

Induced abortions: Still important reproduction loss in the Czech Republic?

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Abstract

OBJECTIVES: The aim of study was to evaluate the importance of induced abortions for reproduction medicine in Czech Republic.

DESIGN: Demographic analysis of data published by EUROSTAT and Czech statistical office.

SETTING: Department of Demography and Geodemography Faculty of Science, Charles University Prague.

RESULTS: Widespread use of the liberal abortion law in socialist countries contributed to the decline of fertility rates only to the replacement level. In the Czech Republic total fertility rate dropped below 1.3 in 1995 and it did not increase above 1.5 children per woman till 2007. The increased use of modern contraceptive methods that results in a sharp decline in fertility and in a significant decrease of induced abortions can be documented. The total abortion rate fell from 1.54 abortions per a woman in 1990 to 0.34 in 2007. The proportion of women aged 15-49 years who were prescribed oral contraception increased from 4 percent in 1990 to 48 percent in 2007. An induced abortion is still used largely as a way to avoid birth of additional children by women who already have the number of children they want. This is in sharp contrast with the situation in the majority of Western European countries in which abortion is used mainly by teen-age girls whose attempts to avoid pregnancy have failed.

CONCLUSION: In contrast to other demographic characteristics which classify the Czech Republic to Eastern Europe, the level of induced abortion rate is comparable with the levels observed in some Western European countries.

INTRODUCTION

The emergence of low fertility is one of the most significant novelties of the 1990s in the population reproduction. Total fertility rate below 1.3 children per woman was recorded at a national level for the first time in Spain and Italy in 1992/1993, and has subsequently spread to the post-socialist countries in Central and Eastern Europe (TFR: the average

number of children born alive to a woman during her lifetime if she were to pass through all her child-bearing years conforming to the age-specific fertility rates of a given year). In the Czech Republic total fertility rate dropped below 1.3 in 1995 and it did not increase above 1.5 children per woman till 2007. Fertility levels could have never fallen to such low levels without the widespread use of effective birth control methods (Fait *et al.*, 2008).

Abbreviations

ART	– assisted reproduction technology
COC	– combined oral contraception
IUD	– intrauterine device
TFR	– total fertility rate
TAR	– total abortion rate
CZSO	– Czech statistical office
ÚZIS CR	– Institute of Health Information and Statistics of the CR

Van de Kaa (1997) identified modern contraceptives as the means that made possible not only the low fertility but they also acted as a catalyst of behaviour that led to the observed effects.

While in the Western European countries effective contraceptive practices were already widely used by the late 1980s, in Eastern Europe traditional or no methods were the rule leading to excessively high abortion ratio, i.e. more than 50 induced abortions per 100 known conceptions. Interestingly, widespread use of the liberal abortion law in those days' socialist countries contributed to the decline of fertility rates only to the replacement level, i.e. total fertility rate around 2.1, and not to the extremely low levels well below the replacement level. Induced abortions on demand do not appear to play a catalytic role themselves but they rather act as a marker of new fertility behaviour. When reviewing the way women have been controlling fertility since 1990 in the Czech Republic and when describing the changes of their choices of birth control methods a profound effect of the increased use of modern contraceptive methods that results in a sharp decline in fertility and in a significant decrease of induced abortions can be documented.

Currently, the European populations rarely use more (and frequently less) than 10 percent of their capacity to reproduce themselves (Van de Kaa, 2002). It is a manifestation of profound social changes. Family planning tools have enhanced control over fertility and resulted in changes of values and norms on sexuality and reproduction. Modern contraception and liberal abortion legislation have enabled women to postpone childbearing to higher ages. Consequently, it has resulted in an increase in infertility rates and thus higher demand on the use of ART. The ongoing fertility postponement has narrowed the time span available for reproduction. Currently, European women become mothers at mean age of 28 years compared to 24 years in 1970. The long-term trend towards later childbearing indicates that ART will become more important for future fertility trends, particularly in the low-fertility countries. Between 1 and 4 percent of children born in 2003 were conceived through assisted reproduction in the European countries (Andersen *et al.*, 2007). In Denmark where the highest success rate was reported in 2003, i.e. 3.9 percent of children were conceived through ART (intrauterine inseminations were excluded). Sobotka *et al.* (2008a) showed a slight positive impact of assisted reproduction on cohort fertility. For Danish women

born in 1975 an increase in their completed fertility by 4.3 percent was estimated. Proportion of births conceived through assisted reproduction is expected to be increasing in most developed countries as ART use becomes more widespread over time. However, it seems to be still a minor factor in comparison with the persisting reproduction loss induced by abortions as one fifth of pregnancies are terminated by induced abortion in Denmark. At present, the highest reproduction loss can be detected in the Russian Federation where almost 50 percent of pregnant women choose an abortion.

DATA, METHODS, AND GENERAL OVERVIEW

Data published by EUROSTAT and CZSO were used to perform more detailed demographic analysis using a transversal approach. CZSO and ÚZIS CR provide complete abortion registry, which is rather a disadvantage from the perspective of the Czech Republic. Some countries have incomplete abortion data because of the fact that menstrual regulations (i.e. legally induced abortion by means of vacuum aspiration) are not registered as induced abortions. Analyses were based on data processed by CZSO as they are the most comprehensive. IHIS CR did not include data on foreign citizens until 2004. Demographic indicators such as the abortion rate (number of abortions per 1000 women of a given age group), index (number of abortions per 100 births), ratios (number of abortions per pregnancies, i.e. probability that a pregnant woman would choose an abortion) were used to demonstrate the recent developments. Age, marital status, number of children, and the number of previous induced interruptions have been shown to be the most relevant characteristics for the analysis of changes in abortion behaviour of the Czech population since 1990 (Kocourková, 2007).

In the Czech Republic abortion is accessible on request up to the twelfth week of pregnancy. The last change of the abortion law occurred in 1987 when abortion became more easily accessible as special committees approving each abortion request were cancelled. This measure was responsible for the pronounced peak in abortion rates between 1987 and 1992. Since 1993, a fee of approximately 3,000 CZK (110 EUR) has been charged for performing an abortion without health reasons. As a result, between 1992 and 1994 an increase in the proportion of induced abortions performed for health reasons from 11 to 24 percent was registered. This proportion has gradually decreased and recently stabilized around 19 percent (Table 1). Between 1990 and 2007 the number of induced abortions decreased to less than one fourth – from 110 thousand to 25 thousand. The total abortion rate fell from 1.54 abortion per a woman in 1990 to 0.34 in 2007 (TAR is analogous to TFR). However, due to the simultaneous decline in TFR the decrease in reproduction loss has not been that significant during the 1990s. Only recently, as a result

Table 1: Abortions in the Czech Republic in 1990-2007

Indicator	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
Induced abortions (excluding ectopic pregnancies)	109375	49531	34623	32528	31142	29298	27574	26453	25352	25414
Spontaneous Abortions	14772	10571	11300	11116	11256	11660	12402	12245	13326	14102
Induced abortions per 100 births	83.4	51.4	38.0	35.8	33.5	31.2	28.1	25.8	23.9	22.1
Spontaneous abortions per 100 births	11.3	11.0	12.4	12.2	12.1	12.4	12.7	12.0	12.5	12.3
Induced abortions per 100 pregnancies	42.5	31.4	25.0	23.9	22.8	21.5	19.8	18.6	17.4	16.3
Proportion of induced abortions performed for health reasons (%)	8.7	23.9	18.7	18.5	18.0	18.4	16.7	17.7	18.9	18.8
Proportion of mini-interruptions (%)	80.4	84.3	82.1	80.7	80.7	79.6	78.8	77.6	77.1	75.6
Total induced abortion rate	1.54	0.68	0.47	0.44	0.42	0.39	0.37	0.35	0.34	0.34
Total spontaneous abortion rate	0.21	0.14	0.15	0.14	0.15	0.15	0.16	0.16	0.17	0.18
Total fertility rate	1.89	1.28	1.14	1.15	1.17	1.18	1.23	1.28	1.33	1.44

Data source: CZSO

of both ongoing decline in TAR and slight increase in TFR, the reproduction loss has reached much lower level. While around 1990 more than 40 percent of pregnancies ended by an abortion, by 2007 this proportion decreased to 17 percent. Nevertheless, it is still high with regard to the current results of ART. In the early 2000s slightly more than 3 percent of children were born after IVF in the Czech Republic (Kučera *et al.*, 2005).

BIRTH REGULATION IN EUROPE

Included abortion is a method of “birth regulation”, a concept currently comprising not only contraception, i.e. the other means to prevent conception and birth, but also methods of assisted reproduction, i.e. means to help infertile couples to conceive. The principal contemporary medical methods of pregnancy termination are vacuum aspiration and Mifepristone (RU-486) for early abortions, and dilatation and curettage. RU-486 was invented in France in 1980 where it has been used since 1988. At present more than 30 percent of first-trimester abortions are medical procedures in France (Pinter *et al.*, 2005). This method has become widely used particularly in Sweden accounting for 57 percent of induced abortions in 2005 (Frejka, 2008). The abortion pill is not yet available in the Czech Republic. More than 75 percent of abortions in the Czech Republic are performed by vacuum aspiration. The highest proportion of mini-interruptions (also called early abortion, until the 8th week of pregnancy) was registered in the middle 1990s (Table 1). Since then a slight decrease in this proportion has been recorded. It could be explained by the stable incidence of induced abortions for inborn defects of the foetus, which are indicated after their diagnosis during the first or second trimester pregnancy screening.

Abortion rate is closely related to the effectiveness of contraception use. Low abortion rate in the countries where abortions are easily accessible indicates a high percentage of women using modern contraception. Currently, contraception use prevalence is the highest in Northern and Western Europe (Frejka, 2008). 75 percent of couples in Northern Europe and 70 percent of couples in Western Europe use the modern methods. In the formerly socialist countries of Central and Eastern Europe the contraception use prevalence is only 36 percent although it has substantially increased since the 1990s. The Czech Republic has the highest contraception use prevalence among the Central European countries with 55 percent of all women at fertile age using IUD or hormonal contraception in 2007 (ÚZIS CR, 2008). Recent major changes in the contraceptive behaviour are referred to as “the contraceptive revolution”.

“Abortion culture” was the term used to characterize the nature of birth regulating behaviour in the formerly socialist countries of Central and Eastern Europe up to the end of the 1980s (Stloukal, 1999). Liberal abortion legislation together with health systems supporting curative rather than preventive medicine made the induced abortions easily accessible as well as socially acceptable. Modern contraception was difficult to get and most couples were using traditional ineffective contraception methods. Due to the promotion of effective contraception use the incidence of induced abortions decreased in the whole region particularly during the 1990s. Despite the differences in the speed of decline, the abortion index has narrowed (Figure 1). There are still countries where, even with the recent increase in the availability of contraception, abortions continue to be a common practise of many women (Melgalve *et al.*, 2005). Nevertheless, within this region the lowest

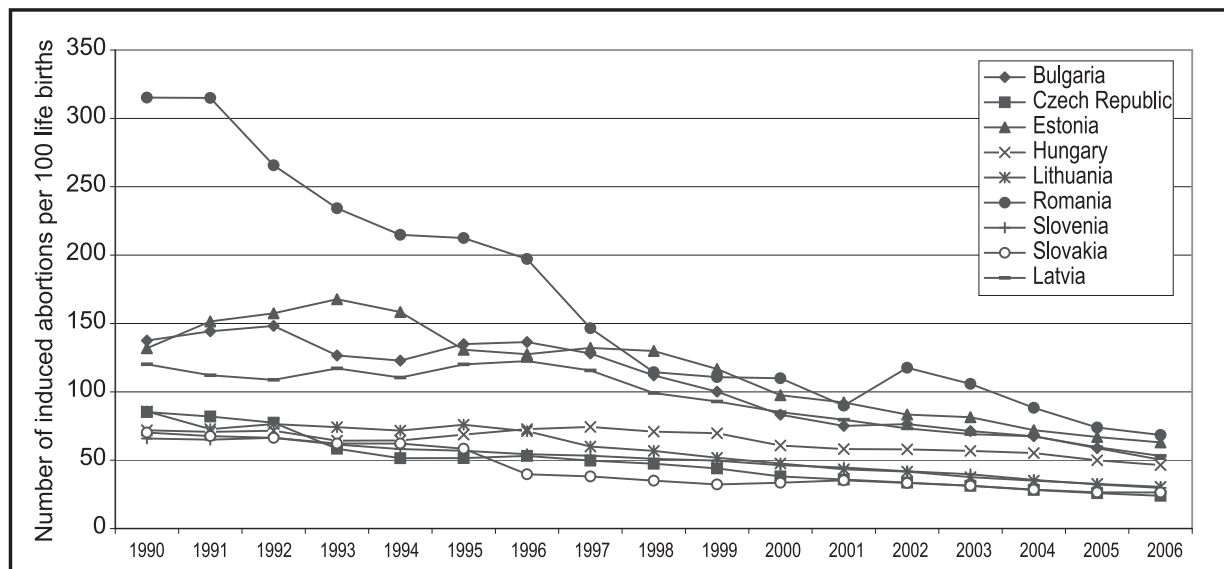


Figure 1: Trends in abortion index in selected Central and Eastern European countries, 1990-2006. Data source: Eurostat

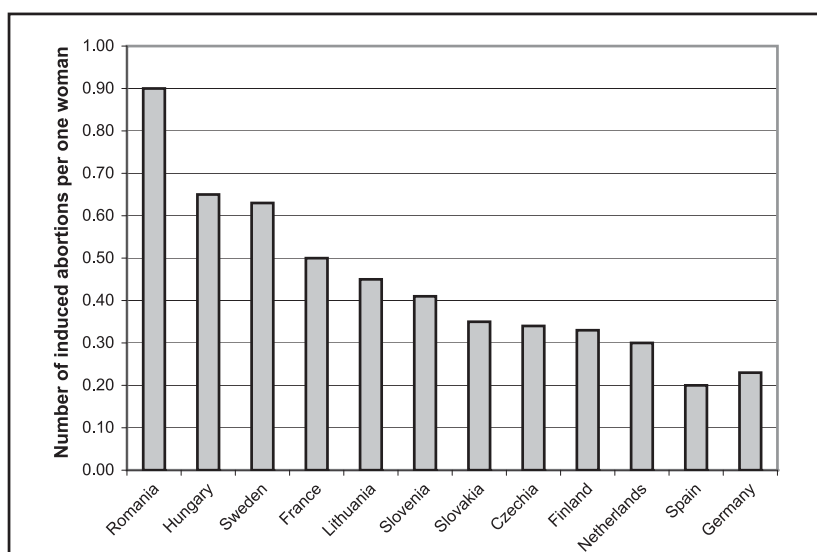


Figure 2: Total abortion rate in selected European countries, 2006. Data source: Eurostat.

level of abortion index has been reached in the Czech Republic.

In terms of the abortion rate, Europe was clearly divided into East and West by the 1990s. Recently, the clear separation has disappeared as in the Czech Republic, Slovakia, Slovenia, and Lithuania total abortion rates have reached levels that are lower or similar to the ones in France or Sweden (Figure 2). When comparing abortion rates between countries, the accessibility and availability of abortion has to be taken into account. Furthermore, international comparison is also complicated by the differences in cultural, social, and religious backgrounds of the countries compared. Although there are some exceptions (Malta, Poland, Ireland, Portugal, Spain, and Switzerland.) generally, abortion is well accessible in terms of the abortion laws in Europe (Pinter *et al.*, 2005). In most other countries abortion is

allowed on request or for socioeconomic reasons. Abortion rate is also a reflection of financial accessibility and availability of abortion services. Recently, similarly to Poland also in other Eastern European countries there has been a trend to limit the availability and access to abortion. Catholicism has some impact on abortion policy in Slovakia and Hungary. In Hungary, the last change of the abortion law in 2001 introduced two rounds of obligatory pre-abortion counselling. Lastly, while in some Western European countries abortion could be fully covered by health insurance (for example in France or UK) or by the government separate insurance (in the Netherlands), in most Eastern European countries women have to pay an abortion fee (with the exception of Romania).

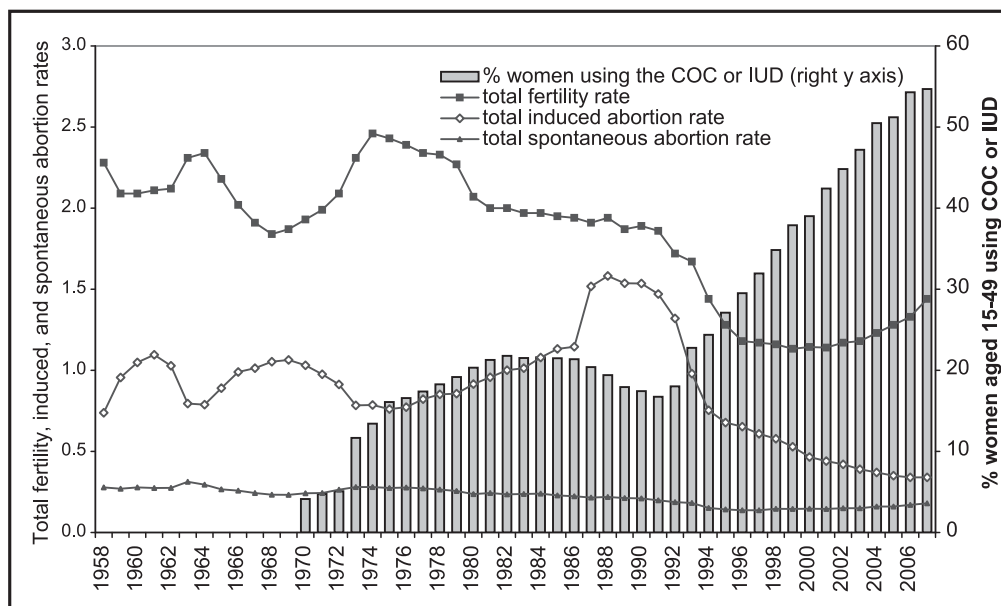


Figure 3: Trends in total fertility rate, total induced abortion rate, total spontaneous abortion rate, and the proportion of women aged 15-49 using COC or IUD, 1958-2007. Data source: CZSO, ÚZIS.

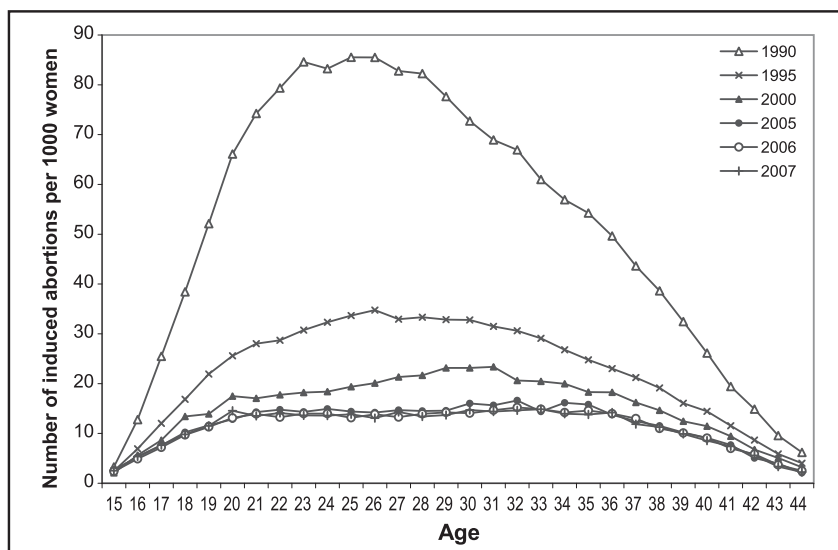


Figure 4: Induced abortion rates by age of women. Data source: CZSO

CHANGES IN DEMOGRAPHIC PROFILE OF INDUCED ABORTIONS IN THE CZECH REPUBLIC

In the first half of the 1990s, an unusually dramatic shift to a qualitatively new demographic situation occurred. All components of the natural reproduction declined to lower levels. Moreover, development of the abortion and fertility rates became independent (Figure 3). Till the end of 1980s the TFR and TAR were virtually “mirror images”, with an increase in one being reflected in a decrease in the other. The different rates of decline of these components have brought about a major change in their relation. Behind this, there has been a marked shift in reproductive behaviour – from limited use of modern contraception and strong reliance

on induced abortion to the widespread use of effective contraceptive methods, especially the COC. The lowest number of women aged 15–49 years using prescription contraception was recorded between 1988 and 1992, i.e. between the date when more liberal abortion law was introduced and the date when an abortion fee was started to be charged. Interestingly, the easier access to abortion temporarily led to less responsible behaviour of individuals that resulted in both a sharp increase in the abortion rate and a decrease in the prevalence of effective contraception. Only the abortion fee stimulated a change in contraceptive behaviour of the Czech population.

Until the early 1990s, the first sexual intercourse was commonly unprotected and the first pregnancy often unplanned. Only after reaching their intended family

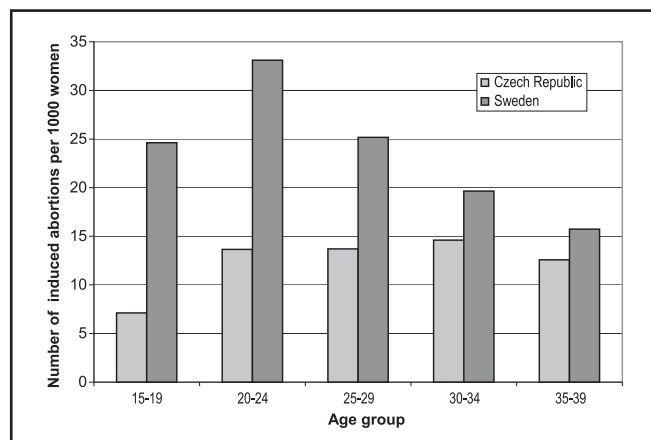


Figure 5: Induced abortion rates by age group in Sweden and the Czech Republic, 2006. Data source: Eurostat.

size women employed contraception methods or opted for an abortion. Currently most men and women use effective contraception methods at the beginning of their sexual life. The first pregnancy therefore most often involves a carefully planned discontinuation of contraception. The proportion of women aged 15–49 years who were prescribed oral contraception increased from 4 percent in 1990 to 48 percent in 2007. In addition, 7 percent of women used the IUD. At present, there are almost no differences in the choice of various contraceptive methods among women of different educational categories (Sobotka *et al*, 2008b). However, low educated women with a partner are less likely to use any form of contraception.

One of the most important aspects of induced abortion is its relationship to women's age. Before 1990 the induced abortion rate was the highest among women aged 20 to 34 years. Most of them were able to conceive, sexually active and married. Women over the age of 35 years and under the age of 20 years were less likely to request abortions. It can be said that abortions were often a result of unplanned pregnancies among women who felt that their childbearing period had been over. After 1990 the fall was most pronounced in the age group with traditionally highest rate of abortions (Figure 4). It resulted in diminishing of the differences between age groups. Recently, the abortion rates of women at age 20–34 almost merged. Despite this improvement, the demographic function of induced abortion has remained unchanged. It is still used largely as a way to avoid birth of additional children by women who already have the number of children they want. This is in sharp contrast with the situation in the majority of Western European countries in which abortion is used mainly by teen-age girls whose attempts to avoid pregnancy have failed (Figure 5).

The structure of women who have undergone abortions has changed. While before 1990 induced abortion was mostly requested by married women, the abortion rates between married and unmarried women have

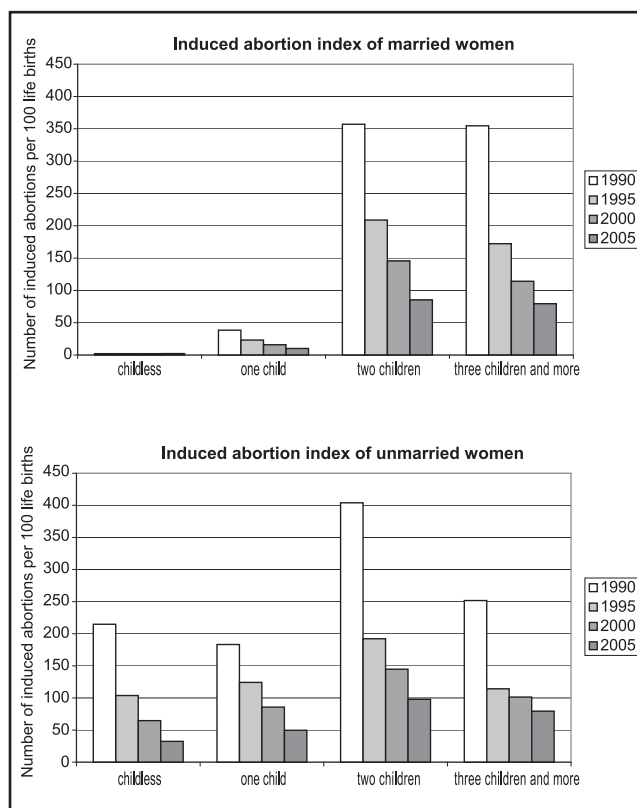


Figure 6: Induced abortion index by number of children prior to abortion, married and unmarried women. Data source: CZSO

converged recently. Although markedly declining, the induced abortion still remains most frequently requested by women with two children. They use abortion as a kind of ex post contraception, as was more common prior to 1990. Abortion index can indicate whether the decision for abortion is more frequent than decision for childbirth once a woman is pregnant (Figure 6). Up to the mid 1990s the probability that unmarried women requested induced abortion was higher than the decision for childbirth. Recent decrease of the abortion index in unmarried women is related to the new reproductive behaviour characterised by greater tolerance towards increasing number of children born out of wedlock. However, the decision making process of married women has changed as well. In 1990 the probability that the pregnancy of a married woman with two children ended by induced abortion was more than 3.5 higher than the probability of childbirth. Since 2005 the childbirth is slightly more frequent than induced abortion in this situation. Nevertheless, an inclination towards a two-child family pattern has persisted in the Czech population. As a result of the overall tendency of women to postpone the childbearing to higher age the lowest share of conceptions ending by abortion is currently observed at the age of 28 and 29 years (Figure 7). More than half of the pregnancies end by abortion when a woman is at the beginning of her reproductive age – 15 or 16 years old.

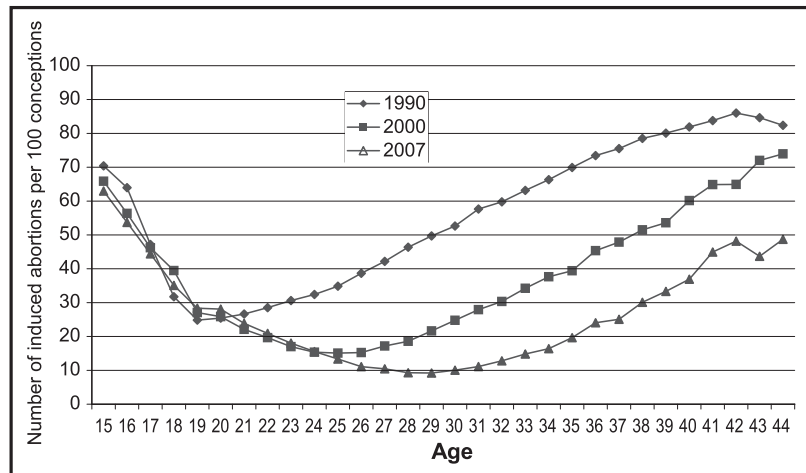


Figure 7: Share of conceptions ending by induced abortion by age of women. Data source: CZSO

DISCUSSION

Significant advancements in contraceptive (Wrobel et al, 2008) and induced abortion technologies and their relatively easy and widespread availability have had a profound impact on fertility levels and trends. What would the course of fertility have been by the end of the 20th century without modern contraceptive technology, and without liberal abortion legislation? Frejka (2008) suggested that in case of absence of liberal abortion legislation the fertility trends might not have differed significantly from reality. Developments in Poland since the 1990s demonstrate that currently, when modern contraceptives are easily available, the legislative changes may have only negligible fertility consequences. Restriction of the liberal abortion legislation in 1993 apparently had only a marginal effect on declining fertility in Poland. However, cancellation of the liberal abortion legislation together with limited access to contraception, can affect fertility markedly, as proven in Romania after 1966.

Thus, introduction of restrictions in the abortion law is not a feasible way to increase fertility level in countries with extremely low fertility. In these countries a big “child gap” (i.e. difference between desired and actual number of children) has been shown repeatedly. Simultaneously the high abortion rate in most of these countries supports the notion that it reflects the small number of children desired (Pinter *et al*, 2005). However, it only implies that socioeconomic conditions in these countries do not favour raising children. The current European family policy attempts to secure an environment that would enable people to realise their preferences of the number of children (Vignon, 2005). Restrictive abortion legislation would result in an increase of the incidence of unwanted and mistimed pregnancies, which is not in line with this policy. Besides, the health risks could be considerable as more

abortions would be performed illegally. Medow (2007 and 2008) estimated effects of various restrictive abortion laws on the demand for abortion. These studies are particularly relevant in countries where teenagers have a higher rate of unplanned pregnancies and abortions than any other age group. The empirical results have found that two types of state restrictive abortion laws – parental notification and mandatory counselling – have a spillover effect on the abortion demand due to the increased price of an abortion.

CONCLUSIONS

In contrast to other demographic characteristics which classify the Czech Republic to Eastern Europe, the level of induced abortion rate is far from those registered in this region. The abortion rate in the Czech Republic is comparable with the levels observed in some Western European countries. The reproduction loss has been markedly diminished and has come close to the level that has been achieved in Western Europe for a longer period of time. Although there are still some reserves as suggested by the contraceptive prevalence in the Czech Republic, a stop in the declining trend of abortion rate could be expected. The future development would depend on how much the problem of unwanted pregnancy would shift into the non-marital sphere. Unbalance between reproduction loss induced by abortions and reproduction gain achieved by application of the ART will probably continue in the near future.

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