently positive effect of children on health satisfaction. On the contrary, cohabiters without children have a significantly higher probability of being satisfied with leisure time and their working lives. In this specification, the category of single parents has also been considered with the aim of disentangling the effect of children within the non-“traditional” family group. Single parents are revealed to be 31 per cent more satisfied than single individuals regarding health (again confirming the positive effect of children on health) and both family ties and relationships with friends. However, single parents are far less satisfied with economic resources, work and leisure time (24 per cent, 19 per cent, 7 per cent less satisfied respectively). This result may solve the puzzling and seemingly contradictory findings of previous literature concerning the impact of children on the life satisfaction of their parents. The arrival of one or more children affects parents’ lives in a complex way, increasing their satisfaction in terms of health and connections to family and friends (the latter two categories for cohabiters only) while children quite predictably decrease parents’ satisfaction with leisure time. The impact on both economic wellbeing and job satisfaction instead seem to be neutral.

Following the framework offered by the commitment theory, our third specification details the role of religiosity on family ties and thus on life satisfaction. In this case, the hypothesis states that religious couples display stronger family ties than non-religious couples and, accordingly, should display higher probabilities of being satisfied. Couples are assumed to be religious if they declare that they attend a church or other places of worship at least twice per year. Therefore, non-religious couples never attend a church or other places of worship. In our data, 85 per cent of married couples are considered religious, whereas among cohabiters those attending church or other places of worship at least couple of times per year are 66 per cent.

Our estimates are reported in Table 4 and they support the hypothesis for married couples: religious married couples show a large and significantly higher probability of

Table 3: Life Satisfaction, family types and children

VARIABLES	(1) Economic satisfaction	(2) Health satisfaction	(3) Family satisfaction	(4) Friend satisfaction	(5) Leisure satisfaction	(6) Work satisfaction
Married with children	1.010 (0.015)	1.870*** (0.040)	2.570*** (0.060)	1.400*** (0.030)	0.659*** (0.009)	1.024 (0.019)
Married without children	1.087*** (0.020)	1.705*** (0.046)	2.728*** (0.083)	1.526*** (0.041)	0.816*** (0.014)	1.013 (0.023)
Cohabitors with children	0.887*** (0.027)	1.605*** (0.076)	2.148*** (0.109)	1.168*** (0.047)	0.725*** (0.021)	0.981 (0.036)
Cohabitors without children	0.892*** (0.024)	1.111*** (0.040)	2.076*** (0.093)	1.124*** (0.041)	0.946*** (0.024)	0.861*** (0.029)
Single parents	0.767*** (0.018)	1.319*** (0.042)	1.125*** (0.034)	1.079** (0.033)	0.811*** (0.017)	0.939** (0.026)
Age	1.005*** (0.000)	0.980*** (0.000)	1.001* (0.001)	0.997*** (0.001)	0.997*** (0.000)	1.001 (0.001)
Female	1.047*** (0.008)	0.843*** (0.008)	1.006 (0.014)	0.919*** (0.010)	0.760*** (0.006)	0.931*** (0.011)
Divorced	0.869*** (0.015)	0.898*** (0.020)	0.547*** (0.012)	0.924*** (0.021)	0.858*** (0.014)	1.061*** (0.024)
Widowed	1.181*** (0.022)	0.699*** (0.014)	1.325*** (0.038)	0.842*** (0.019)	1.027 (0.018)	1.167*** (0.044)
Marriage length	1.003*** (0.000)	0.985*** (0.001)	1.000 (0.001)	0.995*** (0.001)	1.006*** (0.000)	1.001** (0.000)
Working position	0.982*** (0.002)	1.004* (0.002)	0.998 (0.003)	1.001 (0.002)	0.959*** (0.002)	0.990*** (0.002)
Employment status	1.050*** (0.006)	1.422*** (0.009)	1.090*** (0.010)	1.127*** (0.008)	0.686*** (0.004)	1.227*** (0.012)
Education	1.311*** (0.010)	1.316*** (0.012)	1.051*** (0.014)	1.060*** (0.011)	1.027*** (0.008)	1.159*** (0.013)
Economic condition	7.044*** (0.054)	1.838*** (0.017)	1.699*** (0.022)	1.422*** (0.014)	1.500*** (0.011)	2.539*** (0.026)
Religiosity	1.119*** (0.003)	1.129*** (0.004)	1.167*** (0.007)	1.150*** (0.005)	1.067*** (0.003)	1.124*** (0.005)
Friends	1.135*** (0.009)	1.536*** (0.015)	1.404*** (0.019)	4.618*** (0.047)	2.061*** (0.016)	1.203*** (0.014)
Social interaction	1.199*** (0.010)	1.514*** (0.018)	1.133*** (0.017)	1.431*** (0.017)	1.362*** (0.011)	1.054*** (0.012)
Coabh. ratio	1.553 (0.617)	0.212*** (0.104)	0.134*** (0.093)	0.277** (0.146)	0.984 (0.374)	0.249** (0.140)
Divorce rate	0.829 (0.133)	1.869*** (0.369)	0.547** (0.154)	0.656** (0.139)	0.700** (0.107)	1.590** (0.356)
Unemployment rate	1.001 (0.003)	1.007* (0.004)	0.996 (0.005)	0.998 (0.004)	1.000 (0.003)	0.997 (0.004)
Constant	0.159*** (0.009)	1.263*** (0.092)	2.792*** (0.279)	1.283*** (0.097)	2.911*** (0.155)	0.678*** (0.055)
Observations	408,497	408,276	407,789	407,809	407,531	256,520
Wald $\chi^2(52)$	86438	45737	12638	34409	33112	13992
Prob > χ^2	0	0	0	0	0	0
Pseudo R-squared	0.193	0.155	0.0620	0.122	0.0700	0.0572
married with child=married no child	45.01***	34.04***	7.456**	29.62**	450.7***	0.638
Cohab with child=cohab no child	0.0204	41.45***	0.274	0.575	54.61***	7.952**

Note: significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Coefficients expressed in terms of OR. Test on equality of coefficients: null is coefficients of married/cohabitors with children and married/cohabitors without are equal.

being satisfied in all dimensions with the exception of economic resources and leisure time (test of coefficients fail to reject the hypothesis of equal coefficient). In the case of cohabiters, however, the picture differs somewhat and no clear discrepancies appear: the coefficients of religious and not religious cohabiters are statistically equal except for satisfaction with family relationships, by which the OR is significantly higher for religious cohabiters (2.16 vs 1.87).

The fact that our hypothesis is supported in the case of married couples and not cohabiters may not come as a surprise as the predominant religious affiliation in the country (Catholicism) strongly favours marriage over cohabitation. This might imply that religious cohabiters in our dataset embrace, on average, a milder form of religiosity. In conclusion, results consistently confirm the hypothesis that, on average, individuals within close family bonds display higher probabilities of being satisfied with health, relationships and economic resources to some extent, whereas they are found to be consistently less satisfied than those living alone with respect to leisure and work. As regarding the hypothesis that stronger family ties enhance the probability of being satisfied, results show that this is always true for health and consistently true for relationships.

5.1 Endogeneity

The issue of endogeneity characterizes many happiness studies (Becchetti et al., 2008; Guven, 2011) and questions of reverse causality may also be raised also for our results: to use the words of Stutzer and Frey (2006), “Does marriage make people happy, or do happy people get married?”. Without a panel data structure it is not an easy task to find appropriate instruments to tackle such an issue. Following the strategy proposed in financial literature by Caprio et al. (2007) and further used in Laeven and Levine (2009) and Ferri and Murro (2015), we used the regional mean share of married people and cohabiters by age cohort, to instrument respectively marriage and cohabitation. These instrumental variables capture both regional and age effects on the individual choice on marriage or cohabitation. A positive feature of these instruments is that individual happiness is unlikely to affect the regional share of married people and cohabiters.

Table 5 reports the results. The instrument is relevant and not weak, as shown both in the underidentification and weak instrument test (the null is rejected). Results report a reversed effect of marriage on economic satisfaction, which is now lower than 1, meaning that both married people and cohabiters report a lower probability of being satisfied with economic resources than single individuals. Instead, the effect of marriage on health holds and increases (3.16), as does the effect of marriage on friendship satisfaction (1.78). Moreover, the effect of cohabitation on family satisfaction holds but is slightly lower. The resulting effects for both married people and cohabiters on leisure and working satisfaction confirm the lower probabilities for couples of being satisfied within these domains with respect to their single counterparts.

Table 4: Life Satisfaction, family types and religion

VARIABLES	(1) Economic satisfaction	(2) Health satisfaction	(3) Family satisfaction	(4) Friend satisfaction	(5) Leisure satisfaction	(6) Work satisfaction
Married religious	1.139*** (0.019)	1.641*** (0.040)	2.714*** (0.068)	1.500*** (0.036)	0.808*** (0.013)	1.051** (0.022)
Married not religious	1.144*** (0.023)	1.425*** (0.039)	2.090*** (0.063)	1.236*** (0.034)	0.857*** (0.016)	0.951** (0.023)
Cohabitors religious	0.934*** (0.024)	1.157*** (0.041)	2.166*** (0.095)	1.135*** (0.039)	0.913*** (0.022)	0.955 (0.031)
Cohabitors not religious	0.983 (0.033)	1.220*** (0.058)	1.872*** (0.098)	1.131*** (0.049)	0.953 (0.030)	0.861*** (0.034)
Age	1.005*** (0.000)	0.980*** (0.000)	1.001* (0.001)	0.997*** (0.001)	0.997*** (0.000)	1.001 (0.001)
Female	1.043*** (0.008)	0.845*** (0.008)	1.013 (0.014)	0.921*** (0.010)	0.760*** (0.006)	0.927*** (0.010)
Divorced	0.848*** (0.014)	0.910*** (0.020)	0.556*** (0.012)	0.940*** (0.021)	0.860*** (0.014)	1.048** (0.023)
Widowed	1.184*** (0.022)	0.702*** (0.014)	1.331*** (0.037)	0.848*** (0.019)	1.024 (0.018)	1.167*** (0.044)
Marriage length	1.002*** (0.000)	0.986*** (0.001)	1.001** (0.001)	0.996*** (0.001)	1.006*** (0.000)	1.001** (0.000)
Working position	0.982*** (0.002)	1.004* (0.002)	0.998 (0.003)	1.001 (0.002)	0.959*** (0.002)	0.990*** (0.002)
Employment status	1.050*** (0.006)	1.421*** (0.009)	1.086*** (0.010)	1.126*** (0.008)	0.686*** (0.004)	1.225*** (0.012)
Education	1.310*** (0.010)	1.320*** (0.012)	1.054*** (0.014)	1.064*** (0.011)	1.027*** (0.008)	1.162*** (0.013)
Economic condition	7.047*** (0.054)	1.835*** (0.017)	1.695*** (0.022)	1.420*** (0.014)	1.501*** (0.011)	2.538*** (0.026)
Religiosity	1.121*** (0.004)	1.109*** (0.005)	1.130*** (0.007)	1.120*** (0.005)	1.076*** (0.004)	1.106*** (0.006)
Children	0.905*** (0.009)	1.149*** (0.016)	0.997 (0.017)	0.952*** (0.013)	0.806*** (0.007)	1.004 (0.012)
Friends	1.136*** (0.009)	1.536*** (0.015)	1.405*** (0.019)	4.620*** (0.047)	2.060*** (0.016)	1.204*** (0.014)
Social interaction	1.198*** (0.010)	1.512*** (0.018)	1.132*** (0.017)	1.429*** (0.017)	1.363*** (0.011)	1.052*** (0.012)
Coabh. ratio	1.573 (0.625)	0.212*** (0.104)	0.132*** (0.091)	0.279** (0.147)	0.978 (0.372)	0.253** (0.142)
Divorce rate	0.828 (0.133)	1.873*** (0.370)	0.548** (0.154)	0.655** (0.139)	0.699** (0.107)	1.596** (0.357)
Unemployment rate	1.001 (0.003)	1.007* (0.004)	0.996 (0.005)	0.998 (0.004)	1.000 (0.003)	0.997 (0.004)
Constant	0.155*** (0.009)	1.328*** (0.097)	3.031*** (0.303)	1.377*** (0.105)	2.864*** (0.152)	0.692*** (0.056)
Observations	408,497	408,276	407,789	407,809	407,531	256,520
Wald $\chi^2(52)$	86458	45769	12570	34467	33122	14022
Prob > χ^2	0	0	0	0	0	0
Pseudo R-squared	0.193	0.155	0.0625	0.122	0.0701	0.0573
Married rel=Married no rel	0.0747	74.02***	119.5***	126.2***	20.88***	29.48***
Cohab rel=Cohab no rel	1.613	0.869	4.911***	0.00436	1.274	4.680***

Note: significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Coefficients expressed in terms of OR. Test on equality of coefficients: null is coefficients of married/cohabiters religious and married/cohabiters not religious are equal.

Table 5: Robustness check

VARIABLES	(1) Economic satisfaction	(2) Health satisfaction	(3) Family satisfaction	(4) Friend satisfaction	(5) Leisure satisfaction	(6) Work satisfaction
Married	0.691*** (0.019)	3.161*** (0.148)	1.021 (0.017)	1.785*** (0.051)	0.829*** (0.023)	0.686* (0.141)
Cohabitors	0.664*** (0.039)	0.528*** (0.095)	1.093*** (0.023)	0.901 (0.076)	0.875*** (0.039)	1.153 (0.171)
Age	1.004*** (0.001)	0.989*** (0.004)	1.000 (0.000)	1.001 (0.002)	0.991*** (0.001)	1.000 (0.002)
Female	1.005*** (0.002)	0.988*** (0.002)	0.999 (0.001)	0.995*** (0.001)	0.941*** (0.001)	0.980*** (0.006)
Divorced	0.831*** (0.015)	1.701*** (0.089)	0.912*** (0.007)	1.269*** (0.032)	0.921*** (0.014)	0.831* (0.079)
Widowed	0.872*** (0.023)	1.308*** (0.123)	1.010 (0.007)	1.154*** (0.050)	0.965** (0.017)	0.856* (0.070)
Marriage length	1.005*** (0.001)	0.981*** (0.002)	1.001*** (0.000)	0.991*** (0.001)	1.003*** (0.001)	1.006 (0.004)
Working position	0.997*** (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	0.991*** (0.000)	0.999*** (0.000)
Employment status	1.017*** (0.002)	1.027*** (0.006)	1.006*** (0.001)	1.005* (0.003)	0.922*** (0.001)	1.028*** (0.005)
Education	1.063*** (0.002)	1.003 (0.006)	1.005*** (0.001)	0.990*** (0.003)	1.005** (0.002)	1.034*** (0.009)
Economic condition	1.562*** (0.003)	1.050*** (0.003)	1.036*** (0.001)	1.025*** (0.002)	1.096*** (0.002)	1.190*** (0.010)
Religiosity	1.021*** (0.001)	1.000 (0.001)	1.010*** (0.000)	1.010*** (0.001)	1.015*** (0.001)	1.026*** (0.005)
Children	1.092*** (0.008)	0.747*** (0.008)	1.012** (0.005)	0.859*** (0.006)	0.984** (0.007)	1.109* (0.062)
Friends	1.013*** (0.002)	1.085*** (0.002)	1.021*** (0.001)	1.232*** (0.002)	1.161*** (0.002)	1.017** (0.008)
Social interaction	1.020*** (0.002)	1.076*** (0.002)	1.005*** (0.001)	1.051*** (0.002)	1.057*** (0.002)	0.991 (0.010)
Coabh. ratio	1.317*** (0.107)	2.044*** (0.236)	0.879*** (0.039)	1.189** (0.087)	0.973 (0.079)	0.662* (0.146)
Divorce rate	0.938** (0.030)	1.029 (0.041)	0.963** (0.017)	0.944** (0.025)	0.920*** (0.030)	1.065 (0.042)
Unemployment rate	1.000 (0.001)	1.001** (0.001)	1.000 (0.000)	1.000 (0.000)	1.000 (0.001)	1.000 (0.001)
Constant	1.304*** (0.028)	1.415*** (0.080)	2.305*** (0.022)	1.572*** (0.044)	2.431*** (0.045)	1.913*** (0.161)
Observations	408,497	408,276	407,789	407,809	407,531	256,520
R-squared	0.209	-0.561	0.033	-0.055	0.083	-0.020
Endogeneity (P-value)	0	0	0.0181	0	4.14e-09	0.0198
F test (P-value)	0	0	0	0	0	0
Underid Test	456.6	457.8	453.7	452.8	452.5	5.191
Weak ident test	1755	1757	1759	1753	1750	41.24

Note: significance level: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Coefficients expressed in terms of OR.

6 Conclusions

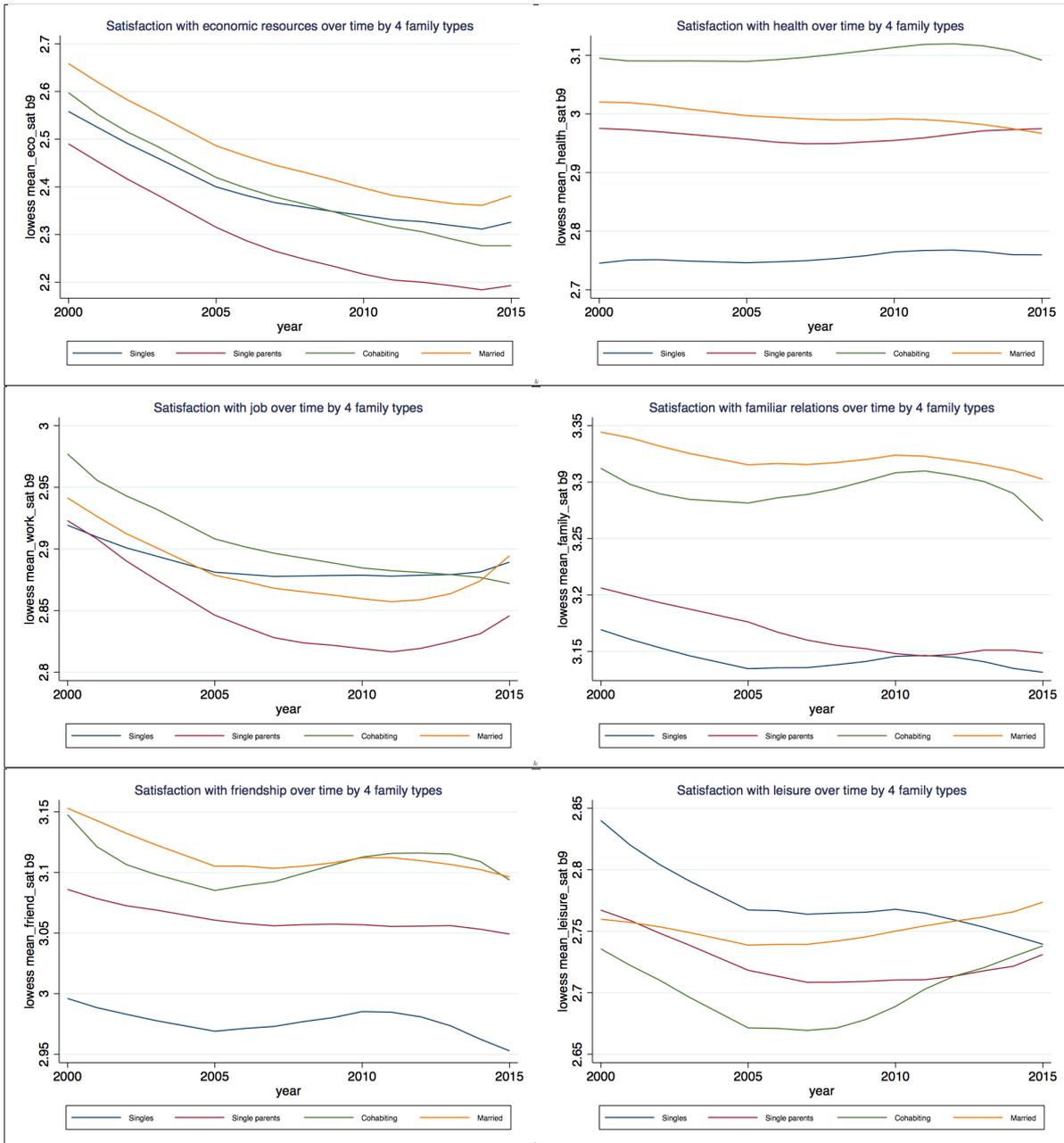
The paper investigates the link between family types, the intensity of family ties and individual wellbeing, taking advantage of a unique dataset that offers six different measures of life satisfaction. The key contribution of the paper to the literature originates precisely from the availability of these many domains of life satisfaction that allow us to disentangle the complex effects of family ties on individual wellbeing. The results confirmed that married couples display the highest probability of being satisfied with their life, also confirming the existence of the “cohabitation gap”. Specifically, considering different life domains, couples (married/cohabiters) were found to be more likely to achieve better outcomes in terms of health satisfaction and relationship satisfaction, whereas those defined as single were found to be more satisfied with their leisure time. As regards economic resources and work satisfaction, married couples reported higher odds ratios than single individuals, whereas cohabiting couples displayed lower probabilities of being satisfied than their singles counterparts. After categorizing family types by their religiosity, the picture became even more striking. Indeed, religious commitment deepens family bonds for married couples and this is reflected in their higher probability of being satisfied. Conversely, in the case of cohabiters, religious commitment represents a factor that marginally affects the probability of being satisfied. Moreover, if we detail the presence of children in each family type the results become more contrasted: parenthood increases satisfaction with health and relationships with family members and friends (the latter two categories for cohabiters only), whereas it decreases satisfaction with leisure time and leaves both economic and job satisfaction relatively unaffected. It is worth noting that previous papers have found contrasting effects of children on parents’ life satisfaction, which might have been due to the fact that previous studies only used one or two measures of life satisfaction. Our data allow us to disentangle the varying effects of parenthood on each domain and thus may help reconcile previous contradictory results. Although this particular dataset encompasses six measure of life satisfaction and in turn allows us to improve on the existing literature, further investigation is desirable in at least two ways. Firstly, from a conceptual point of view, it would be useful to further disentangle family types, not only according to the presence of young children in the household but also by further analyzing those couples whose offspring have already left the family home. Secondly, from a technical point of view, it would be worth testing the hypothesis in a panel setting to further understand possible endogeneity issues.

7 Appendix

Table 6: Variables definition

VARIABLES	VARIABLES DEFINITION AND CODING
Economic satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Health satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Family satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Friend satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Work satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Leisure satisfaction	Original coding 1 = very unsatisfied; 2=unsatisfied; 3=satisfied; 4 = very satisfied. Re-coding 1= very satisfied or satisfied; 0=unsatisfied or very unsatisfied
Cohabitors	1 = couple is cohabiting; 0 = otherwise
Married	1 = couple is married; 0 = otherwise
Singles	1 = individual is living alone; 0 = otherwise
Single parents	1 = single parent is living with at least one child; 0 = otherwise
Female	1 = female; 0 = male
Unemployment rate	Continuous. Regional level of unemployment rate
Children	1 = at least one child in the house; 0 = no children in the house
Employment status	1 = not active; 2 = unemployed; 3 = employed
Education	1 = primary education; 2 = lower secondary and upper secondary; 3 = tertiary education
Economic condition	Original coding 1 = good; 2 = adequate; 3 = not good; 4 = inadequate Re-coding 1= good or adequate; 0= not good or inadequate
Friends	1 = meet friends at least once a week; 0 = meet friends less than once a week
Social interaction	1 = have social interaction; 0 = not have social interaction Individuals have social interaction if have carried out 3 or more activities in the last 12 months (activities are: go to the cinema at least four times, at least once to the theatre, exhibitions and museums, archaeological sites, monuments, concerts of classical music, opera, concerts
Religiosity	1 = go to church at least sometimes; 0 = never going to church
Coabh. ratio	Number of cohabiters/Number of couples
Divorce rate	Divorced or separated/married
Marriage length	Length of marriage in years

Table 7: Satisfaction across Life Domains over time



Data is graphed using a locally weighted scatter plot smooth (LOWESS) function.

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