Working Paper

Parity-Progression Fertility Tables for the Nationalities of the USSR

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WP-90-53
September 1990

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FOREWORD

The USSR is a whole world in itself, with an unexampled richness of geography, culture, language and people. This shows itself in the demography, especially in respect of fertility. The range there is wide, though there are other instances with equal range--in Canada in the 1930s from bare replacement in English-speaking Ontario to an average of 8 children ever born in French-speaking Quebec.

Such ranges are of course transitional; what they mean is that a process inevitable for all has come earlier to one group than to another. The process has gone to its natural culmination in Canada; in the USSR it is still proceeding.

This working paper recognizes the 17 largest nationalities, that divide in a seemingly bimodal fashion into two groups, one with a mean number of births ranging from 1.8 to 2.6, the other mostly around 6.

The method used is in principle the best, being based on a partial life history of individual women, with full details of their childbearing experience. The data was gathered in a 1985 survey, in which women were asked to recollect back to 1970-75. It does not entirely escape from the difficulty with any retrospective survey relying on the respondent's memory in that the quality of reporting differs systematically between the more sophisticated populations, that have lower birth rates and the less sophisticated, whose birth rates are in the high loop of the bimodal distribution. When errors are uncorrelated with the subject of survey they do little harm, but that is unlikely to be true on birth recollections.

Nonetheless these are positively the best data to be had for now, and they should be greeted warmly by students of the Soviet society. For through their bearing on demographic variables they also bear on the evolution of the USSR in its present dramatic transformation.

Nathan Keyfitz
Leader
Population Program

ABSTRACT

Using data from a socio-demographic survey conducted in 1985 in the USSR, fertility parity-progression tables were constructed for the 17 most populated Soviet nationalities. These tables give the probability of a woman who gave birth to a child between 1970 and 1974 to have her next child by the time of the survey. Using World Fertility Survey data, the model of natural fertility by parity was built and two subgroups of women were identified: those who control family size and those who do not. Nationalities differ considerably by the proportion of women who control childbearing (from 17% for the Tajiks to 99% for the Jews), and by TFR for those who control family size (from 4.2 for the Tajiks to 1.5 for the Jews).

TABLE OF CONTENTS

INTRODUCTION 1

METHOD AND DATA 2

RESULTS 6

REFERENCES 10

APPENDIX A 11

APPENDIX B 19

PARITY-PROGRESSION FERTILITY TABLES FOR THE NATIONALITIES OF THE USSR

Leonid Darsky[1] *and Sergei Scherbov*[2]

INTRODUCTION

When a married female recognizes her right and responsibility to define the number of children in her family and the time of their births, and at the same time tries to fulfil these intentions in practice, the number of children already born becomes the dominant factor when analyzing fertility processes. Many demographic factors are taken into account when a woman decides to bear another child. The age of the marital partners may become a limiting factor. Both husband and wife may think that it is too late to have another child, because at the time of their retirement that child could still be dependent on them. This argument is now very important in the USSR, because it is common to provide support (also financial) until the child finishes his education and even later, especially in the families of white-collar workers and intellectuals.

Another factor taken into account is the age of the youngest child. This is important both from an educational point of view, and from the possibility of women not working outside of the home. In the USSR, one receives benefits from the government for two children. When planning the family, a woman considers the optimal age interval of her children. And certainly simply having a small child in the family gives unmeasurable psychological satisfaction to its parents.

But in the end, the major influencing factor on a woman deciding to have another child is the number of children already born.[3] This priority is also mentioned by W. Lutz in the introduction to his study based on World Fertility Survey (WFS) data, where he analyzed fertility by parity for 41 developing and 14 developed countries (Lutz 1989). Unfortunately he did not have data for the Soviet Union so this large and very heterogeneous country was absent from the study. But we hope that by analyzing the data available, we can partly fill the gap and perform a separate interest.

In the Soviet Union the analysis of fertility by parity is very important. The majority of the subgroups in the population have already made the transition towards a modern type of reproduction behavior (controlled fertility); the other groups are gradually moving towards this goal. Especially distinct differences could be found between the different nationalities

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[3]Often in demographic analysis in order to find a solution within the framework of a relatively simple scheme and under the peculiarities of available information, the notion "number of children that a woman has" is substituted by "the number of children ever born". Under relatively low levels of infant mortality, such a substitution would not lead to substantial inaccuracy in the conclusions.

located at various stages of demographic transition. Nationality has now become the most important indication of differential fertility.

METHOD AND DATA

In the socio-demographic survey of 1985 which covered 5% of the total population, among others were the questions about reproduction biography. Women were asked about the year of their marriage, total number of children, and birthdate of each child (month and year). From this survey we could determine the distribution of married women by parity and the intervals between births. Our study was based on the information about one cohort of married women that gave birth to children between 1970-1974. For each married woman who bore a child of a given parity in 1970-1974 and remained married by the time of the survey (1 January 1985), we obtained information about the date of the next births. Data for the whole of the USSR are given in Table 1. The same data were available for most of the nationalities with populations exceeding 1 million (Appendix A).

Table 1 Fertility in the cohort of married women, who bore the previous child in 1970-74. All nationalities.

Parity n	Number of women of parity N(n)	Parity progression ratio *1000 a(n)	Mean interval between birth t(n)	Standard deviation STD(n)
0	366843	952	1.39	1.468
1	302166	741	4.49	2.872
2	238974	349	3.81	2.786
3	92404	476	3.14	2.143
4	50643	639	3.00	1.856
5	36518	630	2.87	1.717
6	24759	673	2.75	1.568
7	16976	667	2.68	1.457
8	10580	637	2.61	1.452
9	5939	599	2.60	1.507

In most cases the number of observations for parities higher than 6 were insufficient for comprehensive study, and thus the indicators for these parities were not estimated. But the data for the first 6 parities were certainly reliable for all selected nationalities with high

fertility (Uzbeks, Kazakhs, Azerbaijanis, Kirghiz, Tajiks, Armenians, Turkmen). For the nationalities with low fertility, the indicators for parities 5 and 6 were unstable and the number of observations insufficient. Thus a summary group of nationalities with low fertility was created, where the stability of indicators for parities 5 and 6 was definite and the information on parity progression ratios of parities 5 and 6 from this group was used for building fertility tables for each nationality with low fertility (Russians, Ukrainians, Byelorussians, Georgians, Lithuanians, Moldavians, Latvians, Estonians, Tatars and Jews). Using data from the combined group of parities 5 and 6 did not influence the final results for the individual nationality, because the number of births of these parities was very small (relatively) for women of reported nationalities and fertility indicators for these parities were similar. At the next stage the parity-progression ratios for parities 5 and 6 for each table were smoothed.

For parities 7 and higher we rejected the idea of estimating the parity-progression ratios for each nationality or combined group. We assumed the hypothesis that a female who has seven and more births does not at all restrict the number of children and does not use any means of contraception. We assumed that the probability of births of parities 7 and higher does not depend on parity-specific fertility regulation, which means that the intention of women to have another child is independent of her previous childbearing history. We had no evidence to consider differences in natural fertility of different nationalities. After the increase of fertility in the 1950s and 1960s the nationalities of Middle Asia achieved a very high level of reproduction. This was partly due to an improved health status of females. In the 1970s and 1980s there was a relatively high mortality level in the USSR, and there existed a differentiation of mortality level by nationality. But this phenomena least affected the female population in the reproductive ages. Thus we assumed that the fertility level of those groups of the USSR population who do not control family size corresponds or is at least very close to some standard that is inherent in populations with a very high fertility level.

Taking this into consideration we created the standard of natural fertility in the following way. From the large number of cohorts who finished their reproduction behavior and were studied in the framework of the WFS, we took only those whose Total Fertility Rate (TFR) exceeded 7.5. We averaged the data and built one single distribution of married females according to the number of children ever born. The cumulate of this distribution was approximated by the Gomperz-Makeham curve. This curve was taken as a standard of uncontrolled fertility. This standard does not pretend to reflect the maximum fertility level and some populations could easily have higher fertility. But in the framework of our study, the chosen level of natural fertility is quite suitable.

Using this curve we built a basic fertility table (Table 2). The relations between the indicators in the table are very simple:

$$a_n=\frac{l_{n+1}}{l_n};\quad W_n=l_n-l_{n+1};\quad F_n=\frac{\sum_{k=n+1}^{\infty} l_k}{l_n}-n$$

Since L. Henry (1953) suggested this method for measuring fertility, the technic of building fertility tables by parity was well elaborated (Lutz 1989).

Table 2 Parity-progression table, taken as a standard of natural fertility.

Parity n	Parity progression ratio *1000 a(n)	Number of women reaching parity l(n)	Women remaining at parity (n) W(n)	TFR for parity (n) and above F(n)
0*	971	1000*	29	7.5
1	973	971	27	6.7
2	962	945	36	5.9
3	947	909	48	5.1
4	936	861	55	4.4
5	910	805	72	3.7
6	867	733	98	3.1
7	837	635	104	2.6
8	781	531	117	2.1
9	714	415	119	1.7
10	661	296	100	1.4
11	604	196	77	1.0
12	502	118	59	0.7
13	454	59	32	0.5
14	398	27	27	0.0

* Women entering first marriage.

Taking into account our hypothesis that births of parities 7 and higher correspond to natural fertility, we accepted for all nationalities indicators from the standard starting from parity 7. We built a parity-progression table for the total population, 17 selected nationalities and two groups of nationalities - with high and low fertility (see Appendix Table B). Strictly speaking, tables that were constructed in the way described above are not cohort tables, because their indicators are not related to a particular marital cohort. These tables were generated using data related to different cohorts who bore children of different parities but at the same time (1970-74). But again, strictly speaking, that was not a synthetic cohort because in respect to each parity, only specific cohorts were observed in time. We believe that this approach is the most fruitful, because the analyzed process is not as distant in time from the beginning of observation, as in pure cohort analysis. At the same time some fictitiousness of a synthetic cohort is reduced to a minimum.

Using such an approach, it was possible to subdivide the table population into two subpopulations: those who control family size and those who follow the pattern of natural fertility. If we consider that all those who bore the 7th child come from a subpopulation that does not restrict family size, and all those who control the family size already realized their procreative intentions, then the share of population that controls fertility could be estimated by dividing the number of those who gave birth to 7 or more children l_7 by the related value in the standard population: $l_7^{stand}=635$.

For example, if in a parity-progression table 353 Kazakh women out of 1000 gave birth to 7 and more children, then we can assume that 556 women out of 1000 never controlled their fertility and all indicators for this group correspond to the standard; but 444 did control family size and their indicators are absolutely different; the total indicators for Kazakhs are weighted characteristics of the two subgroups.

Such calculations were performed for all nationalities and similar fertility tables were produced (see Appendix B). Figure 1 gives a graphic representation of an l_n column for several of the selected nationalities.

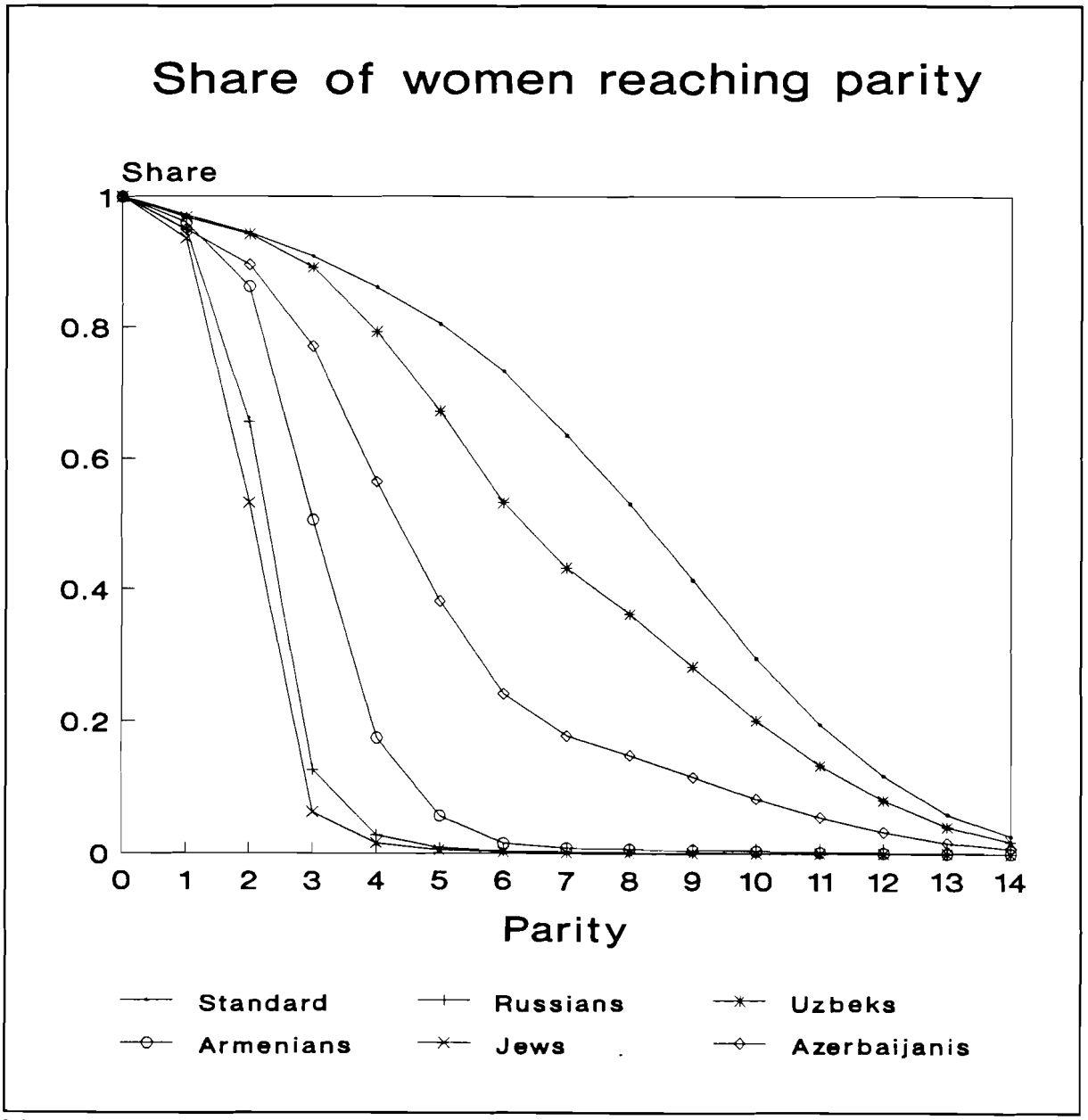

Figure 1

Of course it is not necessary to interpret all births from those who control family size as planned and desired. The culture of birth regulation in most of the groups is low, but moral availability and social acceptability of abortions in most of the groups approaches the situation where undesirable children are not born.

RESULTS

Figure 2 gives the estimates of the proportion of women who control family size for all selected nationalities. The nationalities are ordered by the total fertility rate F_0 in descending order. As expected, the smallest share of women who control family size was obtained for the Tajiks (16.7%), slightly higher for the Kirghiz (25.7%) and the Turkmen (27.3%). The Kazakhs and Azerbaijanis are in the middle - 44.4% and 71.9% respectively. All other nationalities almost completely switched to a controlled type of reproduction, and the proportion of those who do not control family size is negligible from 3.6% for Moldavians to 0.2% for the Jews.

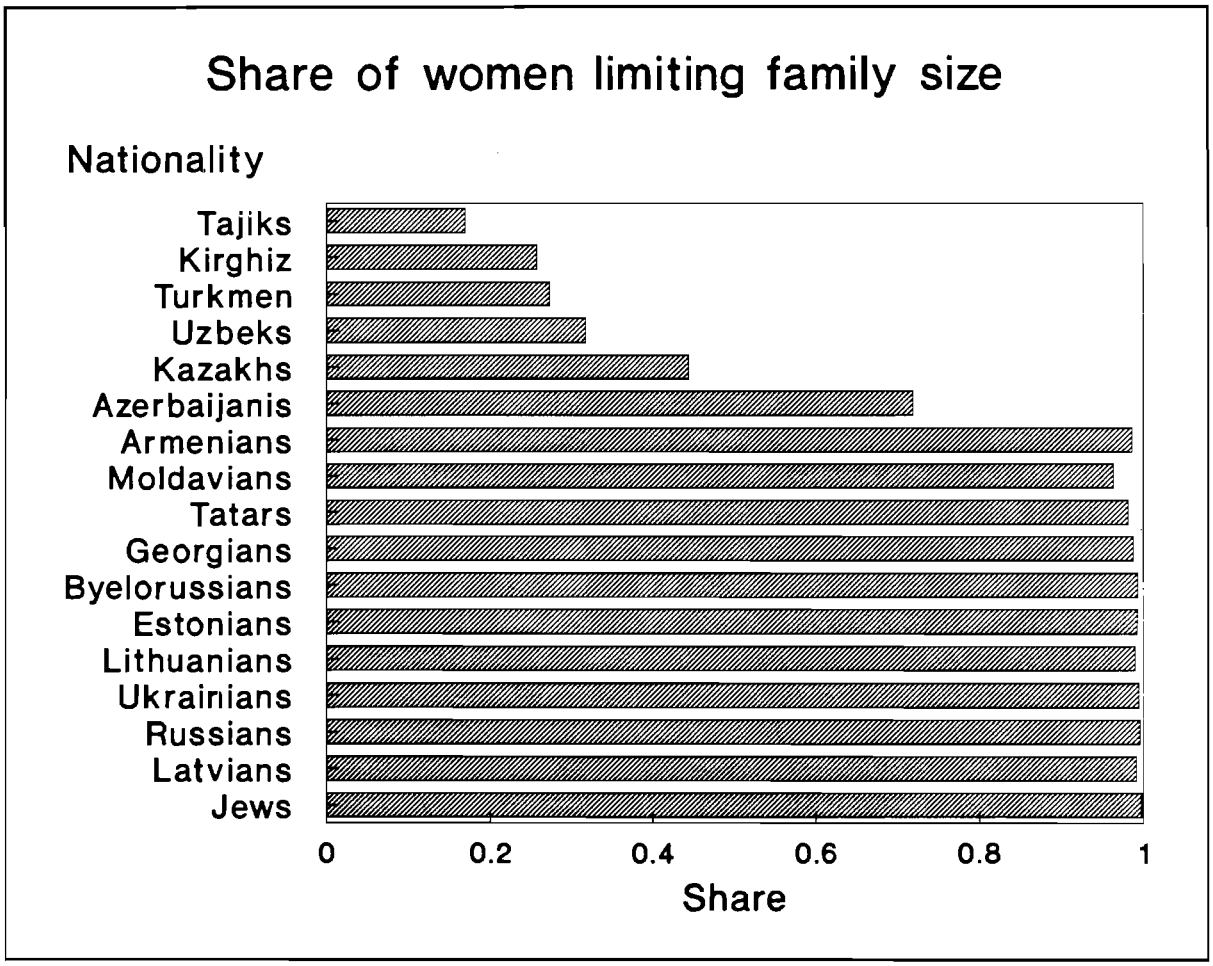

Figure 2

All of those who do not restrict the number of births have the same fertility level (according to our standard) with the mean number of children born by them at 7.5. But among those who control family size, the average number of children differs. In Table 3 we tried to present two indicators: the proportion of women who restricted the number of births and their TFR. Comparison of these indicators for different population groups demonstrates that they play a different role in the development of the fertility level.

The low fertility group consists of nationalities whose reproduction in most cases falls below replacement level. Among these, usually not more than 1% of the females follow the pattern of natural fertility, and they do not play an important role in the generation of total fertility level for these nationalities. Therefore the average number of children born in the whole group does not differ much from those who control family size. (This is not true only for Moldavians). In the group of nationalities with high fertility, that is true only for Armenians, who traditionally were included into this group of high fertility. Together with the Moldavians in the 1970s-1980s, they occupied the intermediate position according to fertility level. But according to our estimate of the proportion of females who control family size, they have already moved to another group. Others nationalities are in a transition towards low fertility level.

It is also possible to distinguish between children born by those who control and those who do not control family size. An example of this distinction is given in Figure 3 for the groups with the most typical fertility behavior.

The results presented allow us to conclude that acceptance of the two-child family model delays from the practice of family size control. The distribution of females who restrict the number of births in this group of nationalities does not have a distinct mathematical mode. The number of children with which they stop the childbearing process is distributed more or less uniformly between three and five. At the same time for nationalities with low fertility, the mode for two children is explicit. Among Russians, Ukrainians, Byelorussians and Estonians, more than half of the females stop childbearing after having two children. Among these nationalities and also among Latvians, Lithuanians and Jews more than 70% of the marital couples stopped childbearing after having one or two children. The one-child family is in second place after the two-child family among these nationalities. For Georgians, Armenians, Moldavians and Tatars the mathematical mode is for two children. But in second position are the families with three children. Only among the Jews is the one-child family as popular as the family with two children.

The popularity of families with two children among nationalities with low fertility may also be confirmed by the data on the average number of children that a woman who gave birth to two children will bear in the future F_2. For low fertility nationalities this number is less than 0.5 (only for Moldavians about 0.8). Among the nationalities with high fertility but for subgroups who control family size, this indicator is higher than 1.5 except Armenians for whom it is only 0.8.

Table 3 Share of women who limit family size and average number of children born to women of different nationalities.

Nationality	Share of women controlling birth per 1000	Mean number of births	
		All women	Birth controlling women
All nationalities	946	2.3	2.0
Low fertility group	995	1.8	1.8
Russians	996	1.8	1.8
Ukrainians	994	1.9	1.9
Byelorussians	993	2.0	1.9
Georgians	988	2.2	2.2
Lithuanians	991	1.9	1.9
Moldavians	964	2.6	2.4
Latvians	992	1.8	1.7
Estonians	993	1.9	1.9
Tatars	982	2.2	2.1
Jews	998	1.6	1.5
High fertility group	439	5.8	3.6
Uzbeks	317	6.4	3.9
Kazakhs	444	5.6	3.3
Azerbaijanis	719	4.4	3.3
Kirghiz	257	6.5	3.6
Tajiks	169	6.9	4.2
Armenians	987	2.6	2.5
Turkmen	273	6.5	3.7
Standard	0	7.5	-

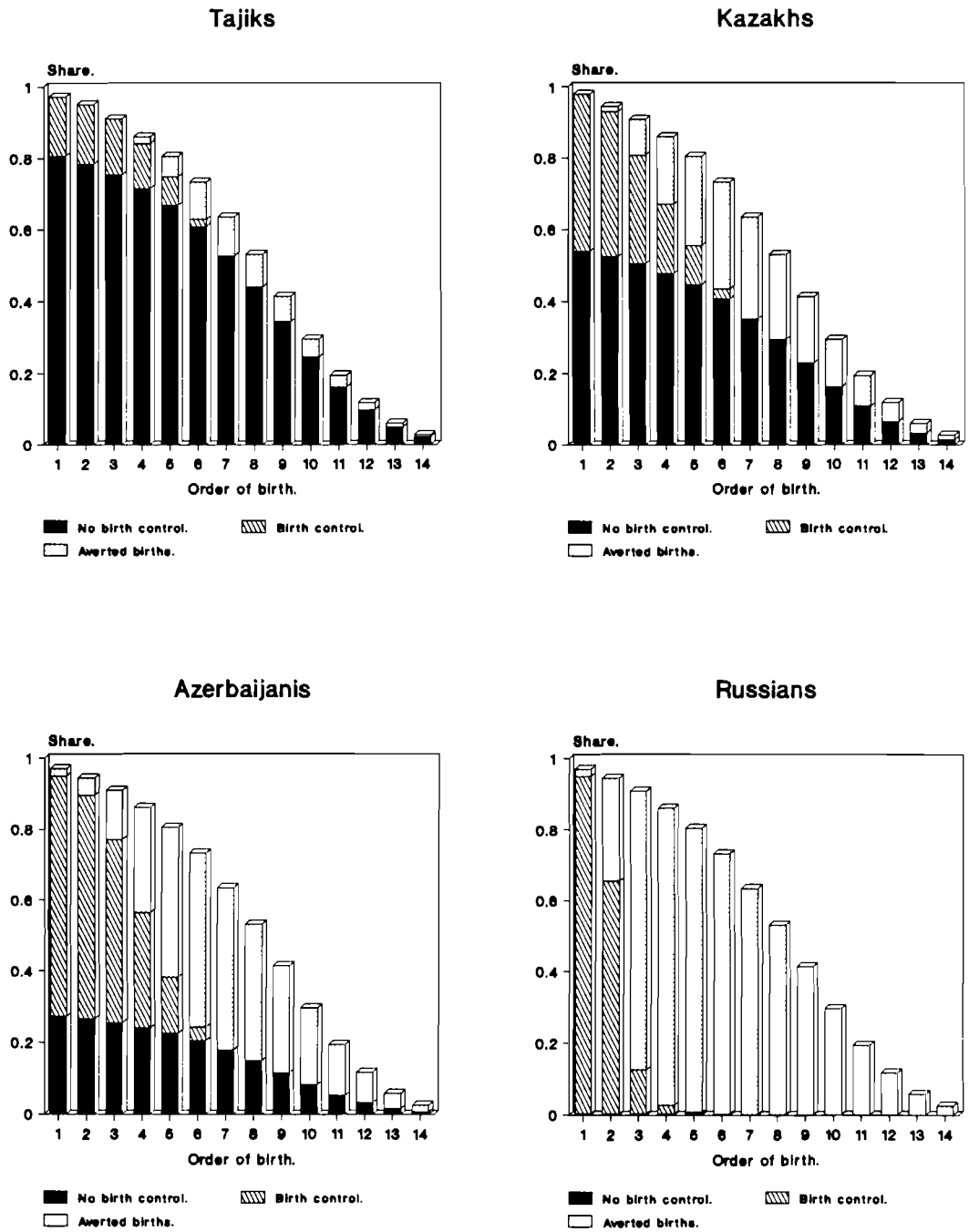

Figure 3 Share of children of each order born by different groups of women

The diversity of the demographic situation in the USSR from a fertility point of view is amazing. If we compare the fertility level of the cohorts under consideration with the corresponding data from the WFS study, one can see that according to TFR, Tajiks are at the same level as Bangladesh, Columbia, Costa-Rica (6.9). Higher TFR was obtained only for Syria, Jordan, Mexico and Morocco. At the same time the level of TFR for Russians (1.8) was below almost all given cohort data except for the Netherlands.

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APPENDIX A

Number of births in each birth interval per 1000 births of a given parity.

Number of births in each birth interval per 1000 births															
Parity 0			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	366843	952	144	546	155	49	23	11	8	5	3	2	4	0	1.39
Russians	198434	949	152	545	150	47	23	11	8	5	3	3	4	0	1.38
Ukrainians	59248	950	145	559	151	46	21	10	7	5	4	3	4	0	1.37
Byelorussians	13737	949	140	565	161	49	21	9	6	4	2	2	3	0	1.34
Uzbeks	16559	968	103	532	184	63	27	13	9	5	3	2	2	0	1.50
Kazakhs	7976	979	161	527	148	48	23	11	7	4	2	1	4	0	1.33
Georgians	4915	953	82	593	190	52	23	12	9	7	5	4	6	0	1.54
Azerbaijanis	6146	950	77	535	204	61	27	15	9	5	2	1	4	0	1.58
Lithuanians	3699	931	155	472	167	62	39	23	13	3	0	0	5	0	1.53
Moldavians	5010	952	103	589	171	58	22	8	6	5	4	3	5	0	1.45
Latvians	1713	898	211	409	148	59	31	18	13	8	5	4	5	0	1.49
Kirghiz	2244	975	122	531	183	62	27	13	8	4	2	0	3	0	1.45
Tajiks	3428	973	74	568	191	73	32	15	9	5	2	1	4	0	1.58
Armenians	5762	960	91	591	197	53	19	8	6	4	3	3	4	0	1.45
Turkmen	2629	972	172	387	202	73	37	23	14	7	2	0	3	0	1.60
Estonians	1139	942	224	410	128	52	36	22	13	7	2	0	5	0	1.44
Tatars	8292	952	147	576	140	42	18	7	6	5	4	4	4	0	1.32
Jews	1895	936	104	517	191	69	42	25	15	7	0	0	7	0	1.67
Low fertility group	322099	950	149	548	151	47	23	11	8	5	3	2	4	0	1.38
High fertility group	44744	967	111	533	184	60	26	13	9	5	2	2	3	0	1.48

Number of births in each birth interval per 1000 births															
Parity 1			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	302166	741	15	167	165	147	131	109	82	64	44	33	44	0	4.49
Russians	165753	691	14	116	139	150	143	123	94	76	52	39	54	0	4.93
Ukrainians	57073	744	14	144	149	154	143	119	87	67	44	35	44	0	4.64
Byelorussians	12808	785	16	164	165	155	143	118	79	64	38	25	33	0	4.37
Uzbeks	14845	974	19	437	349	107	44	19	10	6	4	2	3	0	2.36
Kazakhs	7649	950	19	430	292	116	61	33	18	13	6	6	6	0	2.58
Georgians	4773	848	32	411	264	118	69	40	23	15	10	6	12	0	2.70
Azerbaijanis	5461	943	30	472	284	110	42	22	16	8	6	5	5	0	2.36
Lithuanians	3660	746	21	219	168	160	111	97	75	49	44	25	31	0	4.10
Moldavians	4654	848	16	196	188	169	144	90	74	44	36	18	25	0	4.01
Latvians	1667	683	30	228	182	170	111	79	62	44	37	18	39	0	3.94
Kirghiz	2263	968	14	443	318	110	48	22	12	11	10	6	6	0	2.50
Tajiks	3075	978	22	434	347	110	42	18	11	6	4	4	2	0	2.36
Armenians	5399	898	27	421	262	129	59	34	24	15	10	8	8	0	2.67
Turkmen	2361	967	20	423	342	115	49	22	10	6	4	3	6	0	2.43
Estonians	1139	752	20	281	213	161	116	69	43	26	22	17	32	0	3.55
Tatars	7655	816	13	174	200	172	138	100	66	50	30	25	32	0	4.14
Jews	1931	569	6	79	127	96	144	125	125	103	70	47	78	0	5.56
Low fertility group	266512	711	14	130	144	152	142	120	91	72	49	37	49	0	4.79
High fertility group	35654	964	20	440	325	110	48	23	13	8	5	4	4	0	2.24

Number of births in each birth interval per 1000 births															
Parity 2			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	238974	349	31	225	254	134	96	71	54	42	31	26	36	0	3.81
Russians	113021	193	50	133	142	123	115	100	83	73	57	51	73	0	4.89
Ukrainians	43157	240	44	151	167	133	124	107	79	62	45	38	50	0	4.50
Byelorussians	9631	252	40	163	172	150	118	97	76	65	45	30	44	0	4.35
Uzbeks	13512	945	13	328	422	125	52	24	13	10	5	4	4	0	2.58
Kazakhs	6737	869	17	305	360	129	71	43	25	19	10	9	12	0	2.93
Georgians	4264	410	33	235	221	141	109	77	55	45	30	21	33	0	3.78
Azerbaijanis	5045	860	19	362	295	146	73	42	23	12	10	8	10	0	2.82
Lithuanians	2948	285	46	167	148	141	118	96	60	67	43	49	65	0	4.58
Moldavians	3051	529	22	171	207	165	136	97	69	43	27	34	29	0	4.09
Latvians	1276	261	63	202	147	138	108	75	72	33	75	30	57	0	4.31
Kirghiz	2148	931	13	312	420	126	60	26	15	8	9	6	5	0	2.67
Tajiks	2821	957	20	368	408	109	45	19	15	7	4	2	3	0	2.45
Armenians	4736	587	21	222	237	172	120	83	54	36	21	14	20	0	3.65
Turkmen	2196	947	20	343	409	119	53	22	14	9	5	3	3	0	2.53
Estonians	979	276	30	170	178	137	126	93	59	74	74	15	44	0	4.44
Tatars	5712	390	20	141	189	159	124	93	87	55	44	35	53	0	4.56
Jews	1103	117	77	116	132	140	101	93	70	77	78	46	70	0	4.79
Low fertility group	174063	216	46	143	154	130	119	101	80	67	52	45	63	0	4.70
High fertility group	32459	916	16	332	389	127	59	30	17	12	7	5	6	0	2.67

Number of births in each birth interval per 1000 births															
Parity 3			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	92404	476	29	252	343	144	80	54	33	23	17	11	14	0	3.14
Russians	25484	219	58	192	197	146	112	93	57	46	40	27	32	0	3.94
Ukrainians	13065	250	50	194	221	155	109	83	60	42	35	23	28	0	3.83
Byelorussians	3594	253	56	185	210	176	128	73	56	37	28	17	34	0	3.76
Uzbeks	12315	890	16	282	438	140	56	29	16	10	6	3	4	0	2.67
Kazakhs	5690	831	15	275	398	136	70	36	24	15	14	8	9	0	2.91
Georgians	2030	253	60	228	213	148	94	105	47	51	27	6	18	0	3.53
Azerbaijanis	4479	732	19	306	339	152	70	51	24	14	13	6	6	0	2.88
Lithuanians	1025	306	48	261	166	131	118	92	41	51	25	22	45	0	3.82
Moldavians	1637	461	28	192	251	158	125	101	58	40	17	14	16	0	3.68
Latvians	340	312	38	283	208	76	47	75	85	66	47	47	28	0	4.02
Kirghiz	1901	890	14	285	445	117	57	31	18	15	9	2	7	0	2.74
Tajiks	2818	924	22	306	444	126	51	26	9	10	3	2	1	0	2.53
Armenians	2979	346	36	215	274	154	106	76	60	30	18	14	17	0	3.50
Turkmen	2147	875	16	294	454	121	49	30	11	13	4	4	4	0	2.62
Estonians	301	266	100	237	200	125	87	87	38	50	25	38	13	0	3.47
Tatars	2891	366	36	140	246	162	125	113	64	42	26	22	24	0	3.96
Jews	136	257	57	171	143	314	86	143	57	0	0	29	0	0	3.60
Low fertility group	45446	242	53	195	208	151	113	89	58	44	35	24	30	0	3.87
High fertility group	29350	857	17	287	420	136	60	33	18	12	8	4	5	0	2.73

Number of births in each birth interval per 1000 births															
Parity 4			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	50643	639	25	238	379	158	79	48	30	17	11	7	8	0	3.00
Uzbeks	10833	848	20	243	453	156	61	29	16	9	5	4	4	0	2.72
Kazakhs	4794	828	23	236	433	145	68	36	23	12	10	7	7	0	2.86
Azerbaijanis	3696	678	20	284	361	168	68	42	26	13	7	4	7	0	2.85
Kirghiz	1506	860	15	241	431	168	55	33	22	14	4	11	6	0	2.85
Tajiks	2658	889	17	288	436	135	63	25	16	9	2	3	6	0	2.65
Armenians	1505	325	51	188	235	184	121	74	61	39	21	10	10	0	3.50
Turkmen	1959	856	18	247	478	139	60	26	15	8	2	5	2	0	2.66
Low fertility group	23692	459	29	226	328	162	93	64	40	23	16	9	11	0	3.22
High fertility group	26951	797	22	249	424	155	66	34	21	12	6	5	5	0	2.80

Number of births in each birth interval per 1000 births															
Parity 5			Birth intervals												
Nationality	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	36518	630	26	232	415	159	75	37	22	13	9	5	7	0	2.87
Uzbeks	9240	792	23	225	462	161	66	29	13	9	4	3	5	0	2.73
Kazakhs	4162	784	15	231	455	151	68	29	21	12	7	4	7	0	2.83
Azerbaijanis	2969	634	23	262	386	165	75	41	20	12	9	3	4	0	2.81
Kirghiz	1226	838	20	220	454	158	58	39	24	9	9	6	3	0	2.82
Tajiks	2395	841	22	235	480	147	60	29	14	5	3	3	2	0	2.63
Armenians	709	271	52	271	240	135	125	57	52	37	21	5	5	0	3.22
Turkmen	1682	831	16	238	462	170	52	31	12	7	4	4	4	0	2.70
Low fertility group	14135	418	33	228	367	161	87	45	29	17	14	7	11	0	3.03
High fertility group	22383	764	22	234	445	158	67	32	17	10	6	3	5	0	2.77

Number of births in each birth interval per 1000 births																
				Birth intervals												
Nationality	Parity	number of women of a given parity	Parity progression ratio a(n)	0	1	2	3	4	5	6	7	8	9	10-14	15+	mean interval
All nationalities	6	24759	673	26	240	436	156	66	33	18	10	6	4	5	0	2.75
All nationalities	7	16976	667	29	254	429	155	66	32	17	7	5	3	3	0	2.68
All nationalities	8	10580	637	33	273	424	151	60	28	13	8	4	2	4	0	2.61
All nationalities	9	5939	599	27	302	409	146	58	24	14	7	4	4	5	0	2.60

APPENDIX B

Parity-progression tables for different nationalities of the USSR.

total - relates to the indicators in the parity-progression table for the whole nationality without subdivision of those who control and those who do not control family size.

limit - relates to the indicators in the parity-progression table for those women of given nationality who control family size.

no limit - relates to the indicators in the parity-progression table for those women of given nationality who do not control family size and follow the pattern of natural fertility.

All Nationalities

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	952	951	1000	946	54	48	46	2	2.3	2.0
1	741	727	952	899	53	247	245	1	1.4	1.1
2	349	301	705	654	51	459	457	2	0.9	0.5
3	476	358	246	197	49	129	126	3	1.5	0.6
4	639	441	117	70	47	42	39	3	2.1	0.5
5	630	234	75	31	44	28	24	4	2.3	0.2
6	733		47	7	40	13	7	5	2.6	0.0
7	837		35		35	6		6	2.6	
8	781		29		29	6		6	2.1	
9	714		23		23	6		6	1.7	
10	661		16		16	5		5	1.4	
11	604		11		11	4		4	1.0	
12	502		6		6	3		3	0.7	
13	454		3		3	2		2	0.5	
14	398		1		1	1		1	0.0	

Russians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	949	949	1000	996	4	51	51	0	1.8	1.8
1	691	690	949	945	4	293	293	0	0.9	0.9
2	193	189	656	652	3	529	529	0	0.3	0.2
3	219	199	127	123	3	99	99	0	0.4	0.3
4	319	240	28	25	3	19	19	0	0.8	0.3
5	418	173	9	6	3	5	5	0	1.4	0.2
6	627		4	1	3	1	1	0	2.3	0.0
7	837		2		2	0		0	2.6	
8	781		2		2	0		0	2.1	
9	714		2		2	0		0	1.7	
10	661		1		1	0		0	1.4	
11	604		1		1	0		0	1.0	
12	502		0		0	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Ukrainians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	950	950	1000	994	6	50	50	0	1.9	1.9
1	744	743	950	944	6	243	243	0	1.0	1.0
2	240	234	707	701	6	537	537	0	0.3	0.3
3	250	227	170	164	5	127	127	0	0.4	0.3
4	334	253	42	37	5	28	28	0	0.8	0.3
5	418	173	14	9	5	8	8	0	1.4	0.2
6	627		6	2	4	2	2	1	2.3	0.0
7	837		4		4	1		1	2.6	
8	781		3		3	1		1	2.1	
9	714		2		2	1		1	1.7	
10	661		2		2	1		1	1.4	
11	604		1		1	0		0	1.0	
12	502		1		1	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Byelorussians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	949	949	1000	993	7	51	51	0	2.0	1.9
1	785	784	949	943	6	204	204	0	1.1	1.0
2	252	246	745	739	6	557	557	0	0.4	0.3
3	253	230	188	182	6	140	140	0	0.5	0.3
4	336	254	47	42	6	32	31	0	0.8	0.3
5	418	173	16	11	5	9	9	0	1.4	0.2
6	627		7	2	5	2	2	1	2.3	0.0
7	837		4		4	1		1	2.6	
8	781		3		3	1		1	2.1	
9	714		3		3	1		1	1.7	
10	661		2		2	1		1	1.4	
11	604		1		1	1		1	1.0	
12	502		1		1	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Uzbeks

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	968	961	1000	317	683	32	12	20	6.4	3.9
1	974	977	968	305	663	25	7	18	5.6	3.0
2	945	908	943	298	645	52	28	24	4.7	2.1
3	890	760	891	270	620	98	65	33	4.0	1.3
4	848	598	793	205	587	121	83	38	3.5	0.8
5	792	262	672	123	550	140	91	49	3.1	0.3
6	814		533	32	500	99	32	67	2.9	0.0
7	837		434		434	71		71	2.6	
8	781		363		363	80		80	2.1	
9	714		283		283	81		81	1.7	
10	661		202		202	69		69	1.4	
11	604		134		134	53		53	1.0	
12	502		81		81	40		40	0.7	
13	454		41		41	22		22	0.5	
14	398		18		18	18		18	0.0	

Kazakhs

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	979	989	1000	444	556	21	5	16	5.6	3.3
1	950	922	979	439	540	49	34	15	4.8	2.4
2	869	748	930	405	525	122	102	20	4.0	1.6
3	831	638	808	303	505	137	110	27	3.6	1.1
4	828	561	672	193	479	116	85	31	3.4	0.7
5	784	261	556	108	448	120	80	40	3.1	0.3
6	810		436	28	408	83	28	54	2.9	0.0
7	837		353		353	58		58	2.6	
8	781		296		296	65		65	2.1	
9	714		231		231	66		66	1.7	
10	661		165		165	56		56	1.4	
11	604		109		109	43		43	1.0	
12	502		66		66	33		33	0.7	
13	454		33		33	18		18	0.5	
14	398		15		15	15		15	0.0	

Georgians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	953	953	1000	988	12	47	47	0	2.2	2.2
1	848	847	953	942	11	145	145	0	1.4	1.3
2	410	402	808	797	11	477	476	0	0.6	0.5
3	253	230	331	321	11	248	247	1	0.5	0.3
4	336	254	84	74	10	56	55	1	0.8	0.3
5	418	173	28	19	9	16	16	1	1.4	0.2
6	627		12	3	9	4	3	1	2.3	0.0
7	837		7		7	1		1	2.6	
8	781		6		6	1		1	2.1	
9	714		5		5	1		1	1.7	
10	661		3		3	1		1	1.4	
11	604		2		2	1		1	1.0	
12	502		1		1	1		1	0.7	
13	454		1		1	0		0	0.5	
14	398		0		0	0		0	0.0	

Azerbaijanis

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	950	942	1000	719	281	50	42	8	4.4	3.3
1	943	931	950	677	273	54	47	7	3.7	2.5
2	860	817	896	631	265	125	115	10	2.9	1.6
3	732	626	770	515	255	206	193	14	2.4	1.0
4	678	485	564	322	241	182	166	16	2.2	0.6
5	634	235	382	156	226	140	120	20	2.3	0.2
6	735		242	37	206	64	37	27	2.6	0.0
7	837		178		178	29		29	2.6	
8	781		149		149	33		33	2.1	
9	714		116		116	33		33	1.7	
10	661		83		83	28		28	1.4	
11	604		55		55	22		22	1.0	
12	502		33		33	17		17	0.7	
13	454		17		17	9		9	0.5	
14	398		8		8	8		8	0.0	

Lithuanians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	931	931	1000	991	9	69	69	0	1.9	1.9
1	746	744	931	922	9	236	236	0	1.1	1.0
2	285	277	695	686	9	497	496	0	0.4	0.4
3	306	278	198	190	8	137	137	0	0.6	0.4
4	362	277	61	53	8	39	38	1	0.9	0.3
5	418	173	22	15	7	13	12	1	1.4	0.2
6	627		9	3	7	3	3	1	2.3	0.0
7	837		6		6	1		1	2.6	
8	781		5		5	1		1	2.1	
9	714		4		4	1		1	1.7	
10	661		3		3	1		1	1.4	
11	604		2		2	1		1	1.0	
12	502		1		1	1		1	0.7	
13	454		1		1	0		0	0.5	
14	398		0		0	0		0	0.0	

Moldavians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	952	951	1000	964	36	48	47	1	2.6	2.4
1	848	843	952	917	35	145	144	1	1.7	1.5
2	529	510	807	774	34	380	379	1	1.0	0.8
3	461	421	427	395	32	230	228	2	0.9	0.6
4	440	348	197	166	31	110	108	2	1.0	0.4
5	418	173	87	58	29	50	48	3	1.4	0.2
6	627		36	10	26	13	10	3	2.3	0.0
7	837		23		23	4		4	2.6	
8	781		19		19	4		4	2.1	
9	714		15		15	4		4	1.7	
10	661		11		11	4		4	1.4	
11	604		7		7	3		3	1.0	
12	502		4		4	2		2	0.7	
13	454		2		2	1		1	0.5	
14	398		1		1	1		1	0.0	

Latvians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	898	897	1000	992	8	102	102	0	1.8	1.7
1	683	681	898	891	7	285	284	0	1.0	0.9
2	261	253	613	606	7	453	453	0	0.4	0.3
3	312	284	160	153	7	110	110	0	0.6	0.4
4	365	280	50	43	6	32	31	0	0.9	0.3
5	418	173	18	12	6	11	10	1	1.4	0.2
6	627		8	2	6	3	2	1	2.3	0.0
7	837		5		5	1		1	2.6	
8	781		4		4	1		1	2.1	
9	714		3		3	1		1	1.7	
10	661		2		2	1		1	1.4	
11	604		1		1	1		1	1.0	
12	502		1		1	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Kirghiz

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	975	986	1000	257	743	25	4	21	6.5	3.6
1	968	955	975	254	721	31	11	20	5.7	2.7
2	931	840	944	242	702	65	39	26	4.9	1.8
3	890	702	879	204	675	97	61	36	4.2	1.2
4	860	521	782	143	639	109	68	41	3.7	0.7
5	838	256	673	74	598	109	55	54	3.4	0.3
6	837		564	19	545	92	19	73	3.0	0.0
7	837		472		472	77		77	2.6	
8	781		395		395	87		87	2.1	
9	714		308		308	88		88	1.7	
10	661		220		220	75		75	1.4	
11	604		145		145	58		58	1.0	
12	502		88		88	44		44	0.7	
13	454		44		44	24		24	0.5	
14	398		20		20	20		20	0.0	

Tajiks

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	973	982	1000	169	831	27	3	24	6.9	4.2
1	978	999	973	167	807	21	0	22	6.1	3.3
2	957	932	952	167	785	41	11	30	5.3	2.3
3	924	813	911	156	755	69	29	40	4.5	1.5
4	889	626	841	127	715	93	47	46	3.9	0.8
5	841	255	748	79	669	119	59	60	3.4	0.3
6	839		629	20	609	101	20	81	3.0	0.0
7	837		528		528	86		86	2.6	
8	781		442		442	97		97	2.1	
9	714		345		345	99		99	1.7	
10	661		246		246	83		83	1.4	
11	604		163		163	64		64	1.0	
12	502		98		98	49		49	0.7	
13	454		49		49	27		27	0.5	
14	398		22		22	22		22	0.0	

Armenians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	960	960	1000	987	13	40	40	0	2.6	2.5
1	898	897	960	947	13	98	98	0	1.7	1.6
2	587	581	862	849	13	356	356	0	0.9	0.8
3	346	331	506	494	12	331	330	1	0.5	0.4
4	325	282	175	164	12	118	117	1	0.6	0.3
5	271	121	57	46	11	41	41	1	0.8	0.1
6	554		15	6	10	7	6	1	2.0	0.0
7	837		9		9	1		1	2.6	
8	781		7		7	2		2	2.1	
9	714		6		6	2		2	1.7	
10	661		4		4	1		1	1.4	
11	604		3		3	1		1	1.0	
12	502		2		2	1		1	0.7	
13	454		1		1	0		0	0.5	
14	398		0		0	0		0	0.0	

Turkmen

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	972	974	1000	273	727	28	7	21	6.5	3.7
1	967	952	972	266	706	32	13	19	5.6	2.8
2	947	906	940	253	687	50	24	26	4.8	1.9
3	875	668	890	229	661	111	76	35	4.1	1.1
4	856	531	779	153	626	112	72	40	3.7	0.7
5	831	258	667	81	585	113	60	52	3.3	0.3
6	834		554	21	533	92	21	71	3.0	0.0
7	837		462		462	75		75	2.6	
8	781		386		386	85		85	2.1	
9	714		302		302	86		86	1.7	
10	661		215		215	73		73	1.4	
11	604		142		142	56		56	1.0	
12	502		86		86	43		43	0.7	
13	454		43		43	24		24	0.5	
14	398		20		20	20		20	0.0	

Estonians

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	942	942	1000	993	7	58	58	0	1.9	1.9
1	752	750	942	935	7	234	233	0	1.1	1.0
2	276	269	708	701	7	513	513	0	0.4	0.4
3	266	242	196	189	7	144	143	0	0.5	0.3
4	342	260	52	46	6	34	34	0	0.8	0.3
5	418	173	18	12	6	10	10	1	1.4	0.2
6	627		7	2	5	3	2	1	2.3	0.0
7	837		5		5	1		1	2.6	
8	781		4		4	1		1	2.1	
9	714		3		3	1		1	1.7	
10	661		2		2	1		1	1.4	
11	604		1		1	1		1	1.0	
12	502		1		1	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Tatars

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	952	952	1000	982	18	48	47	1	2.2	2.1
1	816	813	952	935	17	175	175	0	1.4	1.3
2	390	377	777	760	17	474	473	1	0.7	0.5
3	366	333	303	287	16	192	191	1	0.7	0.5
4	392	304	111	95	15	67	66	1	0.9	0.4
5	418	173	43	29	14	25	24	1	1.4	0.2
6	627		18	5	13	7	5	2	2.3	0.0
7	837		11		11	2		2	2.6	
8	781		10		10	2		2	2.1	
9	714		7		7	2		2	1.7	
10	661		5		5	2		2	1.4	
11	604		4		4	1		1	1.0	
12	502		2		2	1		1	0.7	
13	454		1		1	1		1	0.5	
14	398		0		0	0		0	0.0	

Jews

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	936	936	1000	998	2	64	64	0	1.6	1.5
1	569	568	936	934	2	403	403	0	0.7	0.7
2	117	114	533	530	2	470	470	0	0.2	0.1
3	257	234	62	60	2	46	46	0	0.5	0.3
4	338	256	16	14	2	11	10	0	0.8	0.3
5	418	173	5	4	2	3	3	0	1.4	0.2
6	627		2	1	2	1	1	0	2.3	0.0
7	837		1		1	0		0	2.6	
8	781		1		1	0		0	2.1	
9	714		1		1	0		0	1.7	
10	661		1		1	0		0	1.4	
11	604		0		0	0		0	1.0	
12	502		0		0	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

Low Fertility Group

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	950	950	1000	995	5	50	50	0	1.8	1.8
1	711	710	950	945	5	275	274	0	0.9	0.9
2	216	211	675	671	5	529	529	0	0.3	0.3
3	242	220	146	142	4	111	110	0	0.4	0.3
4	330	250	35	31	4	24	23	0	0.8	0.3
5	418	173	12	8	4	7	6	0	1.4	0.2
6	627		5	1	4	2	1	0	2.3	0.0
7	837		3		3	0		0	2.6	
8	781		3		3	1		1	2.1	
9	714		2		2	1		1	1.7	
10	661		1		1	0		0	1.4	
11	604		1		1	0		0	1.0	
12	502		1		1	0		0	0.7	
13	454		0		0	0		0	0.5	
14	398		0		0	0		0	0.0	

High Fertility Group

Parity	a(n) total	a(n) limit	l(n) total	l(n) limit	l(n) no limit	W(n) total	W(n) limit	W(n) no limit	Fn total	Fn limit
0	967	963	1000	439	561	33	16	16	5.8	3.6
1	964	953	967	422	545	35	20	15	5.0	2.8
2	916	855	933	402	530	78	58	20	4.2	1.9
3	857	724	854	344	510	122	95	27	3.6	1.2
4	797	529	732	249	483	148	117	31	3.2	0.7
5	764	260	584	132	452	138	97	40	3.0	0.3
6	800		446	34	412	89	34	55	2.9	0.0
7	837		357		357	58		58	2.6	
8	781		298		298	65		65	2.1	
9	714		233		233	67		67	1.7	
10	661		166		166	56		56	1.4	
11	604		110		110	44		44	1.0	
12	502		66		66	33		33	0.7	
13	454		33		33	18		18	0.5	
14	398		15		15	15		15	0.0	