

BALTIC POPULATION CHANGES, 1950-1980

Rein Taagepera, University of California, Irvine

The main purpose of this article is to present and analyze a year-by-year tabulation of the basic Baltic population data for the last 30 years.¹ No existing compilation covers the whole period for all three countries although extensive partial tabulations are available for individual countries and data categories.²

By and large, scholars interested in Baltic population changes have used their private collections of source materials which tend to be extensive regarding one country but more haphazard regarding the two others. Yet many aspects of Baltic demographic research might profit from a simultaneous study of all three republics. Data gaps for one country may be bridged through extrapolation from the pattern that occurs in the other two. Minor fluctuations, which may look accidental in the case of each republic separately, may become significant if they occur in all three simultaneously. Conversely, major changes in one republic might not be explainable in terms of central Moscow policy if they are not reflected in the other Baltic republics. Compared to other Soviet union republics, the Baltic ones are rather similar in size, recent history, and socio-economic background, so that they can serve mutually as control cases for various republic-level phenomena and explanations.

The 1950-1980 tabulation presented here on the republic level includes population size, births, deaths, immigration, and urbanization. It would also be desirable to have comparative tabulations of age structure, marriage-divorce rates, infant mortality, population growth for individual cities, and so on. However, to do so would involve a monograph rather than a single article. Maybe this article will spur interest in eventually compiling a Handbook of Baltic Social Science Data, which would also include economic and political information.

There is, however, one additional variable that should be considered right away: ethnic composition. It is not directly available outside the census years which have occurred at unequal intervals. The present article interpolates for the

intervening years and also uses indirect data to estimate the ethnic birth and death rates. Once this is done, it becomes all too tempting to make some projections for population size and ethnicity in 1985 and 1990 although the projections presented here might need to be revised as soon as the detailed data for the 1979 census are published (including age structure by ethnic groups). Such

Table 1
BALTIC POPULATION, NATURAL INCREASE AND MECHANICAL INCREASE
(in Thousands), 1950-1980

Year	ESTONIA			LATVIA			LITHUANIA		
	Popul. ^a (Jan. 1)	Nat. ^a Incr.	Mech. ^b Incr.	Popul. ^f (Jan. 1)	Nat. ^f Incr.	Mech. ⁱ Incr.	Popul. ^k (Jan. 1)	Nat. ^p Incr.	Mech. ^b Incr.
1950	1096.7	4.5	2.8	1944 ^g	8.9 ^j	1.1	2573 ^{g,l}	29.8	-42
1	1104.0	5.4	20.4	1954	8.9	10.2	2561 ^g	28.8 ^m	0
2	1129.8	5.3	6.2	1973 ^g	9.5 ^j	-1.5	2590 ^g	28.8 ^m	-13
3	1141.3	5.7	3.2	1981 ^g	8.4 ^j	7.6	2606 ^g	25.6 ^m	-22
4	1150.2	6.9	0.2	1997 ^g	10.8 ^j	2.2	2610 ^g	28.7 ^m	-26
5	1157.3	7.1	-1.9	2010 ^g	11.7 ^j	-1.7	2613 ^{g,n}	31.4 ^k	0
6	1162.5	6.9	5.0	2020 ^g	12.2 ^j	26.8	2644 ^g	31.9 ^m	-9
7	1174.4	6.5	3.8	2059 ^g	12.6 ^j	7.4	2667 ^{g,o}	32.8 ^m	-35
8	1184.7	6.6	5.5	2079 ^g	14.2 ^h	-0.2	2665 ^g	39.2 ^m	7
9	1196.8	6.8	5.5	2093	12.6 ^h	7.4	2711.4	37.4 ^m	6.8
1960	1209.1	7.4	5.7	2113 ^h	14.2	16.8	2755.6	40.9	5.0
1	1222.2	7.2	6.9	2144	14.1 ^h	15.9	2801.5	40.4	3.7
2	1236.3	6.5	7.0	2174 ^h	11.5 ^h	12.5	2845.6	34.8	0.7
3	1249.8	6.0	11.3	2198 ^h	11.1 ^h	17.9	2881.1	33.9	1.8
4	1267.1	6.9	10.8	2227 ^h	11.8 ^h	15.2	2916.8	34.0	2.8
5	1284.8	5.4	7.1	2254 ^h	8.4	16.6	2953.6	30.4	5.3
6	1297.3	4.8	6.6	2279	8.6 ^h	16.4	2989.3	30.5 ^r	7.0
7	1308.7	5.0	5.7	2304 ^h	7.8 ^h	12.2	3026.8	29.2 ^r	6.0
8	1319.4	5.6	9.3	2324 ^h	7.4 ^h	13.6	3062.0	28.5 ^r	5.2
9	1334.3	5.6	16.2	2345 ^h	6.7 ^h	12.6	3095.7	27.1 ^r	5.4
1970	1356.1	6.4	11.1	2364	7.8	12.2 ^b	3128.2	27.5 ^k	11.3
1	1373.6	7.1	9.9	2384	8.9	11.1 ^b	3167.0 ^p	29.1 ^k	8.1
2	1390.6	6.2	7.6	2404	7.7	11.3 ^b	3204.2 ^p	25.4 ^k	6.5
3	1404.4	5.7	6.9	2423	5.8 ^m	15.2 ^b	3236.1 ^p	22.8 ^k	6.9
4	1417.0	6.1	4.3	2444	6.6 ^m	14.4 ^b	3265.8 ^p	22.3 ^k	6.7
5	1427.4	4.8	4.2	2465	4.9 ^m	12.1 ^b	3295.0 ^p	20.5	5.8
6	1436.4	4.5	4.5	2482	4.2 ^m	8.8 ^b	3321.3 ^p	20.3	7.4
7	1445.4	4.9	7.0	2495	3.5 ^m	11.5 ^b	3349.0 ^p	19.2	5.8
8	1457.3	4.0	4.5	2510	3.0 ^m	8.0 ^b	3374.0 ^p	17.8	7.0
9	1465.8	3.8 ^d	4.2	2521 ^c	2.8 ^e	5.2 ^b	3398.8 ^p	16.4 ^e	4.8
1980	1473.8 ^d			2529 ^d			3420 ^d		

Table 1
(Continued)

Sources:

- a: Population on January 1 of the year shown. Natural increase = Births – Deaths, during the year. From *ENSV rahvamajandus 1978. aastal* (Tallinn: Eesti Raamat, 1979), 12, 16, and 17, unless otherwise indicated.
- b: Mechanical increase = Immigration – Emigration. Calculated from (Mechanical Increase) = (Next year's population) – (This year's population) – (Natural Increase).
- c: *Circa* (27 February 1980) gives 2,520.5.
- d: *ENSV rahvamajandus 1979. aastal* (Tallinn: Eesti Raamat, 1980), 12, 14, and 25.
- e: Estimates based on rates in *ibid.*, 24.
- f: *Latvijas PSR tautas saimniecība 1977. gadā* (Riga: Liesma, 1978), 6 and 13, and . . . *1978 gadā* (1979), 5, unless otherwise shown.
- g: *Vestnik statistiki*, No. 4 (1964), 86-89.
- h: J. Dreifelds, "Characteristics and Trends of Two Demographic Variables in the Latvian SSR," *Bulletin of Baltic Studies*, No. 8 (1971), 12.
- i: J. Dreifelds, "Latvian National Demands and Group Consciousness Since 1959," in G. W. Simmonds (ed.), *Nationalism in the USSR and Eastern Europe in the Era of Brezhnev and Kosygin* (Detroit: University Press, 1976), 141, unless otherwise indicated.
- j: Calculated from (Natural Increase) = (Next year's population) – (This year's population) – (Mechanical Increase).
- k: *Lietuvos TSR ekonomika ir kultūra 1975 metais* (Vilnius: Mintis, 1976), 11 and 16, unless otherwise indicated.
- l: A figure of "about 2,505,000" is given in *Liaudies ūkis*, No. 7/8 (1965), 229.
- m: Calculated from birth and death rates (in Table 2) and mid-year population values based on population figures shown.
- n: *Socialistines visuomenės susiformavimas ir raida tarybu Lietuvoje (1940-1980)*, 56, gives 2,636,100, which may be a mid-year figure.
- o: LTSR SV, *Lietuvos TSR liaudies ūkis* (Vilnius, 1957), 7 has a figure of 2,673,000, which could apply to either 1 January or 1 April.
- p: Lietuvos TSR CSV, *Lietuvos TSR liaudies ūkis 1978 metais* (Vilnius: Mintis, 1979), 13-16, unless otherwise indicated. Population data differ by a few thousands from those published earlier.
- r: *Lietuvos TSR ekonomika ir kultūra 1974 metais* (Vilnius: Mintis, 1975), 35.

additional data might be long in coming. It is noteworthy that fairly detailed tabulations of the previous (1970) census were published in the main republic dailies (e.g., *Rahva Hääl*, 17 April 1971, pp. 2 and 4), but nothing comparable seems to have been published on the republic level for the 1979 census, presumably because the Union-wide trends did not look favorable to the Russians. For the same reason the publication of detailed ethnic data, even in Moscow, might be delayed.

Population Growth

Table 1 shows the year-by-year population size in the Baltic republics, starting with 1950. It also shows the yearly natural and mechanical increases. Natural increase is the difference between the number of births and deaths. Changes in birth and death rates (per 1000 population) are shown separately in Table 2.

Table 2
 BALTIC BIRTH AND DEATH RATES (per year and per 1000 population),
 1930-1980

Year	BIRTH RATE				DEATH RATE			
	Estonia ^a	Latvia ^b	Lithuania ^c	USSR ^a	Estonia ^a	Latvia ^b	Lithuania ^c	USSR ^a
1930	17.4	19.8	—	39.2 ⁱ	14.9	14.2	—	20.4 ⁱ
1935	15.9	17.6	—	—	14.9	14.2	—	—
1940	16.1	19.3	23.0	31.2	17.0	15.7	13.0	18.0
1945	20.6 ^d	—	—	—	15 ^d	—	—	—
1950	18.4	17.0	23.6	26.7	14.4	12.4	12.0	9.7
1	18.6	16.7 ^f	22.7	27.0	13.7	12.2 ^f	11.5	9.7
2	18.6	16.3 ^f	21.9	26.5	13.9	11.5 ^f	10.8	9.4
3	17.6	15.6 ^f	20.2	25.1	12.6	11.4 ^f	10.4	9.1
4	18.1	16.6 ^f	20.8	26.6	12.1	11.2 ^f	9.8	8.9
1955	17.9	16.4	21.1	25.7	11.7	10.6	9.2	8.2
6	16.8	16.0 ^f	20.2	25.2	10.9	10.0 ^f	8.2	7.6
7	16.5	16.3 ^f	21.1	25.4	11.0	10.2 ^f	8.8	7.8
8	16.5	16.8 ^f	22.8	25.3	10.9	10.0 ^f	8.2	7.2
9	16.6	16.7 ^f	22.7	25.0	10.9	10.7 ^f	9.0	7.6
1960	16.6	16.7	22.5	24.9	10.5	10.0	7.8	7.1
1	16.5	16.7	22.5	23.8	10.6	10.1	7.9	7.2
2	16.1	16.0	20.8	22.4	10.9	10.8	8.7	7.5
3	15.3	15.3	19.7	21.1	10.5	10.3	8.0	7.2
4	15.4	14.7	19.1	19.5	10.0	9.4	7.5	6.9
1965	14.6	13.8	18.1	18.4	10.5	10.0	7.9	7.3
6	14.3	14.0	18.0	18.2	10.6	10.2	7.9	7.3
7	14.2	13.9	17.7	17.3	10.4	10.5	8.1	7.6
8	14.9	14.0	17.6	17.2	10.7	10.8	8.4	7.7
9	15.5	14.0	17.4	17.0	11.3	11.1	8.7	8.1
1970	15.8	14.5	17.6	17.4	11.1	11.2	8.9	8.2
1	16.0	14.7	17.6	17.8	10.9	11.0	8.5	8.2
2	15.6	14.5	17.0	17.8	11.1	11.3	9.1	8.5
3	15.0	14.0	16.0	17.6	11.0	11.6	9.0	8.7
4	15.1	14.2	15.9	18.0	10.8	11.5	9.0	8.7
1975	14.9	14.1	15.7	18.1	11.6	12.1	9.5	9.3
6	15.1	13.9	15.7 ^b	18.4	12.0	12.2	9.6 ^b	9.5
7	15.1 ^h	13.7	15.5 ^h	18.1 ^g	11.8 ^h	12.3	9.8 ^h	9.6 ^g
8	14.9 ^h	13.6	15.3 ^h	18.2 ^g	12.2 ^h	12.4	10.0 ^h	9.7 ^g
9	14.9 ^h	13.8 ^h	15.2 ^j	18.3 ^g	12.3 ^h	12.7 ^h	10.2 ^j	10.1 ^g
1980	15 ^e	14 ^e	15 ^e	18 ^e	12 ^e	12 ^e	10 ^e	10 ^e

Table 2
(Continued)

Sources:

- a: Unless otherwise indicated, U. Mereste and M. Saarepera, *Rahvastiku enesetunnetus*, 66 (see Note 3).
- b: Unless otherwise indicated, *Latvijas PSR tautas saimniecība 1978. gadā*, 7; and . . . *1970. gadā*, 18; and . . . *1977 gadā*, 14.
- c: Unless otherwise indicated, *Lietuvos TSR ekonomika ir kultūra 1975 metais*, 16 and . . . *1973 metais*, 20; for 1951-1964: *Liudies ūkis*, No. 10 (1966), 309.
- d: The 1945-1949 average birth rate as reported by T. Parming, "Population Changes in Estonia, 1935-1970," *Population Studies* 20 (1972), 58. Death rate is estimated.
- e: Estimates based on earlier trends.
- f: *Ekonomika i kultura Sovetskoī Latvii: Statisticheskii sbornik* (Riga, 1966), 16.
- g: *The USSR in Figures for 1979* (Moscow: Statistika, 1980), 22.
- h: *Eesti NSV rahvamajandus 1978. aastal*, 16-17, and . . . *1979. aastal*, 24-25.
- i: E. Mickiewicz (ed.), *Handbook of Soviet Social Science Data* (New York: Free Press, 1973), 51.
- j: *LTSR liudies ūkis per 40 mety* (Vilnius, 1980), 14.

Mechanical increase is the difference between immigration and emigration. It would be highly desirable to consider the immigration and emigration figures separately, as we do in Table 2, for births and deaths. However, the data for inflow and outflow separately are spotty almost to the point of non-existence. The same applies for birth and death data by ethnic groups separately. These issues will be addressed later on. Table 3 shows the degree of urbanization and the size of the rural population.

The tabulation starts from 1950 because of two related reasons. During the 1940s, Baltic population underwent numerous sudden and drastic changes: territorial alterations, Soviet mass deportations (June 1941, March 1949, and various others), Nazi murder of Jews (mainly in the latter half of 1941), mass emigration to the West (mainly in summer and fall 1944), various military and labor conscriptions, and importation of foreign prisoners, laborers, and functionaries by German and Soviet occupation authorities. Since 1950, the processes have been more gradual and offer a more relevant basis for projections into the 1980s. Because of the same gradualness, population data since 1950 have been accurately determined, and the Soviet administration has been willing to release extensive information. For the 1940s data are likely to be much less accurate, and even more important, the Soviets have published practically no population figures even for the late 1940s, presumably in order to cover up gaps left by deportations. Thus, the population history of the 1940s requires special detective work which is likely to be most effective if carried out in a comparative perspective for all three republics together, but this is outside the scope of this article. Birth and death rates are shown for some years from 1930 on because the birth rates in 1930 influence the labor supply and hence immigration in the 1960s.

Table 3
BALTIC URBANIZATION AND RURAL POPULATION 1940-1980

Year (1 January)	% POPULATION URBAN				RURAL POPULATION (in Thousands)		
	Estonia ^a	Latvia ^b	Lithuania ^c	USSR ^d	Estonia ^a	Latvia ^b	Lithuania ^c
1940	33.6	35.2 ^f	24.0 ^k	32.5	700.3	1222 ^f	2221.1 ^f
1945	31.3 ^g	—	16.0 ^k	—	587 ^g	—	—
1950	47.1	45.3	28.3 ^h	38.9	580.6	1063	1844 ^h
1	49.7	46.9	30.9 ^h	40.2	555.6	1037	1769 ^h
2	51.3	48.1 ^h	31.9 ^h	41.6 ^h	550.3	1024 ^h	1763 ^h
3	52.5	49.4 ^h	32.9 ^h	42.7 ^h	542.2	1003 ^h	1749 ^h
4	54.1	51 ^h	33.7 ^h	43.8	528.2	985 ^h	1730 ^h
1955	54.8	52 ^h	34.6 ^h	44.4 ^h	523.2	969 ^h	1709 ^h
6	55.1	(52 ^h)	35.5 ^h	44.6 ^h	522.2	(964 ^h)	1716 ^{h,i}
7	55.6	(54 ^h)	36.8 ^{h,l}	45.4 ^h	521.3	(957 ^h)	1685 ^{h,l}
8	55.9	(55 ^h)	37.3 ^h	46.6	522.0 ⁱ	(937 ^h)	1671 ^h
9	56.4	53.2	38.6	47.9	521.3	979	1665.5
1960	57.1	53.7	39.3	48.8	518.4	977	1673.2
1	58.1	54.8	40.2	49.9	512.7	969	1674.4
2	59.6	55.8	41.1	50.6	499.7	961	1676.2
3	60.6	56.7	41.9	51.2	492.4	951	1672.8
4	61.3	57.4	42.9	51.9	490.4	948	1665.5
1965	62.1	58.2	43.9	52.6	486.8	942	1657.2
6	62.8	59.2	44.9	53.3	482.7	930	1646.3
7	63.3	59.9	46.0	54.0	480.1	924	1635.4
8	63.9	60.6	47.1	54.7	476.1	916	1618.9
9	64.4	61.5	48.4	55.5	474.6	902	1596.7
1970	65.0	62.5	50.2	56.3	474.9	887	1556.5
1	65.5	63.0	51.4	56.9 ^j	473.3	881	1538.2
2	66.2	63.7	52.7	57.7 ^j	470.6	873	1516.0
3	66.9	64.3	54.0	58.5 ^j	467.9	866	1488.7
4	67.2	64.9	55.0	59.2 ^j	464.1	859	1466.2
1975	67.7	65.9	56.2	60.0 ^j	461.1	841	1440.6
6	68.2	66.6	57.4	60.7 ^j	456.2	830	1411.8
7	68.7	67.2	58.6 ^e	61.2 ^j	452.6	819	1387 ^e
8	69.2	67.8	59.6 ^e	61.7 ^j	448.3	808	1362 ^e
9	69.7	68.5	60.7 ^m	62.3 ^j	443.5	795	1337 ^m
1980	70.1 ^e	69.0 ^e	62 ^e	62.8 ^j	440.7	784 ^e	1312 ^e

Table 3
(Continued)

Sources:

- a: *Eesti NSV rahvamajandus 1979. aastal*, 14.
- b: *Latvijas PSR tautas saimniecība 1978. gadā*, 5, and . . . *1970. gadā*, 7, or calculations based on them.
- c: *Lietuvos TSR ekonomika ir kultūra 1975 metais*, 12.
- d: Mickiewicz, 54.
- e: Estimates based on extrapolation from rural population trends.
- f: 1939 figure.
- g: Estimates in *Eesti NSV ajalugu*, III (Tallinn: Eesti Raamat, 1971), 601.
- h: *Vestnik statistiki*, No. 4 (1964), 86-89, and calculations based on it. Latvian rural figures for 1959-1969 are appreciably lower (by 57,000 to 71,000) in the pre-1970 sources, compared to the post-1970 sources (which are used for this Table) although the two agree on 1950-1951. *Latviiskaia SSR v tsifrah v 1969 godu* (Riga, 1971), 7 says the earlier figures counted as urban about 60,000 people who lived in rural localities administratively subordinated to urban settlements. I have not located any post-1970 corrections for the 1952-1958 period. Thus, the values for the late 1950s are likely to be off by up to 60,000 for rural population, and by 3% points for the urban share.
- i: Figures which show increasing rural population during the preceding year are in italics.
- j: Calculated from the *USSR in Figures for 1979*, 7.
- k: *Socialistines visuomenes . . .*, 56 (see Table 1, Note "n"). LTSR Mokslu Akademija, Istorijos Institutas, *Tarybu Lietuvos valstietija* (Vilnius: Mokslas, 1979), 85-86, also gives 20.4% for 1946 and 28.6% for 1948.
- l: *Lietuvos TSR liaudies ūkis 1957*, 7 (see Table 1, Note "o") has 33.0% urban and 1,790,000 rural.
- m: Obtained or calculated from *Narodnoe khoziaistvo SSSR v 1978 g.* (Moscow: Statistika, 1979), 10-11.

Even for the period 1950-1980, some data gaps and unclear points remain. Recent Soviet sources show major gaps in the Lithuanian data of the 1950s although year-by-year population figures were published in 1964. Soviet data-shyness regarding Latvia and Estonia ends immediately after the last major deportations of 1949; already for 1950, remarkably detailed population data are published (down to the last hundred people, in Estonia's case). In Lithuania the resistance to collectivization of agriculture lasted longer, and further deportations may have taken place in the early 1950s. A further puzzle arises when one calculates immigration from the known population and natural growth rates for the 1950s; it would seem that there was intensive out-migration from Lithuania at certain times both in the early and the late 1950s (cf. Table 1).

This leads us to the more general lack of clarity about who is included in the body count of a given Soviet republic. Are military units located in the republic included? Are republic youth conscripted to the Red Army excluded? Are deportees and prisoners who are sent to another Soviet republic excluded? And has the accounting system been the same during the last 30 years?

For the purposes of this article the working hypothesis will be that people are counted in their actual place of residence. If so, then the outflow from Lith-

uania in the early 1950s could be due to deportation of peasants refusing to collectivize. It could also have involved the removal of Soviet internal repression forces after the pro-independence guerrilla struggle was crushed. Outflow in the later 1950s could be explained by the well-known exodus of Russian administrators and forced labor of various nationalities who were initially brought in during the late 1940s. However, the magnitude of this exodus would seem to be unexpectedly large, the more so because many Baltic deportees were returning during the same period. This return is well documented on the personal level. It also shows up as a temporary increase in the rural population of Lithuania in 1955 and 1959-1961, and Estonia in 1957, superimposed on the long-range decrease trend (see Table 3). This bulge agrees with our working hypothesis since it suggests that deportees were re-registered as they returned. A number of Lithuanians seem to have emigrated to Russia in the late 1950s, in search of jobs, but we have no figures.

We can only conclude that Lithuanian demography throughout the 1950s continues to pose major questions. The answers presumably are awkward to the Soviet occupation regime since, in contrast to their practice regarding Latvia and Estonia, it has been reticent in publishing data.

Figure 1 shows graphically the pattern of natural and mechanical increases. For the natural increase the year-to-year figures from Table 1 have been plotted directly. For the mechanical increase "three-year running averages" have been plotted in order to smooth out the curve. In contrast to births and deaths which vary smoothly and are presumably accurately recorded, the mechanical increase shows sharp year-to-year changes which may be real or artifactual. The artifactual factor appears most sharply around the census years when previous estimates have to be readjusted to the new count. The Estonian record net immigration of 1969 is likely to be such an artifact. Compared to the population estimate in January 1969, the 1970 census made net immigration appear as a totally unbelievable 50,000 or more. The upsurge was later whittled down by correcting the earlier total population estimates upwards.³ In view of such evident misestimates, the formal yearly fluctuations should not be taken seriously (unless there is corroborating evidence). The three-year running averages in Figure 1 smooth out these fluctuations by averaging, for each year, its mechanical increase figure and those of the preceding and the following year.

The visible conclusions from Figure 1 and from Table 2 are the following. Estonia's natural increase has been very slow (around 0.3% per year, recently), and there has been a very slow trend toward even less growth. Absolute numbers rather than the more customary percent rates have been plotted in Figure 1 in order to be able to compare the natural and mechanical increases within a republic and the extent of immigration into various republics. In Latvia the downward trend in natural increase since 1960 has been even more marked. The rate has recently been around 0.15% per year. With almost twice Estonia's population, Latvia's natural increase since 1975, in fact, has become smaller in absolute value. In comparison, Lithuania's natural increase appears as huge, even

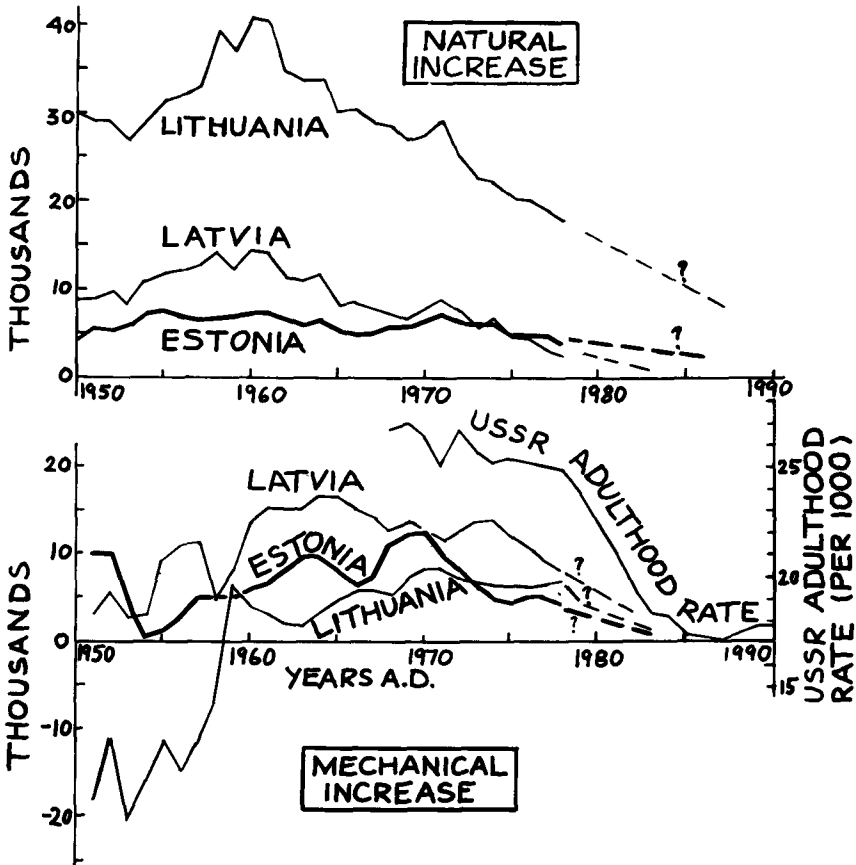


FIGURE 1. Baltic natural and mechanical population growth and the Soviet birth rate. Data from Tables 1 and 2. Mechanical increase curves represent three-year running averages.

when one takes into account its larger population. However, in Lithuania, too, the decrease in growth since 1960 has been marked (down from 1.5% to 0.6% per year). If one dared to extrapolate linearly from Figure 1 (a very questionable procedure), Latvia would reach zero natural increase by 1985, Lithuania by 1990, and Estonia around 1995.

Immigration Trends

Turning now to the mechanical increase curves in Figure 1, Lithuania's immigration is seen to be the lowest (and strongly negative in the 1950s, as discussed earlier). Only since 1973 has net immigration into Lithuania surpassed that into the much smaller Estonia. As Lithuania's natural growth has decreased, the immigration has slowly increased since 1960, but it still remains small com-

pared to natural growth. Proportionately to the existing population, immigration into Latvia and Estonia has been of comparable intensity, but peak periods have varied. Both republics saw an almost complete halt in net immigration around 1954 with non-native prisoners and administrators leaving. (Relatively intense immigration into all three republics occurred in 1951. Professor Dreifelds tells me some Latvian deportees returned at this time.) An appreciable part of the increased immigration into Estonia and Latvia in the late 1950s may have been due to the return of deportees. However, the sharp Latvian peak in 1956 appears too large to be explained through deportee return. It remains unclear why Russian immigration at that time should have increased again in Latvia's case but not in Estonia's. In any case, this new influx helps to explain the strong reaction of the Latvian Communist leadership whose immigration restriction policies apparently had a marked effect in 1958-1959 (as shown by the dip in Figure 1).

The purge of Latvian Communists in 1959 is reflected in the steep rise of immigration in 1960. Russian immigration into Estonia also grew markedly during the early 1960s, suggesting that the demographic results of the Latvian purge were limited. The post-purge policies encouraged an inflow that was to come anyway, due to disparities in Russian and Latvian-Estonian population pressures, and due to the imperialist economic planning of industry.

Around 1967 immigration into both republics decreased, suggesting a possible common reason, but one which remains unclear. In 1968-1974 the Latvian and Estonian patterns diverged widely. Estonia's immigration peak around 1970 may largely be artifactual, due to the aforementioned discrepancy between the 1970 census and the previous yearly estimates.

Since 1977, immigration into all three Baltic republics seems to have decreased. The data are still inconclusive since the time span involved is small. Moreover, this period includes the 1979 census with all the adjustments involved. However, the apparent immigration decrease may prove to be the start of a process that is bound to become manifest in the early 1980s. In the early 1960s the Soviet birth rate dropped precipitously (see Table 2). The birth rate of the Russians decreased at an especially rapid rate. As a result, the number of young Russians available for potential emigration could be expected to decrease, with an 18-year delay, when those less numerous age cohorts finish high school and enter the job market. Immigration into the Baltic republics has, of course, involved people of all ages, but the share of recent high school graduates has been appreciable. Frequently, the first half-year's population figures have suggested a decreased influx, but the pattern has been reversed during the second half of the year after the end of the school year.

These considerations have made me plot the Soviet birth rate along with the Baltic immigration data in Figure 1, but with an 18-year time lag. This curve represents fairly closely the Soviet "adulthood rate," i.e., the number of people who are reaching age 18 per year out of a population of 1000. By 1985, this adulthood rate in the Russian Soviet republic (RSFSR) will become as low as

it will be in Latvia and Estonia, and slightly lower than it will be in Lithuania.⁴ Such equilibrium will prevail at least for the decade of 1985 to 1995. Given the comparable degree of shortage of young labor in Russia and in the Baltic republics, one can reasonably expect the economic motivation for Russian net immigration into the Baltic republics to be strongly reduced around 1985. The scale for the adulthood rate in Figure 1 has been adjusted to reflect these considerations.

The projected zero net immigration by 1985 would not mean that labor movement between Russia and the Baltic republics would stop, but only that the outflow would balance the inflow. The yearly net mechanical increase of the Baltic population has always represented only the difference between the much more voluminous immigration and emigration, mostly of Russians. An example is given in Table 4 for 1969. It is seen that for every 100 new arrivals, there were at least 50 departures from each republic. Migration reported in the 1970 census yields an immigration/emigration ratio of 0.56 for Estonia, 0.69 for Latvia, and 0.91 for Lithuania.⁵ By 1980, the ratio was likely to be higher. There is anecdotal and also some statistical evidence that departures overwhelmingly involve non-Balts, frequently recent footloose emigrants who are looking for the "long ruble" at construction sites throughout the Soviet Union.⁶

Table 4
EMIGRATION AND IMMIGRATION IN 1969

	Net Influx Into Republic	Minimum Depart- ures from Republic	Minimum New Immigration	Emigration/ Immigration Ratio
Estonia	16,200	16,026	32,200	0.50 or more
Latvia	12,600	16,500	29,100	0.57 or more
Lithuania	5,400	12,008	17,400	0.69 or more

Source: Net influx data from Table 1. The minimum number of departures from the republic is the number of departures from Baltic cities (with no information on departures from the countryside) where the destination was known to be outside the republic, as calculated from Dreifelds 1971 (see Note 2) whose data is based on *Vestnik statistiki*, 1971/3, pp. 79-81. The destination of 31,532 departures from Baltic cities was unknown; they may have gone to other places in the same republic, or they may have moved out of it. Minimum New immigration = (Minimum Departures) + (Net Influx).

The large inflow and outflow are, incidentally, a major reason why the mechanical increase figures in Table 1 fluctuate so wildly from year to year: small percent fluctuations in large flows in opposite directions always result in a much larger percent fluctuation in their difference (i.e., the net influx). As the two currents balance out for the Baltic republics, in the 1980s, we can expect fairly large random changes in the mechanical increase. A year with a net out-

flow of several thousand may be followed by another with a net influx of several thousand without any changes in policy or basic economic trends.

Table 3 suggests that urbanization in Latvia and Estonia may be approaching a saturation level. Reduction in net influx (which largely went into cities) may bring further urbanization to a near halt, especially since rural wages tend to equal or even surpass urban ones. However, the rural population would continue to decrease through higher mortality since a large share of the rural population is over 60. Lithuania's rapid urbanization is likely to continue until it catches up with the USSR average.

Trends in Ethnic Composition

Firm figures for the sizes of different nationality groups for the postwar period are available only for the census years of 1959, 1970 and 1979.⁷ In Table 5 values for the years 1960, 1965 and 1975 have been interpolated, and those for 1980 have been extrapolated from the census figures, using the simplest equations able to fit the three census points, for the republic titular nationalities:

$$\text{Estonians: } P(t) = 925.2 + 2.72 (t-1970) + 0.0211(t-1970)^2$$

$$\text{Latvians: } P(t) = 1342 + 2.47 (t-1970) + 0.139(t-1970)^2$$

$$\text{Lithuanians: } P(t) = 2507 + 27.5 (t-1970) + 0.446(t-1970)^2$$

where $P(t)$ is population size at time t in years A.D. One can easily check that these equations yield the correct values for the census years. Their accuracy for the intervening years depends on the assumption that all changes in the size of the republic titular nations were smooth and gradual. This is a reasonable assumption regarding birth and death rates. Immigration may have been a major factor in the early 1960s when many deportees and pre-1920 emigrants were still returning; its decrease is likely to have been fairly gradual. On-the-spot denationalization processes (such as Lithuanization of Poles) also were likely to be gradual and fairly steady.

The percentage figures for republic nations (in Table 5) were obtained by dividing the republic nationality population figures by the total population figures (from Table 1). Since the latter are affected by the marked fluctuations in Russian immigration, the percentage figures for republic nations show more fluctuations than do the absolute figures. These figures are plotted in Figure 2. Although our main concern in this article is with the 1950-1980 period, Table 5 and Figure 2 start with the late 1930s because it is essential to put the ethnic changes that have occurred under Soviet rule into sufficient historical perspective. While the interpolated values from 1959 to 1980 are likely to be fairly accurate, the figures for 1940-1955 are quite approximate.

Because of territorial changes in 1939-1944, the prewar figures within the present boundaries are not exactly known, but the estimates shown are not likely to be off by more than one percentage point, except for Lithuania where the national composition of the Vilnius area, regained in 1939, remains unclear.

Table 5
 SIZE (in Thousands) AND PERCENTAGE OF POPULATION
 BELONGING TO THE REPUBLIC NATIONALITY

Year (1 January)	Estonia		Latvia		Lithuania	
	Number (1000.1)	% (88.2)	Number (1510)	% (75.5)	Number (2075)	% (80.6)
1939 prewar borders						
1939 postwar borders	982±5	92	1495±10	77	2350±100	76±3
1945	800±25	94±2	1200±50	83±3	1900±100	80±4
1950	845 ?	76±2	1220?	63±2	1930?	75±3
1955	865 ?	74±2	1245?	62±2	1980?	75±2
<i>1959</i>	<i>892.7</i>	<i>74.6</i>	<i>1298</i>	<i>62.0</i>	<i>2151</i>	<i>79.3</i>
1960	895.9	74.1	1303	61.7	2187	79.4
1965	911.1	70.9	1326	58.8	2358	79.8
<i>1970</i>	<i>925.2</i>	<i>68.2</i>	<i>1342</i>	<i>56.8</i>	<i>2507</i>	<i>80.1</i>
1975	938.3	65.7	1351	54.5	2633	79.9
<i>1979</i>	<i>948</i>	<i>64.7</i>	<i>1353?</i>	<i>53.7</i>	<i>2718</i>	<i>80.0</i>
1980	950	64.5	1353	53.5	2737	80.1

Source: Census figures (in italics) for 1959, 1970 and 1979 from *Naselenie SSSR* (1980), and *Rahva Hää*, 17 April 1971. Other 1960-1980 figures calculated from parabolic equations shown in text. The 1939-1955 estimates are based on calculations to be published. See Note 7 regarding the number of Latvians and Lithuanians in 1979.

During the war the share of the republic nationality in all three republics is likely to have increased slightly because the losses of national minorities were often large (murder of Jews, evacuation of Germans and Swedes, etc.). From 1945 to 1953, deportations decimated the republic nations while non-native functionaries, laborers, and prisoners were brought in, so that the native share dropped precipitously in Estonia and Latvia, and markedly in Lithuania. A slight rise in the native share probably occurred in 1953-1959 as some Baltic deportees returned and some voluntary and involuntary non-native immigrants left. This whole period is so complex and devoid of hard data that more precise estimates should be left for a separate treatment.

The 1959 census offers the first firm point since 1939 for Baltic population distribution. Compared to 1939, the situation looked bleak for the Latvians and Estonians, while the Lithuanians had amply regained their ground. Their share in Lithuania's population had increased due to higher birth rates, and also due to the postwar emigration and Lithuanization of the Polish minority. After 1959, the denationalization of the territory through immigration continued in Latvia and Estonia at a steep rate, at least until 1975. The moderate Russian influx

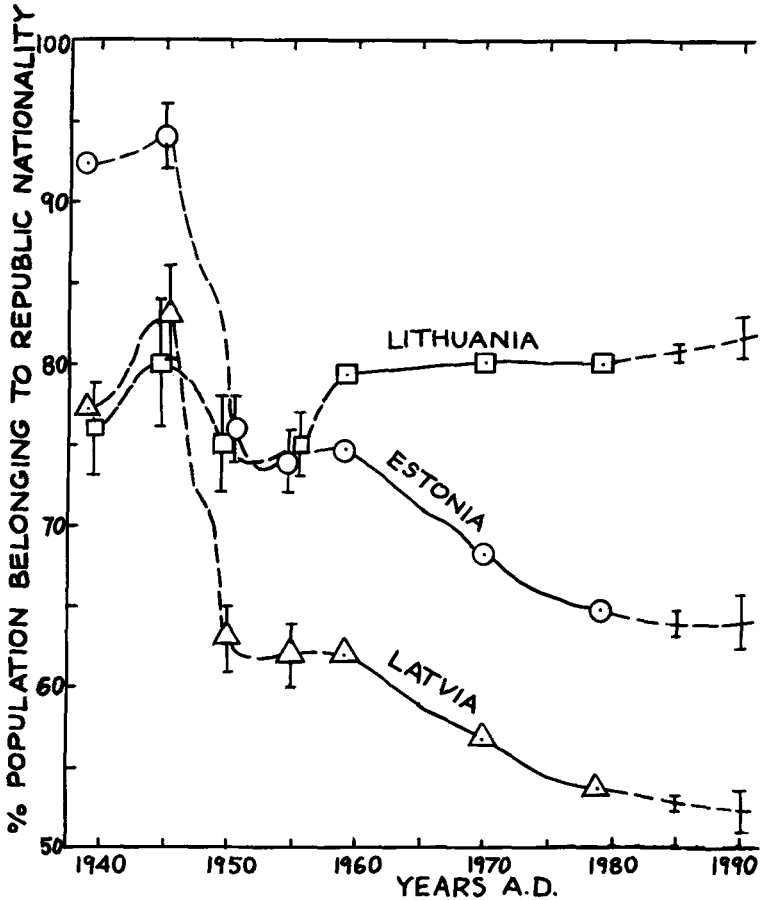


FIGURE 2. Percentage of population belonging to republic nationality. Data from Tables 5 and 9.

into Lithuania has been balanced by a continuing relative decrease in the Polish minority.

Table 6 shows the age distribution in 1970 by major ethnic sections. The share of old people was strikingly large for Latvians and Estonians (reflecting prolonged near-zero growth), and low for "Others" (due to immigration of mostly young people). This is a widely known observation, and the conclusion is often drawn that immigrants must have higher reproductivity than ethnic Latvians or Estonians. We will see later that this was moderately the case regarding the crude birth rates. However, Table 6 shows that age-specific fertility was strikingly lower for "Others" than it was for Latvians and Estonians. Our reproduction ratio measure is imperfect, but it quite clearly indicates that the fertile age cohorts (ages 20 to 39) for ethnic Estonians and Latvians were approximately

Table 6
AGE DISTRIBUTION IN 1970, BY ETHNIC GROUPS (in Thousands)

Age	Estonia		Latvia		Lithuania	
	Estonians	Other	Latvians	Other	Lithuanians	Other
A 0-9	132.6	65.5	192.7	144.1	466.9	97.0
B 10-19	127.1	74.0	177.7	162.3	415.1	101.2
C 20-29	122.8	72.7	177.7	164.1	348.8	97.2
D 30-39	132.1	82.6	199.4	178.3	374.9	103.7
E 40-49	116.8	67.7	167.6	156.8	312.1	90.6
F 50-59	99.5	33.0	131.8	100.4	198.2	51.5
G 60-	192.5	35.0	292.3	115.9	387.5	79.9
SUM	923.3	430.5	1339.2	1021.8	2503.4	621.1
% Over 60 ^a	20.8	8.1	21.8	10.5	15.5	12.9
Reproduction ^b	1.04	0.84	1.02	0.84	1.29	0.97

Source: *Itogi 1970*, IV, 380-382. Note that the sums are smaller than the figures in Tables 1 and 5, by up to 4000.

a: 100 G/SUM

b: Estimate of reproduction ratio = 2A/(C + D).

reproducing their numbers in the 1960s while the "Others" in LaSSR and ESSR were not. In other words, if these trends continued, and immigration were cut off, then the eventual outcome would be a stable Latvian-Estonian population and a decreasing "Other" population. This conclusion is contrary to the oft-expressed opinion that the children of immigrants could continue outcrowding ethnic Latvians and Estonians even if immigration stopped now.

Birth and death rates by ethnic groups are not directly available from Soviet data, but the results of some indirect calculations are shown in Table 7. These estimates look plausible, given the age structure of various groups. The trends in time could be estimated only in the case of Estonia, for which some additional calculations are available (Table 8). It would seem that the ethnically Estonian birth rate has been stable; if anything, it has slowly increased. The basic fertility has probably remained the same, but the reduction of the over-60-years bulge through mortality would automatically increase the crude birth rate. The decrease in the non-Estonian birth rate is quite clear and has reflected the USSR-wide decrease (Table 2). It is quite possible that in the 1970s the non-Estonian crude rate actually fell below that of the Estonians. The favorable age structure of the non-Estonians is counter-balanced by their lower age-specific fertility (as seen in Table 6). It should be kept in mind that the young immigrants include a large fraction of single footloose transients. The death rate of non-Estonians has remained stable and low, due to their low average age. That of Estonians has steadily increased as the large age cohorts born around 1900-1915 are reaching an advanced age. The trends are likely to be similar in Latvia. In Lithuania,

Lithuanians and non-Lithuanians are likely to have similar patterns of decreasing birth rates and slowly increasing death rates.

On the basis of Table 8, one can assume the following average birth and death rates for ethnic Estonians: 14.5 and 12.8 in 1959-70, and 15.5 and 13.5 in 1970-79. If so, then the natural increase during both intercensal periods would be calculated as close to 17,000, suggesting a net immigration of about 15,000 ethnic Estonians in 1959-70 (when deportees were still massively returning) and 6,000 in 1970-79 (out of a remaining pool of 83,000 Estonians, mostly pre-1920 emigrants or their descendants, residing in the USSR outside the ESSR in 1970.)

Table 7
AVERAGE ETHNIC BIRTH AND DEATH RATES
(Per Year and Per 1000 Population)

	Birth Rate 1960-1969 ^c		Death Rate 1970-1977 ^c	
	Estimate ^a	Actual	Estimate ^b	Actual
<i>Estonian SSR</i>	15.4	15.3	11.0	11.3
Estonians	14.5	—	13.5	—
Others	17.5	—	5.2	—
<i>Latvian SSR</i>	14.9	14.9	11.2	11.6
Latvians	14.5	—	14.2	—
Others	15.5	—	6.8	—
<i>Lithuanian SSR</i>	19.1	19.3	9.7	9.2
Lithuanians	19.8	—	10.0	—
Others	16.3	—	8.4	—

a: Rate = $100 P_{0-9}/P_{65}$ where P_{0-9} is the 0-9 population from Table 6 and P_{65} is the total 1965 population from Tables 1 and 5. Comparison with actual 1960-69 averages for SSRs (from Table 2) suggests that the rates for ethnic groups might be within ± 0.3 of the unknown actual value.

b: Rate = $65 P_{old}/P_{74}$ where P_{old} is the over-60 population from Table 6, and P_{74} is the total 1974 population from Tables 1 and 5. The factor 65 is empirical, designed for best fits to the known rates for SSRs. The estimates are likely to be within ± 1 of the actual unknown rates for ethnic groups.

c: The known age distribution in 1970 makes it possible to estimate birth rates during the decade preceding 1970, but death rates for the years after 1970.

Table 8
TRENDS IN ESTONIAN ETHNIC BIRTH AND DEATH RATES^a
(Per Year and Per 1000 Population)

	1958	1960-69	1969	1970-77
<i>Births</i>				
ESSR	16.5	15.3	15.5	15.3
Estonians	14.6 ^b	14.5	15.0 ^b	15.5? ^c
Others	21.4 ^b	17.5	16.0 ^b	15.0? ^c
<i>Deaths</i>				
ESSR	10.9	10.6	11.3	11.3
Estonians	12.4 ^b	—	13.3 ^b	13.5
Others	6.2 ^b	—	6.6 ^b	6 ^d

a: From Tables 2 and 7, unless otherwise shown.

b: Farming 1978, p. 53 and 1972, pp. 73 and 76. His calculations are similar to those in Table 7, but are more refined since age-specific death rates are taken into account.

c: Estimates based on previous trends.

d: Rounded upwards from Table 7 to account for the relatively high proportion of under-60 deaths not taken into account by our crude calculation.

The first figure is in line with a known net immigration of more than 25,000 ethnic Lithuanians into Lithuania in 1959-70.⁸ By analogy, one might guess at a net immigration of about 20,000 Latvians into Latvia during the same period. Assuming ethnic Latvian 1959-70 birth and death rates of 14.5 and 13.0 (from Table 7 and analogy with Table 8), the natural increase would be computed to be around 22,000. The sum of immigration and natural increase then comes out as 42,000—very close to the actual increase of 44,000 (from Table 5).

It is somewhat surprising to notice that the increase in the ethnically Lithuanian population surpassed the natural increase in Lithuania (for all ethnic groups combined) in the 1970s and came close to it in the 1960s (see data below). This would indicate marked immigration of Lithuanians not only in the 1960s but also in the 1970s, or a marked on-the-spot Lithuanization of other groups, most likely Poles. However, the number of Poles in Lithuania also kept increasing, although slowly. The relevant data are the following (in thousands):⁹

<i>Lithuanian SSR</i>	<i>1959-1970</i>	<i>1970-1979</i>
Total natural increase (from Table 1):	370	205
Total increase for Lithuanians (from Table 5)	356	211
Total increase for Poles	10	7

Since the other national groups (including the Russians) also must have had a natural increase of several tens of thousands during each intercensal period, the most plausible explanation may be that tens of thousands of Poles from elsewhere in the USSR moved to Catholic Lithuania, the way some Volga Germans are known to have moved into Protestant Estonia. Meanwhile, many local Poles must have been switching to a Lithuanian self-identification as older family members died and some of the younger ones intermarried, with the offspring opting for Lithuanian nationality.

Those hypotheses are supported by census data on declared nationality and first language preference ("mother tongue"):¹⁰

<i>Lithuanian SSR</i>	<i>1959</i>	<i>1970</i>	<i>Change</i>
Russians speaking Lithuanian	3,361	5,291	+1,930
Lithuanians speaking Russian	2,534	4,553	+2,019
Lithuanians speaking another language	14,421	7,792	-6,629
Poles speaking Lithuanian	3,586	7,588	+4,002
Poles speaking Russian	3,010	9,104	+6,094

The increased number of Russians using Lithuanian as their main language indicates that the LiSSR milieu is conducive to Lithuanization rather than Russification of minorities. The increase in Russian-speaking Lithuanians is likely to indicate the continuing return of pre-1920 emigrants or their descendants. The decreased number of Lithuanians using a main language other than Lithuanian or Russian is likely to apply mostly to Polish-speaking Lithuanians. Among those with a Polish identity, an increasing number is adopting Lithuanian as its first language. The large increase in Russian-speaking Poles is hard to explain by Russification of local Poles: why would Poles become Russified in surroundings where Russians themselves tend to become Lithuanianized? Some Poles marrying Russians may have shifted to the Russian language. Another plausible explanation is the immigration of at least 6,000 Poles (and probably many more) from elsewhere in the USSR. The corresponding data for the 1979 census are not yet available.

Another puzzle presented by the 1979 census is the sharp decrease in the growth of the ethnically Latvian population, in contrast to the expected slow change for the Estonians (as obtained from Table 5):

<i>Average Yearly Increase</i>	<i>1959-1970</i>	<i>1970-1979</i>
Latvian population of LaSSR:	4,000	1,200
Estonian population of ESSR:	2,950	2,600

Changes in birth and death rates would have to be implausibly sudden in order

to explain the Latvian figures. It is true that an especially small age cohort entered the peak reproduction age in the 1970s in the case of ethnic Latvians. As seen in Table 6, cohort D (ages 30-39 in 1970) shifted out of the fertile age and was replaced by the much smaller cohort B. Still, at the same age-specific fertility, the resulting reduction in the number of births would only amount to about 300 per year. It is not likely that age-specific fertility would have decreased much more among Latvians than among Estonians. Death rates also should be similar, given the very similar size of the over-50 cohorts (31.6% of total population in both republics—from Table 6). Unless the 1979 census results turn out to involve an error, emigration or on-the-spot denationalization of Latvians must be considered. About 100,000 pre-1920 Latvian emigrants or their descendants returned from Russia after 1940. Nominally Latvian, they were frequently linguistically Russified and interacted socially more with Russian immigrants than with native Latvians. Some of them may now be returning to Russia, and some of their children may acquire a Russian identity (especially in cases of intermarriage).¹¹ If this were the case, then the percentage of Latvians who declare Russian as their main language should have decreased in the Latvian SSR, from 1970 to 1979. Such census data do not yet seem to be available. Another possibility is Russification of the Latvian population in Latgale where Soviet denationalization pressures have been severe. If this were the case, then the number of Latvians with Russian as their main language could have increased when one assumes that language shift kept abreast of the identity shift.

In contrast to Lithuania, no linguistic assimilation of Russians seemed to take place in Latvia or Estonia in 1959-1970, presumably because the large size of Russian colonies precluded isolation of individual Russians. The first language preferences were:¹²

<i>LaSSR</i>	1959	1970	<i>Change</i>
Russians speaking Latvian	8,237	8,351	+ 114
Latvians speaking Russian	19,023	24,705	+5,682
<i>ESSR</i>			
Russians speaking Estonian	5,011	5,029	+ 18
Estonians speaking Russian	5,895	6,934	+1,039

The increased number of Estonians and Latvians who speak Russian as their main language is probably due to the continuing return from Russia of the pre-1920 emigrants and to increasing numbers of offspring of mixed marriages, which are more frequent in Latvia. It should be noted that in the 0-10 age bracket, 12% of ethnically Latvian children were reported fluent in Russian (as first or second language), in contrast to 3.4% of Lithuanian and 3.9% of Estonian children.¹³

It is, however, very unlikely that denationalization in Latgale or among the "Russian Latvians" would suddenly rise in the 1970s without previous signs in the 1960s. Our analysis of the Latvian immigration and natural increase in 1959-70 left no major gaps to be explained. Therefore, it is quite possible that the LaSSR ethnic breakdown in the 1979 preliminary census reports involves an error.

Population Projections for 1985 and 1990

On the basis of the present birth rate and immigration trends, some projections can be made. It should be stressed that "projections" are not "predictions." Projections are based on known factors and trends. They would not fit the actual future developments if new unpredictable factors are introduced (e.g., general war, new deportations, or establishment of Baltic "People's Democracies" outside the Soviet Union).

In the absence of detailed ethnic demographic data, the estimates presented in Table 9 follow a cruder path. First, the changes in the total population are projected. Natural increase figures are obtained by straight-line extrapolation from the 1959-1979 trends as shown in Figure 1. Mechanical increase figures are based on expected trends as discussed earlier and as shown in Figure 1; this is clearly a riskier estimate than that for natural increase. Accordingly, a much wider "plus-minus" possible error range has been indicated in Table 9. The possible error in the total republic population in 1985 and 1990 is the sum of possible errors in natural and mechanical increases.

The republic titular nationality population figures and increases in Table 9 have been extrapolated from the parabolic equations given in the preceding section. Extrapolation is obviously a riskier procedure than interpolation (which was used in the preceding section). In particular, the projection for Latvia depends considerably on the correctness of the preliminary 1979 census results and our interpretation of them (see Note 7). Publication of detailed 1979 census results (ethnic age structure, second language knowledge, etc.) would enable one to carry out a more precise extrapolation. Meanwhile, our parabolic equations might be the safest basis for projections.

The resulting estimates for percentage of population belonging to the republic nationality have been plotted in Figure 2. The average projection as well as possible error range are shown. According to Figure 2, the percentage of Estonians in their republic's population may stabilize around 1985 at 64% and that of Lithuanians may increase. Decreasing birth rates of these nationalities would be more than offset by decreasing numbers of potential Russian immigrants. The percentage of Latvians in Latvia's population may decrease further, but at a very slow rate. Once more, projections are not predictions. They apply only to the extent that no new factors are introduced.

Table 9
BALTIC POPULATION PROJECTIONS FOR THE 1980s (in Thousands)

	ESTONIA			LATVIA			LITHUANIA		
	1980	1985	1990	1980	1985	1990	1980	1985	1990
Year	1980	1985	1990	1980	1985	1990	1980	1985	1990
Natural Increase During Preceding 5 Years	22	20±5	15±5	18	10±5	0±5	94	65±10	35±15
Mechanical Increase During Preceding 5 Years	24	10±10	0±15	46	15±15	0±20	31	10±10	0±10
Total Population on 1 January	1473.8	1503±15	1518±35	2529	2575±20	2553±45	3420	3495±20	3530±45
Increase in Republic Nationality Population During Preceding 5 years	12	11±3	10±5	2	-5±5	-14±11	104	82±10	60±15
Republic Nationality Population On 1 January	950	961±3	971±8	1353	1348±5	1334±16	2737	2819±10	2879±25
% Population Belonging to Republic Nationality	64.5	63.9±.8	64.0±1.7	53.5	52.8±.5	52.3±1.2	80.1	80.7±.5	81.6±1.2

NOTES

- 1 I am deeply indebted to Professor Benedict Maciuika for sharing with me his extensive compilation of Lithuanian and other Baltic data, and to Professor Juris Dreifelds for various Latvian data.
- 2 For an extensive and recent bibliography of Baltic demographic studies, see Tõnu Parming, "Population Processes and the Nationality Issue in the Soviet Baltic," *Soviet Studies*, 32 (1980), 398-414. Major single country studies include B. V. Maciuika, "Auswertung der Volkszählungsergebnisse von 1970 in Sowjetlitauen," *Acta Baltica*, 11 (1971), 87-116; J. Dreifelds, "Characteristics and Trends of Two Demographic Variables in the Latvian SSR," *Bulletin of Baltic Studies*, No. 8 (1971), 10-17; T. Parming, "Population Changes in Estonia, 1935-1970," *Population Studies*, 26 (1972), 53-78, and "Population Changes and Processes," in T. Parming and E. Järvesoo, *A Case Study of a Soviet Republic: The Estonian SSR* (Boulder: Westview, 1978), 21-74.
- 3 Uno Mereste and Maimu Saarepera, *Rahvastiku enesetunnetus* (Tallinn: Eesti Raamat, 1978), 257-258 give a total mechanical increase of 15,600 for the two years preceding the 1970 census (i.e., for 1968 and 1969). Their figure can also be calculated from *Itoigi vsesoiuznoi perepisi naseleitia 1970 goda* (Moscow: Statistika, 1974), VII, 6-7. It is based on self-reported recent movement, and it may well be on the low side. However, it agrees fairly well with the average net immigration for 1960-1969 (8,660, as calculated from Table 1). The combined immigration figure for 1968 and 1969 in Table 1 is much higher: 25,500. The unusual peak influx of 16,200 in 1969 is not corroborated by any other evidence. Since it is contradicted by census self-reports on movement, this peak is probably an artifact caused by continuing underestimation of influx during the whole pre-census decade.
- 4 The RSFSR birth rate has been below the USSR average since about 1960. It was 14.6 in 1970 and 15.8 in 1977, according to *Eesti NSV rahvamajandus 1977. aastal* (Tallinn: Eesti Raamat, 1978), 14.
- 5 Self-reported migration figures for the two years preceding the 1970 census can be calculated from *Itoigi 1970*, VII, 6-7: Estonia—35,287 arrivals and 19,687 departures; Latvia—45,264 and 31,047; Lithuania—27,685 and 25,132. Comparison with mechanical increase figures for 1968 and 1969 in Table 1 shows that at least 20% of actual arrivals were not reported in the census. Using the mechanical increase figures from Table 1 could lead to departure/arrival ratios as low as .43, .54, and .70, respectively.
- 6 Occasionally, attempts are made to involve ethnic Balts in emigration. *Rahva Hääl*, 15 November 1980, reports that a team formed by the ESSR Transportation Ministry has been sent to Tiumen (West Siberia) for three years of road building, and seven of the nine names mentioned are Estonian. The peak strength of the ESSR team will be 250 workers, with families apparently left behind in Estonia. The project looks temporary, and the frequency of Estonian names may not be representative of the group. *Rahva Hääl*, 6 November 1980, mentions only Russian names for a 72-person ESSR Komsomol task force in Siberia.
- 7 There are inconsistencies in the 1979 census figures as published by the USSR Central Statistics Office, *Naselenie SSSR* (Moscow: Politizdat, 1980, printed in January). Soviet Latvia's population is 2,521,000 on pp. 4 and 10, but p. 29 says that the 1,344,000 ethnic Latvians form 53.7% of a total population of only 2,503,000. It might be that ethnicity had not yet been tabulated for the remaining 18,000 people or that they represent the "non-permanent" population. My best guess is that the total population was 2,521,000 and that it was about 53.7% Latvian, leading to a final figure of 1,353,000 Latvians. Similar but smaller discrepancies occur for the total populations of Lithuania (6,000) and Estonia (1,000). I have always used the larger figure, combined with the ethnic percentage given.

- 8 From 1959 to 1970, net immigration was 50,000, and over one half of it consisted of Lithuanians returning from other Soviet republics, according to P. Gaučas, *Mokslas ir gyvenimas*, No. 6 (June 1971), 18-21 and 58.
- 9 From census data in *Naselenie SSSR* (1980), and *Rahva Hää*, 17 April 1971.
- 10 *Itogi vsesoiuznoi perepisi naseleniia 1970 goda* (Moscow: Statistika, 1973), IV, 273, and the Lithuanian *Itogi 1959*, p. 160; also reproduced in *Baltic Events* (June 1974), 13.
- 11 Some "Russian Latvian" top administrators returned to posts in Russia already in the 1960s (e.g., Pelše and Peive). A blatant case of on-the-spot Russification is that of LaSSR Chairman of the Council of Ministers, Jurijs Rubenis, who was listed as Russian by nationality in an official biography in *Deputaty Verkhovnogo Soveta Latviiskoi SSR Vosmoi Sozyv* (Riga: Liesma, 1972), 122, as pointed out to me by Professor Juris Dreifelds. Dreifelds further draws attention to the fact that from 1970 to 1979 the number of Latvians in the USSR outside Latvia increased by 7,000 (from 88,000 to 95,000). This figure would be independent from possible census error discussed in Note 7. In contrast, the number of Soviet Estonians outside their own republic decreased by 10,000 (from 82,000 to 72,000). For Lithuanians there was a decrease of 19,000 (from 158,000 to 139,000).
- 12 *Itogi 1970*, IV, 280 and 318; Latvian *Itogi 1959*, p. 92; and Estonian *Itogi 1959*, p. 94, as reproduced in *Baltic Events* (June 1974), 13.
- 13 *Itogi 1970*, IV, 380-382.