

The Increasing Fertility of Finland

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Since the end of the 1940's the number of live births has declined continually in Finland. In 1949 somewhat more than 26 children per 1000 inhabitant were born. In 1965 the corresponding figure was 17.1, and in 1973 the bottom was reached with only 12.2 children per 1 000 inhabitants. After that a weak augmentation has been noted: in 1974 the crude birth rate was 13.3 and in 1975 14.1. This growth seems to be continuing this year also.

The purpose of this article is to discuss the characteristic features of the growing fertility. The increase will mainly be examined with regard to purely demographic features, such as the number of women of childbearing age, marriage and fertility patterns. Further, the reasons for the increasing birth rates will be discussed with regard to social and economic development in Finland.

As the vital statistics in Finland are published with at least a two years' lag the figures for 1975 will not be available until 1977. Therefore a small sample of the live births in 1975 was taken from the population register and the fertility pattern analyzed on the basis of the information obtained.¹ The emphasis of the analysis is, however, on the natality of 1974 for which various cross-tabulations have been computed at the central statistical office but not yet published.

It seems incredible that the increasing fertility is caused by new attitudes toward family size even if there is an awareness among the common people in Finland of the long lasting low fertility and the far-reaching and many-faced problems it is supposed to cause in the long run. It might, however, probably be that the growing number of births has originated in a changing fertility pattern, in a changing timing of childbearing especially among the large post-war age groups. These age classes born in the latter part of the 1940's, who met difficulties in finding employment and housing, might have postponed having children for several years until they were established in society. However, firstly one has to find out if and to which extent the change in the age structure of women, i.e. the increase of the number of women of fertile age, has effected natality.

¹ By systematic selection a sample of 2664 live born children was compiled. The sample represents 4.0 per cent of all live births in 1975.

Development

It is an undeniable fact that the number of women of childbearing age has increased continuously during the whole 1970's. In 1971 there were 1 010 000 women in 15—44 age group, rising to 1 058 000 in 1975 (Table 1).² Hence the yearly increase of women of childbearing age was on the average 0.9 per cent.

Table 1. Mean population of women 1970—75

Age	1970	1971	1972	1973	1974	1975
15—19	207 956	206 166	204 872	201 885	198 478	195 789
20—24	217 376	214 936	213 971	211 130	207 878	205 718
25—29	156 124	170 361	180 595	198 366	211 800	218 731
30—34	143 685	151 511	149 889	148 844	150 098	157 204
35—39	137 214	134 865	135 382	138 148	142 480	143 785
40—44	148 180	146 578	145 833	142 896	139 298	136 456
	1 010 535	1 024 417	1 030 542	1 041 269	1 050 032	1 057 692

A more detailed analysis shows that growth was most accentuated among women aged 25—29, which displayed an increase of 8 per cent annually. This age group represents the bulk of the large age groups born after the Second World War. At the same time the 20—24 age group, which until now has stood

Table 2. Number of live births 1970—75, by age groups

Age	1970	1971	1972	1973	1974	1975	
						live births	SE*
15—19	6 688	6 120	5 861	5 289	5 396	4 531	318
20—24	25 965	24 013	22 325	20 368	21 600	20 101	581
25—29	16 948	17 854	18 769	19 621	22 810	26 359	691
30—34	9 286	8 537	7 972	7 624	8 505	10 664	464
35—39	4 183	3 407	2 968	3 004	3 284	4 181	307
40—44	1 372	1 051	895	813	802	826	228
	64 449	60 982	58 790	56 719	62 397	66 662	

* Standard Error

² As the age distribution in 1975 was not yet available when writing this article the age structure was calculated by using the life table of 1971 and the age distribution of 1974. External migration, which consisted in 1975 of a somewhat larger return migration than emigration, has not been taken into consideration.

for the greatest age-specific fertility rate has decreased roughly 1.1 per cent yearly.

Simultaneously as the number of women of childbearing age increased, the number of births decreased until 1974 in all age groups except the 25—29 group, which exhibits an obvious augmentation (Table 2). From 1973 to 1974 the total number of births rose ten per cent. Growth was especially accentuated for women 25—29 years of age displaying an upswing of more than 16 per cent from 1973. Even in the older age groups an increase could be verified.

In 1975 the increase continued, although it seemed that it was even more concentrated in the 30—34 and 34—39 age groups than in 1974, as the following table shows:

Age	1973—74		1974—75	
		%	%	SE
15—19		+ 2.0	- 16.0	5.9
20—24		+ 6.0	- 7.0	2.7
25—29		+ 16.2	+ 15.5	2.7
30—34		+ 11.5	+ 25.3	5.4
35—39		+ 9.3	+ 27.3	9.3
40—44		- 1.4	+ 3.0	28.4
		10.0	6.8	

The number of children by five year age groups, M_{ht} is

$$\hat{M}_{ht} = M_t \frac{m_{ht}}{m_t}$$

where M_t is the total number of live births, m_{ht} live births by a five year age group in the sample, and m_t the total number of live births in the sample.

The variance of the age group is

$$\text{var}(\hat{M}_{ht}) = M_t \frac{M_t - m_t}{(m_t - 1)} p_{ht} q_{ht}, \quad \text{where } p = \frac{m_{ht}}{m_t} \text{ and } q = 1 - p_{ht}$$

The age-specific fertility rate of an age group $\hat{F}_{ht} = \frac{L_{ht}}{N_{ht}}$,

where L_{ht} is the number of live births by an age group and N_{ht} the number of women of this age group. The age-specific fertility rate is

$$\hat{F}_{ht} = \frac{M_t \frac{m_{ht}}{m_t}}{N_{ht}} = \frac{M_t}{N_{ht}} p_{ht}, \quad \text{where } p_{ht} = \frac{m_{ht}}{m_t}$$

The variance is

$$\text{var}(\hat{F}_{ht}) = \left(\frac{M_t}{N_{ht}}\right)^2 \frac{M_t - m_t}{(m_t - 1)} p_{ht} q_{ht}$$

A more helpful picture of fertility development shows age-specific fertility. Firstly, one can notice that up to 1973 the age-specific fertility rate fell in all age groups more or less linearly. Hence, one might claim that the rapid retrogression in fertility in the beginning of 1970 affected all ages with roughly the same intensity (Table 3).

Table 3. Age-fertility rates 1970—1975

Age	1970	1971	1972	1973	1974	1975	
						Rates	SE
15—19	32.22	29.65	28.45	26.15	27.18	23.14	1.60
20—24	119.44	111.72	103.96	96.47	103.90	97.71	2.79
25—29	108.55	104.80	101.24	98.91	107.69	120.51	2.92
30—34	64.62	56.35	53.04	51.22	56.66	67.84	3.09
35—39	30.48	25.26	21.80	21.74	23.04	29.08	2.16
40—44	9.26	7.17	6.21	5.68	5.75	6.05	2.37
	63.7	59.5	57.0	54.5	59.5	63.0	

In 1974 fertility rose again in all age groups. It is interesting to note that the increase now was most accentuated among women aged 25—29, while since the beginning of the 1960's age-specific fertility in general had been greatest in the 20—24 age group. In a relative sense the increase from 1973 was most marked for ages 30—34 or 11 per cent.

In 1975, fertility displayed a continued rising tendency. According to the sample taken from the files of live births in 1975 the increase seems to have gone on in the same manner as in 1974. The augmentation was most accentuated in the same age groups as in the preceding year:

Age	1973—74		1974—75	
	%		%	SE
15—19	3.9		— 14.8	5.9
20—24	7.7		— 6.0	2.7
25—29	8.9		11.9	2.7
30—34	10.6		19.7	5.4
35—39	6.0		26.2	9.4
40—44	1.2		5.2	41.2
	10.9		5.8	

The effect of changing age structure

If the age structure had been the same in 1974 as in 1973 but the age specific fertility that of 1974 the total number of live births would have been 57 800. In reality 62 400 children were born. Hence the changes in the age

structure explain only about one-fifth of the increase amounting to 10.0 per cent from 1973. This increase caused by a greater number of women of child-bearing age is most striking among the women aged 25—34, representing the large age classes born after the Second World War, but also among the neighboring older agegroups. However, the fertility increase in these age groups is much greater than the growth of the age group implies.

As to the 1975 fertility the tendency seems to have been the same as in 1974: about one-fifth of the augmentation is attributable to the growing number of women of childbearing age. The increase is statistically significantly at least for women aged 25—34 years (Table 4). The higher birth rate in 1974 and 1975 is, however, only partly explained by the changes in the age structure.

Table 4. Live births 1974 and 1975 if the age-specific birth rates are those of the preceding year and the age structure that of the actual year*

Age	1974		1975	
	Live births	+ or — %	Live births	+ or — %
15—19	5190	— 1.9	5322	— 1.4
20—24	20054	— 1.5	21374	— 1.0
25—29	20949	6.8	23555	3.3
30—34	7688	0.8	8907	4.7
35—39	3097	3.0	3313	0.9
40—44	791	— 2.7	785	— 2.1
	57769	1.8	63256	1.3

* $f_i^{73} \cdot w_i^{74}$ and $f_i^{74} \cdot w_i^{75}$ were f_i^{73} and f_i^{74} are the age-specific fertility rates of an age groups in 1973 and 1974, w_i^{74} and w_i^{75} being the number of women in this age group in 1974 and 1975.

It the whole fertility increase cannot be explained by the age structure changes, the fertility pattern must have undergone a transition. As it is a question of increasing births the reasons could be that more women are entering or are entering earlier into the childbearing period, or more probably, are having children that for some reason had been postponed, e.g. more second and third children.

Normally the entering into matrimony has for centuries been used as the indicator of the outset of the childbearing period of an individual woman. However, the phenomenon among young people of not getting married when forming a family has made legitimate fertility more or less unreliable. The num-

ber of illegitimate births has steadily risen especially during the last few years: in 1970 illegitimate live births formed 5.8 per cent of all live births but 9.0 per cent in 1974. Most or about 90 per cent of the illegitimate births are the women's first-born.

The crude marriage rate has fallen continuously during the 1970's. It was 8.8 in 1970, 7.4 in 1974 and 7.1 in 1975. The birth increase is not due to a greater number of women entering the marriage.

If the median age of giving birth to the first child is used as an indicator of entering into the childbearing period, there seems to be a weak tendency to have begun motherhood earlier in 1974 than in the preceding year: in 1973 the average age of the mother when having the first child was 23.20 years, but in 1974 it was 23.07 years. The transition is so small, however, that it could not have effected fertility significantly.

The fertility pattern displays, however, a significant increase in 1974 especially in the number of second children compared with the previous year. When the overall increase of the number of children was 10 per cent, the number of second children exhibits an augmentation of 13.6 per cent. A detailed analysis based on age specific fertility by birth order shows that a second child was especially common in 1974 in the 25—29 and 30—34 age groups, where the increase was as large as 13.8 per cent (Table 5). This age group further displays an apparent augmentation of having the first confinement; in 1974 there was 13.3 per cent more than in 1973. There were also considerable more women aged 25—29, or 11.7, having their second child.

Table 5. Increase of live births from 1973 to 1974, by age and birth order.

	1. child %	2. child %	3. child %	Total %
15—19	3.2	5.9	0.0	3.7
20—24	8.0	8.2	-2.9	7.7
25—29	8.5	11.7	6.7	9.5
30—34	13.3	13.8	9.1	12.5
35—39	0.0	0.0	2.0	3.8
40—44	1.7	-10.0	0.0	0.0
All age groups	8.1	12.9	2.1	9.3

If one eliminates the effect of age structure it appears that the changing fertility pattern — here represented by having more children of different birth order than in 1973 — explains an equal portion of the increase as does the transition in age structure, or about one-fifth.

A look at the cohort fertility series, not reported in this article, for the cohort born in 1939—49 shows that that the total fertility, which can be determined for the youngest cohort at the age of 24 years and for the oldest at 34

years, shows that cumulative fertility is lower in the youngest cohorts than in the older cohorts when compared here at the same age. The increase appears clearly in 1974 in the youngest cohorts, born in 1946—49.

Conclusion

In the beginning of the 1970's fertility decreased slowly until 1974, when it suddenly rose by eleven per cent continuing in 1975 with sex per cent. Age-specific fertility rates shows that the increase was characteristic of the whole childbearing age. The rise was most marked, in the 30—34 and the 25—29 age groups. About one-fifth of the augmentation was due to changes in the age structure; the number of women of childbearing age increased from 1973 to 1975 especially in the 25—29 age group. It appears also that the increase caused by a change in the fertility pattern was manifested especially in a greater number of second children among women aged 25—34 years. This fertility pattern change was responsible for another fifth of the increase. A small shift toward entering earlier into childbearing age was also visible. On the other hand, the increase was not caused by more women entering motherhood than in 1973.

When discussing the reasons why the increase occurred in 1974 one must first take into consideration that social development in Finland has been characterized by a strong and rapid structural change during the past decades. From 1960 to 1970 the number of economically active population in agriculture and forestry declined with roughly 40 per cent, i.e. from 35 to 20 per cent of the whole economically active population consequently. The predominant feature of this development has been a decrease in the population of sparsely settled areas and a growth of urban centers. The migrants have had difficulties in adjusting to their new domicile because they have not been trained for their new occupations and because there has been a shortage of housing in urban centers. Furthermore, during the second half of the 1960's the labor demand was strongly decreased by a slump and wide-spread unemployment was an unavoidable result.

In the beginning of 1970 there were signs of a retardation in the structural changes in society. Internal migration decreased and became more balanced: net out-migration from developing areas of the country diminished. In 1970 the total net out-migration from out-migration municipalities amounted to 50 043 persons and in 1972 to 38 314 persons. In 1974 the figure was 34 003 persons and in 1975 only 29 340 persons. A major reason for this development is the fact that the regional imbalance in demand for and supply of labor has diminished as a consequence of a more active regional policy.

Further in 1972 an economic upswing was visible, which continued during 1973 and 1974. The GNP increased, unemployment diminished and housing production was intensified. Obviously the fertility increase as well as decrease

are a result of several factors operating in a complex way. In addition to the retardation of structural change the attitudes toward family policy measures have grown more favourable. Economical and social support of the family have been frequently discussed and plans have been made. Some of them have been accomplished step by step as e.g. children's day care. The real value of the child allowance has been slightly raised several times, while it remained practically unchanged during the 1960's. In 1974 maternity leave was increased from 72 to 174 days etc. As a whole, however, the measures taken have not been particularly important economically. It is perhaps the psychological value of the measures that is more significant: families have the feeling that society is really trying to improve their situation.

It is evident that the «baby boom» that began in 1974 is from an absolute point of view caused partly by the large age groups born in the second half of the 1940's partly by an overall increase of fertility. If one takes the changes in age structure into consideration the increase becomes especially apparent in 25—29 year age group. It seems likely that the large age groups have postponed having their first but especially their second child until they have found their place in society and external conditions are favorable for family building and rearing children. However, the overall increase might indicate that the recession in the second half of the 1960's effected all age groups more or less. The combined effect of several positive circumstances together might have released the baby boom.