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Changing Family Values Among Soviet Nationalities

A Research Paper

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Changing Family Values Among Soviet Nationalities

Overview

Fertility in the Soviet Union is an important aspect of the broader issue of cultural heterogeneity and its effect on political stability. In the Soviet Union, as in many other multinational states, significant regional differences in levels of modernization have affected the timing of demographic trends for different regional and ethnic groups. This has produced large differences in natality. One- and two-child families are becoming the norm among Slavic and most other European nationalities; the more traditional minorities, particularly those of Muslim heritage, still favor large families of five or more children. The high fertility of these less modernized groups reflects their more traditional lifestyles.

But social and economic changes fostered by the Soviet leadership are gradually undermining the popularity of large families among Soviet Muslims and are providing opportunities for greater female participation outside the home. These changes are expected to produce fertility declines similar to those experienced earlier by the European nationalities. The impact of social change on traditional family values has been greatest for city dwellers, the well educated, and white collar workers. Evidence of change in rural areas is also found, particularly among higher status families.

Fertility declines among the USSR's less modernized minorities will moderate expected changes in the ethnic composition of the total population. Preliminary results from the 1979 census indicate that the growth rates of the late-modernizing groups, although still two to three times those of the Slavic groups, are declining. Although the Slavic share of the population is projected to decline to about 67 percent by the year 2000, a much more dramatic change would have occurred if the high Muslim growth rates of the 1960s had been maintained.

The changing family values that underlie these trends have important implications for Soviet political cohesion. The USSR's ethnic diversity has been viewed as a potential source of anti-Soviet unrest. The Soviet strategy for coping with this problem is one of promoting modernization of the more traditional minorities in order to minimize the social, economic, and political differences between nationalities. This strategy is based on the belief that modernization, with the attendant reduction in disparities between groups, will lead to the adoption of a common set of values.

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Value change among the less modernized nationalities, therefore, provides a crucial test of Soviet nationality policy. Considerable evidence of value change among traditional groups has been found, including:

- Significant declines in family size expectations of younger and better educated women.
- Acceptance of family planning methods (including increased abortion and use of contraceptives) among higher status women.
- Considerable willingness among Muslim women to send young children to child care facilities so that mothers may work outside the home.
- Evidence that Muslim husbands are about as likely as Russians to assist their wives with housework.

This evidence indicates that a gradual breakdown in traditionality is occurring among these groups and that the Soviet strategy of promoting value change through modernization may be paying off.

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Changing Family Values Among Soviet Nationalities

Family Values as an Indicator of Sovietization

The Soviet Communist Party leadership governs a state containing over 100 nationalities with 28 percent of the populace comprised of non-Slavic minorities. A major complication for the Soviet leadership is the substantial economic and social differences between nationalities. Both history and theory suggest that national or cultural identity is more potent as a rallying point for political opposition when members of an ethnic group are united by common economic interests and value systems. In other words, ethnic differences present a greater threat to political stability when ethnic, social, and economic cleavages coincide, when members of an ethnic group share similar lifestyles, occupations, and attitudes.

The Soviet leadership apparently recognizes the danger to political cohesion posed by coinciding ethnic, social, and economic cleavages. Soviet strategy to deal with the ethnic issue involves programs to break down the social, economic, and political differences that divide nationalities and to increase the heterogeneity within each group. For the traditional minority groups, who constitute the bulk of the USSR's non-Slavic population, this means an accelerated program of modernization designed to promote fuller participation in Soviet life.

One goal of these programs is to produce an educational and occupational profile among the more traditional minorities that closely mirrors that of the dominant Slavs. Soviet efforts to promote modernization have been fairly successful. Although there are some inconsistencies, most of the less modernized groups have registered steady progress, relative to the Russians, across a variety of indicators of modernization.

The ultimate goal of the USSR's nationality policy is to promote minority acceptance of the Soviet system through Sovietization-- that is, the adoption of basic system values. The Soviet strategy of encouraging

modernization of the more traditional minorities is based on the belief that modernization will lead to Sovietization. In other words, the Soviet leadership is hoping that modernization, with its attendant reduction in disparities between ethnic groups, will promote a common lifestyle and values compatible with the party-dominated system.

Western analysts have questioned this assumption. Modernization in a multiethnic society, they suggest, exacerbates nationality-based threats to the system by providing the modernizing, but still disadvantaged, groups with a native elite capable of stimulating popular unrest and channeling it into political opposition. Modernization, in this view, does not necessarily promote Sovietization. Individuals may choose pragmatically to participate in the system for its material benefits or because they are unwilling or unable to challenge the regime. These individuals may retain values that set them apart from the mainstream of Soviet society. Thus, a key issue in the evaluation of Soviet nationality policy is the extent to which modernization has been associated with value change.

Measuring value change among the late-modernizing Soviet minorities involves finding appropriate indicators of traditionality. The lack of appropriate statistical data precluded an assessment of the more sensitive values, such as religious belief. Other indicators of traditionality were available, however, particularly those relating to the social position of women. For both ideological and practical reasons, the Soviet state has promoted the integration of women into the modernized workforce. This process involves the modification of traditional values that limit appropriate female roles to those of wife, homemaker, and mother. Because the way people feel about their home and family is much more resistant to change and much less responsive to direct policy manipulation than, for example, education, increased minority participation in the economic

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and political life of the country may not lead to immediate shifts in family values. Change in the highly personal values relating to family life and sex roles can be expected to lag well behind other kinds of value change.

The success of Soviet efforts to erode traditional values regarding women's role in society thus provides an important measure of the breakdown of traditional value systems and acceptance of values more compatible with the Soviet system, that is, Sovietization. This process can be roughly gauged by change in behavioral patterns, such as female education levels, female educational attainments relative to male attainments, and rates of early marriage. Across all these indicators, the less-modernized groups are rapidly closing the gap between themselves and the Russians. These data indicate an increasing range of options outside the home for women in the less-modernized groups.

Another indicator of changing attitudes toward women's role is fertility. Because traditional values supporting large families may be expected to persist long after education and labor force participation for women have gained wide social acceptance, fertility declines can be expected to lag well behind those social changes. Fertility declines, as well as changing attitudes toward the use of child care facilities, abortion and contraception, and the sharing of household tasks thus provide evidence of significant value shifts concerning family life and sex roles. These changes provide powerful support for the Soviet leadership's assumption that modernization leads to Sovietization.

Analysis of social change involving family formation among the less-modernized Soviet nationalities is thus an informative way to measure value convergence and the potential for political discord stemming from value conflict. The effect of social change on the family values of Muslim groups is of particular interest, since these nationalities are often considered to be culturally insulated. The goal of this analysis is threefold: to isolate social, economic, and cultural factors that affect family size in the Soviet Union; to examine the extent to which these factors produce regional and

ethnic-differences in family size and fertility; and to estimate the impact of current social and economic change on future behavior and attitudes relating to family formation among the less-modernized nationalities.

Data Sources

This analysis is based on four major data sources: published results of Soviet surveys on family size and family planning; statistics culled from Soviet demographic, statistical, and medical literature; Soviet census material; and Soviet historical and ethnographic literature on Muslim peoples.

One valuable source of insight into family values in the USSR is Soviet surveys on expected, ideal, and desired family size. Most such surveys asked large samples of married women how many children they expected to have, how many they wanted personally, how many they considered "ideal," and how many they actually had at the time of the survey. Several dozen such studies have been conducted since 1964. Most are regional in scope, but two that were sponsored by the Demographic Section of the Central Statistical Administration's Scientific Research Institute (one conducted in 1969 that was limited to workers and employees and another conducted in 1972) were national in coverage. These family size studies (which often included revealing data on use of abortion, contraception, and attitudes toward child care) proved to be an invaluable supplement to the reported population data.

Statistical materials from the Soviet census and other demographic publications provided various measures

*One finding that emerges from these surveys is that both a woman's notion of the "ideal" family size and her idea of how many children she expects to have vary throughout her lifetime. One study that surveyed newly married women and then resurveyed them four years later noted a significant decline in the desired number of children among these women.

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of fertility.² The most common measures of fertility (birth, fertility, and marital fertility rates) are not routinely available by nationality. Because ethnic attitudes and family behavior are the focal point of this analysis, we therefore computed child-to-woman ratios (children 0-9/women 20-49) from age-specific nationality data in the 1959 and 1970 censuses as our indicator of fertility.³

The information provided by Soviet historical and ethnographic literature provided a useful supplement to the quantitative materials drawn from demographic survey, and census publications. The historical literature, particularly that focusing on developments in family lifestyles in Central Asia, provided valuable background material that helped to place the demographic trends of the last several decades in a broader historical perspective. The ethnographic literature provided a series of detailed case studies of the extent of social change in Central Asia.

² The most common fertility measures are birth rate (births per thousand population), fertility rate (births per thousand women age 15 to 49), and marital fertility rate (births per thousand married women age 15 to 49). Each of these has certain weaknesses. Birth rate, for example, provides only a rough measure of actual reproductive behavior, since it is affected by the proportion of females of childbearing age in the total population. Significant decreases in reported birth rates can occur with no change in reproductive behavior due to declines in the proportion of fertile-age women. Similarly, a stable birth rate can mask important changes in actual fertility when the proportion of childbearing age women increases but fertility is actually decreasing.

Both birth and fertility rates are affected by differential levels of birth registration. Parents of newborn infants are required to register their child at the local civil registry. In many areas of the Soviet Union, however, birth registration was incomplete because some families failed to register their babies. Although precise data on the frequency and reasons for these omissions are rare, it is likely that areas with relatively high infant mortality were most affected by underregistration since there would be relatively less pressure to register an infant who had died in the first days or weeks of life. Underregistration severely complicated Soviet efforts to track natural population trends, particularly infant mortality and fertility. While efforts have been made in the last several decades to remedy this problem, a study of civil registration procedures in Uzbekistan revealed that as late as 1959, 5 percent of births went unregistered, including one region (Karakalpak ASSR) where 13 percent of births and 28 percent of deaths were unregistered. This inaccuracy in both birth rates and fertility tends to undermine the utility of these indicators, particularly for trend analysis involving rural areas. The major shortcoming of this measure is that like birth and fertility rates, it too is affected by infant and child mortality, which varies over time and between regions. Moreover, in those areas where interethnic marriage rates are high, ethnic child-to-woman ratios may be confounded by assimilation. All ethnic-specific measures of fertility are subject to these same caveats.

Nationalities at Different Stages in the Demographic Transition

The current Soviet demographic situation is characterized by wide cultural and regional differences in natality (tables 1 and 2). Family size among the Slavic and most other European nationalities of the USSR appears to have stabilized at a relatively low level; one- and two-child families are becoming the norm, especially among urban couples. The less-modernized nationalities, particularly those of Muslim heritage, still favor large families of four, five, or more children. Western observers have interpreted these differences as a manifestation of cultural differences that spring from ethnic identity. They have also noted that existing fertility differentials will radically affect the USSR's ethnic profile, with attendant strains on military manpower and political cohesion. An alternative explanation of the observed fertility differences places emphasis on the role of social and economic development in conditioning natality. The high family size orientations of the less-modernized nationalities are due not to their ethnic identity, but to the stage they occupy in the demographic transition—a process of demographic change that is closely associated with modernization. If this explanation is correct, social and economic change in the Soviet southern tier can be expected to produce changes in traditional family values, which will in turn contribute to a gradual decline in the cultural distinctiveness of the late-modernizing nationalities. The resulting decline in fertility will also moderate expected shifts in the Soviet Union's ethnic composition.

This analysis is an assessment of how closely the Soviet experience fits the demographic transition pattern. In effect, it is a test of the hypothesis that Soviet nationalities are in varying stages of transition from primitive to modern demographic conditions. Primitive demographic conditions are marked by high birth rates (40 to 45 per 1,000) and high death rates (30 to 35 per 1,000). Population growth is generally slow, and radical upswings in the death rate due to environmental factors, such as disease and famine, create sharp fluctuations in population patterns. The first stage of the demographic transition is characterized by continued high birth rates and gradually declining death rates

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Table 1

Regional Differences in Fertility and Family Size

	Birth Rate ^a (1978)	Fertility Rate ^b (1977-78)	Child/Woman Ratio ^c (1970) (Children 0-9/ Women 20-49)	Children Living With Mothers ^d (1970)	Family Household Size ^e (1970)	Expected Number of Children		Ideal Number of Children Workers and White Collar ^f (1969)
						Workers and White Collar ^f (1969)	All Social Classes ^g (1972)	
RSFSR	15.9	58.1	.731	1,801	3.5	2.21	2.08	2.69
Ukrainian SSR	14.7	56.1	.696	1,684	3.4	2.07	2.02	2.63
Belorussian SSR	15.9	59.6	.834	1,919	3.6	2.41	2.33	2.93
Estonian SSR	14.9	59.2	.642	1,572	3.1	2.29	2.10	2.74
Latvian SSR	13.6	52.5	.613	1,546	3.2	2.11	1.93	2.60
Lithuanian SSR	15.3	58.8	.803	1,838	3.4	2.20	2.20	2.75
Kazakh SSR	24.4	93.4	1.300	2,495	4.3	3.19	3.11	3.38
Kirghiz SSR	30.4	125.7	1.630	2,851	4.6	3.72	4.14	3.94
Uzbek SSR	33.9	150.6	1.968	3,300	5.3	4.31	5.32	4.55
Tadzhik SSR	37.5	167.1	2.075	3,381	5.4	4.08	4.84	4.18
Turkmen SSR	34.4	151.5	1.953	3,289	5.2	3.79	4.57	4.10
Azerbaydzhan SSR	24.9	100.0	1.764	3,271	5.1	4.25	4.16	4.52
Georgian SSR	17.7	66.8	.940	2,177	4.1	2.88	2.91	3.95
Armenian SSR	22.2	83.5	1.436	2,900	5.0	3.42	3.66	4.10
Moldavian SSR	20.1	74.0	.944	2,231	3.8	2.25	2.39	2.74

^a Narodnoye Khozyaystvo SSSR v 1978g (Moscow: Statistika, 1979), pp. 26-27.

^b Vestnik Statistiki, No. 11, 1979, p. 65.

^c V. I. Kozlov, *Natsionalnostii SSSR* (Moscow: Statistika, 1975), p. 171.

^d Number of children residing with mothers/families comprised of one married pair with children or a single mother with children. *Itogi vsesoyuznoi perepisi naseleniya 1970 goda*, Volume 7, pp. 444-449.

^e Family household size. *Itogi*, Volume 7, pp. 206-233.

^f V. Belova, "Differentiation of opinion on best and expected number of children in the family," *Vestnik Statistiki*, No. 7, 1973, pp. 27-36.

^g V. Belova et al. *Skolko detei budet v sovetskoi semye* (Moscow: Statistika, 1977), p. 77.

due to improved agricultural methods and more stable food supplies. Population growth is rapid during this stage. The second stage is associated with the onset of industrialization. Birth rates remain high, and death rates decline substantially because of improvements in medical care and economic development. Average annual population growth rates are high (1.5 to 2.5 percent); increases in fertility may occur, reflecting improved medical care and nutrition levels associated with the early stages of the transition. In the Soviet context, real fertility increases may be accentuated by

improvements in birth reporting, particularly for those "late transitioning" groups for whom reporting improvements and real fertility increases occurred simultaneously. These increases, however, are only temporary.

Changes in traditional preferences for large families often lag behind the advances in health care that make large families medically possible. Modernization, however, ultimately undercuts both the value system that

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Table 2

Ethnic Differences in Family Size

Ethnic Group	Child/Woman Ratio, 1970 ^a (Children 0-9/ Women 20-49)	Family Household Size, 1970 ^b	Estimated Birth Rate, 1959-69 ^c	Expected Number of Children, 1972 ^d
Slavs				
Russians	.727	3.4	19.0	2.00
Ukrainians	.691	3.4	15.8	2.08
Belorussians	.759	3.6	19.2	2.31
Balts				
Estonians	.675	3.1	12.3	2.18
Latvians	.677	3.1	12.3	1.99
Lithuanians	.859	3.4	20.6	2.23
Muslims				
Kazakhs	2.213	5.5	41.2	5.01
Kirghiz	2.445	5.5	44.0	6.04
Uzbeks	2.401	5.9	45.2	6.26
Tadzhiks	2.422	6.0	45.2	5.97
Turkmens	2.384	6.0	45.6	5.93
Azerbaijanis	2.082	5.6	43.7	4.89
Other				
Georgians	.933	4.0	24.0	2.83
Armenians	1.203	4.7	20.8	3.42
Moldavians	1.099	3.9	24.8	2.62

^a R. A. Lewis et al. *Nationality and Population Change in Russia and the USSR* (New York: Praeger, 1976), p. 290.

^b *Izviestia*, Volume 7, pp. 272-273. This is a measure of the average number of family members residing together; it therefore encompasses 15 to 29 years of fertility behavior.

^c B. Ts. Urtanis. *Problemy dinamiki naseleniya SSSR* (Moscow: Nauka, 1974), p. 132.

^d V. A. Belova, et al. *Skolko detei budet v sovetskoi sem'ye* (Moscow: Statistika, 1977), p. 23.

promotes large families and the economic incentives to maximize family size. The third stage of the demographic transition is reached as families slowly begin limiting childbearing; death rates may continue to fall during this stage, but do so more slowly than the birth rate. The fourth stage of the demographic transition is reached when conscious family limitation is accepted throughout society, resulting in an annual birth rate ranging from 13 to 18 per 1,000. Death rates are stabilized at 7 to 12 per 1,000, resulting in slow rates of population growth (.5 to 1 percent annually).

In the Soviet Union, as in other culturally heterogeneous societies, significant regional differences in levels of modernization have affected the timing of the demographic transition for different regional and ethnic groups. European Russia was still in the early stages of the demographic transition at the turn of the century. In 1913, only 18 percent of the population resided in urban areas. Large families were popular, particularly in rural areas, where the birth rate was 44

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per 1,000. Women derived much of their social prestige from their maternal role. Early marriage was common. On the eve of the revolution, however, birth rates had begun to fall in the more urbanized and industrialized regions of European Russia. More substantial fertility declines were noted beginning in the late 1920s. By the 1960s and 1970s most of the peoples in the European USSR, including the Slavs and Balts, had reached the final stages of the demographic transition, with the Georgians, Armenians, and Moldavians lagging somewhat behind.

Most of the Soviet Muslims, however, are still in the earlier stages of the demographic transition. The strictly differentiated sex roles characteristic of conservative Muslim societies generally persisted well into the 20th century in the Asian USSR. These social patterns were reinforced by physical segregation of women and sanctioned by religious beliefs and traditions discouraging family planning. The institution of "bride wealth" (*kalym*) was still common. Unquestioning obedience and fidelity to the husband were mandatory and enforced by both physical fear and the wife's total economic dependence on her husband. Male-initiated divorce was easy to obtain; the repudiated wife was literally thrown out on the street, minus children, property, and means of support.

The exclusively domestic role assigned to women in traditional Muslim societies reinforced the value placed on large families—in effect, operating precisely as similar sex role divisions have operated in many other cultures. But the Muslim women of the Asian USSR were much more firmly cemented in their domestic role well into the Soviet period, at a time when a gradual shift toward more flexible sex roles was well under way in the central and western portions of the USSR. The impact of the demographic transition on Muslim fertility is evident in available trend data on fertility rates by republic. The timing of the transition, however, is masked by the effects of improved birth registration: reported fertility rates peaked in several of the Soviet Muslim republics in the mid-1960s (see table 3). The relatively moderate reported rates of the 1950s and 1960s in those areas are probably due, as Soviet demographers point out, to health factors and

underregistration of births, rather than to actual family size preferences. Thus, real fertility probably peaked much earlier than the reported rates suggest.

Two of the Muslim republics—Azerbaijdzhan and Kazakhstan—have registered sharp declines in fertility rates over the last two decades. Kazakhstan's fertility rate declined by 34 percent; Azerbaijdzhan's by 40 percent. Even these substantial declines in reported rates probably underestimate the changes in real fertility. In the case of Azerbaijdzhan, for example, there is evidence to suggest that rural fertility peaked in the late 1920s and early 1930s.⁴ The declines in reported fertility rates in these two republics are due to major changes in the fertility behavior of the indigenous populations. The trends cannot be accounted for by immigration of low-fertility European nationalities, since over the last two decades the European proportion of the population has declined in both republics—from 59 to 54 percent in Kazakhstan, and from 27 to 17 percent in Azerbaijdzhan. Nor can the substantial declines be attributed wholly to declines in family size among the Europeans. Over much of this period, European family size preferences stabilized at about two children. One must conclude, therefore, that the declines in republic fertility rates are due primarily to real change in family size expectations among Kazakhs and Azerbaijanis. The republic fertility data and the nationality-specific family size surveys discussed below permit us to place both nationalities in the third stage of demographic transition. The Tatars and some of the smaller Muslim groups may also be placed in this stage.⁵

The remaining major Muslim groups (Uzbeks, Kirghiz, Tadzhiks, and Turkmen) are by and large in the second stage and exhibit continued high fertility—a trend that is evident in republic fertility rates. The

⁴ This evidence is drawn from two surveys—one in 1947 and one in 1967—of reproductive behavior in Azerbaijdzhan. These studies provide corrections to the published data on birth and fertility rates that are artificially depressed due to underregistration.

⁵ On declines in Tatar and Azerbaijani fertility, see Tolls and Mamedov. On fertility declines among seven Muslim nationalities in Dagestan ASSR, see Golin and Bondarskaya. For an analysis of fertility within republics, see Coale.

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Table 3

Fertility Rates by Union Republic Births Per 1,000 Women, Aged 15-49

	1958- 59	1965- 66	1967- 68	1969- 70	1971- 72	1972- 73	1973- 74	1974- 75	1975- 76	1976- 77	1977- 78	1978- 79
RSFSR	82.9	59.0	53.3	53.4	55.2	54.9	55.3	56.6	57.1	57.7	58.1	59.0
Ukrainian SSR	70.7	57.1	55.3	55.3	57.1	56.2	55.7	56.4	56.8	56.5	56.1	57.3
Belorussian SSR	91.0	67.1	62.0	61.3	61.1	59.7	58.9	58.9	58.9	59.2	59.6	60.9
Estonian SSR	59.5	55.3	55.6	59.3	59.8	58.5	57.9	58.1	58.5	59.2	59.2	58.6
Latvian SSR	59.2	51.9	52.6	53.5	54.8	53.8	53.4	53.8	53.4	52.8	52.5	53.2
Lithuanian SSR	82.8	68.6	66.9	67.2	66.1	63.1	60.9	60.2	59.8	59.5	58.8	59.0
Kazakh SSR	143.0	107.9	98.1	96.1	95.7	93.6	94.1	94.8	94.7	94.1	93.4	94.5
Kirghiz SSR	140.1	137.2	131.2	134.7	136.1	132.9	131.6	130.1	130.5	129.1	125.7	128.8
Uzbek SSR	158.8	165.3	161.9	158.5	159.5	156.0	156.8	156.8	157.1	154.0	150.6	149.6
Tadzhik SSR	123.5	166.2	170.5	166.4	171.9	168.0	170.6	172.3	173.2	170.0	167.1	168.9
Turkmen SSR	161.6	176.6	168.5	165.6	161.8	159.3	158.6	157.1	156.0	154.3	151.5	151.3
Azerbaijani SSR	163.3	165.8	148.9	134.6	119.1	111.4	108.0	105.1	104.4	102.8	100.0	98.6
Georgian SSR	85.0	78.2	72.9	73.3	70.8	69.0	69.4	69.1	68.9	68.1	66.8	68.2
Armenian SSR	159.2	122.4	104.9	92.9	90.0	87.3	84.7	84.3	84.9	84.4	83.5	82.8
Moldavian SSR	111.7	79.2	76.3	71.6	75.4	75.6	75.1	75.2	75.3	74.6	74.0	75.0
USSR	88.7	70.8	66.3	65.7	67.2	66.4	66.8	67.8	68.5	68.7	68.8	69.9

Source: 1958, 1965, 1969, 1972: *Naseleniye S.S.S.R.*, 1973 (Moscow, Statistika, 1975), pp. 137-138.

1967: *Vestnik Statistiki*, No. 12, 1971, p. 75.

1971: *Vestnik Statistiki*, No. 12, 1973, p. 75.

1973: *Vestnik Statistiki*, No. 12, 1975, p. 80.

1974: *Vestnik Statistiki*, No. 11, 1976, p. 86.

1975: *Vestnik Statistiki*, No. 12, 1977, p. 76.

1976: *Vestnik Statistiki*, No. 11, 1978, p. 82.

1977: *Vestnik Statistiki*, No. 11, 1979, p. 66.

1978: *Vestnik Statistiki*, No. 11, 1980, p. 76.

reported rates for Uzbekistan and Turkmenistan appear to have peaked in the mid-1960s and are now declining slowly. The Kirghiz rates have been slowly but steadily declining since the late 1950s. Only the Tadzhik rates showed no substantial declines in the 1970s. To a large degree, Central Asian fertility declines reflect a significant drop in urban fertility. Elements of the traditional value system continue to affect the family size preferences and lifestyles of rural Muslims. One Soviet commentator has predicted that rural Central Asian birth rates, because of the young age structure in those areas, will begin to decline substantially only in 1985-90.

The pattern of natality declines exhibited by republic fertility rates is not evident in the child-to-woman ratios computed from the 1959 and 1970 Soviet censuses. A comparison of the 1959 and 1970 rates, displayed in table 4, reveals lower 1959 rates for nearly all Muslim groups. This apparent conflict between the republic data and the nationality data is due in part to high infant and child mortality that kept the 1959 ratios artificially depressed and in part to the time span covered by the child-to-woman ratios. One mid-1970s study of married women in rural Uzbekistan revealed

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Table 4

Fertility: Child/Woman Ratios
by Ethnic Group, 1959-70

Nationality	Child to Woman Ratios (Children 0-9/Women 20-49)	
	1959	1970
Slavs		
Russian	.863	.727
Ukrainians	.714	.691
Belorussians	.836	.759
Balts		
Estonians	.638	.677
Latvians	.612	.675
Lithuanians	.823	.859
Muslims		
Kazakhs	1.896	2.213
Kirghiz	1.885	2.445
Uzbeks	1.878	2.401
Tadzhiks	1.782	2.422
Turkmen	1.809	2.384
Azerbaijanis	1.711	2.082
Balkars	1.698	1.616
Tatars	1.105	1.002
Bashkirs	1.431	1.540
Chechens	2.204	2.257
Avars	1.334	1.967
Other		
Georgians	.905	.933
Armenians	1.240	1.203
Moldavians	.933	1.099
Buryats	1.460	1.563
Yakuts	1.494	1.622
Komis	1.052	1.044
Chuvashes	1.037	1.154
Udmurts	1.131	1.105
Nordva	.933	1.015
Maris	1.146	1.310
Osetins	.998	1.032

that over half of the women born between 1900 and 1924 (that is, women whose reproductive lives spanned the period from 1915 to the mid-1960s) had between 10 and 15 births. These extremely high rates of natality would have translated into high child-to-woman ratios, except for the high rates of infant and child mortality. Infant mortality in these areas on the eve of the Bolshevik revolution was reported to be 500 to 600 per 1,000 live births. This grim statistic had a devastating effect both on completed family size and child-to-woman ratios. Although medical care improved substantially during the interwar period, infant mortality remained high for these areas well into the 1950s, exerting a significant dampening effect on Muslim child-to-woman ratios. Data on Ashkhabad, for example, indicate that reported infant mortality was 250 per 1,000 in 1939, falling to 86 per 1,000 in the mid-1950s. Even this figure greatly underestimates actual frequency of infant deaths because of underregistration.*

One must conclude that the actual fertility among Soviet Muslims in the 1950s and early 1960s was much higher than the 1959 child-to-woman ratios indicate. The high child mortality of the 1950s makes it impossible to use child-to-woman ratios to pinpoint the timing of the demographic transition among the less-modernized groups; we do not know how much of the change between 1959 and 1970 was due to real, but temporary, fertility increases consequent to the early stages of the transition and how much was due to the declining infant and child mortality of the 1960s.

Another explanation of the apparent conflict between reported republic fertility rates and computed 1959 and 1970 child-to-woman ratios is the nature of the

* The proportion of home births and births with no medical assistance is substantially higher among Muslim women in spite of continuing Soviet efforts to increase medical assistance during pregnancy and births. The level and type of medical assistance at birth is closely associated with infant mortality. A study of infant mortality among Lezgin women in a rural Dagestan area, for example, revealed that infant mortality for home birth (medically assisted and otherwise) was twice as high as that for those at obstetric stations. Some Soviet writers attribute continuing differences in medical care during pregnancy and birth less to differing access to medical assistance than to differing popular acceptance of such assistance.

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computed measure. Data limitations precluded use of the conventional child-to-woman ratio (children 0 to 4/women 15 to 49); instead, the ratio—children 0 to 9/women 20 to 49—was used. This means that the ratios measure a full decade of family formation, the 1959 ratio the fertility behavior of the 1950s and the 1970 ratio that of the 1960s. The republic fertility declines summarized above are, in some cases, of such recent origin that they cannot be expected to affect significantly the 1970 child-to-woman ratios. This fact is not a disavowal of the utility of the child-to-woman ratio as a fertility measure—it is the only one available for nationality groups—but rather a reminder that one must be aware that an entire decade of behavior is being measured.

Similar comments apply to a second indicator that has been invalidly used to chart family formation trends among Soviet Muslims: family household size. This measure, which is a report of the average number of family members residing together, is useful as a general comparison of family structure between regions or groups. As a measure of fertility behavior, however, it is very imprecise, far more so than the child-to-woman ratio. Average family household size is affected by both housing availability and custom. Regions with a higher proportion of extended (nonnuclear) families, for example, will have a larger household size regardless of fertility behavior. The most serious problem with average family size, however, is that it cannot be used to track recent trends in family formation because it encompasses 15 or 20 years of fertility behavior. In Armenia, for example, republic fertility rates declined precipitously from 159.2 per 1,000 in 1959 to 92.9 per 1,000 in 1970, yet average family household size increased from 4.8 in 1959 to 5.0 in 1970. Similarly, in spite of the dramatic declines in republic fertility rates in Azerbaydzhan in the 1970s (from 134.6 in 1970 to 98.6 in 1979), family household size did not change between 1970 and 1979. The Muslim fertility declines of the 1970s are not reflected in family household size data because this indicator lags far behind real change in fertility behavior.

* Estimates of the 1979 child-to-woman ratios that reflect the fertility behavior of the 1970s are contained in table II.

Determinants of Fertility

The republic fertility data provide at least conditional support for the hypothesis that the Soviet Union's more traditional minorities are experiencing demographic changes already experienced by the USSR's European nationalities. A second test of the applicability of demographic transition theory to the Soviet southern tier is the pattern of fertility differentials within and between nationality groups. Demographic transition theory, as well as the experience of other countries, would lead us to expect that the early stages of the transition in a given region would be characterized by wide fertility differentials between women from different social and economic groups, with higher status and urban women the first to display the temporary fertility increases associated with modernization. This relationship is soon reversed, however, as those segments of society most affected by modernization begin consciously to limit family size; the expected fertility differentials should then show a negative relationship between social and economic development and fertility, with the more modernized women having substantially smaller families. As the values associated with smaller families and more flexible sex roles become more widespread throughout the region or group, the large fertility differentials within them should begin to narrow. Tracing fertility differentials within a particular nationality or cultural group thus provides another way of assessing how closely the late-modernizing minorities are following a characteristic demographic pattern.

Soviet findings on factors affecting fertility provide strong support for demographic transition theory as applied to the Soviet case. These findings indicate, moreover, that the Soviet southern tier is in the middle stage of the transition wherein large differentials in fertility within ethnic groups are observed, with measures of modernization negatively related to natality—that is, the more modernized segments of the group have lower fertility rates. These relationships also pertain to the more modernized groups in the European areas of the USSR, but the differentials in fertility have declined as smaller families have become widely accepted throughout the group in the final stages of the demographic transition.

Soviet research indicates that family size and fertility are affected by a complex set of social, economic, and cultural factors. These include factors relating to the overall modernity of a given group or region that affect its progress in the demographic transition (urbanization, industrialization, education); and factors more directly affecting women's position in society (female education levels, employment status, occupation). These factors, as we shall see, cut across regions, nationalities, and generations, with factors such as urbanization and female education levels affecting the family expectations of all nationality groups in the predicted direction. That is, the factors found to be important in explaining fertility (including indicators of modernization and the role of women) exhibited the same effects on the family size and family expectations of Muslim women as on ethnic Russian or Baltic women: although the impact of modernization on Muslim family size is more striking. Although overall Muslim family size expectations and preferences still exceed those of European women, those Muslim women who have been most strongly affected by modernization have begun to reduce their family size preferences and expectations.

The Soviet findings were tested by correlation analysis using three separate data sets drawn from the 1959 and 1970 Soviet censuses: social, economic, and fertility data for 37 nationality groups (comprising more than 97 percent of the Soviet population); analogous material for the 15 union republics; and separate data sets for the urban and rural populations of the 15 republics. Each of these data sets was used to explore the statistical relationships between social and economic indicators and fertility, providing a series of tests of the findings drawn from Soviet social and ethnographic research. The separate urban and rural data by republic provided a way to establish whether the determinants of family size were different in the city and the country. The nationality data were used to see if the same determinants of fertility affected different ethnic groups in different ways.

Modernization

Because modernization levels are closely linked with various stages in the demographic transition, it might be expected that fertility levels would be strongly affected by indicators of modernity, such as urbanization. Almost all Soviet studies of fertility show that

Table 5

Urban-Rural Differences in Fertility Rates

	Total	Urban	Rural
1959-60	88.7	72.0	106.8
1960-61	90.6	73.5	111.2
1965-66	70.8	57.0	90.4
1969-70	65.7	55.7	82.3
1972-73	66.4	57.5	82.7

Source: *Naseleniye SSSR, 1973* (Moscow: Statistika, 1975), p. 136

urban women have fewer children than their rural counterparts. Children in the city are no longer the economic resource they were on the farm, and cramped housing may provide a strong disincentive to a large family. Moreover, the urban woman soon discovers that juggling a baby and a job in the city is far more complicated than combining motherhood and agricultural work on the family's private plot in the country. The impact of urban residence on fertility is reflected in substantially lower urban fertility indicators for the USSR as a whole and for individual regions for which appropriate data are available (see table 5). For example, one study of fertility and urban residence in Turkmenistan reported a strong negative correlation between urban residence and childbearing; another study indicated that 1965 fertility rates in Azerbaydzhan were 126 in the city, compared with 238 in the country.* A September 1978 study of 310,000 families revealed that only 7 percent of the worker and white collar families living in cities had more than two children compared to 23 percent of their rural counterparts.

Furthermore, urban women who live in large cities have correspondingly smaller families than those in medium-size or small cities (see table 6). For example,

* These findings cannot be explained by the differing ethnic composition of rural and urban areas. Although it is true that the Slavic populace in Central Asia is concentrated primarily in the cities, the strong statistical relationship between urban residence and family size is evident within ethnic groups as well.

Table 6

Effect of City Size on Family Expectations (1972)*

	Total Population	Urban Population	Expected Number of Children for Married Women Of Which, in Cities With Population of				Rural Population
			less than 20,000	20,000-100,000	100,000-500,000	500,000 plus	
RSFSR	2.08	1.86	2.14	1.96	1.85	1.63	2.69
Ukrainian SSR	2.02	1.86	2.07	1.93	1.80	1.73	2.36
Belorussian SSR	2.33	2.06	2.31	2.12	1.94	1.91	2.84
Estonian SSR	2.10	1.92	2.10	1.85	1.83		2.46
Latvian SSR	1.93	1.75	1.93	1.73	1.71	1.64	2.30
Lithuanian SSR	2.20	2.00	2.15	2.00	1.93		2.63
Kazakh SSR	3.11	2.44	3.08	2.55	2.33	2.13	4.06
Kirghiz SSR	4.14	2.91	3.38	3.44	2.44		5.35
Uzbek SSR	5.32	3.61	4.74	4.02	3.69	2.76	6.60
Tadzhik SSR	4.84	3.81	4.17	4.50	3.15		6.11
Turkmen SSR	4.57	3.68	4.74	3.90	2.88		6.21
Azerbaijdzhan SSR	4.16	3.09	4.46	4.22	3.51	2.61	5.68
Georgian SSR	2.91	2.56	2.89	2.66	2.34	2.46	3.28
Armenian SSR	3.66	3.20	3.48	3.48	3.39	2.91	4.48
Moldavian SSR	2.39	1.98	2.06	2.18	1.83		2.84

* V. A. Beloŭa, et al. *Skolko Detei budet v sovetskoi semye* (Moscow: Statistika, 1977), p. 75.

a 1967 national study of fertility among workers and employees revealed an average of 2.1 births for women with 20 years of marriage (married between 1950 and 1954), while similar women in Moscow, Leningrad, and Kiev averaged only 1.5 births. Similar findings were reported in the 1969 nationwide study of expected and ideal family size among workers and employees: expected family size was 4.3 children in Uzbekistan, but only 2.8 in Tashkent, the republic capital. The relationship between urban residence and fertility persists when age, employment, social class, educational level, or income are held constant.

Several Soviet studies of the effects of migration on expected family size suggest that moving from the country to the city leads to a gradual decline in family size preferences. A mid-1970s study of Izhevsk residents who had migrated from rural areas revealed that

63 percent of the migrants reduced their family size expectations after the move; expected family size shrank from 3.0 to 2.2 children. An earlier study of the effects of migration on fertility in the Bashkir ASSR showed a similar drop from 3.2 to 2.4 children. In both studies, respondents who had lived in the city longest changed the most, suggesting that the effects of an urban environment on family values are both gradual and cumulative.

The link between urban residence and fertility affects all ethnic groups, including Soviet women of Muslim heritage. The results of a massive nationwide survey of expected family size conducted in 1972 reveal that urban residence is strongly associated with smaller families for both Muslim and non-Muslim women.

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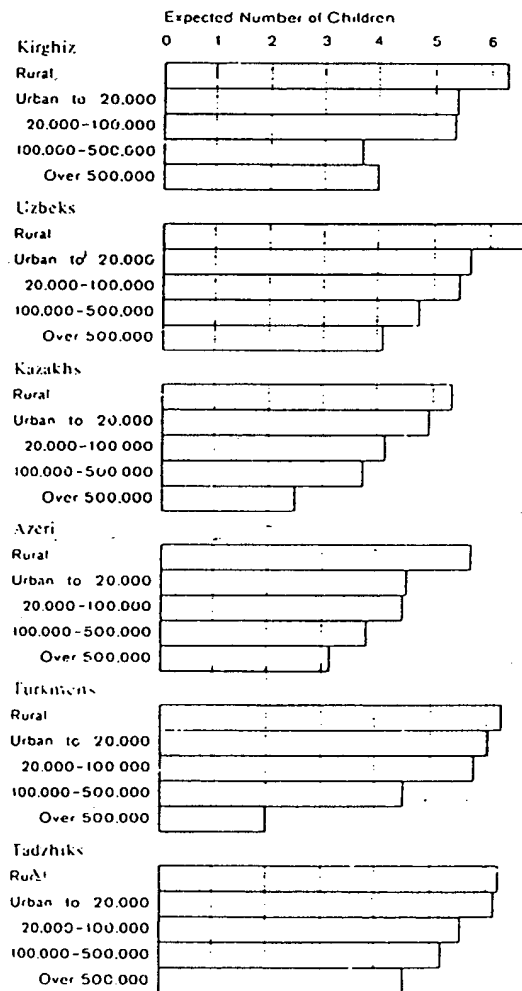
This finding is consistent with other, more limited surveys of family size in predominantly Muslim regions.¹ For example, a study of families after 10 or more years of marriage in Tselinograd Oblast reported larger family size for rural Kazakh women than for urban Kazakh women, even when employment and education are held constant. Size of urban residence was shown to have an inverse relationship with family size for all ethnic groups surveyed (see figure 1).

These Soviet findings linking modernization with fertility declines across all ethnic groups are confirmed by correlation analyses of both republic and nationality data. Urbanization rates, for example, have a strong negative correlation with various measures of fertility in all data sets.² The 1970 correlation between percent urban and child-to-woman ratio is $-.47$ for the 15 republics and $-.59$ for the 37 nationality groups. Urban residence is also associated with lower crude birth rates ($-.58$) and lower fertility rates ($-.55$) in the Soviet republics. These latter measures of fertility were not available for the nationality groups. Correlation analysis also supports Soviet findings that women in larger cities have fewer children than women in smaller cities. The republic data included the percentage of the population living in cities of 100,000 or more, 50,000 or more, and 20,000 or more. The correlations between these three measures of urban population and child-to-woman ratios are uniformly negative: $-.55$, $-.63$, and $-.58$, respectively. Thus, every indicator of urbanization, whether within republics or nationality groups, is related negatively to measures of fertility.

¹ The rural underregistration problem noted above may obscure the relationship. One study that provided 1959 data on fertility for Tadzhiks in Tadzhikistan revealed a substantially higher rate for urban areas. These data may be traced partly to birth underregistration and partly to a temporary rise in real fertility associated with the early phase of the transition. Such a rise would affect the urban Tadzhiks first, thus producing the differences reported. Because most of the studies are of more recent vintage, this hypothesis could not be tested.

² The statistics presented in this section are Pearson correlation coefficients. They range in value from $+1$ to -1 , with zero indicating no linear relationship between variables. The size of the coefficients expresses the extent to which the variables are statistically related; the sign expresses the direction of the relationship. For example, a strong negative correlation between urbanity and fertility means that the more urbanized republics have lower fertility rates.

Figure 1
Effect of Residence Size on
Muslim Family Size Expectations, 1972



SOURCE: V. A. Belova, et al. SKOLKO DETEI BUDET V SOVLITSKOH SEME (Moscow: Statista, 1977), p. 76

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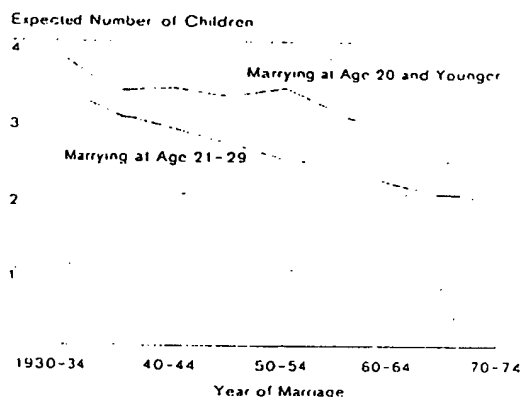
Other measures of modernization, such as overall educational level, were also found to be good predictors of the fertility level—the higher the education levels, the lower the birth rate. The best predictor among the general education variables is percent having completed higher education. The 1970 correlation between percent completed higher education and child-to-woman ratio is $-.33$ for republics and $-.39$ for nationality groups. The relationship between other measures of attained education (incomplete higher, complete secondary, and incomplete secondary) are also uniformly negative, though the correlations are weaker. We will see below that the education of women is a much better predictor of fertility than the overall level of education in a republic or ethnic group. A third measure of modernization—industrialization—is also negatively correlated with fertility. For example, a high percentage of the working age population with specialist training—a key indicator of industrialization—is associated with reduced fertility. For the nationality data, the correlation between percent specialist and child-to-woman ratio is $-.43$.

Thus, all available data indicate that urban Soviet women tend to have smaller families than their rural counterparts. The strong statistical relationship between urban residence and lowered fertility affects both Muslim and non-Muslim women, although the larger differences between Muslim urban and rural fertility rates may make those ratios appear more dramatic. These data call into question the assumption of some Western analysts that Muslim behavior relating to home and family is particularly resistant to the effects of social and economic change.

The Social Position of Women

Demographic transition theory suggests that the link between urban residence and fertility is due, in large part, to the impact of the urban environment on norms and values regulating the position of women. In agrarian societies, traditional patriarchal values typically support a strict social division of labor based on gender, in which women are limited to the domestic sphere (reproduction and homemaking) and concomitantly blocked from access to the public sphere. Urbanization facilitates a gradual breakdown in the traditional sex-based division of labor by undermining the economic basis of these values. Removing the social and legal impediments to female participation in the community

Figure 2
Effect of Early Marriage on
Family Size Expectations, 1972



SOURCE: V. A. BHOVA et al. SKOLKO DETEI BUDET V SOVETSKOI SEMYE (Moscow: Statistika, 1977), p. 77

at large (the public as opposed to the domestic role) acts to depress fertility levels. Most Soviet commentators concur that the single most important factor affecting fertility is the social position of women, with family size inversely related to the range of educational and occupational options available to females.

One indicator of relative emphasis on women's maternal role is the incidence of early marriage among females. All available data show a strong correlation between early marriage and large families (see figure 2 and table 7). The strong statistical relationship between early marriage and large families is evident for both Muslim and non-Muslim women, even when marital cohort and place of residence are held constant (see figure 3).

Another more direct indicator of the extent of female participation in the public sphere is employment; working wives can logically be expected to have smaller families, as is confirmed by Soviet research. Women employed outside the home have smaller families. For example, in a 1963 study in Yerevan the fertility rate

Table 7 Average Number of Children Born in a First Marriage Over Entire Childbearing Period^a
Effect of Early Marriage on Family Size

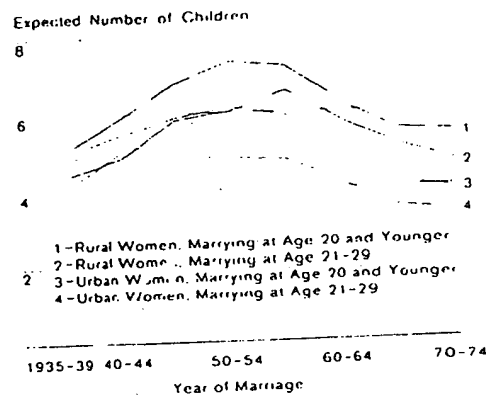
Age at Marriage	All Marriages	Urban Areas ^b				Rural Areas ^b			
		I	II	III	Total	I	II	III	Total
15-19	5.187	2.433	3.325	4.597	3.185	3.702	5.014	7.775	6.149
20-24	3.259	2.225	2.716	3.302	2.545	3.216	4.350	6.929	4.313
25-29	2.341	1.990	2.266	2.926	2.110	2.483	3.026	4.336	2.930
30-34	1.700								

^a Based on a 1960 Study by the USSR Central Statistical Administration.
^b Territory I - Ukrainian SSR, Latvian SSR, Estonian SSR
 Territory II - Belorussian SSR, Georgian SSR, Lithuanian SSR, Moldavian SSR, RSFSR (excluding autonomous republics).
 Territory III - Central Asian republics, Azerbaydzhan SSR, Armenian SSR, autonomous republics of RSFSR.
 Source: "Indicators of Marriage and Fertility," *Vestnik Statistiki*, No. 8, 1967, p. 94.

of working women was 37 percent lower than that of unemployed women. Again, this relationship is valid for all nationalities, including Muslim; employed Muslim women have fewer children than Muslim housewives. For example a study of marital fertility in a rural and predominantly Azerbaijani area revealed that Azerbaijani housewives averaged 7.25 children; white collar employees, 5.14 children. Soviet studies suggest reasons why this relationship is so strong. Despite a state-subsidized network of preschool child care facilities, many women do not return to work immediately after their paid maternity leave ends. A late 1960s study in the Ukrainian SSR, for example, revealed that almost all women required an additional three months of unpaid leave after the birth of their child; 70 percent of them remained at home with their baby for at least a year." Frequent childhood illnesses may interrupt the mother's work schedule after she returns to work, while competing job- and home-related pressures continue to complicate child rearing and orient the working woman to smaller families.

" Other Soviet studies report somewhat shorter absences from work

Figure 3
Effect of Early Marriage on Muslim Family Size Expectations, 1972



SOURCE: V. A. Belova, et al. SKOLKO DITEI BUDET V SOVETSKOI SEMYE (Moscow: Statistika, 1977), p. 51.

Table 8

Percent

Social Class and Family Size (1978)^a

All Families Having Children 16 years old and younger	Families of Workers and White Collar			Families of Collective Farmers
	Total	Urban	Rural	
With one child	57.4	61.5	44.2	37.9
With two children	31.8	31.4	33.1	30.2
With three children	6.4	4.7	11.7	14.7
With four children	2.3	1.4	5.3	7.6
With five and more children	2.1	1.0	5.7	9.7

^a Based on a sample of 310,000 families of workers, white collar employees and collective farmers conducted in September 1978. *Deti*, SSSR (Moscow: Statistika 1979), p. 9.

Other Soviet commentators place less stress on the double burden of the working mother and more on the attitudinal changes that accompany employment. Professional employment, in particular, tends to modify the woman's attitudes regarding motherhood. In effect, the opportunity costs of an additional child are greater; the professionally employed woman has more interests outside the home and is less eager to commit all of her energies to baby and housework. This interpretation is supported by studies showing that among employed women, fertility declines further as the skill and qualification requirements of the occupation increase. Women engaged in mental work have fewer children than those in physical labor; industrial workers have fewer children than agricultural workers. Similar findings are reported for Muslim women.

Social class also influences fertility choices, with kolkhoz women having larger families than working class women, who in turn have larger families than white-collar women (table 8).^b This is true when age, education, place of residence, income, and social class are held constant.

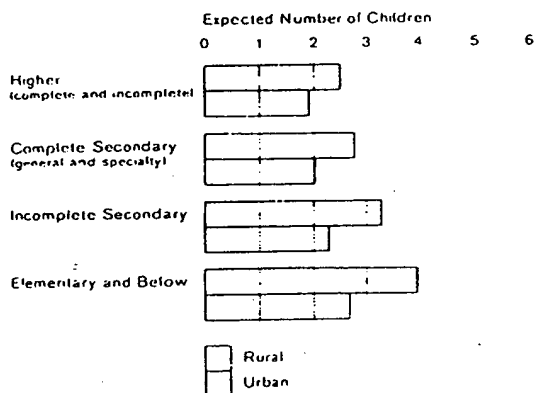
^b The Soviets use three broad terms to denote social class. We employ the following translations: kolkhoznik - collective farmer; rabochiy - working class (blue-collar worker on a state farm, in a factory); sluzhashchiy - white collar (employee; office or professional worker).

Another important indicator of traditional sex-based division of labor is female educational level. One may hypothesize that as female educational attainments increase, fertility levels decrease. Soviet studies have found that this is indeed the case (see figure 4). For example, a Soviet study of the relationship between education and fertility by republic reported a negative correlation between percent of women with higher education and birth rate. A Moscow study of women in their late thirties indicated an average of 1.43 children for women with eight years of education and less, compared with 1.16 children for women with higher education. Furthermore, the strong negative association between fertility and educational level persists when place of residence, age, income, and social class are held constant. In the Yerevan study cited above, for example, 18- to 29-year-old women with an income of 25 rubles or less per person reported a desired family size of 2.8 children if their educational level was completed secondary or below, compared to 2.4 children for women with higher and specialized secondary education.

The strong statistical relationship between education and fertility is apparent for all nationality groups. A study of marital fertility in a rural and predominantly ethnic Azerbaijani area showed that women with seven years of education or less averaged 6.9 children; women with specialized secondary or higher education averaged only 4.5 children. A mid-1970s study in

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Figure 4
Effect of Education on
Family Size Expectations
Workers and White Collar Employees, 1969

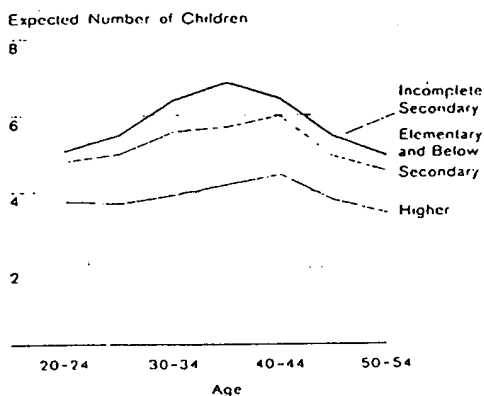


SOURCE: V. A. Belova, "Differentiation of opinions on the best and expected number of children in the family" VESTNIK STATISTIKI, No. 7, 1973, pp. 27-36

Tashkent of Muslim women with four or more children indicated that those with specialized secondary education and above averaged 4.9 children; those with secondary education or less, 5.8 children. Education exerts the same pressures on family size among Muslims as among other Soviet nationality groups, even when age is held constant (see figure 5). The impact of increased educational attainment on Muslim women, however, appears much more dramatic because their family size was much larger to begin with (see figure 6). Larger differentiation was also found in other, more limited, studies that note the stronger effects of social and economic variables on Muslim women.

These data suggest that variables relating more directly to the social position of women are much better predictors of fertility than are factors associated with overall modernity, and further, that these variables cut across nationality lines. Correlation analysis for both the nationality and republic data indicate that this is the case. For example, whereas the 1970 correlation between percent completed secondary education in the general population and child-to-woman ratios within

Figure 5
Effect of Education on Muslim
Family Size Expectations, 1972
Standardized for Age



SOURCE: V. A. Belova, et al., SKOLKO DETEI BUDET V SOVETSKOJ SEMYE (Moscow: Statistika 1977), p. 69

republics was $-.19$, the correlation between percent of women with that level of education and child-to-woman ratio is $-.49$. The comparable figures within nationality groups are $-.25$ and $-.45$. The correlation analysis also confirms Soviet findings on the effect of early marriage on family size. The correlation between early marriage (percent of 16- to 19-year-old women who are married) and child-to-woman ratios is $.90$ for the republic data and $.35$ for the nationality data.

A somewhat more precise measure of the social position of women is the ratio of female-to-male educational attainments obtained by dividing the percentage of females with a given education level by the male percentage for the same educational level. This variable, which we call "emancipation," more accurately captures the extent of female participation in society and is very highly correlated with fertility—within republics $-.91$ and $-.80$ within nationality groups.

The republic and nationality data sets also permitted us to test assumptions relating to the lag between social and economic changes and fertility behavior. It has

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Table 9

Matrix of Correlations ^a

	1	2	3	4	5	6	7
1. Percent urban		.69	.48	-.28	.24	-.09	-.50
2. Women's education	.65		.49	-.41	.15	.04	-.51
3. Women's "emancipation"	.58	.76		-.77	.19	-.29	-.79
4. Muslim group	-.28	-.41	-.74		-.25	.30	.77
5. Slav group	.36	.23	.27	-.26		.05	-.38
6. Early marriage	-.13	-.16	-.39	.45	-.06		.34
7. Child-to-woman ratio, 1970	-.51	-.60	-.91	.77	-.38	.54	

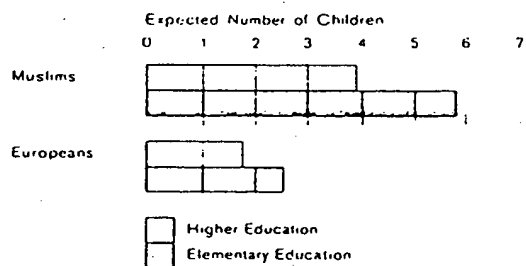
^a Based on 1959 and 1970 census data to 36 nationalities. The correlations above the diagonal are for 1970 data; those below the diagonal are for 1959 data except for variable seven, which is the 1970 child-to-woman ratio. The point made in the test is that the correlations in row seven are larger than those in column seven, particularly for women's "emancipation" (-.91 versus -.79).

been suggested that fertility is itself a measure of women's "emancipation"; we argue, however, that there is a causal relationship between changes in women's social position and family size orientations. That is, social and economic changes affecting socially approved sex roles precede shifts in fertility. If this assumption is correct, one would expect stronger correlations between 1959 social and economic indicators and 1970 measures of fertility than between the analogous variables for the same census year. The correlation analysis reveals that this is the case. The correlations between the 1959 "emancipation" and early marriage data and the 1970 child-to-woman ratio are -.94 and .95 for republics, and -.91 and .54 for the nationality groups (see table 9).¹¹ We make extensive use of these strong relationships in building our predictive model of fertility rates presented below.

The correlation analysis also provides a way of analyzing the effects of urban and rural residence on other social and economic predictors of fertility. These analyses indicate that determinants of fertility involving the social position of women, such as "emancipation" and early marriage, affect fertility in the same way for

¹¹ Stronger correlations between 1959 social indicators and 1970 measures of fertility were noted for the other social and economic variables as well.

Figure 6
Effect of Educational Level on Muslim and European Family Size Expectation, 1970



SOURCE: V. A. Belova, et al. SKOLKO DETEI BUDET V SOVETSKOI SEMYE (Moscow, Statistika, 1977) pp. 63, 65, & 69

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both urban and rural women. Analysis of the republic data that was provided separately for urban and rural residents resulted in equally strong and almost identical correlations between "emancipation," early marriage, and child-to-woman ratio. For example, higher rates of early marriage are associated with higher fertility rates no matter whether the women reside in the city or in the countryside.

Still another indication that enlargement of women's role in society acts to depress childbearing is the relationship between the percentage of working-age women (16 to 55 years of age) who are employed in nonagricultural work and the child-to-woman ratio. The correlation within republics is $-.60$. Comparable data were not presented in the republic urban/rural breakdowns, nor was it available for the nationality groups.

Finally, the correlation analysis provided an opportunity to examine the relationship between cultural variables and fertility. For the nationality data, a cultural designator for "Muslimness" was added by coding each Muslim nationality as one and each non-Muslim group as zero. Soviet findings indicate that Muslim women have deviated less from their traditional female roles as mother and homemaker than the women of the more modernized nationalities, suggesting that "Muslimness" might provide a crude indicator of the social position of women. The cultural designator for "Muslimness" was correlated highly with the female "emancipation" variable ($r = -.74$). In other words, what is important about being a Muslim woman in the Soviet Union is not "Muslimness" per se, which is a cultural heritage that remains fixed, but rather a complex of values relating to female roles. Because these values are dynamic rather than static, one would expect that they would be more accurately measured by variables, such as female "emancipation," that capture change in female participation rates. This reasoning suggests that "emancipation" will be a somewhat better predictor of fertility than will the "Muslimness" variable. As expected, "emancipation" is more highly correlated with the 1970 child-to-woman ratios ($r = -.91$) than is the Muslim variable ($r = .77$).

The above findings indicate that a woman's family size goals are directly affected by her social and economic status.¹⁴ Attitudes affecting family formation, however, are also influenced by what the woman's family, peers, and community see as an appropriate family size and lifestyle. Although education and urban residence may substantially modify a woman's perception of appropriate female roles, this perception is also influenced by the attitudes of her spouse, relatives, friends, and community. Several Soviet studies have shown that size of the parental family exerts a strong effect on the woman's family size preference. In other words, women from large families have larger family size expectations than similar women from small families. The husband's educational attainment also affects the wife's attitude toward family size. The 1969 study of expected and ideal family size among workers and employees revealed that highly educated women married to men with lower educational attainments have correspondingly larger family expectation than highly educated women married to similarly well-educated men. These findings were noted for both Muslim and non-Muslim nationalities.

This suggests that overall social opinions interact with the woman's personal attributes, such as her education, to affect her attitudes toward family size. The 1972 study, for example, provides data demonstrating the effects of republic of residence on family size. Muslim women living outside Central Asia tend to have much smaller families than their counterparts within Central Asia; Russian women living outside the RSFSR, particularly those residing in Central Asia, tend to have larger family size expectations than those in the RSFSR (see figure 7).

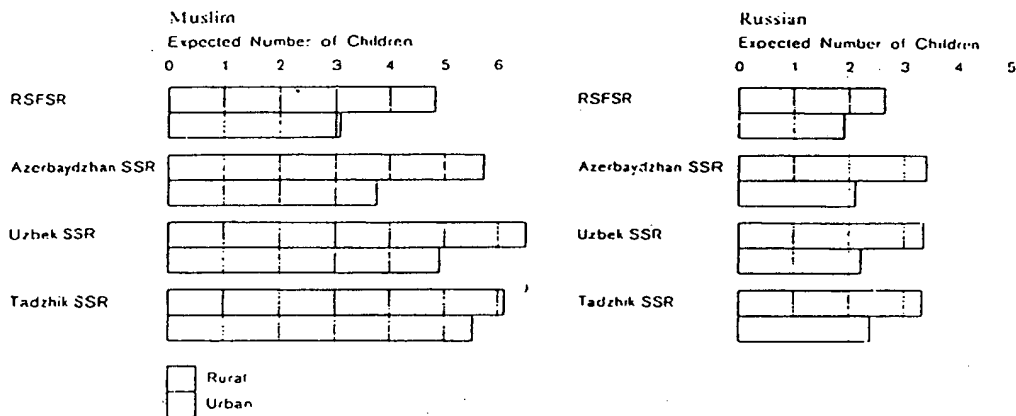
In the European areas of the Soviet Union, smaller families and the use of family planning methods to achieve them are widely accepted. Younger women, regardless of place of residence, employment status, and level of education expect fewer children than the previous generation. Urban/rural and educational differences in family preferences are gradually eroding in

¹⁴ The same social and economic characteristics associated with family size are also important in family power. A late 1960s study in Udmurt ASSR indicated that younger and better educated males were more egalitarian in their perception of the role of the head of household, with a smaller percentage naming themselves as head of household.

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Figure 7

Effect of Republic Residence on Muslim and Russian Family Size Expectations, 1972



SOURCE: V. A. Belova, et al., SKOLKO DETEI BUDET V SOVETSKOI SEMYE (Moscow: Statistika, 1977) pp. 45-46

the more industrialized areas of the Soviet Union as family values that were once restricted to high status and urban women become increasingly accepted by society as a whole. In other words, the gradual decline in fertility differentials predicted by demographic transition theory is already well under way in the USSR's European areas.

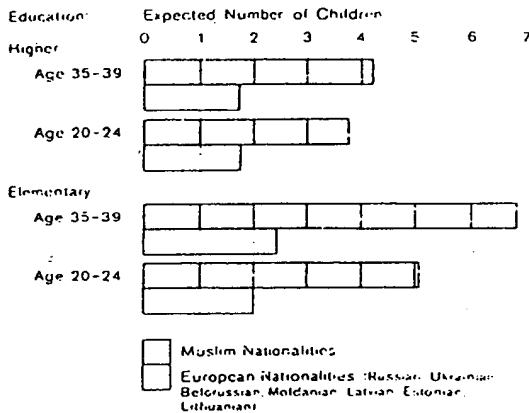
This process is at a much earlier stage in the Soviet southern tier. The changing attitudes relating to sex roles and family size have already had an impact on the family formation of younger Muslim women, who tend to have smaller family size expectations than their mothers and older sisters regardless of their educational level, residence, or age at marriage (see figure 8). For younger women, higher education and residence in a large city tend to mute ethnic differences in family size expectations (see figures 9 and 10). One study of Russian and Azerbaijani women in Baku revealed only marginal differences between Russian and Azerbaijani family size expectations among younger women. Young Azerbaijani women reported an average expected family size of 2.33, Russian women 2.07. These

findings provide compelling evidence of a gradual breakdown in the traditionally rigid sex role division that confined females to an exclusively maternal role. These changes are most striking among employed, well educated, younger, urban Muslim women and less evident among rural housewives. It will be some time before the changed family size values spread to the rural areas of Central Asia.

Fertility and Family Values

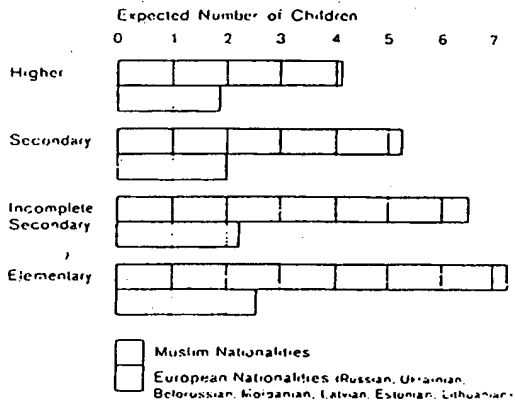
The data summarized above provide persuasive support to the hypothesis that Soviet Muslims are experiencing a demographic transition similar to that experienced earlier by the more modernized nationalities. The relatively lower level of modernization of the Muslim regions, however, is only part of the explanation for their tendency to lag behind the Slavs and Balts in the demographic transition. An additional, and perhaps more crucial factor is the persistence of traditional sex roles in these areas. That is, family size preferences are related both to a society's general modernization level and to the level of female participation in that society. The breakdown of traditional

Figure 8
Effect of Age on Ethnic Differences in Family Size, 1972



SOURCE: V. A. Belova, et al., SKOLKO DETEI BUDET V SOVETSKOI SEMYE (Moscow Statistika, 1977), pp. 63, 64, & 65

Figure 9
Effect of Education on Ethnic Differences in Family Size Expectations
Workers and White Collar Employees, 1969



SOURCE: V. A. Belova, CHISLO DETEI V SEMYE (Moscow Statistika, 1976), p. 149.

sex roles is itself closely linked with indicators of modernization. There are, however, differing cultural values placed on gender-based divisions of labor that vary from society to society and make such a division more resistant to change in some societies. For example, analysis of Latin American and Middle Eastern nations at similar levels of economic development has revealed different levels of sex role stereotyping, with the traditional values regarding female participation in the nonagricultural labor force much more persistent in Muslim societies of the Middle East. Similar factors may be operating in the Muslim areas of the Soviet Union to reinforce cultural traditions assigning women to a maternal role.

Muslim traditionality, however, has not meant that Soviet Muslims are immune to the effects of social and economic change. The Soviet-sponsored modernization program is gradually undermining the traditional orientation toward large families and exclusive emphasis on the woman's maternal role, even among the less

modernized groups. This process has already affected the childbearing behavior and attitudes of the younger, more urbanized, and better educated Muslim women and provides compelling evidence of increased Sovietization among the more traditional nationalities. The changes in reproductive behavior and attitudes have been accompanied by modifications of the entire system of values relating to home, family, and appropriate female roles, including changes in Muslim attitudes regarding family planning, child care, working wives, and sharing of household chores.

Attitudes toward family planning methods are of particular importance, since achievement of smaller family size is not possible without broad acceptance of family limitation techniques. Although cross-cultural data on family planning are extremely limited, it appears that use of family planning among Muslims, as among other Soviet women, is most widespread among better educated, employed urbanites. For example, a 1972 study of Russian and Kirghiz women in Kirghizia

showed that among indigenous nationalities, 50 percent of the urban respondents and 27 percent of the rural respondents used family planning methods. The corresponding percentages for European nationalities were 76 and 69.

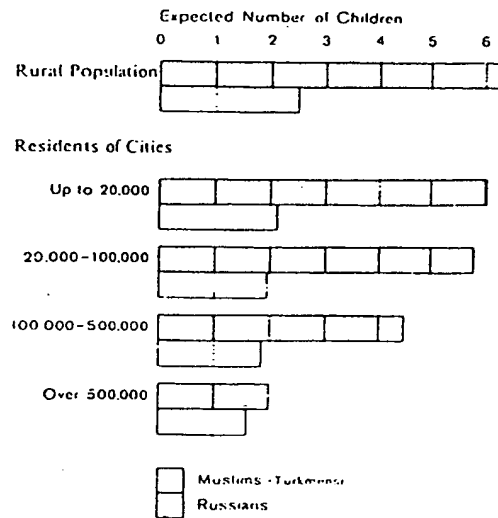
Those Muslim women who wish to limit their families rely heavily on abortion as a means of family planning. Resort to abortion among Muslim women is directly related to education and status. A study of family formation among urban Uzbek women with four or more children, for example, revealed a higher incidence of abortion among the more highly educated women. While 26 percent of the entire sample had had at least one abortion, 79 percent of the well-educated women (married 15 years or more) had had at least one abortion. The well-educated group average 3.4 abortions per women, as compared to 2.4 abortions per woman for those with secondary education or less.¹⁵ A study of childbearing activities in the first seven years of marriage among Kazakh women in Alma Ata revealed a similar pattern. Kazakh women with higher education averaged 2.28 abortions; those with secondary education 1.99 abortions.¹⁶

This pattern contrasts with that of European families where abortion use is inversely related to status. Comparative data for Moscow, Vilnius, Tambov, and Russian women in Alma Ata revealed that highly educated women had fewer abortions. For example, in

¹⁵ It is tempting to compare these figures with abortion frequency as reported in other studies. A Latvian study, for example, revealed an average of almost four abortions for women married 16 to 20 years. These figures cannot be validly compared with the Uzbek data because of the way the data in the Uzbek study were collected. The Uzbek survey was conducted in 1973 and was based on a sample of Uzbek women who were married to Uzbek men and who have their fourth child during 1971-72 in Andizhan and Leninsk. The 1972 study revealed an expected family size of 5.0 among Uzbek urban women. Many of the surveyed women had only just completed their families, while others were still in the process of doing so. Many of the reported abortions were likely to have been for spacing purposes. The abortion frequency among a sample that was not limited to women with four or more children (such as in the Latvian study) would probably yield quite different results. Studies that employ different types of samples cannot be directly compared.

¹⁶ Another problem in comparing data from different sources is that frequently the studies were not designed to provide insight into abortion frequency, but rather to examine why the women who aborted did so. Consequently, many Soviet surveys are drawn from

Figure 10
Effect of Urbanity on Ethnic Differences in Family Size Expectations, 1972



SOURCE: V. A. Petrova, et al. SKLKO DETEI BUDET V SOVETSKOI SEMYE (Moscow: Statistika, 1977), p. 76

samples of women who request abortions at specific medical facilities or in a general region. One survey, for example, was based on women who requested abortions between 1963 and 1966 in Aginsk National Okrug. The sample which included women aged 15 to 49, averaged 2.4 abortions for Russian women and 1.1 abortions for Buryat women. These results should not be generalized to the total populations of these groups, because the abortion history of women varies with their age. Moreover, the survey results provide no clues as to the percentage of women of either nationality who have not had an abortion.

¹⁶ Thirty-four percent of the Kazakh women, as compared to 32 percent of the Russian women, reported three abortions in the first seven years of marriage. At the time of the survey, Alma Ata had the highest rate of registered abortions in the republic, so these rates should not be generalized to all women in Kazakhstan. Another study of abortion frequency in Kazakhstan, this time in Karaganda, revealed that the abortion/live-birth ratio for the first five years of marriage was 1.16 for Russian women and 0.79 for Kazakh women. Given the ethnic difference in family size expectations in urban areas of this size, it is likely that the average number of abortions for Russian and Kazakh women in the sample is very similar.

a Moscow study of childbearing behavior in the first five years of marriage, 88 percent of the women with secondary education or less had at least one abortion, compared to only 67 percent of those with specialized secondary and higher education." These lower abortion frequencies for better educated, non-Muslim women are due to more successful use of contraception among these women.¹⁴

Muslim women appear to make less frequent use of contraception than their European counterparts in the USSR. In the study of Uzbek mothers of four mentioned above, only 16 percent of the total sample reported use of contraceptives. Although no directly comparable data for other nationalities are available, several studies of family planning practices in other areas of the USSR revealed that 70 to 80 percent of the sample reported use of contraceptives. For example, in a late 1960s study of family size and family limitation in Latvia, 80 percent of the respondents reported use of contraception. The analogous figure in a 1970 Moscow study was 79 percent; and an earlier study of family planning in four Moscow enterprises indicated that 90 percent of the women over 30 reported use of contraception.

Higher status women of all nationalities, however, report more frequent use of contraception. In the Uzbek study, 27 percent of the working wives and only 4 percent of the housewives reported use of contraceptives. In the Tambov, Vilnius, and Alma Ata studies, highly educated women reported more frequent use than their less educated counterparts. In the Latvian study, better educated women—particularly those in cities—relied more heavily on more reliable contraceptive techniques.

¹⁴ Abortion frequency among older women is only marginally higher. A 1970 Moscow study revealed the following abortion frequency for 35- to 39-year-olds: 22 percent had no abortions; 54 percent had one to three abortions; 19 percent had four to six abortions; and 5 percent had seven to 10 abortions.

¹⁵ It is interesting that this relationship was reversed in the 1920s: urban and professional women reported higher abortion frequencies than rural, peasant, and working women. This suggests that family planning practices, like fertility, have gone through stages. In the early stage, high status and urban women exhibit higher abortion frequencies. Later, this relationship is reversed as contraceptive use becomes more routine among high status women.

Muslim reliance on abortion and contraception to achieve desired family size may become increasingly affected by efforts by the Soviet medical establishment to promote contraception and reduce the frequency of abortion. Soviet medical specialists have traced what they consider to be an excessive abortion rate to inadequate or incorrect use of contraception. Although contraceptive use is quite high among the European nationalities, many women do not use it consistently. For example, a 1966 Moscow study revealed that only 49 percent reported consistent use of contraception. The Moscow study of young families during their first five years of marriage indicated that only 8 percent of the women and 44 percent of the men reported use of contraceptive techniques in the first year of the marriage. Five years later these rates had increased to 40 percent for women and 88 percent for men, but almost three-fourths of the sample had been forced to interrupt an unwanted pregnancy with abortion. Many Soviet couples rely on methods that Soviet medical authorities consider unreliable, such as withdrawal.¹⁵

As noted above, use of family planning methods of any kind is much less frequent among rural Muslim women, particularly housewives, than among urban Muslims. The abortion/live birth ratio, for example, in one rural and predominantly Muslim area of Dagestan ASSR was 12 abortions to 100 births, while one study in rural Uzbekistan indicated that less than 1 percent of the Uzbek women who visited the women's clinics reported use of contraception. These data suggest a pattern of family planning in which the traditional, agrarian women are the last to adopt family limitation practices. This pattern may be due partly to the conservatism of rural communities and partly to religious and cultural values condemning birth control practices. Cultural strictures against family planning, however,

Contraception in the USSR				Percent
Method	1928	1960	1962	1973
Condoms	10	51	37	34
Withdrawal	22	29	45	56
Diaphragms	3	3	4	3
Chemical	39	13	10	6
Douche	19	2	3	
Rhythm		2	1	
Other	7			

have not prevented the more modern Muslim women from using these techniques to achieve their smaller family size preference.

Other studies of Muslim attitudes relating to working wives and child care arrangements indicate that popular acceptance of the working mother is fairly widespread among Soviet Muslims. A 1974 Institute of Ethnography study of Uzbek families revealed that 64 percent of the urban respondents and 72 percent of the rural respondents favored a family situation in which the wife was employed, and opposed to one in which she remained at home doing housework.²⁹ Studies of Muslim attitudes toward communal child care arrangements are generally favorable. Although 60 percent of the Uzbek mothers mentioned above favored caring for infants (up to one year) at home, only 31 percent favored family care for children aged one to three. Attitudes toward communal child care varied with the mother's employment history—81 percent of the wives who had been employed throughout their marriage believed communal child care was best for children aged one to three, compared with only 46 percent of the full-time housewives. Similar findings were reported in a study of Russian and Kazakh families in Kazakhstan. Fifty-one percent of the urban respondents and 40 percent of the rural respondents favored day care for one- to three-year olds, while a large majority in both areas (92 percent urban, 85 percent rural) advocated communal child care for three- to seven-year olds. These findings—while far from conclusive—suggest a fairly high level of receptivity to communal child care arrangements, even for very young children, among groups that might be expected to advocate strongly that mothers remain in the home caring for their small children. Resistance to communal child care, therefore, is not a strong barrier to increased participation in the public sphere by Muslim mothers.

Muslim husbands also display at least a limited willingness to share household tasks. Fifty-eight percent of the urban Uzbeks in the study cited above reported that in their family the husband helped his wife with both the housework and the child care. A

²⁹ The higher rural percentage probably reflects the greater ease with which the rural wife and mother can integrate both household and employment responsibilities; female employment in an urban environment more often means out-of-home employment.

mid-1970s study of primarily rural Muslim families revealed that in a third of the families surveyed, the husband did a significant portion of the housework: husbands whose wives contributed a large portion of the family income were the most likely to take a more active role in housework. An early 1970s study of 1,226 industrial and state farm workers in Kirghizia revealed that 17.2 percent of Russian husbands and 16.8 percent of Kirghiz husbands performed household tasks that are traditionally defined as "women's work": laundry, food preparation, cleaning, and mopping. In addition, 47.8 percent of Russian and 47.6 percent of Kirghiz husbands assisted their wives in such tasks. Sharing of household chores was much more common among urban families of both nationalities. These data suggest that while the Soviet wife suffers from a double burden of job and housework, her husband's willingness to share at least some of the domestic tasks depends less upon his nationality than on his social status and place of residence.

This review of Soviet findings on family size and attitudes relating to home and family indicates the persistence of traditional values among Soviet Muslims. The findings suggest, however, that significant changes in popular attitudes are occurring in a pattern similar to that experienced by the European nationalities. First to be affected are the younger, better educated, urban Muslim families with change spreading only later and much more slowly to the more isolated rural communities.

Forecasting Fertility Among Soviet Nationalities
The relationships noted between social and economic trends and family formation permit us to forecast future fertility trends.³⁰ Our analysis of census data supports the finding that there is a time lag between social and economic change and change in fertility rates. This was demonstrated most clearly by the significantly larger correlations that exist between

³⁰ It is important that the results of social surveys and ethnographic studies were available in addition to the census data because of the level of analysis problems. Census tables present aggregated measures of population characteristics within geographic or other units. Those data do not pertain to individuals, but rather to groups of individuals. Attributing relationships to individuals within units based on observed relationships between units has been called the "ecological fallacy." In this case, however, there is a large body of research based on surveys of individuals so that the census data can be used to expand on those findings.

1959 measures of social conditions, including the social position of women, and the 1970 child-to-woman ratios than exist between these variables in the same census year. Because of this lag, we are able to model 1970 fertility based on 1959 census data and then apply the model using 1970 social data to forecast 1979 fertility among the Soviet nationalities.

Four factors that predicted 1970 fertility with considerable accuracy were used in the model. These factors, in order of importance, were:

- Female "emancipation" (the ratio of female-to-male education).
- Early marriage (percent of 16- to 19-year-old women who are married).
- Whether the nationality was Slav or not.
- Whether the nationality was Muslim or not.

The correlations between the 1959 scores on these factors and the 1970 child-to-woman ratios (children 0-9/women 20-49) was displayed in table 9.

A multiple regression analysis of the 1970 fertility scores using the four factors explained almost 90 percent of the variance in child-to-woman ratios for 36 nationality groups. "Emancipation" alone explains 82 percent of the variance in fertility, with early marriage contributing an additional 4 percent. The two cultural variables add the remaining 3 percent of explained variance. The results of the regression are displayed in table 10 and figure 11.

The regression results confirm the fact that when the position of women in society is measured directly by the "emancipation" variable, the cultural designations have little additional explanatory power. Being a Slav or a Muslim stands for a set of values and behaviors about the role of women that is well represented in our analysis by the "emancipation" variable. Furthermore, the approximately 10 percent of the variance that remains unexplained by the model cannot be attributed to "culture" (in the sense of being a Slav or a Muslim), since those two variables have contributed as much as they can to explaining the variance in fertility scores.²²

²² Two other variables, percent urban and women's education, for which there was available data from the two censuses, could not be added to the model because of the effects of colinearity, including sign reversals in the regression analysis. Nor did logarithmic transformation of the data improve the predictive power of the model.

Table 10

Regression of Fertility on Four Factors Among 36 Nationalities

Variable	Percent of Variance Explained (R ²)	Regression Coefficient	F Ratio
"Emancipation"	.82	-.0133	58.02
Early marriage	.04	.0009	8.40
Slav	.02	-.313	5.22
Muslim	.01	.177	2.46
Total	.89		
Constant Term	2.174		

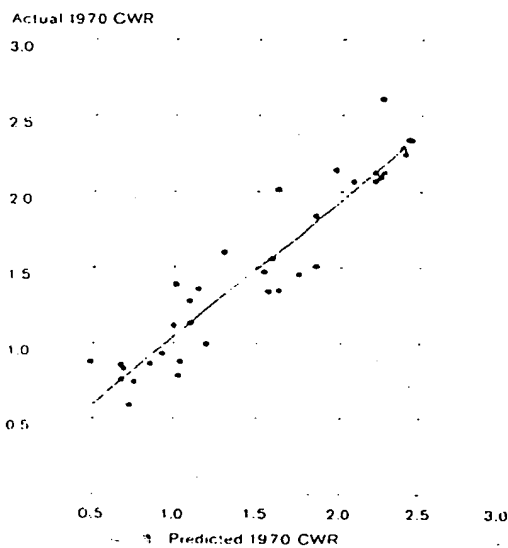
The predicted 1979 child-to-woman ratios are presented in table 11.²³ Fertility decreases predominately; only 11 of the 36 nationalities are predicted to have increases.²⁴ Large decreases in fertility are predicted for most of the Muslim nationalities. Whereas there were 10 nationalities, all of them Muslim, with child-to-woman ratios greater than two in 1970, only two of them are predicted to be that high in 1979—the Tadzhiks and the Chechens.

The high predicted 1979 fertility scores for these two groups are due to their relatively low "emancipation" scores in 1970. Table 12 reveals that both had 1970 "emancipation" scores below 50, though the rapid increases that occurred during 1959-70 indicate considerable social change even among these nationalities. The very traditional Chechen, for example, more than tripled their "emancipation" score (from 9.7 to 31.0) during those 11 years.

²³ Since the regression of 1970 fertility on 1959 social factors covered a period of 11 years, the change computations actually projected 1981 fertility rates. Assuming equal change each year, only nine-elevenths of the child-to-woman ratios would have occurred by 1979. Accordingly, the projected change was multiplied by .8181 to arrive at the nine years of change ending in 1979 that are reported in the table.

²⁴ All of the nationalities with predicted increases are European, and none of the projected increases are large. Once family planning practices receive widespread acceptance within a group, indicated by very small differences in fertility behavior between social classes or place of residence, minor fluctuations in child-to-woman ratios result from other factors, such as the availability of housing and child care facilities. Furthermore, the very small differences in child-to-woman ratios forecast for these groups are well within the range of model error and should not be given too much significance.

Figure II
Plot of Regression Results



Two caveats are important. First, the young age group structure of the Muslim nationalities means that population increases can be expected for those groups even though the average number of children per woman continues to decline, since greater numbers of women will be entering the prime childbearing ages. Thus, while the 1979 census should reveal continued high population growth rates among the Muslim nationalities, our analysis calls into question the assumption that family size orientations of Muslim women are somehow immune to the effects of social and economic change. Preliminary results of the 1979 census reveal a substantial drop in the annual growth rates for all major Muslim groups during the 1970s. These declines in growth rates occurred during a period when the young age group structure of the Muslim groups ensured a growing percentage of women in the prime childbearing ages and low population losses due to the

extremely small share of older, high mortality age groups. If fertility among the Muslims had remained stable during the 1970s, they would have registered significant increases in annual growth rate. The fact that these groups experienced substantial declines in growth rates demonstrates important shifts in fertility along the lines predicted by our model.

Second, the predicted fertility scores for 1979 represent our best estimate of the general fertility trends among different ethnic groups. Where large increases or decreases are forecast, change in that direction is very likely. Where the projected change is near zero, neither large increases nor large decreases are likely. This caveat is not a disavowal of the accuracy of the predicted change—which rests not only on a good fitting model, but also is supported by Soviet ethnographic and demographic research—but rather an explicit statement that minor deviations from the forecast figures are to be expected. Release of age-specific nationality data from the 1979 census will permit us to evaluate precisely the model's accuracy in predicting 1979 child-to-woman ratios.

Conclusion

This analysis demonstrates how closely Soviet fertility trends, including those of the Soviet Muslims, have conformed to the demographic transition pattern. Social and economic changes affecting the USSR's more traditional minorities have been followed by significant changes in family values and family formation behavior. These changes have had greatest impact on the more modernized elements of even the most traditional Muslim groups. These findings are not unique to the Soviet situation. The simplistic view that Islamic traditions make Muslims immune or resistant to the natality-inhibiting effects of modernization has been shown to be false in the Muslim countries of the Middle East and North Africa as well. These findings call into serious question other assumptions about the persistence of Islamic cultural values among Soviet Muslims. For example, the widely held view that Muslims will not migrate from their traditional homelands, even if given appropriate economic stimuli, is one that deserves more careful review.

More important, we argue that these value changes are an important aspect of Soviet political stability. One source of political strain in any multinational system is

Table 11

Predicted 1979 Child to Woman Ratios
For 36 Nationality Groups ^a

Nationality	1970 Child-to-Woman Ratio	Predicted Change	1979 Child-to-Woman Ratio	Nationality	1970 Child-to-Woman Ratio	Predicted Change	1979 Child-to-Woman Ratio
Slavs				Durginstsy	2.25	-.27	1.98
Russian	.73	-.12	.61	Lezgins	2.21	-.31	1.90
Ukrainian	.69	.15	.84	Kumyks	1.85	-.20	1.65
Belorussian	.76	-.10	.66	Kabardinians	1.58	.17	1.42
Balts				Other			
Estonian	.68	.01	.69	Georgian	.93	.05	.99
Latvian	.68	.05	.72	Armenian	1.20	-.17	1.04
Lithuanian	.86	-.16	.70	Moldavian	1.10	.08	1.18
Muslim				Buryat	1.56	-.42	1.14
Kazakh	2.21	-.50	1.71	Yakuts	1.62	-.55	1.07
Kirghiz	2.45	-.53	1.91	Komi	1.04	-.26	.79
Uzbek	2.40	-.43	1.98	Chuvash	1.15	.06	1.21
Tajik	2.42	-.36	2.06	Udmurt	1.11	-.01	1.10
Turkmen	2.38	-.42	1.96	Mordva	1.02	.18	1.20
Azerbaijanis	2.08	-.19	1.89	Mari	1.31	.08	1.39
Balkar	1.62	.02	1.63	Osetins	1.03	-.24	.80
Tatar	1.00	.09	1.10	Tuvins	1.84	-.99	.87
Bashkir	1.54	-.25	1.30	Kalmyk	1.74	-.60	1.14
Chechen	2.26	-.10	2.16	Karelians	.48	.29	.78
Avars	1.97	-.03	1.94				
Ingush	2.27	-.34	1.92				

^a Jews had to be excluded from the analysis due to insufficient data about child-to-woman ratios. Of the remaining 36 nationalities, 16 are Muslim.

wide social and economic disparities between regions or nationalities. Soviet programs to promote "convergence" in ethnic, social, economic, and political attainments have been fairly successful in helping to reduce disparities. The data relating to family values indicate that the efforts to promote minority modernization have resulted in significant modification of traditional values as well. Such trends are important for political stability because some aspects of traditionality conflict with regime-sponsored programs. The traditional restriction of women's role to the home and family conflicts with Soviet labor force needs and leadership desires to expose both youngsters and females to highly institutionalized socialization programs outside the home. Continuing high Muslim fertility is also

dysfunctional from the regime's perspective because it may ultimately lead to shifts in ethnic composition of a destabilizing magnitude.

For these reasons, the shifts away from traditional family values should help reduce one source of political opposition to the regime. This is not to say that ethnic identity will lose all political relevance. Common ethnic or regional identity has frequently served as a rallying point for political opposition by uniting groups with disparate economic interests and values. Nonetheless, such alliances are far less effective than those that are based on common economic goals and values. Value congruence thus helps reduce strain on the

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Table 12

Change in Women's "Emancipation": 1959-70

	"Emancipation" Scores *			"Emancipation" Scores *	
	1959	1970		1959	1970
Slavs					
Russian	101.2	102.3	Durginstsy	20.2	33.5
Ukrainian	83.7	82.4	Lezgins	22.0	39.8
Belorussian	88.4	97.1	Kumyks	39.6	57.0
Balts			Kabardinians	60.2	73.6
Estonian	108.5	114.7	Other		
Latvian	101.3	112.0	Georgian	100.3	97.8
Lithuanian	101.2	117.2	Armenian	99.5	99.0
Muslims			Moldavian	77.5	81.6
Kazakh	37.5	65.0	Jews	96.0	94.3
Kirghiz	32.6	56.7	Buryat	68.3	87.2
Uzbek	30.6	51.3	Yakuts	65.7	93.8
Tadzhik	26.4	46.5	Komi	101.8	112.5
Turkmen	27.8	50.4	Chuvash	64.2	75.5
Azerbaijanis	41.1	51.4	Udmurt	82.6	85.6
Balkar	30.0	57.8	Mordva	63.6	75.0
Tatar	97.6	97.5	Mari	47.4	61.4
Bashkir	75.3	89.3	Osetins	104.0	107.2
Chechen	9.7	31.0	Tuvins	50.9	114.5
Avars	16.8	32.6	Kalmyk	54.7	87.9
Ingush	17.9	38.5	Karcelians	90.9	100.0

* A score of 100 indicates men and women are equally educated.

political system. The changes in family values reported here, therefore, must be seen as a stabilizing factor in Soviet political life.

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Appendix

Soviet Fertility and Demographic Policy

The data presented above provide overwhelming evidence that Soviet fertility trends for all nationalities are linked to basic social and economic changes that affect values about parenthood and appropriate female roles. What of the impact of government-sponsored family planning or, conversely, pronatalist programs? The overall decline in Soviet fertility and the particularly low rates at which the more modernized regions have stabilized have evoked alarm from some Soviet demographers. The recent studies on family size and expectations summarized above were prompted not from a concern over the high fertility rates of Soviet Muslims, but from apprehension over the low natality of the European nationalities of the USSR.

Some Soviet demographers exhibit a strongly pronatalist orientation in their grim assessment of the implications of the decline and their enthusiastic espousal of remedial measures. Other Soviet specialists counsel moderation. The fertility decline, they say, is a consequence of the overall modernization that has resulted in substantial increases in the quality of life for all Soviet citizens. Moreover, they argue, measures to moderate the trend must be fully consistent with the broader goals of Soviet society, especially those relating to sexual equality. Proponents of this approach recognize the woman's dual role as worker and mother, but oppose pronatalist programs that sacrifice the woman's participation in society in order to enhance her maternal role.

Both groups seem to regard the two- to three-child family as ideal. Attainment of this ideal would require a major behavioral shift for both the Baltic and Slavic regions, where the single-child family has become increasingly popular (particularly among young professional women) and the Muslim regions, where the persistence of traditional family values is reflected in the continued popularity of families with five and more children, particularly among less-educated rural women. Most commentators seem to concur that the large families characteristic of rural Central Asia

place a strain on the financial status of the family and inhibit the woman's full participation in society.

The Soviet leadership seems to have adopted an essentially moderate stance on the issue. Most of the current programs are not explicitly designed to raise natality, but rather to improve living standards for the poorest families and to ease the burden on the working mother. There are two major family income supplement programs. The first is a series of one-time and monthly payments to single mothers and mothers of three or more children. There is no income ceiling for receipt of the payments, which continue until the child is five years old. The payments range from a one-time payment of 20 rubles for the third child (increasing to 250 rubles for the 11th and subsequent child) plus a monthly payment of 15 rubles for each child until the age of five. The payments are additive; a mother of four receiving four rubles per month will, with the birth of her fifth child, receive a lump sum of 85 rubles and an additional payment of 6 rubles per month. Costs to maintain the program are modest. In 1978 340 million rubles, which is about .1 percent of total budgetary expenditures, were allocated to 2.3 million mothers. The other program provides income supplements to families with a monthly per capita income of less than 50 rubles who have children less than eight years of age. The avowed goal of the income supplement program is to increase living standards, not to raise fertility rates.

Most Soviet programs relevant to family welfare are designed to ease the double burden of work and motherhood. These programs include, first, a system of protective labor laws, allowing pregnant women and nursing mothers to transfer to less arduous jobs. Second, working mothers can take advantage of a series of leave programs, generous by US standards, but modest compared to some East European programs. Paid maternity leave covers about four months--56 days before and 56 days following birth. The payments are linked to wages and, since 1973, cover 100 percent of

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the mother's salary for the entire leave period. Working mothers may elect to stay at home with their child until the child is one year old; in other words, when their paid maternity leave ends, they may take an unpaid leave of absence for an additional 10 months. Nursing mothers who elect to return to work are provided paid intervals to nurse their child. In addition, mothers of children up to age 14 receive seven days of additional paid leave to care for their children should they become ill. The government investment in these programs, while larger than the income maintenance programs described above, is quite modest. The total cost for maternity and nursing leave was 1.4 billion rubles in 1978, or 0.5 percent of total state expenditures.

The third program to facilitate working motherhood, a state-subsidized child care system, involves by far the largest chunk of government resources. By the late 1970s the system included a preschool program covering about 13 million children, or an estimated 43 percent of all children from two months of age to school age (seven years old).²⁷ This compares with a Soviet-reported coverage of 23 percent in 1965. In spite of this rapid expansion, the demand for public child care far exceeds supply. Furthermore, the availability of child care varies substantially by the age of the child. As estimated 52 percent of the three- to seven-year-olds, but only 29 percent of the children under three, are covered. The situation is even more acute for infants under the age of one year. The regular preschool child care is augmented by seasonal preschool and summer day camps. For working mothers with school-age children, there are extended day schools, providing supervised programs to cover the hours between school dismissal and the parents' return home from work. Current enrollment figures for these programs indicate that about one-fourth of all primary and secondary students are covered. In addition, there are state-subsidized summer and day camps. Although the total costs for these programs are not known, expenditures for maintenance of children in preschool facilities and summer camps, excluding capital investment costs, amounted to 6.2 billion rubles, or more than five times the combined costs of the two major income maintenance programs summarized above.

²⁷ Estimates were computed from reported enrollments in 1977, broken out by two age groups, plus birth registrations and age-specific death rates.

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Although none of these programs is explicitly or even primarily designed to promote larger families, one area with particularly low natality—Moscow—is attempting an integrated approach to boosting the birth rate. Moscow's approach is four-pronged: efforts to improve housing, especially for young families; improvements in day care availability and services; better access to consumer items; and a propaganda program stressing the benefits of larger families.

The most recent developments in Soviet demographic policy were unveiled in the draft guidelines for the 11th Five-Year Plan, formally approved at the 26th Party Congress. The programs, implemented in part by a joint Central Committee-Council of Ministers resolution in March 1981, continue the leadership's essentially moderate stand on the issue. The program changes are explicitly intended to ease the burdens of combining motherhood with paid employment in the labor force. A major plank in the program is the introduction of paid leave to working mothers of children up to one year of age. This provides some financial relief to mothers who choose to stay home and care for their infants after the four months of paid maternity leave is over.

Unlike paid maternity leave, however, the new payments are not keyed to salary but are set at a flat rate of 35 rubles per month. The payment represents less than one-fourth of the Soviet average monthly salary, suggesting that its impact will probably be greatest with low-income families.²⁸ The payment will, however, provide financial aid to those families where an early return to work for the mother is not feasible. Mothers may elect to take an additional six months of unpaid leave with no loss of pension benefits. Further liberalization of benefits is promised in the 12th Five-Year Plan (1986-90).

²⁸ The average monthly salary in 1979 (excluding collective farmers) was 163.3 rubles. Women, however, are overrepresented in lower paying occupations, and their average monthly earnings are somewhat lower. Western specialists estimate that Soviet women earn about 75 percent of male earnings. This would mean an average monthly salary of 140 rubles for females. The 35 ruble monthly payment, therefore, represents about one-fourth of average female earnings. The opportunity cost of remaining home to care for the infant will clearly be much higher for highly educated women who earn well above-average salaries.

The package also liberalized leave policy for working mothers and lengthened the period of paid leave for caring for a sick child. It also expanded pension benefits for working mothers and introduced a series of one-time payments to working mothers for the first three children. Also promised was an expansion of child care, extended day school facilities, and consumer services to ease the burden of housework. Republic governments and ministries were ordered to formulate measures to promote wider use of part-time and variable-time work for women.

The programs unveiled in the 11th Five-Year Plan guidelines and formally approved at the 26th Party Congress represent a continuation of the leadership's very modest pronatalist policies. The planned steps extend previous programs designed to lighten the double load of motherhood and employment. The programs fall well short of the radical pronatalist proposals to transform maternity into a paid vocation. None of the benefits promised by the 11th Five-Year Plan guidelines and the subsequent party-government resolution will do much to help families where the mother is not in the paid labor force; most benefits will flow to the employed woman and are designed to help her combine motherhood with paid employment, as well as ease the financial burdens of child rearing.

The extent to which the current programs have affected ethnic or regional differentials in fertility is not clear. None of the programs adopted thus far is explicitly differentiated by region, although almost all will have a differential impact on different social and economic groups.²⁷ The family income supplement programs, to the extent that they provide a fertility incentive, will have their greatest impact on low-income groups. The system of graduated monthly payments to mothers of many children is biased in favor of families with four or more children. The existence of those payments has virtually no effect on the young Muscovite family deciding whether to have a second child.

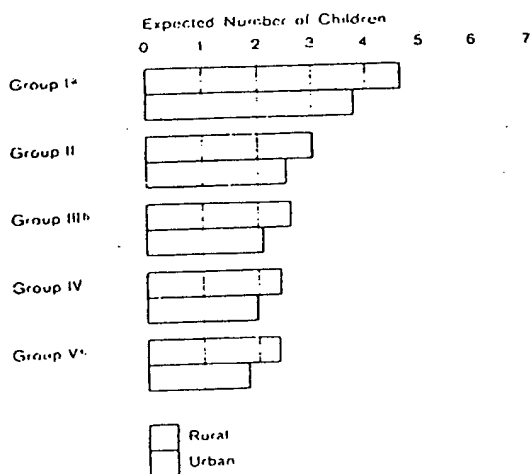
²⁷ The 35-ruble-per-month paid leave for mothers with children under one year of age is increased to 50 rubles per month in the Far East, Siberia, and northern regions of the USSR. The higher monthly payment for those regions is an adjustment for regional differentials in wage scales. The Soviet wage system includes a series of regional wage coefficients (percent additions to wages) and graduated wage supplements to compensate for the higher living costs and unfavorable conditions in those regions.

The paid maternity leave, other liberal leave policies for working mothers, and the state-subsidized child care system will have the greatest effect in regions with high female labor force participation rates. Because the new "part paid" benefits to working mothers represent a larger proportion of the salaries of less educated and lower status women, this program will have the greatest impact in rural areas with a high concentration of those women. On the other hand, the program is designed to be phased in gradually region by region. If the Soviet leadership begins the program in the European areas of the USSR, it might produce a temporary differentiation until full implementation of the policy is achieved.

The larger issue, however, is not the extent to which current programs have a differential impact on various areas or groups, but the extent to which the current policy mix is effective in achieving desired changes in demographic trends. Many of the measures adopted have been designed to bolster family living standards, but Soviet surveys have failed to reveal a consistent relationship between those programs and fertility. Soviet critics of expanded income maintenance programs note that the fertility decline coincided with a significant increase in living standards. Proponents note that practical and financial difficulties are frequently mentioned by Soviet women when asked why they do not want another child, suggesting that fertility and living standards might be positively related. So far, Soviet findings are contradictory. Some researchers reported an inverse relationship between family income and family size and between income per family member and family size (see figure 12). Others found that family size rose with income, except for well-educated women whose family size declined with income. Still others report inconclusive findings.

A similar mixture of contradictory or inconclusive results is evident in a review of Soviet studies examining the impact of housing on family size. Although some of the contradictory findings may be due to faulty research design, it seems reasonable to conclude that the influence of living standards varies depending on the overall social and economic status of a given group. The frequency with which poor living conditions or the lack of child care facilities is cited by Soviet women as an explanation of their desire to limit family size may

Figure 12
Effect of Income on
Family Size Expectations
Workers and Employees, 1969



^aLow income/family member
^bMedium income/family member
^cHigh income/family member

SOURCE: V. A. Belova, "Differentiation of opinions on the best and expected number of children in the family", VESTNIK STATISTIKI, No. 7, 1973, pp. 27-34.

be traced to the fact that financial constraints are a socially acceptable answer to the question: Why don't you want another child?

The evidence suggests that the current mix of financial subsidies and other measures to ease the burden on the working mother probably has not affected total Soviet fertility significantly; nor is it likely—in view of anticipated labor shortages—that the Soviet leadership will embrace more radical pronatalist measures involving large-scale, long-term withdrawal of females from the labor force. As the more moderate Soviet demographers are fond of pointing out, the fertility declines so bemoaned by the radical pronatalists are a result of basic social and economic change. Demographic policies alone can have only a marginal long-term effect on the fertility declines associated with those social and economic changes.

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Cited References ²⁸

Bondarskaya, G. A. *Rozhdayemost V SSSR*. Moscow: Statistika, 1977.

Coale, A. J., Anderson, B. A., and Harm, E. *Human Fertility in Russia Since the Nineteenth Century*. Princeton University Press, 1979.

Golin, Ya. I. Birthrate in Dagestan. *Zdravookhraneniye Rossiyskoi Federatsii*, 1971, 12:9-13.

Mamedov, K. Influence of Several Factors on the Level and Dynamics of the Number of Births. *Izvestiya Akademii Nauk Azerbaydzhanskoj SSR (Seriya Ekonomiki)*, 1973, No. 1-2:114-120.

Tolts, M. Characteristics of Several Aspects of Fertility in Large Cities. In D. I. Valentey (ED.), *Demograficheskiy Analiz Rozhdayemosti*. Moscow: Statistika, 1974, pp. 45-55.

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