

DEMOGRAPHIC
TRENDS AND PATTERNS
IN THE SOVIET UNION
BEFORE 1991

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Part I

**Fertility Trends and
Patterns**

Chapter 8

Contraception and Abortions: Trends and Prospects for the 1990s

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Over the past decade the problems of family planning began to cause interest in the USSR. Three mutually related questions have been occupying the attention of the mass media, demographers, and sociologists:

- Why does the USSR have the highest level of induced abortions in the world?
- What are the trends and factors associated with abortion and contraception?
- Is it possible to modify the situation and in what way?

It is difficult to find answers to these questions because official abortion statistics were not published between 1930 and 1987, and even these official statistics do not have enough detail for an in-depth analysis.

During the first liberalization of the abortion law (1920–1936) in the USSR there were very good abortion statistics, providing information on age, social characteristics, marital status, number of children, deliveries, and previous abortions of women who obtained an abortion in a clinic. In 1936, when the abortion law was restricted, the system of collecting abortion statistics was almost completely abolished, and

it was not restored after 1955 when the Soviet government liberalized abortion again.

Between 1955 and 1965 the number of abortions was rapidly increasing and reached its maximum of 8.3 million in 1965. It then slightly decreased and during the next two decades it stabilized at the level of 7 million per annum, in spite of the Ministry of Health efforts to spread modern contraceptive methods.

This chapter aims to estimate the basic indicators of abortion and contraception from the incomplete data available, to analyze the causes of abortion-level stabilization during the 1980s in the USSR, and to anticipate the future problems and effects of family-planning activity concerning abortion and contraception.

8.1 Why Has Induced Abortion Become the Main Method of Family Planning in the USSR?

The beginning of fertility decline in the course of demographic transition occurs at the same time as the start of family planning, which includes such important elements as the attitudes of society, social institutions, families, and individuals toward deliberate birth control, abortion, and contraception.

Throughout the world, there are three basic types of family planning. The origins of the first were typical for Western Europe: the decline of birth rate had begun at a time when contraception was underdeveloped and abortion was prohibited and considered a crime. Under these conditions any information on contraception was well received by the population and the freedom to obtain such information was supported by a majority of litigators who were eager to have birth control. Thus, the contraceptive way of family planning was created. Typical of this way are a negative attitude to abortion and a high motivation for contraceptive practice, even after the liberalization of abortion law.

The second type of family planning may be found in countries in which the decrease in birth rate had begun during the period of the contraceptive revolution in the 1960s. Modern contraception was supplied by the governments of many countries, especially within the framework of family-planning programs, often significantly exceeding the demand.

~~This was an inversion of the European type but resulted in the same~~

consequence: the spread of contraception as the main method of birth control.

In the USSR the birth-rate decrease had begun under conditions of liberal abortion policies without wide supply of contraception. This forms the third type of family planning.

The birth-rate decline started in Russia in the late 19th century, but was significantly distorted during the Russian-Japanese war, the revolution of 1905, the First World War, the revolution of 1917, and the following civil war. Legalization of abortion in 1920 under conditions of hunger had rapidly made it a widespread method of birth control. So after the increase in the birth rate in the mid-1920s, abortion became more accessible and soon became the main method of family planning.

The main aim of abortion policy in the 1920s was to decrease the number of abortions outside hospitals. This policy was successful, but it resulted in the further spread of abortion as the principal method of family planning because contraception was in limited supply.

The use of abortion for family-planning purposes was based on the ideological doctrine, which existed for many years, that a decrease in birth rate (and thus abortion) was a temporary phenomenon not typical of socialism. It was believed that the improvement in economic conditions of life would automatically result in increased birth rates and decreased abortion levels. This ideological doctrine prevented interest in modern contraception and hindered its dissemination.

In the early 1930s abortion policy in the USSR experienced a crisis. Abortion data over different time periods demonstrate that, though the quality of life improved, the number of abortions continued to rise. Simultaneously, a fertility decrease and a reduced population growth caused by forced collectivization and hunger was observed. Abortions were forbidden in 1936 as a result of this.

It may have been thought that the restriction of abortion law could have reoriented family-planning practice in the USSR to the "Western" way. However, this process was slowed down by the Second World War distorting the demographic development of the USSR.

The next liberalization of abortion law in 1955 was the revival of the abortion policy which had existed between 1920 and 1936. As before, abortion and fertility decline were considered as temporary phenomena. Only in the 1960s was it accepted that a general change in reproductive

patterns, resulting in low fertility, had occurred in the USSR. It was understood that low fertility is a necessary reaction to low mortality. As a consequence of this understanding the attitude to abortion changed too. It became clear that it was impossible to reduce abortions significantly without widespread use of modern contraception and without changing family-planning activities in general.

--- In the 1960s and 1970s health planners believed that a growth in contraceptive practice, even in less effective methods, should decrease the abortion level. But they did not take into account the fact that families did not worry about the global problem of reducing the number of abortions. The main problem within a family was how to avoid unwanted childbearing, and if contraception was not 100 percent effective the motivation to use it was very low (Verbenko *et al.*, 1968).

So, the USSR Ministry of Health paid increased attention to the problem of contraception, giving a priority to intrauterine devices (IUD) and oral contraceptives (OC), with the intention of achieving a change in the abortion level in the 1980s. However, this did not happen. Section 8.2 explains the reasons for this.

8.2 Framework and Data for Analysis

At present, Soviet official statistics only include data on the annual number of registered abortions occurring in hospitals, grouped by territorial units. However, this indicator depends significantly on factors such as the number of women of reproductive age, the proportion who are married, the age distribution of births, and the contraceptive prevalence. It is difficult to analyze changes in abortion rates on the basis of official statistical information. Thus the main analytical task is to identify the influence of different demographic factors on abortion level.

First, the abortion level depends on the proportion of women of reproductive age (WRA) in the population. One may exclude the influence of this factor by calculating the general abortion rate (GAR, or abortion rate) equal to the number of abortions per 1,000 WRA. The impact of age structure on the WRA can be removed by standardizing GAR or by calculating the total abortion rate (TAR) as a sum of age-specific abortion rates (ASAR), by analogy with the total fertility rate (TFR).

As the age grouping of abortions is not given in the Soviet statistics, we can determine the TAR value by dividing GAR by 1,000 and multiplying by 35 – the duration of the reproductive period in years. This procedure is sometimes used for the comparison of indicators in different countries or for TAR use in demographic models. However, for the analysis of abortion dynamics such simplification is not viable because the differences in age-specific distribution of fertility are ignored.

The other method of estimating TAR, which is more accurate and more appropriate for countries with high abortion levels, is based on the assumption that the hypothetical age-specific distribution of abortion number is proportional to the age-specific number of averted births. This procedure provides an estimate of ASAR so that a researcher may use the wide spectrum of modern analytical methods. The calculation is carried out by comparing any standard natural fertility model and observed marital fertility in the ratio of age-specific fertility rate (ASFR) to proportion married. Marital fertility in the age group 15–19 was taken to be equal to 75 percent of marital fertility in the group 20–24 (Bongaarts and Kirmeyer, 1980).

The method for the estimation of ASAR is given in the following equation:

$$a(x) = \frac{m(x)[n(x) - mf(x)]A}{\sum_{x=15}^{49} \{W(x)m(x)[n(x) - mf(x)]\}}, \quad (8.1)$$

where $a(x)$ is the age-specific abortion rate, $n(x)$ is the age-specific natural fertility rate, $mf(x)$ is the age-specific marital fertility rate (ASMFR), $m(x)$ is the proportion of currently married women of age x , $W(x)$ is the number of women of age x , and A is the annual number of induced abortions.

The calculations showed that TAR changed slightly from 1979 to 1986, it significantly decreased in 1987, and in 1988 it returned almost to the initial level.

The estimation of ASAR for five-year groups was carried out using this procedure, and then the standardized abortion rate was calculated for the period from 1979 to 1989. The estimated ASAR for 1979 was used as a standard, and the numbers of women in 1979, 1987, and 1989 were taken from state statistics. The numbers of women in other years were interpolated.

Abortion and contraception are two types of family-planning methods. It is very important to estimate the impact of each one on the formation of fertility level. The model of intermediate or proximate determinants of fertility (PDF), suggested by Bongaarts (1978), is a good instrument for this.

Equation (8.2) generalizes the essential relationships of this model:

$$\text{TFR} = \text{TF} C_m C_c C_a C_i, \quad (8.2)$$

where TFR is the total fertility rate; C_m is the index of the proportion of women who are married; C_c is the index of contraception; C_a is the index of abortion; C_i is the index of postpartum infecundability; and TF is the total fecundity, i.e., an average number of children who could be borne by a woman in the absence of such inhibitors as marriage, contraception, abortion, and lactation, which has an inhibitory effect on ovulation. The values of indexes which estimate the impact of proximate determinants on fertility vary from one (the factor is absent) to zero (the factor blocks fertility completely).

In assessing the values of proximate determinants of fertility the main problem is determining the value of the total abortion rate (TAR) and the contraceptive prevalence (u), equal to the proportion of currently married women of reproductive age (MWRA) using contraception.

There are no data on contraceptive prevalence in Soviet state statistics. The only information available was on the absolute number of registered abortions and on the manufacturing and distribution of some kinds of contraceptives through the medical institutions and commercial network, as well as the published data on fertility, nuptiality, and population age structure. The variable u was found from the regression equation describing the relationship between u and crude birth rate (CBR):

$$\text{CBR} = 46.9 - 42.0u \quad R^2 = 0.91$$

or

$$u = \frac{(46.9 - \text{CBR})}{42.0} \quad (8.3)$$

The parameters of this equation were estimated by Nortman for the populations of 32 developing countries where the prevalence of induced abortion was minimal (Nortman and Hofstatter, 1980). In this case the

term u should be estimated under a very high level of induced abortions. Thus, to use equation (8.3) for analysis it is necessary to calculate the corrected CBR resulting from the hypothesis that all the births that were estimated to have been averted that year by induced abortions had occurred. It is known that an induced abortion always averts less than one birth, because the maximum duration of pregnancy in this case is equal to three months, in general, and ovulation is resumed after one or two months – much sooner than after giving birth. In the absence of contraception, an induced abortion averts about 0.4 births, while about 0.8 births are averted when moderately effective contraception is used. The births averted per induced abortion, b , may be estimated with the equation:

$$b = 0.4(1 + u) . \quad (8.4)$$

To be exact, u should equal the proportion of women protected by contraception who have had an induced abortion. Since this information is usually unavailable, it would not be a gross error to use the proportion of MWRA currently using contraception as u (Bongaarts, 1978). The corrected CBR can be calculated using the formula

$$\text{CBR}^* = \text{CBR} + 0.4(1 + u)\text{CAR} , \quad (8.5)$$

where CBR^* is the crude birth rate corrected for induced abortions and CAR is the crude abortion rate equal to the number of induced abortions per 1,000 people per year. Substituting equations (8.4) and (8.5) in equation (8.3) yields the following formula for estimating the value of u associated with a given level of abortions:

$$u = \frac{46.9 - (\text{CBR} + 0.4\text{CAR})}{(42.0 + 0.4\text{CAR})} . \quad (8.6)$$

In 1979 the observed CBR was 18.2. This corresponds with the theoretical contraceptive prevalence of 68 percent. The adjusted CBR was equal to about 33–35, which agrees with the real contraceptive prevalence of about 34 percent.

The decrease of postpartum infecundability must lead to fertility increase or to contraceptive prevalence growth or to abortion-level rise. For this reason the estimate of the postpartum infecundability index (C_i) for the USSR and the republics is a very important but very difficult task, because the data on breast-feeding duration and postpartum sterility are absent in the Soviet statistics.

According to the data of the sample survey carried out in 1985 and 1986 by the gynecologist Yun for the random sample of WRA in Moscow and Uzbekistan (Katkova *et al.*, 1989), the average duration of lactation after the first delivery was 6.8 months in Moscow and 13 months in rural Uzbekistan. After the second delivery this decreased to 6.3 months in Moscow and it increased almost to 15 months in Uzbekistan. The mean duration of postpartum infecundability, i , in Moscow was 4.2 months after the first delivery and 3.1 months after the second one. In Uzbekistan the figures were 7.7 months after the first delivery, 9.4 after the second one, 6.5 after the third delivery, and 10.4 after the fourth.

It was thought that these data corresponded with two limiting points of the regression line describing the linear relationship between CBR and i . The crude estimation of this relationship is

$$i = 0.202\text{CBR} + 0.372 . \quad (8.7)$$

We can now obtain the set of values of i for all the republics and then calculate C_i using the PDF model:

$$C_i = \frac{20}{(18.5 + i)} . \quad (8.8)$$

The calculation of the proportion of married women is not difficult, as there are complete marital statistics in the USSR. The only difficulty is determining the proportion of those living in unions (married or marriage-like) in age group 15–19. The marital fertility rate for teenagers will be unrealistically high if it is calculated by dividing the ASFR by the proportion of people married obtained from official marital statistics. There are many incidents of premarital and extramarital conceptions in this age group, so if age when married and age of first birth are compared, both contained in official statistics, unnaturally short intervals between marriage and first birth are observed. In reality there are many more married teenagers or teenagers in sexual relationships than are registered in the statistics. Assuming that the marital fertility rate in this group is 75 percent of that of the 20–24-year-old age group, the proportion married before age 20 may be corrected as follows:

$$m^*(15-19) = \frac{m(20-24)f(15-19)}{0.75f(20-24)} , \quad (8.9)$$

Table 8.1. Proximate determinants of fertility in the USSR and the republics in ascending order of total fertility rate, 1985 to 1986.

	TFR	C_i	C_m	C_c	C_a	TF	TAR
USSR	2.46	0.87	0.49	0.65	0.55	16.14	3.65
Ukrainia	2.07	0.91	0.55	0.49	0.51	16.53	3.30
Byelorussia	2.08	0.91	0.49	0.49	0.59	16.40	2.42
Latvia	2.09	0.91	0.54	0.48	0.54	16.50	2.93
Estonia	2.11	0.91	0.56	0.48	0.52	16.52	3.24
Russia	2.11	0.89	0.49	0.62	0.47	16.39	4.62
Lithuania	2.13	0.90	0.53	0.40	0.69	16.44	1.49
Georgia	2.36	0.88	0.50	0.50	0.66	16.26	2.06
Armenia	2.54	0.84	0.42	0.62	0.74	15.72	1.64
Moldavia	2.75	0.86	0.49	0.69	0.49	15.92	3.63
Azerbaijan	2.91	0.82	0.43	0.67	0.81	15.29	1.33
Kazakhstan	3.08	0.83	0.49	0.74	0.74	15.55	3.07
Kirghizia	4.17	0.79	0.55	0.89	0.74	14.60	3.26
Uzbekistan	4.68	0.75	0.56	0.94	0.83	13.77	2.18
Turkmenistan	4.72	0.76	0.59	0.88	0.87	13.92	1.64
Tajikistan	5.60	0.73	0.67	1.00	0.88	13.02	1.79

where $m^*(15-19)$ is the adjusted proportion of married people in the age group 15-19, $m(20-24)$ is the proportion of married people in the age group 20-24, and $f(15-19)$ and $f(20-24)$ are age-specific fertility rates.

Table 8.1 shows the estimated values of PDF for the USSR with the republics arranged in ascending order of TFR. An increase in the index of the proportion of those who are married (C_m) is observed. This signifies the decrease of the impact of this factor on fertility. The abortion index (C_a) is positively associated with TFR, as is the change in contraception index (C_c). Contraception appears to prevail over abortion at some stage of demographic transition.

The logarithmic transformation of equation (8.2) gives a better result for the proximate determinant:

$$\frac{\ln(C_m) + \ln(C_c) + \ln(C_a) + \ln(C_i)}{\ln(C_m C_c C_a C_i)} = 1, \quad (8.10)$$

where 1 or 100 percent is the sum of the relative impacts of all proximate determinants on TFR. It is simple to determine the values of relative weights for every proximate determinant.

As Table 8.2 shows, the relative occurrence of abortion is also significant in republics which joined the USSR in 1940. The liberalization

Table 8.2. Relative impact of proximate determinants on fertility in the USSR and the republics, 1985–1986.

	TFR	C_i (%)	C_m (%)	C_c (%)	C_a (%)	TF	TAR
USSR	2.46	7.40	37.92	22.90	31.78	16.14	3.65
Ukrainia	2.07	4.54	28.76	34.31	32.39	16.53	3.30
Byelorussia	2.08	4.60	34.82	34.82	25.76	16.40	2.42
Latvia	2.09	4.58	29.90	35.62	29.90	16.50	2.93
Estonia	2.11	5.65	34.58	23.17	36.60	16.52	3.24
Russia	2.11	4.57	28.12	35.59	31.71	16.39	4.62
Lithuania	2.13	5.20	31.31	45.19	18.30	16.44	1.49
Georgia	2.36	6.62	35.92	35.92	21.53	16.26	2.06
Armenia	2.54	9.57	47.64	26.25	16.54	15.72	1.64
Moldavia	2.75	7.74	36.61	19.04	36.61	15.92	3.63
Azerbaijan	2.91	12.00	51.04	24.22	12.74	15.29	1.33
Kazakhstan	3.08	12.41	47.50	20.05	20.05	15.55	3.07
Kirghizia	4.17	18.84	47.78	9.31	24.07	14.60	3.26
Uzbekistan	4.68	25.78	51.97	5.55	16.70	13.77	2.18
Turkmenistan	4.72	25.67	49.35	11.96	13.03	13.92	1.64
Tajikistan	5.60	37.15	47.28	0.47	15.09	13.02	1.79

of the abortion law in 1955 was the first for these republics in which the fertility level was already quite low. The same situation occurred in some regions of Ukraine and Byelorussia. It proves that abortion culture can not only begin and develop spontaneously, but penetrate quickly into other countries under similar conditions. If the influences of natural fertility (index C_i) and exposure (index C_m) on fertility are excluded, the relative impact of abortion and contraception on birth control can be determined.

On ranging the republics in descending order of abortion impact on fertility (*Table 8.3*), the Asian republics occupy the initial places. Thus, the belief that Islamic cultures do not accept abortion as a family-planning method is erroneous. Probably, the expansion of abortion culture to this region took place as a consequence of fertility decline.

It is difficult to explain the very low relative impact of abortion on fertility in the Transcaucasian republics. It seems that many abortions in this region are not reported. In the European republics the relative impact of contraception on fertility is greater than that of abortion. It is supposed that an abortion culture is some intermediate stage in family-planning development which would then be replaced by a contraceptive

Table 8.3. Relative impact of abortion and contraceptives in the USSR and the republics, 1985–1986 (total impact equals 100 percent).

	TFR	$C_c(\%)$	$C_a(\%)$	TF	TAR
USSR	2.46	41.88	58.12	16.14	3.65
Tajikistan	5.60	3.04	96.96	13.02	1.79
Uzbekistan	4.68	24.93	75.07	13.77	2.18
Kirghizia	4.17	27.90	72.10	14.60	3.26
Moldavia	2.75	34.22	65.78	15.92	3.63
Russia	2.11	38.77	61.23	16.39	4.62
Turkmenistan	4.72	47.86	52.14	13.92	1.64
Kazakhstan	3.08	50.00	50.00	15.55	3.07
Ukrainia	2.07	51.44	48.56	16.53	3.30
Estonia	2.11	52.88	47.12	16.52	3.24
Latvia	2.09	54.36	45.64	16.50	2.93
Byelorussia	2.08	57.48	42.52	16.40	2.42
Armenia	2.54	61.35	38.65	15.72	1.64
Georgia	2.36	62.52	37.48	16.26	2.06
Azerbaijan	2.91	65.52	34.48	15.29	1.33
Lithuania	2.13	71.18	28.82	16.44	1.49

culture. Special programs and laws regarding birth control will only enhance or inhibit natural processes. As is shown in *Table 8.3*, in the mid-1980s abortions had a stronger influence on fertility in the republics with high fertility than contraception. However, if fertility declines, abortion is partially replaced by contraception.

8.3 Factors Affecting Abortion and Contraceptive Prevalence Dynamics in the 1980s

From the early 1980s the Ministry of Health enforced family-planning measures to reduce abortions. In 1980 about 2 million IUDs were manufactured in the USSR, and in 1987 the figure had reached 4.8 million. In addition to this IUDs were imported from Yugoslavia from 1983, and in 1987 1 million IUDs were imported from Finland. In 1988 the manufacture of Soviet IUDs commenced. The import of hormonal pills from Eastern European countries was slowly growing and reached 6.5 million packets in 1989. So the proportion of married women of reproductive

age (MWRA) who had access to this kind of contraception was about 2 percent. In 1990 the number imported increased abruptly and the proportion of MWRA who had access to pills reached about 10 percent. From 1986 to 1990 condom manufacture increased from 195 to 350 million. In addition to this, 657 million condoms were imported in 1990.

It may be expected that such expansion of contraceptive availability would change the abortion situation. In reality, during the first half of the decade the number of abortions decreased slightly, but in 1985 and in 1986 it exceeded 7 million again. An abrupt decrease occurred in 1988, when the published annual number of abortions was equal to 6.088 million. This could be taken as a radical change in the trend, because the annual number of abortions was reduced by about 1 million. However, it was discovered to be a statistical trick: 1.46 million vacuum-aspirations (terminations of pregnancy up to five weeks) had not been included in abortion statistics. Thus, in 1988 the number of abortions reached a record value for the decade: 7.528 million.

Why did such active efforts from the Ministry of Health not have the expected results and why, in the early 1980s, was a decrease in abortion rate observed? The analysis of the contraceptive-use pattern and fertility dynamics answers these questions.

The government's program of family support which began in the USSR in November 1981 helped to increase fertility. The rise of CBR had occurred mainly due to numerous cohorts born between 1960 and 1965 entering childbearing age. In addition, an increase in TFR was induced by a synchronization of reproductive activity of different women's generations. This influenced the dynamics of abortion indicators.

If the abortion level decline was a consequence of fertility-level increase, it should begin approximately nine months earlier. In 1981, the year before the fertility leap, observed abortion rate deviated from the standardized one (see *Table 8.4*). The maximal increase in TFR occurred in 1987, but in 1986 the observed abortion rate began to rise and in 1988 it came near the standardized one.

This situation was enhanced by women aged 25–34, because this age group was characterized by the greatest number of abortions. Women who were 25–29 years old in 1982–1988 caused a significant growth in age-specific fertility rates. However, when they were 20–24 and 15–19 years old, the situation was the opposite: they had fertility rates lower

Table 8.4. Abortion rate in the USSR, 1979–1988.

Year	Number of Abortions	Abortion rate		GFR	TAR	Contraceptive prevalence
		Standardized	Observed			
1979	7,009,000	102.5	102.5	70.3	3.65	34.8
1980	7,003,000	103.2	102.3	70.9	3.70	34.7
1981	6,834,000	103.8	99.6	72.3	3.56	33.7
1982	6,921,000	104.6	100.6	74.1	3.56	32.1
1983	6,765,000	105.3	97.8	78.0	3.43	31.3
1984	6,780,000	106.1	97.5	77.4	3.38	31.1
1985	7,034,000	107.2	101.3	77.4	3.65	30.2
1986	7,116,000	108.4	102.5	80.8	3.65	29.0
1987	6,818,000	108.6	97.2	79.6	3.11	29.1
1988	7,528,000 ^a	110.2	107.4	76.8	3.58	31.4

^aIncluding 1,460,000 abortions performed by vacuum-aspiration.

Abortion rate – number of abortions per 1,000 WRA; GFR (general fertility rate) – births per 1,000 WRA; TAR (total abortion rate) – number of abortions per woman, calculated as sum of age-specific abortion rates (analogous to TFR); Contraceptive prevalence – proportion of currently married women ages 15–49 currently using contraception.

Sources: State Committee of the USSR on Statistics (Goskomstat), 1988, 1989; *Vestnik statistiki*, 1990.

than the average. So, in 1982–1988 they had caught up. The same is true, but to a lesser extent, for women who were 30–34 years old in 1982–1988.

In 1988–1989 the same cohort, characterized by its high fertility in the previous decade, became the most likely group to receive abortions. Thus we can expect the regeneration of the abortion growth trend.

The calculations conducted on the basis of the age-specific version of the PDF model (Bongaarts and Kirmeyer, 1980) showed interesting results concerning contraceptive prevalence. In 1987 it decreased to 29 percent, compared with 35 percent in 1979. Thus, the growth in fertility had induced not only a decrease in the number of abortions, but also a decrease in contraceptive prevalence.

What happened to the millions of IUDs? According to Ministry of Health data, the annual number of IUDs inserted was 1.11 million in 1982, 1.436 million in 1984, 2.929 million in 1987, and 3.363 million in 1988. We had tried to restore the contraceptive mix in the USSR

Table 8.5. Model estimation of contraceptive prevalence in the USSR (share of MWRA currently using contraception, in percent).

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
IUD	1.48	3.09	4.58	5.86	7.16	8.57	9.73	10.69	12.09	13.14
Pill	0.50	0.57	0.62	0.65	0.69	0.75	0.79	0.81	0.87	1.40
Condom	2.00	2.29	2.51	2.66	2.85	3.10	3.27	3.38	3.64	4.07
Vaginal spermicide	0.79	0.80	0.79	0.76	0.75	0.75	0.74	0.72	0.73	0.80
Other	30.00	27.94	25.25	22.22	19.83	17.95	15.70	13.41	11.80	12.01
All	34.77	34.69	33.75	32.15	31.28	31.12	30.23	29.01	29.13	31.42

in 1979–1988, using the data on the number of inserted IUDs, manufacturing and import of the other contraceptives, and the estimates of contraceptive prevalence.

The data in *Table 8.5* show that from 1979 to 1988 modern contraceptive methods competed with traditional methods, not with abortions. The proportion of IUDs in the contraceptive mix increased by a factor of about 10, but this led to a decrease in the share of the traditional methods (coitus interruptus, rhythm, etc.), not to increased contraceptive prevalence. In 1979 traditional methods made up over 80 percent of all methods. In 1987 their share decreased to 40 percent, and the proportion of IUD, in contrast, increased from 4.3 percent in 1979 to 41.5 percent in 1987. Change in the contraceptive mix structure resulted in a growth of average effectiveness but did not affect the abortion level.

8.4 Prospects for Family Planning in the 1990s

The threat of AIDS will drastically affect the method of family planning in the 1990s. The situation where over 10 percent of women of reproductive age are forced into having a surgical operation is associated with a high risk of AIDS infection. Therefore, the prevention of unwanted pregnancy by using modern prophylactic contraception should be considered as an important element for the prevention of AIDS. This will require a significant increase in expenditure.

In the current structure of the contraceptive mix, established in the early 1990s, the traditional methods still occupy a significant position. Therefore, their replacement by modern methods will continue.

This process will undoubtedly exert an inhibiting effect on contraceptive prevalence growth and on abortion-level decrease.

In the 1980s the use of IUDs was very prevalent in the USSR. Therefore, in the next decade most of the newly inserted IUDs will replace the discontinuation of IUD use caused by reasons such as termination of contraceptive effect (three to four years), expulsions, inflammatory effects and other complications, and, finally aging of IUD users past 49. To preserve IUD prevalence, it will be necessary to insert annually more than 2.5 million IUDs, which includes compensation for discontinuations, aging past 49, and the growth of the absolute number of WRA in the population. The number of terminations of IUD use (for different reasons) will increase from 1.1 million in 1990 to 2.2 million.

Taking into account the high prevalence of the IUD use, the contraceptive priority will probably change to hormonal contraception, including not only pills but also implants and injections currently not allowed in the USSR. If injections and implants are not made available, then to increase the proportion of pills up to 12 percent (20–22 percent in the contraceptive mix) it will be necessary to increase their annual sales to 81 million packets by the year 2000. Although in 1990 the import of pills increased sharply, it still did not cover half the potential demand.

Another problem will be contraception for women aged 35 and older who generally already have their desired number of children. The number of women in this age group will increase by 10 million in 1999. They will make up more than half the MWRA using contraception. The solution will be more simple than the hormonal contraception one – if sterilization for contraceptive purposes is allowed at the wish of the spouses. The fear of AIDS infection will result in a growth in the use of condoms as a family-planning method. To give a proportion of up to 10–12 percent (20 percent in the contraceptive mix), their annual sales should be about 1 billion units. According to Ministry of Health data, this occurred in 1990.

Vaginal spermicides, although less popular, are also used. If their share in the contraceptive mix remains at the level of 2.5–3 percent, it means an increase in their annual consumption by a factor of two: 10–11 million packets.

To reach the goal of decreasing the total abortion rate to 1.1, the contraceptive prevalence must increase by at least a factor of two and reach 56–60 percent, or the number of married women of reproductive

age currently using contraception should increase from 13.5 million in 1987 to 28.5 million in 2000. The achievement of these goals will depend on the policy and efforts of the government.

References

- Bongaarts, J., 1978. A Framework for Analyzing the Proximate Determinants of Fertility. *Population and Development Review* 4:105-132.
- Bongaarts, J., and S. Kirmeyer, 1980. Estimating the Impact of Contraceptive Prevalence on Fertility: Aggregate and Age-Specific Versions of a Model. In *The Role of Surveys in Analysis of Family-Planning Programs*. Ordina, Liège.
- Katkova, I., I. Manouilova, and A. Avdeev, 1989. Le comportement procréateur et la santé des femmes et des enfants en URSS. In G. Calot, A.G. Vishnevsky, and L.L. Rybakovskiy, eds., *Natalité et famille*. Editions du Progrès, Moscow.
- Nortman, D., and E. Hofstatter, 1980. *Population and Family Planning Programs: Data Through 1978*. The Population Council, New York, NY.
- State Committee of the USSR on Statistics (Goskomstat), 1988. *Naseleniye SSSR 1987: Statisticheskiy sbornik* (Population of the USSR 1987: Statistical Collection). Finansy i statistika, Moscow.
- State Committee of the USSR on Statistics (Goskomstat), 1989. *Naseleniye SSSR 1988: Statisticheskiy ezhegodnik* (Population of the USSR 1988: Statistical Yearbook). Finansy i statistika, Moscow.
- Verbenko, A.A., S.E. Ilyina, V.N. Chusovaya, and T.N. Alshevskaya, 1968. *Aborty i protivozachatochniye sredstva* (Abortions and Contraception). Meditsina, Moscow.
- Vestnik statistiki* (Herald of Statistics), 1990 (1):47.