Limited detraditionalization of intimacy:

Contraceptive use at first intercourse over six decades in Italy

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Abstract

This paper investigates social inequality in demographic behavior. It complements the extensive research on stratification of young adults' life chances in education and the labor market by considering changes over time in the stratification of contraceptive use at first intercourse by gender and parental background. We seek to understand detraditionalization trends in young people's sexual intimate behavior by investigating whether these were driven by particular social groups, and how they were supported by policy initiatives. We study Italy 1950-2006, which shows strong regional and class disparities, and slow changes in religion and gender norms. Data from the "Survey on Italians' Sexual Behavior" (2006) and macro indicators on family planning centers are used. Findings show a steep increase in contraceptive use at first sexual intercourse over time, which is universal for men throughout, but stratified by parental background for women. We did not find that family centers intervened in the relationships.

Keywords: Contraceptive use, first intercourse, parental background, family planning centers, Italy

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1. Introduction

Romantic sexual intimacy across the life course changed profoundly in many advanced democracies throughout the past century, a trend supported by far-reaching developments in family planning technologies. Today young people's sexual initiation is relatively decoupled from the transition to marriage compared to the 1950s; and modern contraceptive technologies are used widely as means to actively control childbearing. Social theorists have described these trends as the detraditionalization of intimacy, arguing that intimate behavior, including sexuality and family formation, is increasingly separating from traditional social norms (Beck and Beck-Gernsheim, 2001; Beck-Gernsheim, 2002; Giddens, 1992). Although descriptions of the pronounced shifts in family demography often refer to the notion of detraditionalization (Coontz, 2000; Lesthaeghe, 1998), critics have cautioned about assuming that changes in private lives are universal (Therborn, 2004).

We define detraditionalization of intimacy as the increasing empirical deviation of sexual intimate behavior—including intercourse and contraceptive use—from traditional norms and social expectations since the 1950s. Traditional (hetero)sexuality norms include a close coupling of sexual initiation to marriage and a strong sense of gender differentiation (Giddens, 1992). Women in particular were expected to enter marriage as virgins and allow for fertility within marriage. Men's sexual intimate behavior was less normatively regulated in the traditional setting. A double standard prevailed that allowed young men to gather sexual experiences before marriage (Sagebin Bordini and Sperb, 2013), although they too were expected to wait with having children. The role of contraception in this arrangement was to control men's fertility before marriage, and women's fertility within marriage, after the desired number of children was reached (Dalla Zuanna et al., 2005). Detraditionalization of young people's intimacy implies that sexual intimate behavior increasingly decoupled from this normative pattern (Giddens, 1992).

To the extent that the traditional normative arrangement severely restricted women's personal and reproductive autonomy, detraditionalization increased women's independence.

Contraceptive use at first intercourse is a window into romantic sexual intimate behavior, which can be used to examine changes in conformity with traditional norms. The traditional patterns in norms towards contraception started to shift in the 1960s-70s in high income countries. With secularization, educational expansion and rising income levels, sexual norms were becoming more permissive of earlier sexual initiation in the life course (Bozon, 2003). At the same time, contraceptive technologies advanced. The availability and access to modern contraceptive methods, such as the pill or condoms, supported the realization of control over childbearing, especially for women (Birdsall and Chester, 1987). Increasingly since the HIV epidemic in the 1980s, public health institutions have promoted the use of contraceptives particularly among adolescents in order to protect against health risks associated with sexual intercourse. Condom use in particular protects against sexually transmitted diseases besides controlling unplanned pregnancy, which is addressed with the use of the pill and intra uterine devices (IUDs). Contraception is also widely acknowledged as an instrument to further women's personal autonomy (IPPFN, 2015), and hence to support gender equality.

Two aspects are neglected in the detraditionalization thesis. First, despite family demographic changes, traditional expectations toward heterosexual intimacies including marriage, monogamy, and strong gender roles widely persist (England, 2010; Hochschild and Machung, 2012). Previous accounts often failed to incorporate the deeply gendered dynamics in romantic sexual intimacy. Gender norms pervade also patterns of contraceptive use at first intercourse. Traditional norms implied a strong differentiation of gender roles in that contraception was considered men's responsibility (MacCorquodale, 1984). Although these expectations changed with increasing availability for contraceptives controlled by women (Brown, 2015), it is an

empirical question to what extent the gendered patterns of contraceptive use at first intercourse detraditionalized. Second, the increase in non-traditional behavior at first intercourse is unlikely to have unfolded universally across the social strata. Information about and access to contraceptive methods are unevenly distributed (Eeckhaut and Sweeney, 2016). For example, high parental education (Manning et al., 2000), high own education (Buhr and Castiglioni, 2017) and lack of disadvantage during childhood (Brew et al., 2020) are positively associated with contraceptive use. This point echoes critiques of individualization and detraditionalization assumptions, which point to the continuing relevance of social class as a structuring mechanism in society (Breen, 1997; Goldthorpe, 2002; Platt, 2019). In this study, we look at changes in young people's contraceptive use at first intercourse by gender and social background as a case for assessing the detraditionalization of intimacy.

Specifically, we address the following research question: How have patterns of contraceptive use at first intercourse developed for young women and men from different social backgrounds over a period of significant liberalization? We examine trends in contraceptive behavior at first intercourse between 1950 and 2006 among young people in Italy, relating the patterns to socio-historical developments across cohorts. So far, research on social inequality in contraceptive use is predominantly on the US case, which bears the risks of generalizing to contexts with different dynamics of social stratification. Italy is an illustrative case for analyzing the links between romantic sexual intimacy, social stratification and socio-historical context. On the one hand, like many other countries, family planning regulations liberalized in the 1970s in Italy (Spinelli et al., 1993). Divorce was legalized in 1970, the ban on information about birth control was dropped in 1971 and abortion became legal in 1978. On the other hand, Italy remains a country with traditional gender norms and high gender inequality (OECD, 2017). It is important to understand exactly how contraceptive behavior deviates from traditional norms, because such change can

have different implications. While it may lead to gains in personal autonomy and reproductive control, it may also expose individuals to stigmatization or unintended socio-economic outcomes.

2. Background

The theoretical framework presented in the following conceptualizes contraceptive use at first intercourse as a case for the detraditionalization of intimacy with a particular focus on inequalities. We focus on first intercourse as an important transition in individuals' sexuality trajectories (Carpenter, 2010). We derive expectations about how patterns of contraceptive use at first intercourse have developed over time, paying particular attention to our study country Italy.

2.1 Detraditionalization

Family demographic patterns shifted markedly across advanced democracies throughout the past century (Goldscheider et al., 2015). Marriage rates and first births have been delayed in the life course, cohabitation and non-marital childbearing are more common, as are divorce and childlessness. For young people, sexual initiation and moving out of the parental home today occurs earlier in the life course and is more differentiated compared to the 1950s. These trends involved pronounced changes in romantic sexual intimacy on the individual level, which have prominently been described as consequences of modernization processes. An influential explanation featuring in different theories is that the relevance of traditional norms declined for structuring people's behavior and ways of living (Beck and Beck-Gernsheim, 2001; Beck-Gernsheim, 2002; Giddens, 1992; Lesthaeghe, 1995, 1995). Hence, intimate relationships were less strongly dictated by traditional expectations about family demographic behavior, which was interpreted as the detraditionalization of intimacy (Gross, 2005). Sexuality, a central component

of intimacy, was affected by the changes as it "became much more completely separated from procreation than before" (Giddens, 1991, p. 164) and "lost its extrinsic connections with traditions and ethics, as well as with the succession of the generations" (ibid.).

Theoretical explanations of family change that proclaimed increasingly reflexive (Giddens 1992) or individualized (Beck and Beck-Gernsheim 2001) behavior arguably fell short of accounting for the perseverance in traditional expectations toward heterosexual intimacies. Marriage, monogamy, and strong gender roles persist (England, 2010; Grunow et al., 2018) despite apparent detraditionalizing family demographic behavior. This suggests both that the detraditionalization process might not be completed, but also that it may not accurately be described as a uniform trend. For example, despite relative normalization of non-marital unions, marriage has remained an idealized relationship context for sexual intercourse, not least because it is considered a desirable setting for having children (Gross, 2005; Thomson et al., 2013). This ideal is deeply anchored in young people's ideals of family life trajectories, orchestrating around narratives of meeting the 'right' person to share romantic love and intimacy (Berghammer et al., 2014; Kefalas et al., 2011).

While intimate behavior seems to have detraditionalized in many respects, it might have occurred in stratified patterns. We use the example of trends in contraceptive use at first intercourse to illustrate some of the complexities of detraditionalization that have previously been overlooked. We suggest there are two non-traditional orientations, reproductive autonomy and risk adversity, which drive detraditionalization, but appear to apply to different degrees to different subgroups of young people.

2.2 Drivers of changes in contraception at first intercourse

First sexual intercourse has changed its meaning in the life course: from being a crucial marker in the transition to adulthood to being one element in the extended period of adolescence. Cultural, technological and medical developments underpin these changes. Intimacy among young people used to be strongly governed by traditional norms rooted in religious rules, including the sex in marriage standard with the purpose of reproduction for young women and the double standard for young men (Giddens, 1992; Sagebin Bordini and Sperb, 2013). Traditionally, contraception tended to be condemned, and commonly practiced only after the desired number of children had been born within marriage. Traditional contraceptive methods such as *coitus interruptus* and monitoring fertile periods through measuring women's body temperature were most prevalent (Dalla Zuanna et al., 2005).

With sexual liberalization, sex before marriage became more common (Bozon, 2003). Although nonmarital birth rates increased with these developments, first sexual intercourse before marriage should rather be understood as an indicator for the decoupling of childbearing intentions and sexuality, which was supported by medical developments (Lesthaeghe, 1995). Advances in contraceptive technologies were evident especially since the 1960s. Condoms were becoming more widely available, and the pill was made accessible as a contraceptive method beyond medical purposes. Secularization trends allowed for these technologies to be more widely used, and for young people to pursue romantic sexual intimacy outside a traditionally prescribed family formation pathway (Giddens, 1992).

Besides its role for sexual liberation through controlling reproduction, young people's contraceptive use has become a public health issue in many countries (Sprecher et al., 2008). In this context, contraception is discussed as a risk-aversion strategy. Public health campaigns and measures target young people to prevent sexually transmitted diseases (STD) and reduce

incidents of early unintended pregnancy (Avery and Lazdane, 2008). The implementation of appropriate policy strategies is however often lagging behind. A recent assessment of policies granting women access to sexual and reproductive health and rights illustrates vast differences across countries and highlights those with particular demand (IPPFN, 2015). Italy ranks lowest among 16 EU countries (together with Czech Republic and Romania), which points to limited leverage of the reforms implemented since the 1970s. Research on contraceptive decision-making processes further highlights the limits to regulating young people's contraceptive behavior (Averett et al., 2002; Vasilenko et al., 2015). Difficulties arise from contraceptive use being an outcome of communication in a private and intimate situation that is pervaded by normative expectations and power dynamics (Raine et al., 2010). Improved knowledge about health risks and contraception acquired in sex education does not always translate into contraceptive behavior (Bogani et al., 2015).

Young people's intimate relationships are strongly governed by dominant gender roles, but these too have been changing over time. Traditional norms prescribe clear differentiation of gender roles in romantic sexual intimacy. Historically, contraception has been understood as men's responsibility in heterosexual intimate relationships (MacCorquodale, 1984). This was in line with attributes typically ascribed to a 'male' gender category (West and Zimmerman, 1987), including being protective and making decisions. With the availability of contraceptive methods and growing value of personal autonomy, women were increasingly considered responsible for contraception (Lowe, 2005). Given that contraceptive use requires decisions by both sexual partners (Manning et al., 2000), communication becomes more important where roles are less prescribed. Congruently, young women and young men today have conflicting views on their respective responsibilities over using contraception (Brown, 2015). Women's striving for bodily

autonomy seems to clash with ideas about equality in intimate relationships on the one hand and traditional gender roles on the other (Lowe, 2005).

2.3 Stratified changes in contraceptive use at first intercourse

Based on the changes in institutions and norms surrounding intimacy, diverging expectations about the patterns of change in contraceptive use at first intercourse may be formulated. On the one hand, the diffusion of the ideal of reproductive autonomy is expected to cause young women's and young men's contraceptive use at first intercourse to converge over time. Women would seek to extend their autonomy in romantic sexual intimacy, which men had already largely acquired. With women's movements advocating reproductive rights gaining momentum from the late 1960s, we would expect convergence in contraceptive use between young men and women to be strongest in the period 1960s to 1980s compared to before.

Dispersion of the risk adversity ideal, on the other hand, could be associated with different trends in contraceptive use patterns. Rather than quick mid-century gender convergence, the HIV epidemic pushed the reproductive health agenda forward starting in the 1980s, and hence change in contraceptive use would be expected to be most pronounced in the following decades. Two factors seem important. First, young men and women would both try to adapt their behavior to adhere to the norm of risk protection, and hence existing gender differences in levels of use would perpetuate. Second, because contraceptive methods controlled by women such as the pill and IUDs do not provide protection from sexually transmitted infections, risk adversity orientation may actually have boosted men's contraceptive (condom) use more than that of women.[1]

[1] From an analytical point of view, looking at individual men's and women's contraceptive use at first intercourse (rather than couples) is necessary even when considering heterosexual relationships, because the first sexual intercourse for one of the sexual partners might not be first for the other.

Further to how the orientations of reproductive autonomy and risk aversion played out for gendered contraceptive use at first intercourse over time, differential outcomes by socioeconomic background seem likely. Research shows that patterns of contraceptive use are stratified by socioeconomic status, such as parental education (Manning et al., 2000), own education (Buhr and Castiglioni, 2017), employment (Pekkurnaz, 2019), and occupations (Layte et al., 2007). Lower status is generally associated with a reduced use of contraceptives.

There is little research tapping into the drivers of these inequalities. Possible mechanisms are that young people with lower socioeconomic status are less well informed about contraception and have fewer resources to access contraceptive methods because they are less exposed to comprehensive sex education and medical advice than those from higher status backgrounds (Lindberg and Maddow-Zimet, 2012; Sprecher et al., 2008). While young people with more resources would be able to realize control over intimacy, this possibility is more limited for young people with fewer resources given the inequalities in access to information and contraceptive technologies.

As a consequence, we expect that changes in young people's contraceptive behavior occurred in distinct patterns at the intersection of gender and socioeconomic background. Given the considerations above, we assume that young women from low socioeconomic backgrounds are relatively disadvantaged in terms of their access to information and contraceptive methods compared to both young men from low socioeconomic backgrounds and young women and men from higher socioeconomic backgrounds. Because of their weak relative position, their ability to extend reproductive autonomy is more restricted compared to the other groups when new opportunities are available. We hence expect any changes in contraceptive use to be less extensive for women from disadvantaged social backgrounds. Such differences manifest in

contexts where regional socioeconomic disparities intersect with unequal institutional provision of educational opportunities and medical infrastructure, like in the case of Italy.

3. The Italian context

The socio-historical context in which young people live is a crucial factor for their decisions about contraception. Several formal and informal institutions play a role in conveying information on sex and contraception, but also on social norms that prescribe what is acceptable or not and for whom (Billy et al., 1994; Borgoni and Billari, 2003). In the following paragraphs, we outline characteristics of the Italian socio-historical context in terms of laws, policies and dominant cultural norms that regulate sexuality and family demographic behavior.

3.1 Laws and policies

Family planning regulations, such as divorce law and abortion law, provide the legal context for decisions over reproductive behavior. They set the opportunity structures in which individuals' options and alternatives are defined. Policies have a similar function, but usually have redistributive aims in terms of levelling life chances. Contraception policies include service infrastructures for accessing information, contraceptive methods and counselling support to young women. Such strategies gained momentum with the women's movement in the 1970s across European countries including Italy. Table 1 lists the most important changes in legislation and policies that set the stage for the first and the second contraceptive revolutions in Italy (Léridon, 1987).

Period		Reforms	
Restrictive	Before 1967		Divorce and abortion illegal, shotgun wedding/honor killing legal, family right that subject the wife to the husband
Transformative	1967–1981	1967	Oral contraception for medical purposes
		1970	Legal divorce (Law 898)
		1971	Stop ban on contraceptive advertising
		1974	Abrogative referendum on divorce (not passed)
		1975	Reform of family right (Law 151)
		1975	Institutionalization of centers for family planning and health (Law 405)
		1976	Oral contraception extended to everyone
		1978	Depenalization and legal access to abortion (Law 194)
		1981	Abrogative referendum on abortion (not passed)
		1981	Abolition shotgun wedding/honor killing (Law 442)
Liberal	After 1981	2000	Emergency contraception with medical prescription (Authorization of the Ministry of Health n.510 G.U. n. 238)
		2004	Norms on assisted reproduction technology (Law 40): limits to ART for specific populations and embryo protection model dissonant from Law 194/1978.
		2016	No medical prescription for emergency contraception (except for underage)

Table 1. Socio-historical contexts and reforms

Besides family planning regulations, sex education governs young people's use of contraception. Research suggests that the more informed young people are about contraception, the more likely they are to use contraceptives at first intercourse (Mauldon and Luker, 1996). In Italy, the first proposal for the introduction of sexual education in schools as part of the curricula dates back to 1910 and it was followed by several other attempts (Rifelli and Ziglio, 1991). Up until today, none of the proposals has received sufficient consensus to be transformed into a law, mostly owing to concerns that sex education would incentivize sexual activity among young people. Public health initiatives have been more successful (Donati et al., 2000; Ministero della Sanità, 1992). Pilot programs of sex education demonstrate the lack of basic knowledge about the biology of sexuality and contraception (Bogani et al., 2015).

3.2 Cultural norms

A central institution of sexuality norms in Italy is the Roman Catholic Church. Most of the children born in Italy are christened in the Catholic Church. Their religious socialization extends across childhood and preadolescence as they receive Reconciliation and Communion at the age of 8-10 and Confirmation at 14-15. Moreover, curricula in public schools include Catholic religion classes held by teachers directly appointed by the Church. From the late 1960s, young people gradually reduced religious practices after receiving the Sacraments (Cesareo et al., 1995), but religious marriage remains very popular. For more recent cohorts, the family acts as mediator of the Catholic percepts and dogmas, making indirect appearances in secularized everyday lives in the form of social norms and habits (Vignoli and Salvini, 2014).

Strong intergenerational ties and their links with family demographic behaviors are considered a central mechanism in the sluggish detraditionalization across generations in Italy (Dalla Zuanna and Micheli, 2006; Rosina and Fraboni, 2004). In comparison with other European countries, changes in family structures were slow in Italy (Pirani and Vignoli, 2016), and changes in sexual behavior were no exception (Barbagli et al., 2010). Older generations are crucial in the reproduction of traditional gender roles (Farre and Vella, 2013; see for the US Moen et al., 1997), mainly by parents exerting pressure and discouraging their children from non-normative behavior during adolescence and beyond (Vignoli and Salvini, 2014). The transmission of family demographic norms and behavior differs across social groups. For example, traditional norms about marriage are more prevalent among women than men (Vignoli and Salvini, 2014), and family transitions occur in more traditional patterns for young people from lower than for those from higher socioeconomic background (Sironi et al., 2015).

The Catholic Church seems to also have slowed down the diffusion of safe contraceptive methods in Italy compared to other European countries. First, the territorial distribution of centers for family planning and health mirrors the patterns of votes in the referenda on divorce and abortion (Spinelli et al., 2000). Second, extremely high shares of medical doctors in Italy are conscientious objectors to abortion (between 65 and 95 percent across regions, with very little variation over time). We lack empirical evidence on the attitudes and behavior of family doctors and gynecologists concerning contraception and on whether conscientious objection is driven by religiosity. That means, whether objecting doctors would also proactively discourage the use of contraceptives remains an open question. However, there are indications for high barriers to contraception from local surveys (Volante et al., 1978) and qualitative studies and reports (Dalla Zuanna et al., 2005), which suggest that requests for subscriptions of the pill were sometimes not fulfilled, and individuals do not receive adequate information on contraception (IPPFN, 2015).

3.3 Contraception in Italy

Before the 1970s, a uniform contraceptive model prevailed in Italy with the great majority of individuals relying on coitus interruptus. This pattern relied on traditional sexuality norms. Indeed, most married couples used modern contraception only after reaching the planned number of children.

According to Catholic doctrine, even traditional contraceptive methods such as coitus interruptus are considered illegitimate. However, its widespread diffusion even among older (and supposedly more traditional) cohorts suggests that the idea of "religious bricolage" or patchwork religion applies to Italy as well (Garelli et al., 2003). As such, coitus interruptus remains widely practiced (Johnson et al., 2013). In 2006, among cohabiting and married couples 30 percent use the pill, 27 percent use the condom, and 30 percent use coitus interruptus; among those born in

the 1980s (whenever having sexual intercourse) 47 percent use safe contraceptive methods and 23 percent use coitus interruptus (Barbagli et al., 2010).

3.4 Sexual debut and gender

As explained above, sexual behavior varies between men and women. Over time, the median age at first sexual intercourse in Italy has changed very little for men, decreasing from 18.5 to 17.5 for those born in the 1940s and 1980s respectively. For women the median age of sexual initiation was 22 for those born in the 1910s, 20 for those born in the 1950s, and 18.5 for those born in the 1980s (Barbagli et al., 2010; Billari and Borgoni, 2002). For more recent cohorts of women, the age at first intercourse is equal to that of men only in regions in the Centre and North (Billari and Borgoni, 2002). While in the past, the first sexual intercourse for women occurred within a stable relationship and predominantly within marriages, from the 1970s this was no longer the case. In fact, the sexual revolution took place at the same time as the increase in average age at marriage (22 years-old for those born in the 1950s, 27 years-old for cohorts born in the 1970s). However, unlike in Northern and Central Europe, Italy did not see strong increases in cohabitation or living alone (or with friends), so that young adults experienced a long sexually active period while living with their parents. This constellation restrained the frequency of sexual intercourse (Castiglioni et al., 2001).

In Italy, norms with respect to first sexual intercourse seem to persist even among more recent cohorts of young adults (Billari and Mencarini, 2004; Ferrero Camoletto, 2014). Despite quantitative evidence on some convergence in sexual behavior, gendered sexual scripts persist in the narratives around first sexual intercourse. Young women describe their experiences following a romantic script that resonates with the idea that sexual intimacy is the locus of emotional closeness and disclosure between equal partners (Giddens, 1992). Men, instead, tend

to conform to a pragmatic script (Camoletto, 2011), which links to naturalizing notions such as "men have stronger sexual needs than women" or "men, while sexually provoked, can hardly stop" (Camoletto and Bertone, 2012).

There are several limitations to the existing research on first sexual intercourse in Italy. In particular, most studies focus on single cohorts of individuals, and in the most recent case on university students (Caltabiano et al., 2006; Dalla Zuanna et al., 2019; Dalla Zuanna and Crisafulli, 2004); rely on small qualitative samples (Camoletto, 2011; Ferrero Camoletto, 2014); or consider multiple cohorts (Billari and Borgoni 2002; Barbagli et al 2010) but do not account for the interaction between the use of contraception, gender, and parental background.

4. Data and methods

We use data from the Survey on Italians' Sexual Behavior ("Indagine sulla Sessualità degli Italiani" ISI henceforth) on 3058 individuals 18-69 years old interviewed in 2006.[2] The ISI collected information on a wide range of aspects related to sexual behavior and attitudes towards sex. The results are generalizable to the population using the post-stratification weighting scheme (Barbagli et al., 2010). 152 individuals (5% of the initial sample) had not experienced the first sexual intercourse at the moment of the interview. Focusing on adolescence as a distinct phase in the life course, we restricted the sample to individuals who experienced the first intercourse between age 10 and 24 years included (Sawyer et al., 2018): 95 had sex being younger than age 10 or older than 24 (3.1% of the initial sample). Finally, because 294 individuals have missing

[2] The Survey on Italians' Sexual Behavior - ISI (*Indagine sulla Sessualità degli Italiani*) was collected within the framework of a project (ex-40%) financed by the Ministry of Education, University and Research MIUR in 2004 lead by University of Bologna, the University of Turin, University of Padua (P.I. Marzio Barbagli).

value on the dependent variable (9.6% of the initial sample), our final analytical sample contains 2,517 individuals (1,252 men and 1,265 women).[3]

Our dependent variable is the use of modern contraceptive methods at first sexual intercourse: condom, pill, and IUD. We consider as traditional contraception methods: coitus interruptus and the choice of having sex in (self-assessed) non-fertile periods of the month. The main independent variable is parental education: the highest educational level among parents is used to identify either parents with at most lower secondary education or at least upper secondary education. The effect of parental education is considered in interaction with the socio-historical period when the first intercourse occurred: this variable distinguishes between those who experienced the first sexual intercourse before 1967 (*restrictive context*), between 1967 and 1981 (*transformative context*) and after 1981 (*liberal context*). During the transformative period several reforms related to access to contraception and abortion were introduced as displayed in Table 1.

We estimate logistic regression models for the probability of contraceptive use at the first sexual intercourse in different socio-historical contexts. In the first set of analyses, differences by gender are at focus. In the second set of models we estimate the effect of parental education by gender.[4] Parental education is operationalized as the highest among parents (at most lower secondary and at least upper secondary). We exploit regional variation in the availability of centers for family

[3] Table A4 in Appendix A displays the distribution of the independent and control variables for those who have not experienced the first intercourse at the time of the interview and those who have missing values on the dependent variable. Comparing descriptively these samples with the analytical sample on the most important variables, we conclude that the excluded cases do not substantially differ from those included in the analyses. The over-representation of women among those who did not have sex for the first time at the moment of the interview is due to the young women from the more recent cohorts in the sample who still experience (on average) their sexual debut at a relatively later age compare to young men.

[4] Because estimating models separately by gender is standard practice within the contraception literature, we run separate analyses by gender as a robustness check: the point estimates and the confidence intervals are consistent with those presented here.

planning and health across 20 regions (0; 0.1-1; 1.1-3; 3.1-5; 5+ per 10,000 women 15-49 years old). These data are retrieved from the *Report of the Ministry on the implementation of the Law 194/1978 for the social protection of motherhood and legal abortion* complied (almost) every year from 1979. Descriptive distribution of centers for family planning and health across regions and over time (1979-2006) can be found in Figure A1 and Table A1 in Appendix A. Details on these data are reported in Appendix B. Finally, models control for geographical macro-area of residence (North-West, North-East, Center, South and Islands) fixed-effects. Additionally, the models are adjusted for: type of relationship with the sexual partner (no relationship, partner, cohabiter or wife/husband)[5], size of the city (up to 5,000, 5,001-10,000, 10,001-30,000, 30,001-100,000, 100,001-500,000, 500000+), age at first intercourse (min.10, max. 24, s.d. 2.61). The results of the effects of interest will be displayed as predicted probabilities.

Tables with full models are reported in Table A2, A3a, and A3b in Appendix A. These tables also include results from models with additional controls that we excluded from the models used for the estimation of our effects of interest for different reasons. The effect of the religiosity of the father and the mother when the interviewees were 14 (father's/mother's mass attendance when the interviewee was 14: never, 1-2 times/year, 3+ times/year, at least 1/month, at least 1/week) are never significant, as the largest part of this effect is likely to be captured by parental education. The variable used to operationalize own religiosity refers to when the interviewee was in the first partnership (own attendance to mass when being in the first partnership - of any kind: never, 1-2 times/year, 3+ times/year, at least 1/month, at least 1/week), which might or might not refer to the time when the first intercourse occurred.

[5] Unfortunately, the data do not allow for distinguishing between cohabiting and married partner.

Table 2. Distribution of the independent and control variables in the analytical sample

Gender	
Men	50.97
Women	49.03
Contraception at first intercourse	
No	61.87
Yes	38.13
Parental education	
at most lower sec.	74.14
at least upper sec.	25.23
missing	0.63
Type of relationship with sexual partner	
No relationship	24.47
Cohabiting/marriage	13.88
Partner	60.78
missing	0.87
Age at 1st sex	
Min.10-Max.24, S.D.=2.61	16.9
Geographical area	
North-West	26.77
North-East	20.06
Center	19.75
South and Islands	33.43
Context when 1st intercourse occurred	
Restrictive (before 1967)	19.18
Transformative (1967-1981)	33.97
Liberal (after 1982)	46.85
Number of centers for family planning and health per 10000 women in the region (after 1978)	
Min.0.1-Max.5.6m, S.D.=0.87	1.59
Father's mass attendance when the interviewee was 14	
1 Never	25.06
2 1-2 times/year	17.54
3 3+ times/year	13.49
4 at least 1/month	11.1
5 at least 1/week	22.12
missing	10.69
Mother's mass attendance when the interviewee was 14	
1 Never	9.84
2 1-2 times/year	9.52
3 3+ times/year	15.29
4 at least 1/month	15.73
5 at least 1/week	44.72
missing	4.9
Own attendace to mass when being in the first partnership (of any kind)	
1 Never	21.55
2 1-2 times/year	15.37
3 3+ times/year	14.33
4 at least 1/month	16.5
5 at least 1/week	23.4
missing	8.84
Own highest educational level attained	
At most lower secondary	59.31
At least upper secondary	40.69
N.	*2,517*

Source: ISI 2006, authors' calculations.

Finally, because we do not know when each educational level was attained, the attainment of the highest educational level might have occurred after the first intercourse, so that the effect of this

variable (though not significant) might be endogenous. Finally, all these variables present missing values on several cases. Results from models adjusted stepwise for these variables are nevertheless displayed in Table A2 and A3a and A3b in Appendix A: the main effects of interest remain unchanged in size and significance. Table 2 shows distribution of the dependent and independent variables as well as controls in the analytical sample.

5. Results

5.1 Descriptive results

Figure 1 and Figure 2 display the descriptive trends in contraceptive use at first intercourse by gender and parental education between the 1950s and the 2000s. Both men and women increased their use of contraception over time and the gender gap seems to diminish during the 1980 to 1990s. Importantly, at the beginning of the 2000 only sixty percent of young men and women used modern contraception at first intercourse. Figure 2 shows a less clear pattern with respect to differences by parental background: the overall increase concerns young people from families where parents have low and medium or high education. This descriptive picture of young Italian's experience at first intercourse over time does not support existing research reporting stratified patterns of contraceptive use. The next step involves testing these associations in a multivariate setting.

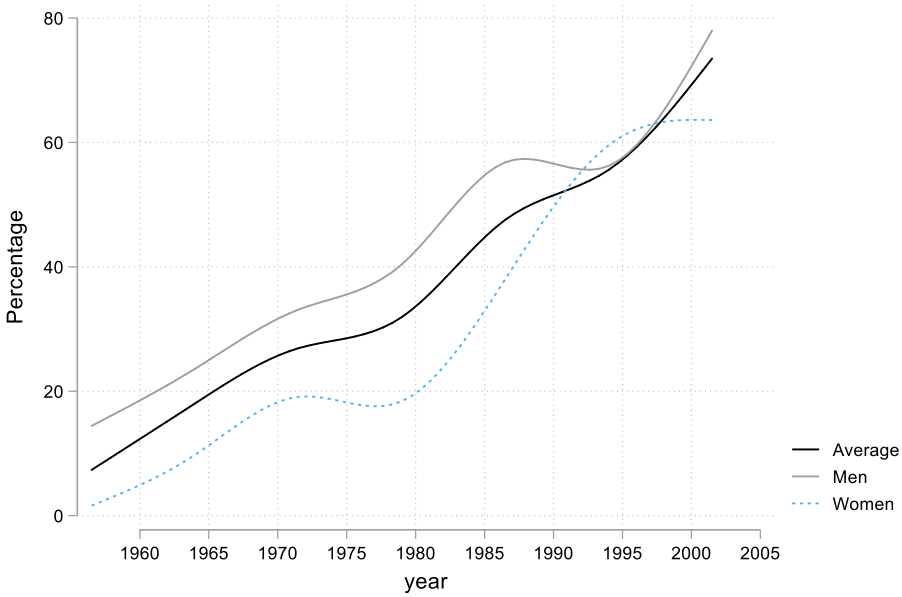


Figure 1. Young adults using contraceptive at first intercourse, men and women, 1960-2006
Source: ISI 2006, authors' calculations.

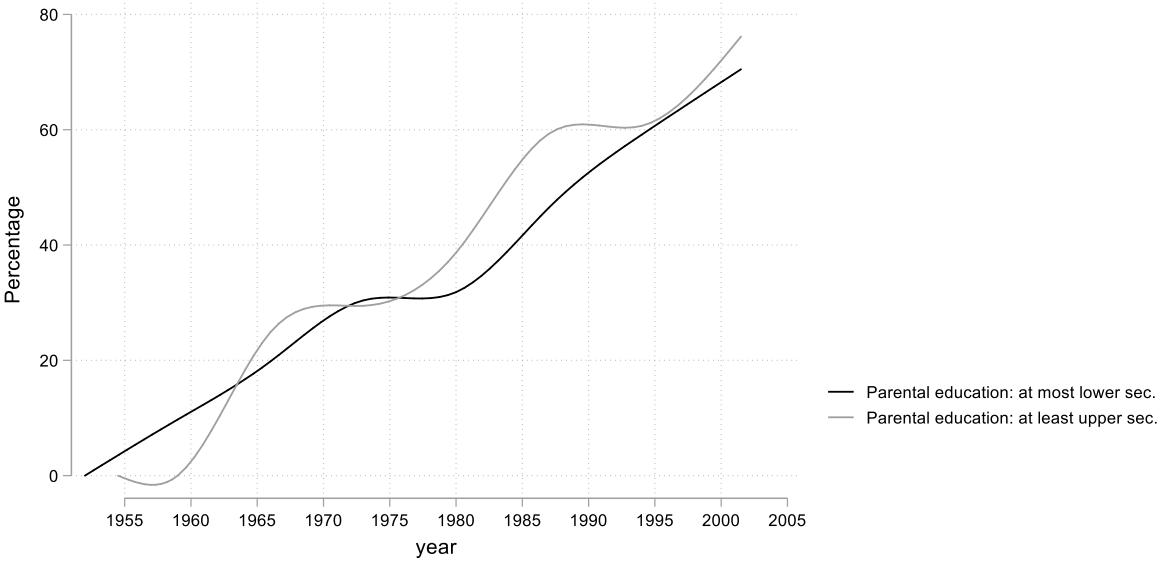


Figure 2. Young adults using contraceptive at first intercourse by parental education, 1960-2006
Source: ISI 2006, authors' calculations.

5.2 Multivariate analyses

We estimate three regression models, introducing independent variables in three steps. Figure 3 shows the probabilities of contraceptive use at first intercourse in the restrictive, transformative

and liberal contexts by gender. In the first panel, estimates are adjusted for individual characteristics, in the second panel we further adjusted for our institutional indicator, the number of centers for family planning and health by 10,000 women in the region, and in the third panel for macro area to account for strong regional differences in overall structural conditions in Italy.

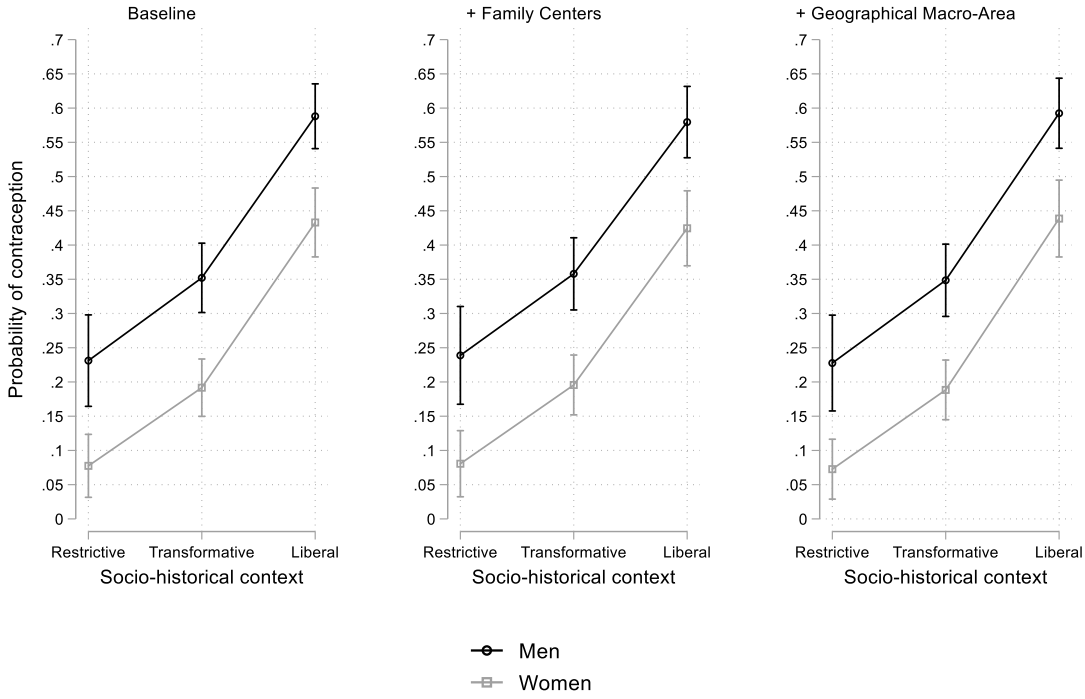


Figure 3. Logistic regression model for the probability of contraception at first intercourse over time: predicted probabilities by gender

Source: ISI 2006, authors' calculations. 95% confidence intervals. Full results displayed in Table A2 in Appendix A: estimated from model 1, model 8, and model 9. Weighted results.

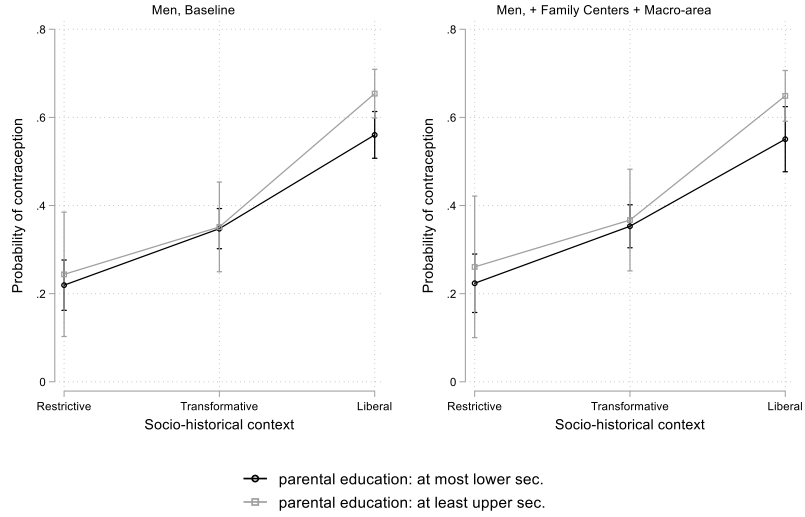
Looking at the first panel, we find a steep increase in contraceptive use at first intercourse for both men and women as seen in the descriptive graphs. This confirms the massive changes in intimate sexual behavior in the direction of detraditionalization across this period in Italy. However, we also find a very obvious and persisting gender gap. These results emphasize that women lag behind in use of modern contraceptives at first intercourse, if we adjust for individual and contextual factors. This gender gap in modern contraceptive use at first intercourse over time

points to the limits of detraditionalization of intimate sexual norms in Italy despite extensive institutional and legal changes. It suggests that young women have not been able to expand their reproductive autonomy, and that young men and women both intensified their risk adverse strategies for the first sexual intercourse.

From the second and third panel we see that the introduction of our institutional and regional indicators does not change the results. That means, neither the availability of information and contraceptives offered in centers for family planning and health, nor the broader structural conditions in the macro areas explain differences in contraceptive use at first intercourse between young men and women in Italy. The gender gap is thus similar in regions with more and with less centers for family planning and health. This suggests that the institutional support structure that was installed in Italy throughout the period did little to allow for reducing gender inequalities in contraceptive use.

In the next step, we estimated the effect of parental education on using modern contraception at first intercourse across the different socio-historical contexts, looking at men and women separately. Estimates on the left hand side of panel (a) and (b) of Figure 4 are adjusted for individual characteristics; those on the right hand side are additionally adjusted for centers for family planning and health by 10,000 women in the region and for macro area. Our results show that the stratification of modern contraception at first intercourse by parental background is negligible among young men, but it appears to grow in the more liberal context albeit not to a statistically significant difference in probability. For women, however, parental education seems to matter more. In fact, there appear stronger signs for class gaps than for men, with young women with low educated parents having lower probabilities to use modern contraceptives at first intercourse since the transformative period.

(a)



(b)

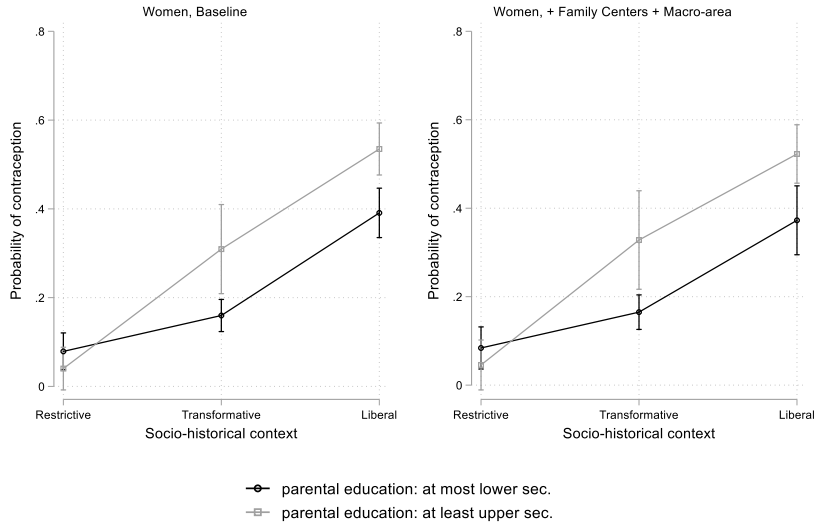


Figure 4. Logistic regression model for the probability of contraception at first intercourse over time: predicted probabilities by social background and gender

Source: ISI 2006, authors' calculations. 95% confidence intervals. Full results displayed in Table A3a and A3b for women and men respectively in Appendix A: estimates from model 7 and model 9. Weighted results.

Although use of modern contraceptives increased also among women with low educated parents during the transformative period and especially during the liberal period, a much steeper increase

is detected already during the transformative period for women whose parents have higher education. This observation resonates with the idea that gender equality may be coming at the cost of class-based inequality (Esping-Andersen, 2009). Our expectation about the relative disadvantage of young women from lower social backgrounds, who have the least material and power resources to realize non-traditional sexual intimate relationships, is confirmed too. Adjusting for the structural setting does not change this relationship. Again, this implies that institutional support did little to reduce differences. In the Italian context, it is likely that the scope of coverage at which family centers were introduced was too limited to be effective.

6. Conclusion and discussion

Norms and behavior around romantic sexual intimacy across the life course have detraditionalized since the middle of the last century across many countries including Italy. This included a decoupling of sexual initiation and marriage, an extension of the sexually active period, and massive increases in the use of modern contraceptive methods at the first intercourse and beyond (Giddens, 1992). Previous literature has suggested that there are limits to the detraditionalization of intimacy. First, the non-traditional orientations that were driving detraditionalization such as reproductive autonomy and health risk aversion lead to different expectations about developments for women and men respectively. On the one hand, increasing pursuit of reproductive autonomy predicts a convergence of contraceptive use over time because of changes mainly in women's behavior. On the other hand, health risk averse orientations imply a persistent gender gap, because both men and women would have reacted to the widespread awareness about the risk of sexually transmitted diseases. Moreover, socioeconomic inequalities have been shown to affect detraditionalization and the prospects of reproductive autonomy for women: empirical research indicates class differences in contraceptive use (Eeckhaut and

Sweeney, 2016; Layte et al., 2007). In this study, we investigated the links between gender, socioeconomic background and the detraditionalization of intimacy by looking at changes in contraceptive use at first intercourse in Italy over the period of sexual liberalization.

Our analyses confirm a steep increase in the use of modern contraceptive methods at first intercourse over time in Italy between 1950 and 2006, pointing to the weakening of traditional norms around romantic sexual intimacy. However, our results also document a strong and persisting gender gap: young men's probability to use modern contraceptives at first intercourse is higher than young women's probability across the long time period, even in the youngest cohorts. That means that women were not able to realize their reproductive autonomy to the same degree as men, although institutions have become increasingly permissive of non-traditional behavior.

We also find evidence for a socially stratified contraceptive behavior at first intercourse for young women, which developed with liberalization of sexuality. This implied that women with low educated parents did not experience the same increase in probability to use contraception at their first intercourse. While young men and women with higher educated parents integrated emerging contraceptive technologies in their sexual intimate lives, this was not the case for those with the most relative disadvantaged position in terms of power and resources. Our third set of results then gives a sobering insight into the potential of institutional support to enable young people to realize reproductive autonomy and to reduce any of the inequalities in contraceptive use at first intercourse. We do not find that centers for family planning and health were associated with smaller gaps in contraceptive use between the social groups.

Although young people in Italy show overall growing individual command over sexuality, at least until 2006 young women's realization of personal sexual autonomy lags behind that of

men's suggesting that individualization is a stratified process and that institutions – in the Italian case – failed to moderate gaps between men and women and between young women from different social backgrounds.

This study has some limitations that point at future research. First, our observational period ends in 2006: our data are the most recently collected data on a representative sample of the Italian population that survey behaviors and attitudes on sexuality. The contemporary scenario of relatively widespread use of non-safe contraceptive methods across the population has seen the recent abrogation of the need for medical prescription for the hormonal emergency contraception in 2016 for adults. Our findings on the persisting differences by gender and social background in contraception at first intercourse might inform explanations on recent trends that include emergency contraception, which postpones the act of using contraception after the shared intimacy of sexual intercourse and implies an action towards reproductive autonomy by the women only. Second, because awareness towards own autonomy, attitudes towards sexual behavior, and the degree of conformity to social norms can change over the life course, we might underestimate the role of those factors as in our data they are measured at the time of the interview, which for many interviewees is several decades after they had their first intercourse. Future initiatives should aim to provide the data infrastructure for studying these dynamics in Italy and beyond.

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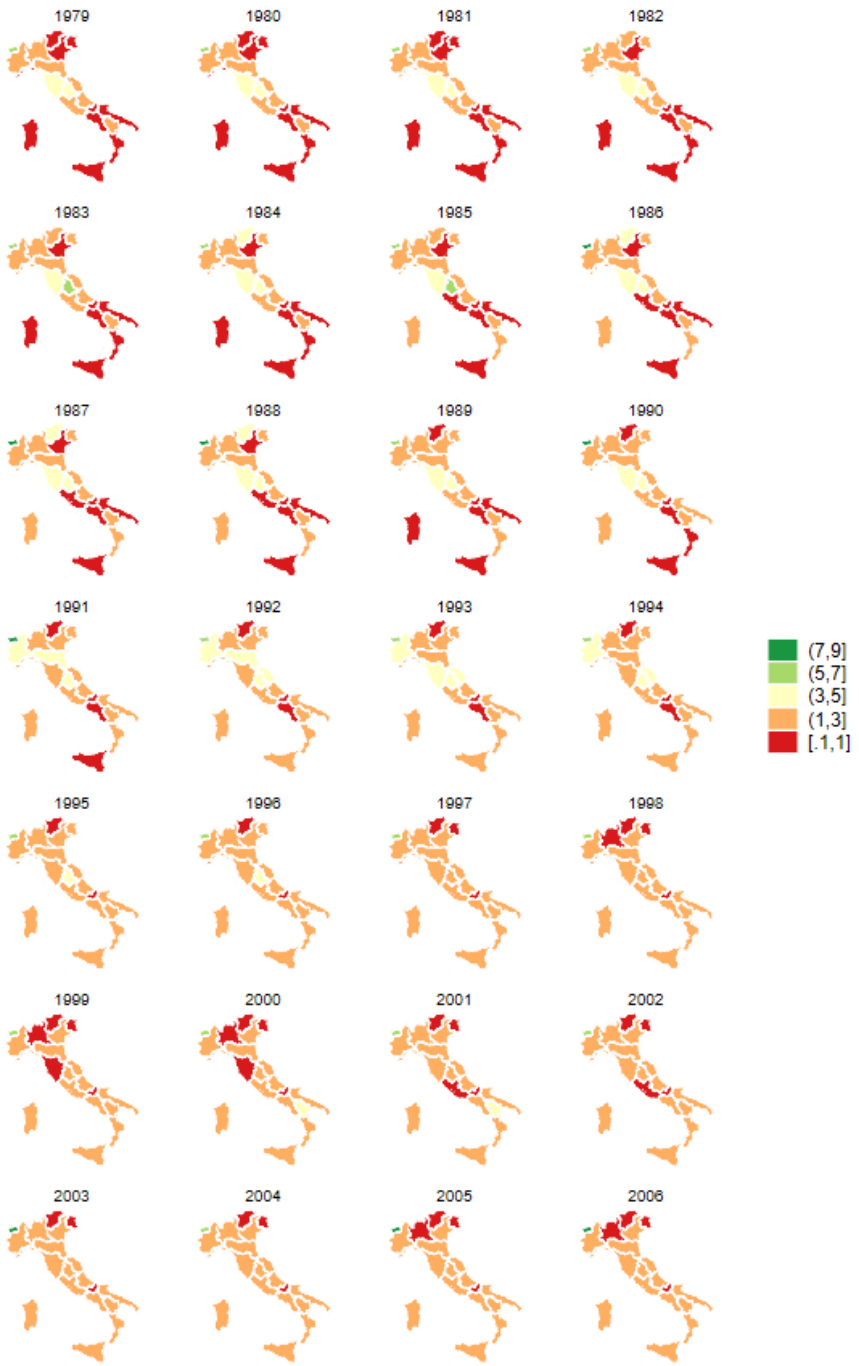
Appendix A

Figure A1. Centers for family planning and health per 10,000 women between 15 and 49 year-old across regions and over time (with impute missing information)



Source: *Report of the Ministry on the implementation of the Law 194/1978 for the social protection of motherhood and legal abortion (1979-2006)* and ISTAT.

Table A1: Centers for family planning and health per 10,000 women between 15 and 49 year-old across regions and over time (with missing information)

Region	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Piemonte	1.1			1.6	1.7	1.7	1.7	1.7	1.7	1.7		2.1	1.9	3.3	3.3	3.3		2.3	2		2.0	2.7	2.1	1.8		2	2.2	2.3	1.9	2.2
Valle d'aosta				6.7	6.7	7.0	7.0	7.0	7.8	7.8		6.3	8.7	8.7	6.3	6.2	6.2	6.2	6.2		6.2	6.2	6.3	5.6	6.3	6.4	7.1	6	7.1	7.7
Lombardia				1.4	1.5	1.4	1.3	1.4	2.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.3		1.3	1.0	0.8	0.8	1.3	1.2	1.1	1.1	1	1
Trentino Alto-Adige				1.0	2.2	2.1	4.3	2.1	4.1	4.1		0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.1		0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.9
Veneto				0.8	0.9	0.9	1.0	1.0	0.9	0.9		1.1	1.4	1.4	1.4	1.3	1.3	1.3	1.3		1.3	1.3	1.3	1.3	1.3	1.4	1.3	1.4	1.3	1.2
Friuli Venezia Giulia				0.8	1.9	1.9	1.2	1.9	1.1	1.1		1.1	1.9	2	1.9	2	2	2	0.8		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Liguria	0.5			2.8	2.8	2.3	2.3	2.3	2.3	2.3		2.9	2.9	2.9	2.9	3	3	3	2.6		2.6	2.6	2.6	2.6					2.6	2.6
Emilia Romagna				1.8	1.8	2.9	2.9	2.9	3.0	3		2.9	3	3.1		3	2.7	2.8	2.6		2.6	2.6	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.3
Toscana				3.9	4.0	4.0	4.0	3.9	3.9	3.9		3.5	3.5	2.4	2.5	3.6	2.6	1.9	1.1		1.1	2.0	0.9		2.9	2.9	2.9	2.8	2.5	2.5
Umbria				3.5	3.8	5.1	3.4	5.6	3.9	3.9		3.8	3.9	3.9	3.9	4	4	3.8	2.4		2.4	2.2		1.8	1.8	2	1.8	1.8	1.8	1.7
Marche				1.6	2.7	2.7	2.6	2.9	2.8	2.8		2.8	2.8	2.8	3.1	3.1	3.1	1.9	2.2		2.2	2.2	1.1	1.2		1.1		1.1	1.1	2.1
Lazio				1.1	1.1	1.1	1.1	0.9	0.9	1		1.8	1.5	1.4	1.4	1.3	1.3	1.2	1.3		1.3	1.3	1.3	1.3	1		1.2	1.2	1.2	1.3
Abruzzo				2.0	2.0	2.2	2.1	2.1	2.0	2		2.1	2.1	2.3	2.5	2.5		2.7	2.4		2.4	2.3	2.7	2.7	2.4	2.5	2.4	2.5	2.4	2.4
Molise				0.3	0.7	0.9	0.9	0.8	0.9	0.9		0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9		0.9	0.9	0.9	0.9	0.9	0.9			0.9	0.9
Campania				0.5	0.7	0.8	0.8	0.8	0.7	0.7		0.8	0.8	0.8	0.8	1	1	1.2	1.2		1.2	1.2		1.1	1.2		1.1	1.1	1.1	1.2
Puglia				1.0	1.0	1.0	0.9	0.9	0.9	0.9		1	1.1	1.3	1.4	1.4	1.4	1.4	1.3		1.3	1.4	1.4	1.4			1.5	1.6	1.6	1.6
basilicata				2.1	2.4	1.6	2.4	2.5	2.5	2.5		2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3		2.3	2.3	2.3	3.2		2.4	1.9	2.4	2.4	2.4
Calabria				0.6	0.6	0.8	0.8	1.1	1.1	1.1		1.1	0.9	1.1	1.1	1.3	1.4	1.4	1.4		1.4	1.4	1.4	1.3		1.4	1.4		1.4	1.5
Sicilia				0.1	0.4	0.4	0.5	0.5	0.4	0.4		0.8	1	1	1.2	1.4	1.4	1.4	1.4		1.4	1.4	1.4	1.4		1.4		1.4	1.1	1.4
Sardegna				0.3	0.3	1.0	1.0	1.4	1.3	1.3		1	1.4	1.4	1.5	1.6	2	1.6	1.8		1.8	1.8	1.8	1.8		1.8	1.8	1.5	1.9	1.9

Source: *Report of the Ministry on the implementation of the Law 194/1978 for the social protection of motherhood and legal abortion (1979-2006)* and ISTAT.

Table A2: Logistic regression model for the probability of contraception at first intercourse over time by gender (odds ratios and standard errors)

	M1	M2	M3	M4	M5	M6	M7	M8	M9
Transformative (1967-1981)	1.84**	1.81*	1.70*	1.96**	1.77*	1.81**	1.76*	1.80*	1.81**
	(0.41)	(0.43)	(0.39)	(0.46)	(0.44)	(0.40)	(0.44)	(0.41)	(0.41)
Liberal (after 1982)	4.92***	5.12***	4.77***	5.06***	4.74***	4.79***	4.68***	4.21***	4.36***
	(1.06)	(1.18)	(1.06)	(1.15)	(1.15)	(1.04)	(1.15)	(1.21)	(1.26)
Women	0.36**	0.39*	0.34**	0.36*	0.36*	0.37*	0.36*	0.36**	0.34**
	(0.14)	(0.16)	(0.14)	(0.16)	(0.16)	(0.14)	(0.16)	(0.14)	(0.13)
Transformative * women	1.59	1.47	1.66	1.54	1.52	1.56	1.50	1.59	1.64
	(0.67)	(0.64)	(0.71)	(0.71)	(0.72)	(0.66)	(0.72)	(0.67)	(0.69)
Liberal * women	1.98	1.63	1.87	1.90	1.71	1.90	1.68	1.99	2.11
	(0.81)	(0.68)	(0.78)	(0.85)	(0.79)	(0.78)	(0.78)	(0.82)	(0.86)
Age at 1st sex	0.99	1.01	1.00	1.00	1.00	1.00	1.00	0.99	1.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Parental education: at least upper sec.	1.24	1.31*	1.28*	1.35*	1.46**	1.16	1.42**	1.20	1.17
	(0.14)	(0.15)	(0.15)	(0.16)	(0.18)	(0.14)	(0.18)	(0.14)	(0.13)
Type of relationship with sexual partner: Cohabiting/marriage	0.24***	0.18***	0.21***	0.22***	0.19***	0.24***	0.19***	0.25***	0.27***
	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Not in a partnership	0.94	1.02	0.93	0.87	0.87	0.94	0.87	0.93	0.93
	(0.12)	(0.14)	(0.12)	(0.12)	(0.13)	(0.12)	(0.13)	(0.12)	(0.12)
Size of the city: 5001-10000	0.88	0.96	0.82	1.00	1.12	0.88	1.12	0.88	0.88
	(0.16)	(0.19)	(0.16)	(0.19)	(0.23)	(0.16)	(0.23)	(0.16)	(0.16)
10001-30000	0.91	0.94	0.85	0.93	0.93	0.91	0.93	0.91	0.92
	(0.14)	(0.16)	(0.14)	(0.15)	(0.16)	(0.14)	(0.16)	(0.14)	(0.15)
30001-100000	0.87	0.91	0.81	0.98	1.01	0.86	1.01	0.87	0.94
	(0.14)	(0.16)	(0.14)	(0.17)	(0.19)	(0.14)	(0.19)	(0.14)	(0.15)
100001 a 500000	0.91	0.89	0.85	0.97	0.93	0.91	0.93	0.90	0.86
	(0.17)	(0.18)	(0.16)	(0.19)	(0.20)	(0.17)	(0.20)	(0.17)	(0.17)
500000+	1.01	0.94	0.85	1.03	0.90	1.00	0.89	0.98	1.03
	(0.19)	(0.19)	(0.16)	(0.20)	(0.19)	(0.19)	(0.19)	(0.18)	(0.20)
Father's mass attendance when the interviewee was 14:1-2 times/year		0.82			0.84		0.84		
		(0.12)			(0.15)		(0.15)		
3+ times/year		0.93			1.01		1.01		
		(0.16)			(0.20)		(0.20)		
at least 1/month		1.06			1.22		1.21		
		(0.19)			(0.26)		(0.26)		
at least 1/week		1.10			1.44		1.44		
		(0.16)			(0.30)		(0.30)		
Mother's mass attendance when the interviewee was 14:1-2 times/year			1.01		1.02		1.02		
			(0.21)		(0.25)		(0.25)		
3+ times/year			0.86		0.92		0.92		
			(0.17)		(0.21)		(0.21)		
at least 1/month			0.81		0.79		0.78		
			(0.16)		(0.18)		(0.18)		
at least 1/week			0.87		0.76		0.76		
			(0.15)		(0.17)		(0.17)		
Own attendace to mass when being in the first partnership (of any kind): 1-2 times/year				1.12	1.17		1.16		
				(0.17)	(0.21)		(0.21)		
3+ times/year				0.86	0.90		0.90		
				(0.14)	(0.18)		(0.18)		
at least 1/month				0.91	0.92		0.92		
				(0.15)	(0.19)		(0.19)		
at least 1/week				0.73	0.74		0.74		
				(0.12)	(0.15)		(0.15)		
Own education: at least upper sec.						1.22	1.08		
						(0.13)	(0.13)		
Family centers: 0.1-0.9								0.85	0.90
								(0.18)	(0.20)
Family centers: 1-1.5								1.28	1.32

								(0.26)	(0.27)
Family centers: 1.6-2.9								1.38	1.32
								(0.31)	(0.30)
Family centers: >3								0.94	0.88
								(0.25)	(0.24)
Area: North-East									1.24
									(0.19)
Area: Center									0.86
									(0.13)
Area: South and Islands									0.71*
									(0.10)
N	2485	2231	2368	2254	1981	2485	1981	2485	2485
r2_p	0.14	0.15	0.15	0.15	0.16	0.14	0.16	0.14	0.15

Source: ISI 2006, authors' calculations. Weighted results.

Table A3a: Logistic regression model for the probability of contraception at first intercourse over time: predicted probabilities by social background for women (odds ratios and standard errors)

	M1	M2	M3	M4	M5	M6	M7	M8	M9
Transformative (1967-1981)	2.06	2.08	2.21	1.94	2.21*	1.92	2.28*	2.19*	2.28*
	(0.80)	(0.81)	(0.92)	(0.82)	(0.85)	(0.81)	(0.88)	(0.87)	(0.90)
Liberal (after 1982)	7.06***	7.07***	7.40***	6.48***	7.54***	6.32***	8.04***	6.73***	7.65***
	(2.64)	(2.66)	(2.99)	(2.63)	(2.85)	(2.60)	(3.00)	(3.18)	(3.63)
Parental education: at least upper sec.	0.34	0.32	0.14	0.15	0.31	0.15	0.32	0.33	0.32
	(0.29)	(0.27)	(0.15)	(0.17)	(0.26)	(0.17)	(0.27)	(0.28)	(0.27)
Transformative (1967-1981) * parental education at least upper sec.	5.34	5.72	11.83*	12.51*	4.81	12.38*	4.96	4.80	5.14
	(4.88)	(5.20)	(13.78)	(14.83)	(4.31)	(14.69)	(4.45)	(4.33)	(4.65)
Liberal (after 1982) * parental education at least upper sec.	3.61	3.92	9.80*	9.06	3.62	9.05	3.65	3.48	3.42
	(3.12)	(3.38)	(10.98)	(10.24)	(3.08)	(10.22)	(3.13)	(2.98)	(2.94)
Type of relationship with sexual partner: Cohabiting/marriage	0.17***	0.18***	0.22***	0.18***	0.22***	0.18***	0.21***	0.22***	0.24***
	(0.06)	(0.06)	(0.07)	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)	(0.07)
Partnership	0.95	0.80	0.84	0.80	0.82	0.80	0.83	0.82	0.82
	(0.31)	(0.24)	(0.30)	(0.33)	(0.25)	(0.33)	(0.25)	(0.25)	(0.26)
Age at 1st sex	0.98	0.97	0.96	0.99	0.95	0.99	0.95	0.95	0.95
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Father's mass attendance when the interviewee was 14:1-2 times/year	0.96			0.88		0.88			
	(0.22)			(0.24)		(0.24)			
3+ times/year	1.13			1.12		1.12			
	(0.26)			(0.32)		(0.32)			
at least 1/month	0.93			1.21		1.20			
	(0.24)			(0.38)		(0.38)			
at least 1/week	1.31			1.92*		1.91*			
	(0.29)			(0.57)		(0.57)			
Mother's mass attendance when the interviewee was 14:1-2 times/year		1.50		1.38		1.37			
		(0.42)		(0.46)		(0.46)			
3+ times/year		1.24		1.32		1.32			
		(0.34)		(0.44)		(0.44)			
at least 1/month		0.93		1.00		1.00			
		(0.26)		(0.34)		(0.34)			
at least 1/week		1.05		0.98		0.97			
		(0.27)		(0.32)		(0.32)			
Own attendace to mass when being in the first partnership (of any kind): 1-2 times/year			1.55	1.37		1.37			
			(0.39)	(0.39)		(0.39)			
3+ times/year			0.80	0.65		0.65			
			(0.20)	(0.20)		(0.20)			
at least 1/month			0.79	0.63		0.63			
			(0.21)	(0.19)		(0.20)			
at least 1/week			0.73	0.57		0.56			
			(0.19)	(0.18)		(0.17)			
Own education: at least upper sec.					1.23	1.07			
					(0.20)	(0.20)			
Size of the city: 5001-10000	1.07	0.93	1.03	1.19	0.99	1.19	0.99	1.03	1.04
	(0.30)	(0.25)	(0.29)	(0.36)	(0.26)	(0.36)	(0.26)	(0.27)	(0.27)
10001-30000	1.14	1.09	1.10	1.11	1.13	1.11	1.13	1.14	1.17
	(0.27)	(0.25)	(0.26)	(0.29)	(0.25)	(0.29)	(0.25)	(0.26)	(0.26)

30001-100000	1.26	1.21	1.36	1.45	1.21	1.44	1.22	1.24	1.32
	(0.32)	(0.29)	(0.34)	(0.39)	(0.29)	(0.39)	(0.29)	(0.30)	(0.32)
100001 a 500000	1.05	1.02	1.07	0.92	1.14	0.92	1.16	1.17	1.17
	(0.31)	(0.30)	(0.33)	(0.31)	(0.32)	(0.31)	(0.32)	(0.33)	(0.34)
500000+	1.04	0.93	1.08	1.00	1.08	1.00	1.09	1.04	1.01
	(0.30)	(0.26)	(0.31)	(0.32)	(0.29)	(0.32)	(0.29)	(0.28)	(0.28)
Family centers: 0.1-0.9								0.86	0.92
								(0.28)	(0.30)
Family centers: 1-1.5								1.49	1.48
								(0.45)	(0.45)
Family centers: 1.6-2.9								1.26	1.17
								(0.42)	(0.39)
Family centers: >3								0.88	0.75
								(0.34)	(0.30)
Area: North-East									1.01
									(0.23)
Area: Center									0.98
									(0.22)
Area: South and Islands									0.67
									(0.14)
N	1134	1197	1147	1018	1248	1018	1248	1248	1248
r2_p	0.18	0.19	0.20	0.21	0.18	0.21	0.18	0.19	0.19

Source: ISI 2006, authors' calculations. Weighted results.

Table A3b: Logistic regression model for the probability of contraception at first intercourse over time: predicted probabilities by social background for men (odds ratios and standard errors)

	M1	M2	M3	M4	M5	M6	M7	M8	M9
Transformative (1967-1981)	1.80*	1.76*	2.04**	1.73*	1.88**	1.72*	1.91**	1.90**	1.93**
	(0.46)	(0.43)	(0.52)	(0.47)	(0.44)	(0.47)	(0.45)	(0.47)	(0.48)
Liberal (after 1982)	4.69***	4.88***	4.61***	4.14***	4.58***	4.07***	4.74***	4.27***	4.28***
	(1.20)	(1.20)	(1.18)	(1.13)	(1.11)	(1.14)	(1.13)	(1.46)	(1.48)
Parental education: at least upper sec.	1.07	1.36	1.14	1.15	1.00	1.10	1.11	1.11	1.10
	(0.58)	(0.69)	(0.58)	(0.64)	(0.51)	(0.62)	(0.56)	(0.56)	(0.56)
Transformative (1967-1981) * parental education at least upper sec.	0.97	0.80	0.85	0.95	0.94	0.96	0.92	0.91	0.82
	(0.61)	(0.47)	(0.51)	(0.61)	(0.54)	(0.62)	(0.54)	(0.53)	(0.48)
Liberal (after 1982) * parental education at least upper sec.	1.48	1.04	1.50	1.69	1.35	1.74	1.29	1.22	1.22
	(0.86)	(0.57)	(0.82)	(1.01)	(0.72)	(1.04)	(0.70)	(0.66)	(0.66)
Type of relationship with sexual partner: Cohabiting/marriage	0.23**	0.33*	0.24**	0.22*	0.35*	0.22**	0.35*	0.36*	0.35*
	(0.13)	(0.16)	(0.13)	(0.13)	(0.16)	(0.13)	(0.16)	(0.17)	(0.17)
Partnership	1.07	1.01	0.91	0.91	1.00	0.91	1.00	1.00	0.98
	(0.16)	(0.15)	(0.14)	(0.15)	(0.14)	(0.15)	(0.14)	(0.14)	(0.14)
Age at 1st sex	1.04	1.03	1.04	1.01	1.04	1.01	1.04	1.04	1.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Father's mass attendance when the interviewee was 14:1-2 times/year	0.72			0.86		0.87			
	(0.15)			(0.22)		(0.22)			
3+ times/year	0.81			1.01		1.01			
	(0.20)			(0.29)		(0.29)			
at least 1/month	1.18			1.21		1.21			
	(0.29)			(0.37)		(0.37)			
at least 1/week	0.93			1.13		1.12			
	(0.19)			(0.33)		(0.33)			
Mother's mass attendance when the interviewee was 14:1-2 times/year		0.68		0.74		0.74			
		(0.21)		(0.27)		(0.27)			
3+ times/year		0.62		0.67		0.66			
		(0.17)		(0.22)		(0.22)			
at least 1/month		0.73		0.65		0.64			
		(0.19)		(0.21)		(0.21)			
at least 1/week		0.71		0.63		0.63			
		(0.17)		(0.19)		(0.19)			
Own attendace to mass when being in the first partnership (of any kind): 1-2 times/year			0.90	1.03		1.03			
			(0.18)	(0.24)		(0.24)			
3+ times/year			0.93	1.11		1.11			
			(0.21)	(0.30)		(0.30)			
at least 1/month			1.03	1.19		1.19			
			(0.23)	(0.33)		(0.33)			
at least 1/week			0.73	0.86		0.86			
			(0.17)	(0.24)		(0.24)			
Own education: at least upper sec.					1.20	1.08			
					(0.18)	(0.18)			
Size of the city: 5001-10000	0.85	0.74	0.99	1.09	0.79	1.08	0.80	0.77	0.74
	(0.23)	(0.19)	(0.26)	(0.31)	(0.20)	(0.31)	(0.20)	(0.20)	(0.19)
10001-30000	0.81	0.71	0.83	0.79	0.79	0.79	0.79	0.78	0.77
	(0.19)	(0.16)	(0.19)	(0.20)	(0.17)	(0.19)	(0.17)	(0.17)	(0.17)
30001-100000	0.70	0.59*	0.78	0.76	0.67	0.76	0.67	0.65	0.71
	(0.16)	(0.14)	(0.18)	(0.19)	(0.15)	(0.19)	(0.15)	(0.14)	(0.16)
100001 a 500000	0.81	0.76	0.93	0.92	0.79	0.92	0.79	0.75	0.68
	(0.22)	(0.20)	(0.25)	(0.27)	(0.20)	(0.27)	(0.20)	(0.19)	(0.18)
500000+	0.88	0.81	1.00	0.84	0.96	0.83	0.96	0.95	1.07
	(0.25)	(0.22)	(0.27)	(0.26)	(0.25)	(0.25)	(0.25)	(0.25)	(0.28)

Family centers: 0.1-0.9								0.82	0.86
								(0.24)	(0.25)
Family centers: 1-1.5								1.12	1.21
								(0.30)	(0.33)
Family centers: 1.6-2.9								1.58	1.57
								(0.49)	(0.49)
Family centers: >3								1.00	1.06
								(0.37)	(0.42)
Area: North-East									1.49
									(0.30)
Area: Center									0.77
									(0.16)
Area: South and Islands									0.76
									(0.15)
N	1097	1171	1107	963	1237	963	1237	1237	1237
r2_p	0.10	0.10	0.10	0.11	0.09	0.11	0.09	0.09	0.10

Source: ISI 2006, authors' calculations. Weighted results.

Table A4. Distribution of the independent and control variables for those who did not have sex at the time of the interview and those who have missing values on the dependent variable.

	Never had sex at the time of the interview	Missing on the y (1st intercourse between age 10 and 24)
Gender		
Men	38.49	52.92
Women	61.51	47.08
Parental education		
at most lower sec.	67.65	71.22
at least upper sec.	31.39	27.58
missing	0.96	1.2
Type of relationship with sexual partner		
No relationship		20.53
Cohabiting/marriage		8.13
Partner		28.43
missing		42.91
Age at 1st sex		
Min.10-Max.24, S.D.=2.41		17
Geographical area		
North-West	20.79	26.56
North-East	17.51	12.11
Center	18.65	18.51
South and Islands	43.05	42.83
Socio-historical context at age 15		
Restrictive (before 1967)	23.09	
Transformative (1967-1981)	13.8	
Liberal (after 1982)	63.1	
Context when 1st intercourse occurred		
Restrictive (before 1967)		26.97
Transformative (1967-1981)		26.4
Liberal (after 1982)		46.63
Father's mass attendance when the interviewee was 14		
1 Never	15.23	21.74
2 1-2 times/year	11.34	15.58
3 3+ times/year	17.02	16.56
4 at least 1/month	9.66	13.31
5 at least 1/week	26.42	17.59
missing	20.32	15.21
Mother's mass attendance when the interviewee was 14		
1 Never	5.25	9.3
2 1-2 times/year	7.75	7.03
3 3+ times/year	11.77	16
4 at least 1/month	13	12.76
5 at least 1/week	54.71	48.26
missing	7.51	6.64
Own attendace to mass when being in the first partnership (of any kind)		
1 Never	5.5	22.46
2 1-2 times/year	6.27	11.1
3 3+ times/year	3.74	16.3
4 at least 1/month	4.29	15
5 at least 1/week	20.34	28.94
missing	59.86	6.21
Own highest educational level attained		
At most lower secondary	58.01	61.34
At least upper secondary	41.99	38.66
N.	*152*	*294*

Source: ISI 2006, authors' calculations. Weighted results.

Appendix B

Starting from 1978, the Ministry of Justice and the Ministry of Health have the duty to compile every year a report on the implementation of the law for the protection of maternity and for the voluntary termination of pregnancy (Law n. 194, paragraph 6, May 22nd) to the Parliament – the *Relazione del Ministro della salute sulla attuazione della legge contenente norme per la tutela sociale della maternità e per l'interruzione volontaria di gravidanza - Legge 194/78*). Until 1996 included, these reports contain information at the regional level on the number of abortions and the characteristics of the women who asked for it and the medical technicalities of the procedures, information on the number of centers for family planning and health available, and the number of medical doctors who refuse to perform abortions due to moral concerns. The reports include also information on how many legal actions have been pursued against violators of the Law n. 194. This is also the reason why until then the report was compiled by both the Ministry of Justice and the Ministry of Health – and only by the latter from then on. The reports were retrieved on the regional level from the website https://storia.camera.it/ and http://www.salute.gov.it/portale/home.html. In this article we used the information on public family planning centers per 10.000 women aged 15 to 49. This information is missing for the years 1978, 1979, 1980, and 1996. We manually imputed the missing information based on the previous (closest in time non-missing) year. For some years, only the total number of family planning center was available. We therefore calculate the number of family planning center per 10,000 women between age 15 and 49 using statistics on the number of women aged 15 to 49 provided by the Italian Statistical Institute (http://dati.istat.it/). The final result of the manual imputation is displays in panel (b) Figure A1. A ready-to-use excel file with information on centers for family planning and health and medical doctors who do not perform abortion-related procedures by region between 1978 and 2017 is available upon request.