

HOUSEHOLDS AND FAMILIES IN ESTONIAN POPULATION

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ABSTRACT

The statistical distribution of households and families by their size and structure can be received from population and household censuses, but it is also important to know this information between the censuses, as changes during the ten-year period can be quite remarkable. It is demonstrated that, since the last census in Estonia in 2011, the share of older age-groups has increased and the rate of children – decreased. The age at first marriage has increased for men and women respectively by 3 and 4 months per year. Consequently, the share of young people living without a partner has increased, but the process is different in men and women. The number of divorces has dropped, but this seems to be caused by the decline of marriages during the last decades. The age of women giving birth has also increased. During the last years, the number of third children has increased, but the number of first children has decreased. The distribution of households by their types was also studied and is presented in Table 1. It is evident that about one-sixth of the population lives alone; single-person households form the most numerous household type in present-day Estonia. From all households containing a couple, somewhat more than two-thirds are households with a married couple, others are households with a cohabiting couple. In average, the first ones are much older than the second ones. The number of households where two or more generations live together is marginal.

Keywords: *population size; age of first marriage; divorce rate; birth order; household type*

It is important to know the current statistical distribution of households and families by their size and structure. This information can be received from

population and household censuses. But the problem is that the period of censuses is ten years nowadays, which means that between the censuses the exact data are usually not available, and out-of-date data are used if necessary.

To avoid this problem, a model has been created that gives the estimated values for all household and family types for each year between two censuses. As input for this model, we also use data from different surveys alongside the census data and data from registers.

CHANGE OF POPULATION SIZE IN DIFFERENT AGE GROUPS

Since 2015, the population size in Estonia has been estimated using the residency index that uses more than 20 administrative indexes to establish the persons living permanently in Estonia each year, that is, are residents of the state. It is interesting that the change has not been linear, but, in 2015, a turn took place: the population size that had decreased for more than 25 years started to increase. The reason for this turn is the change in external migration: Estonia, which was an emigration country for long time, has, due to the improved economic situation, gained the status of an immigration country. Also, many people who had emigrated in earlier years, have now returned. The change in population size is well described with help of a quadratic model, see Figure 1. From 2010, the population size has decreased by 0.6% (8500 persons).

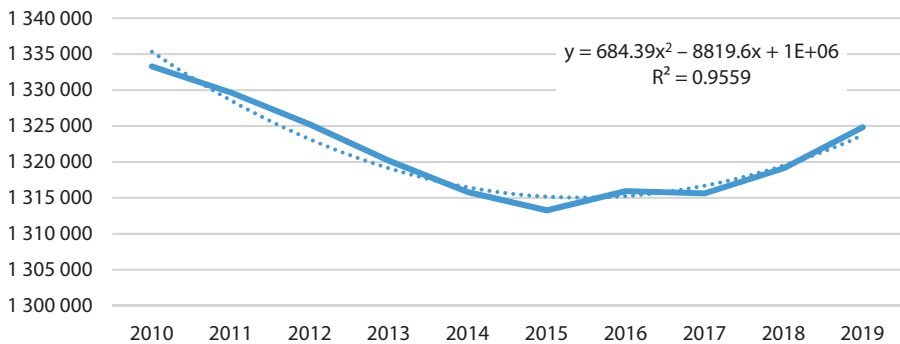


Figure 1. Empirical change of population size (1.01) and its approximation with a parabolic model

CHANGE IN THE SIZE OF ADOLESCENTS' AGE-GROUPS

As the distribution of household and family types depends on the number of children, that is, on the fertility trends during the recent years, we regard the dynamics of sizes in adolescent's age-groups during the last ten years, see Figure 2.

The size of the youngest age-group has S-shaped form (parabola of the 3rd order) with the maximum in 2011 and the minimum in 2018 and a general decreasing tendency (total change -5,7%). This form is the reflexion of changes in the number of births during the period.

The size of the two next age-groups – 5–9 and 10–14 has been increasing and can be described by parabolae of the second order.

The size of the oldest age group, young people aged 15–19, years has decreased very strongly. The model is again a parabola of the second order.

The total change in the number of adolescents aged <20 years is similar to the change of total population, see Figure 3. The absolute number of adolescents in 2019 was 1% less than in 2000. Hence, the decrease in the number of adolescents was somewhat bigger than that of the total population, but changes in different age-groups are different as shown in Figure 3.

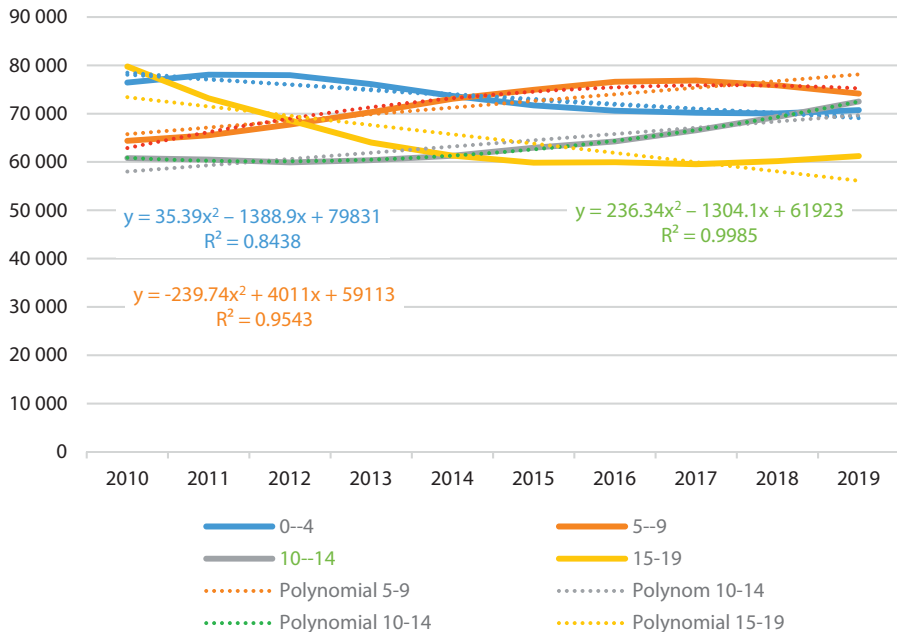


Figure 2. Changes in the size of children's age-groups

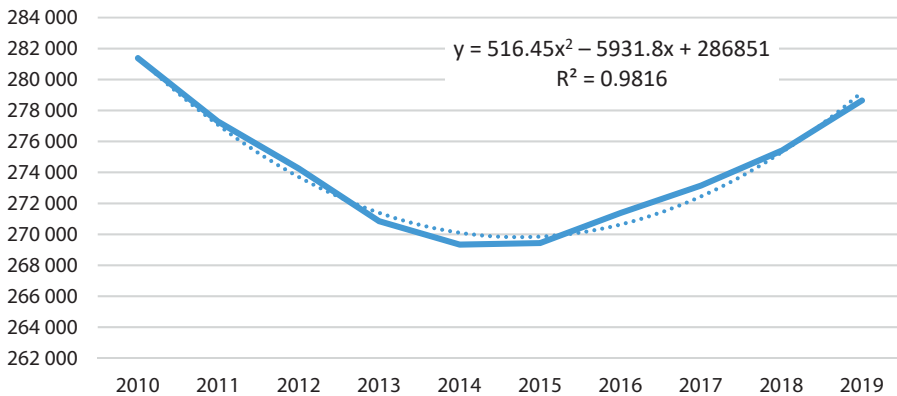


Figure 3. Change in the total number of adolescents

CHANGES IN THE SIZE OF SENIOR AGE GROUPS

The number of seniors, aged 65+ has increased by 12.6%, see Figure 4. The change is not equal in all age-groups; the behaviour of the group 70–74 is especially exceptional, as from 2012–2017, this group included people who were born in the years of the Second World War. Notably big growth – 67% – occurred in the oldest age-group aged 85+.

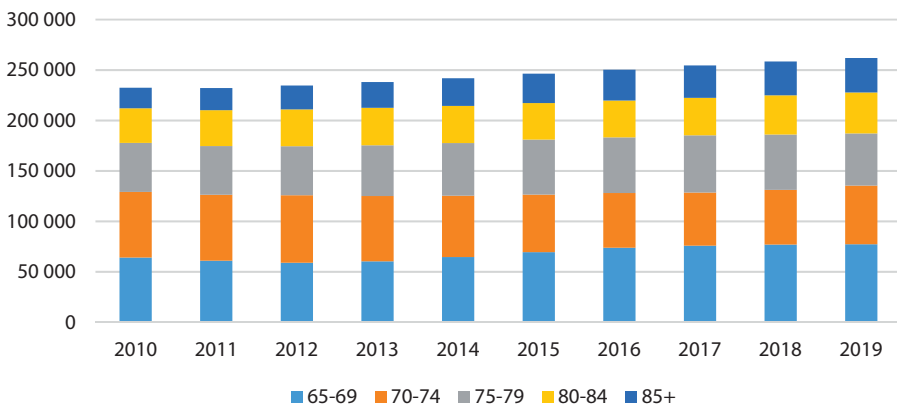


Figure 4. Dynamics in the number of senior age groups

LEGAL AND *DE FACTO* FAMILY STATUS

During the period 2010–2018 almost 55 000 men and women married; the number of marriages per year increased 1.3 times from 2010 to 2018. At the

same time 29 000 marriages were divorced; the number of divorces increased by 7%. The coefficient of the first marriage increased by almost 0.1 and had the value 0.47 for men and 0.53 for women, which is a considerably high value compared with the last decades in Estonia. The change can be described by a linear model showing a 1% increase per year, see Figure 5.

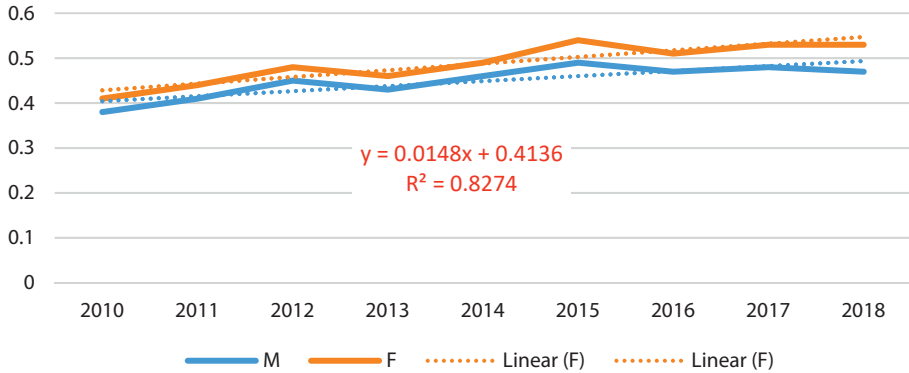


Figure 5. Coefficient of the first marriage in men and women

CHANGES IN THE AGE OF MARRIAGE

The age of the first marriage increased by almost two years and reached the value 29.6 years for brides and 32.1 years for grooms. Thus, the age of the first marriage increased by 3 months per year for men and 4 months per year for women, see Figure 6.

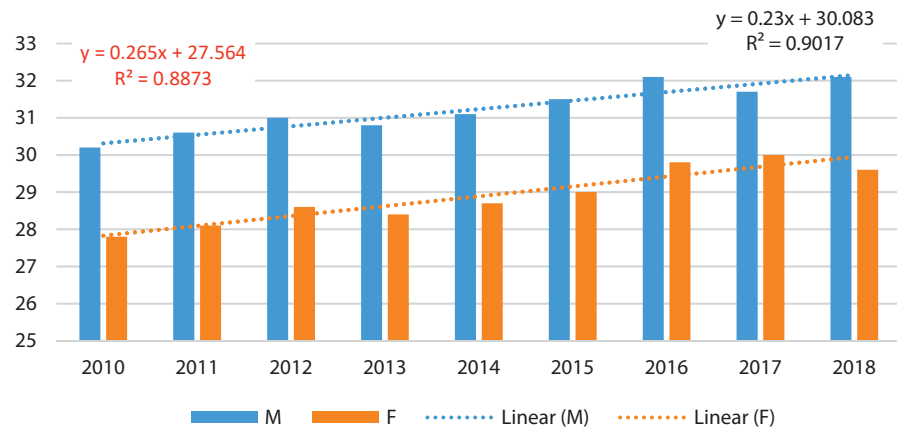


Figure 6. Age of the first marriage in men and women

The increasing marrying activity and the rising age of marriage have an opposite impact on the number and share of married people in the population.

COHABITATION

The only source of information about non-registered cohabitation is available from census data, see Figures 7–9.

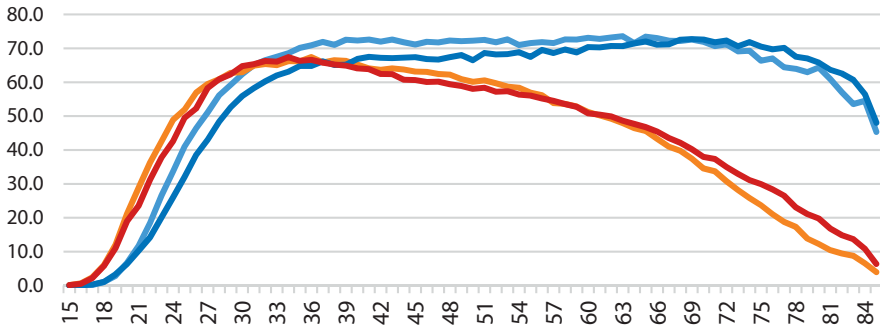


Figure 7. Men and women living with married or non-married partners in 2000 and in 2011

From Figure 7, we can see that the partnership patterns were quite similar at the time of both censuses, but there is a small shift towards later start. If we look the age when 50% of people live together with a partner, we can see that in 2000, this age was 26.8 years for men and 24.4 years for women. In 2011, this situation appeared when men were 28.4 and women 25.2 years old, which means that, in twelve years, the starting point of family life had shifted to more than one year later.

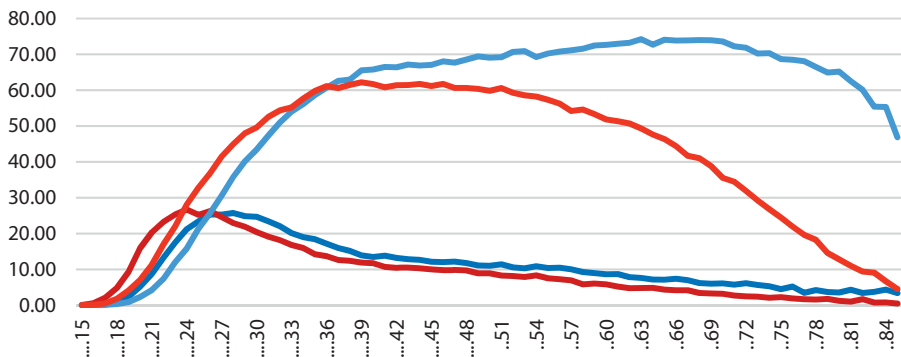


Figure 8. Family status of men and women in 2000, share in age groups

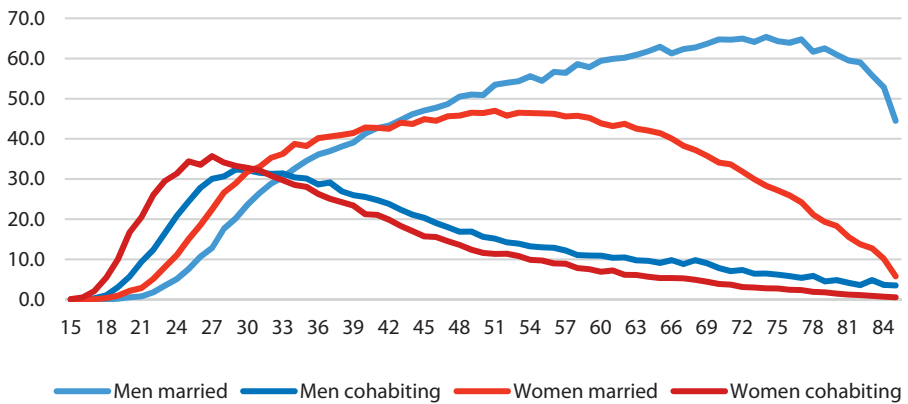


Figure 9. Family status of men and women in 2011, share in age-groups

The share of people living together with a partner among the population aged 15 years and more has also changed. In 2000, 56.5% of men and 46.2% of women had partner; by 2011 this number had dropped and was 55.1% for men and 46.2% for women.

As there are many widows among aged women, we also compared the populations of age groups 15–49 in both years. In 2000, – 49.0% of men and 50.7% of women had a partner; in 2011, the share of men having a partner had dropped to 46.4%, but the share of women having a partner had somewhat increased to 51.1%.

To explain the different ratios of women and men, it is important to consider that the partners do not always belong to the same age group. Another reason explaining the change is that the ratio of women and men in fertile age has dramatically changed. In 2000, women were dominating among the population aged 15–49 years – per 100 men there were almost 104 women, but in 2011 the situation was the opposite: per 100 men there were 98 women. Here, the two main reasons were the more active emigration of young women and the dropped death rate (increased life expectation) of men.

The ratio of two partnership types – married couples and unmarried cohabiting couples – has also somewhat changed – in 2000, 19.5% of all couples were not married, in 2011, this share was 31.0%. Among the people aged 15–49 years, the share of unmarried partners was 28.5% in 2000 and 44.3% in 2011.

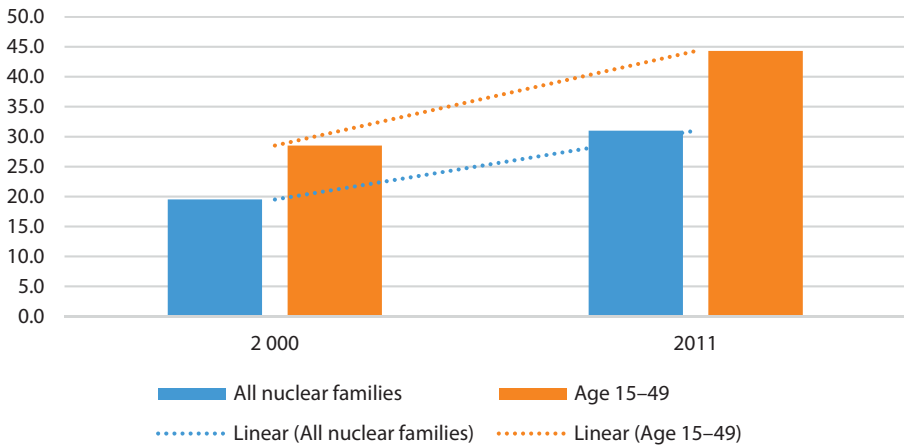


Figure 10. Ratio of unmarried and married couples in 2000 and 2011

Probably the tendency of increase of unmarried couples continues but in a slowing tempo. Most married couples (60–78%) have experienced cohabitation before marriage, see Figure 11.

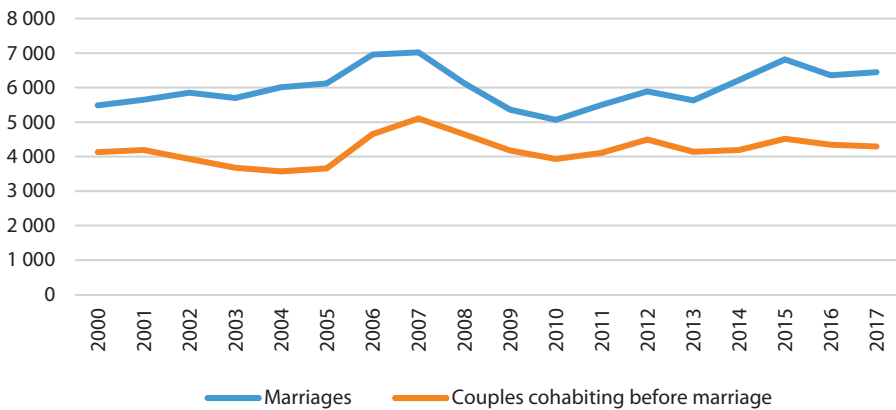


Figure 11. Number of marriages and couples who have cohabitated before the marriage

It is also quite common to marry after the couple already has a child or several children, see Figure 12.

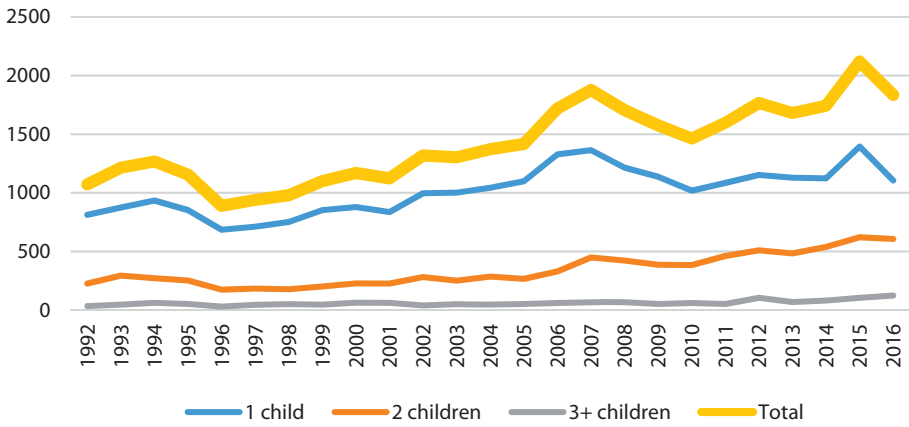


Figure 12. Marrying couples with common children

DIVORCES

The number of divorces was high in Estonia from the middle of the 20th century already and increased extremely in the 1990s when the number of marriages dropped. Now, the ratio of divorces and marriages has gone down and has stabilized at the level of 50 divorces per 100 marriages, see Figure 13. Still, this fact does not demonstrate that half of marriages continue until the death of partners, as among all marriages, the number of second or third marriages for partners changes between 0.25 and 0.33, having a modest tendency of falling.

Unfortunately, there is very few information on the stability of cohabitation; probably it is not higher than the stability of legal marriages.

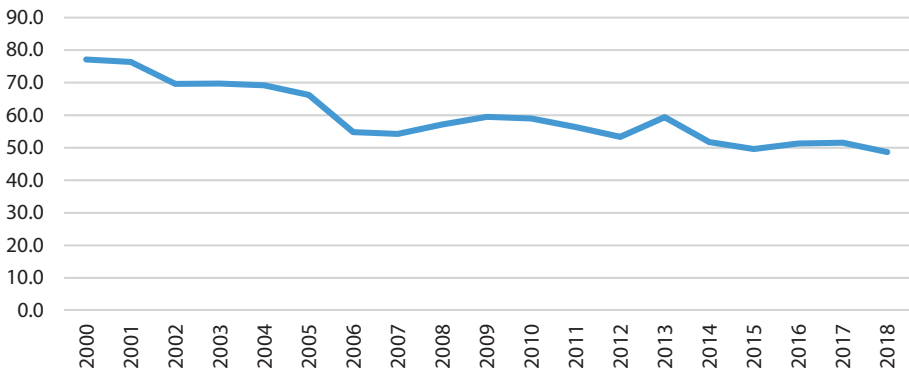


Figure 13. Number of divorces per 100 marriages.

More than half of divorcing couples have common children. The average number of common children in divorcing couples is about 0.6, and, consequently, almost 3000 children lose one of their parents each year; more often this is the father and a single-mother family arises.

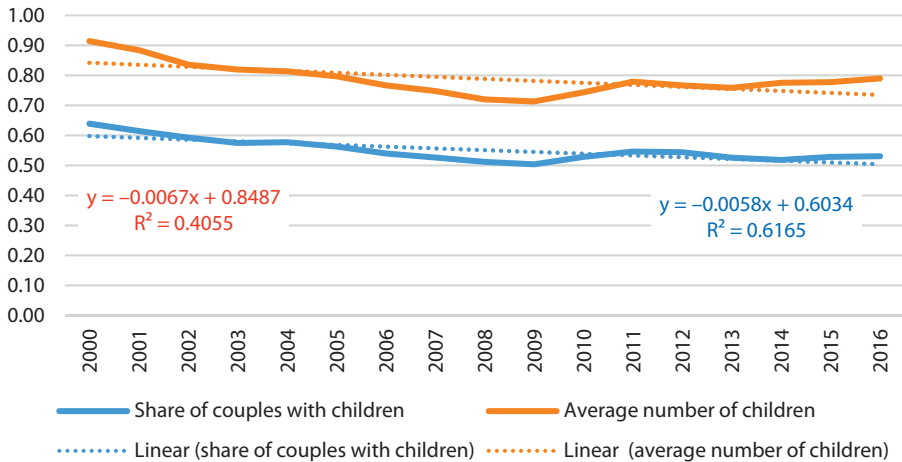


Figure 14. Children of divorced couples

CHILDREN IN FAMILIES

Mother's family status when giving birth

From the census in 2000, the distribution of family status of newborns' mothers has changed considerably, see Figures 10–12, but the share of married mothers has remained between 40% and 45%, being the lowest (40.3) in 2011. From this year, the percentage of married mothers has increased, but the position reached in 2018 (43.3) is still lower than it was in 2000 (45.5).

A great change has happened in the share of cohabiting mothers. In 2000 their share was 28.8% and in 2014 almost twice more – 53.9%. But this rate has not changed in the same direction all the time: from 2014, the share of cohabiting mothers has decreased and was 19.7% in 2018, still remaining the most common family status of child-bearing mothers.

The most dramatic change has happened in the number of women who have decided to give birth without having stable partner, that is, as single mother. In 2000 their percentage was 26.3%, and, during the period 2002–2003, it increased to 36% but, after that, started to decrease quite rapidly, having its minimum value (4.2%) in 2015. In 2018, the percentage of parturients

who did not have a husband or a cohabiting partner was 7%. Maybe big jumps in this time-series have some technical reasons, but it is still clear that the number of women who have chosen the way to have a child without a partner is less than 10 %.

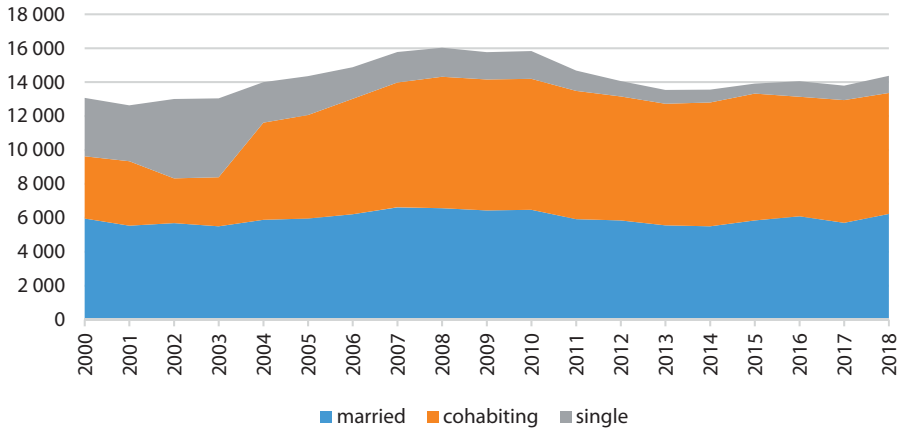


Figure 15. Newborn children by their mothers' family status

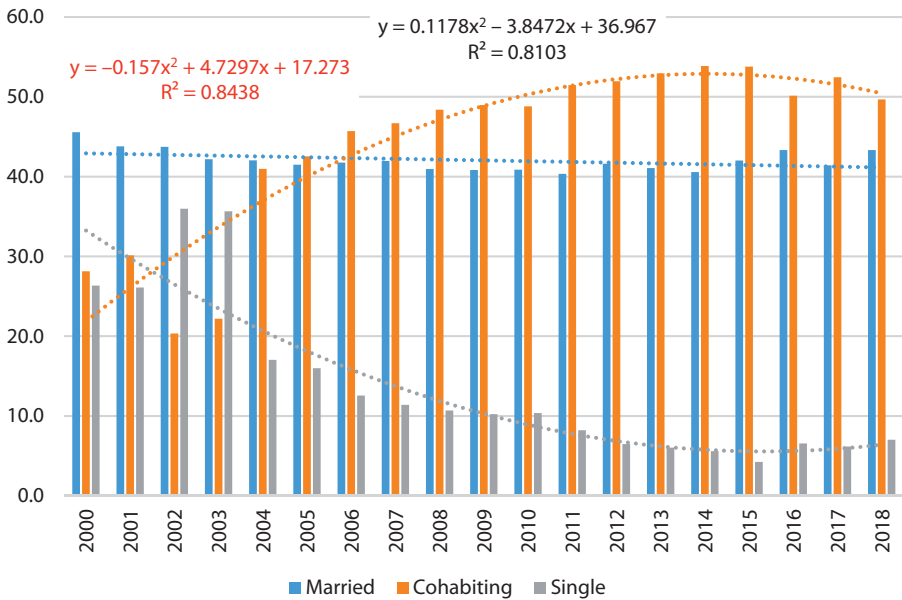


Figure 16. Trends of newborns' mothers' family status. Trends are polynomial for cohabiting and also single mothers, but linear for married mothers

AGE OF NEWBORNS' PARENTS

The fact that mothers tend to postpone childbearing and that mothers' average age has increased for several years is generally known. Naturally, fathers' age has also increased, but, surprisingly, much less, see Figure 17. If the average age of women has increased by four years from 2000, the increase in men's age forms only 66% from this number. Especially remarkable is the stabilization of fathers' age during the period 2012–2018.

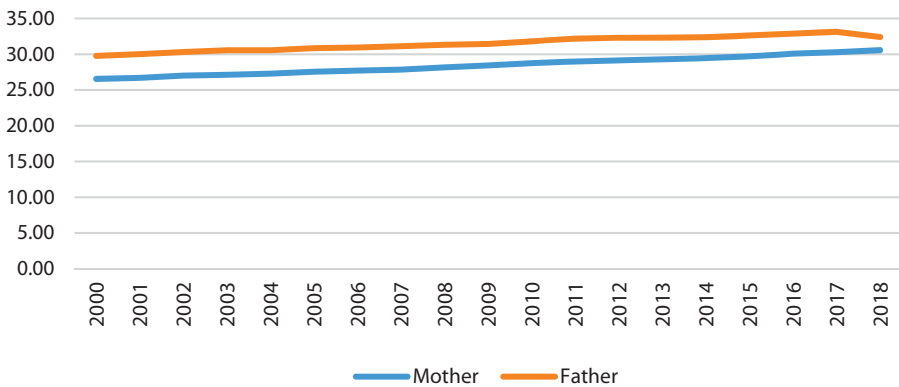


Figure 17. Average age of newborns' mothers and fathers

BIRTH ORDER OF CHILDREN

Birth order of children born in a year gives some information about the popular children's pattern in a certain time-period: if second children dominate among the newborns, then it is evident that single-children households are not very popular. In a similar way, the big share of third and following children might forecast the growing popularity of bigger families. During the last decade, the share of second children has almost reached the level of the share of first children, and the share of third children has also increased. Obviously, the biggest problem in Estonian family policy is postponing of the first birth, see Figure 18.

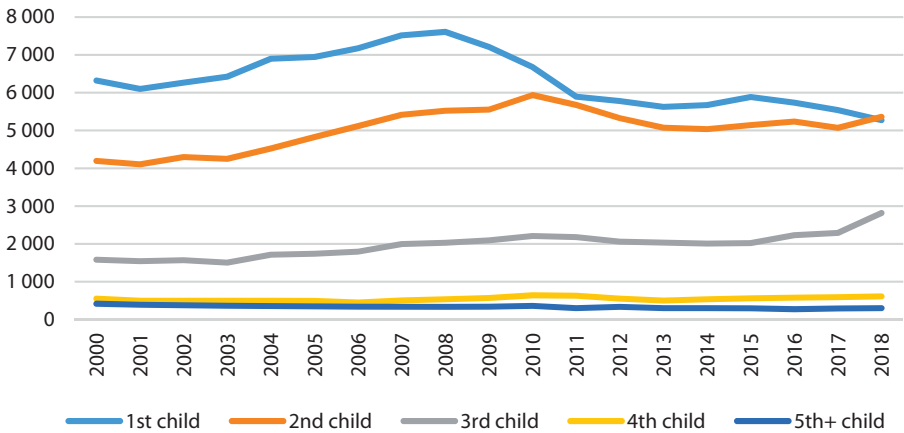


Figure 18. Trends in birth order of children

TYPES OF HOUSEHOLDS AND NUCLEAR FAMILIES

The traditional definition of the **household** is a group of people, usually living in a common dwelling, who share the available household facilities (common budget and food); a person living alone is also a household.

In register-based terminology, the **household** is a group of people (relatives or not) who live in a common dwelling. The household consists of nuclear families and additional household members. In the most typical case, the household has no nuclear families (this is single person's household) or one nuclear family, but households with two and also three nuclear families also exist – these are, usually, multigenerational households where grandparents, parents and children live together. In nuclear families, all members are related to each other. In the following text, we will mainly use the traditional definition of the household.

There exist the following types of nuclear families:

1. Married or cohabiting couple without children.
2. Married or cohabiting couple with a child or children.
 - a. At least one child is adolescent (aged less than 18 years).
 - b. All children are adults.
3. Single parent's family with an adolescent or adult child or children.
 - c. Single father's family.
 - d. Single mother's family.

To characterize the society, it is important to know the distribution of households and also the distribution of types of nuclear families.

Distribution of household types

The following table gives the distribution of household and family types measured in the census of 2019.

Table 1. Typology of households and nuclear families

	House-	Members	House-	Members	House-	Members
	holds		holds		holds	
	Nuclear families		Nuclear + additional ms		Total	
Single	239 587	239 587			239 587	239 587
Hh without nucleus	10 498	22 202			10 498	22 202
Married c without children	81 230	162 460	5 162	15 836	86 392	178 296
Married with adolescents	57 593	224 622	4 254	21 271	61 847	245 893
Married with adult children	29 832	96 521	2 442	10 465	32 274	106 986
Married total	168 655	483 603	11 858	47 572	180 513	531 175
Cohabiting os without children	30 974	61 948	2 213	6 829	33 187	68 777
Cohabiting os with adolescents	39 653	145 222	2 836	13 427	42 489	158 649
Cohabiting os with adults	5 199	16 631	435	1 851	5 634	18 482
Cohabiting os total	75 826	223 801	5 484	22 107	81 310	245 908
Cohabiting ss without children	174	348	8	24	182	372
Cohabiting ss with adolescents	24	90	4	17	28	107
Cohabiting ss with adults	2	6	0	0	2	6
Cohabiting ss total	200	444	12	41	212	485
Single mother with adolescents	27 551	70 012	5 857	20 555	33 408	90 567
Single mother with adults	33 806	71 743	3 550	11 387	37 356	83 130
Single mother total	61 357	141 755	9 407	31 942	70 764	173 697

	House-	Members	House-	Members	House-	Members
	holds		holds		holds	
	Nuclear families		Nuclear + additional ms		Total	
Single father with adolescents	2 327	5 526	481	1 616	2 808	7 142
Single father with adults	3 982	8 407	450	1 422	4 432	9 829
Single father total	6 309	13 933	931	3 038	7 240	16 971
Multinucleus household	8 661	42 891	1 047	6 412	9 708	49 303
Total	571 093	1 168 216	28 739	111 112	599 832	1 279 328

Explanations: Hh – household, ms – members, c – couple, os – opposite sex, ss – same sex; Hh without nucleus – household containing more than one member but no nuclear family, multinucleus household – household containing more than one nuclear family.

The share of different household types and their members is represented in Figure 19.

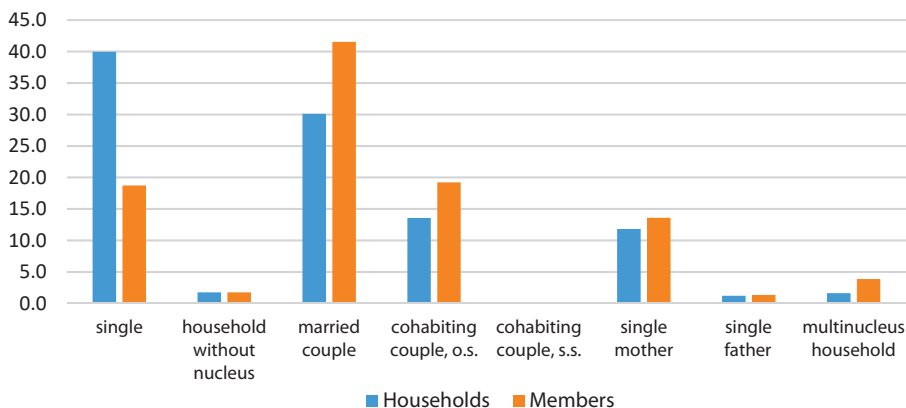


Figure 19. Distribution of household and family types, 2011

The most common household type in 2011 was the single person's household (39.9%). Married couples' household type was on the second place (31.1%). On the third and fourth place, there were households of cohabiting opposite sex couples (13.6%) and single mothers' households (11.8%). All other household types were very rare, covering in total less than 5% of all households. If family members are considered, the order is different. The biggest number of people (41.5%) lived in married couples' households, 19.2% in households of

cohabiting opposite-sex couples and 18.7% of all people lived alone – 94 thousand men and 145 thousand women, more than half of them widows. 6.3% of all persons lived in single mothers' households, and 3.9% of all household members lived in the biggest households which had two or more nuclei. Very few households had a cohabiting same-sex couple as the nucleus. This household type was measured in Estonia for the first time, and it is possible that it is under-reported and also under-covered. The households with several members but without a nucleus were also rather rare.

ADDITIONAL MEMBERS OF HOUSEHOLDS

More than 110 000 persons are members of households but do not belong to the nuclear family constituting the household; that is 8.7% of the population. Often, they are relatives, e.g. parents of members of belonging to the nucleus. Sometimes they are also helpers or subtenants. Of the households with (married or unmarried) couples, about 7% have additional members. Most often the additional members belong to single-parent households; there are additional members in 15% of all cases. Obviously, single parents need more help from relatives and other people than the households of couples.

CHILDREN IN HOUSEHOLDS

Table 2. Households and families with adolescent children

Household type	Nuclear families	Nuclear + additional members	Total
Married couple with 1 child	28 277	2 273	30 550
Married couple with 2 children	23 408	1 559	24 967
Married couple with 3 or more children	7 472	615	8 087
Cohabiting couple with 1 child	22 762	1 729	24 491
Cohabiting couple with 2 children	14 566	989	15 555
Cohabiting couple with 3 or more children	3 694	284	3 978
Single father with 1 child	2 134	446	2 580
Single father with 2 or more children	990	76	1 066
Single mother with 1 child	23 121	4 933	28 054
Single mother with 2 or more children	8 878	1 616	10 494
Total	135 302	14 520	149 822

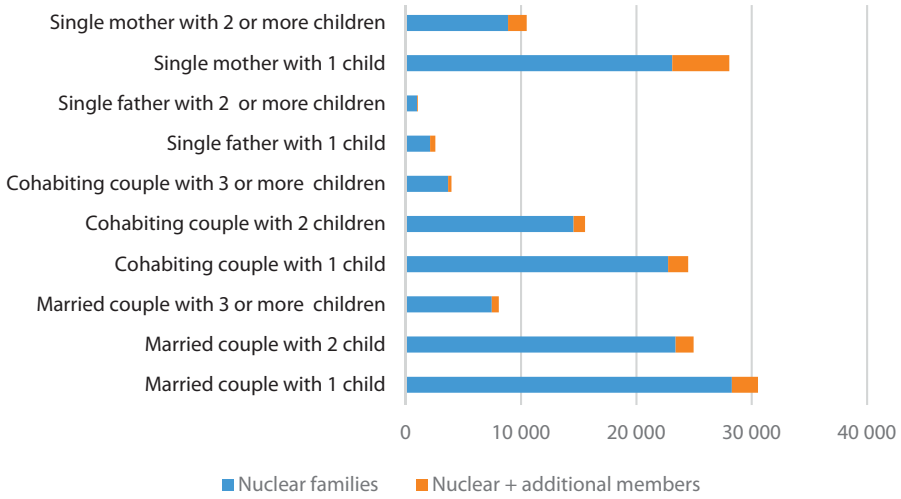


Figure 20. Households with nuclear families containing adolescent children

In Table 2 and Figure 20, some households with children are missing – these are households without the family nucleus, e.g. the households of grandparents with children. The number of such households is small.

The decision to have the following child depends on the household and family type, see Figure 21.

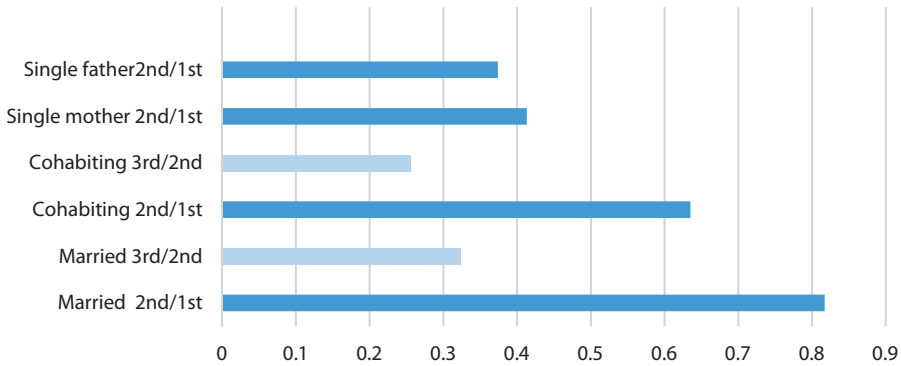


Figure 21. Frequency of having a following child in different household types

In married couples, the frequency of having the second child is the highest and in single parent households – the lowest. The frequency of having the third child (and following children) is also higher in married couples than in cohabiting couples.

CHANGE IN THE DEFINITION OF THE HOUSEHOLD

As already mentioned, there are two possible definitions of the household, and, until now, we have used the traditional one. But the number of inhabited dwellings is about 50 000 smaller than the number of traditional households, which means that the distribution of households by the number of their members will change when using the new definition of the household, see Figure 22.

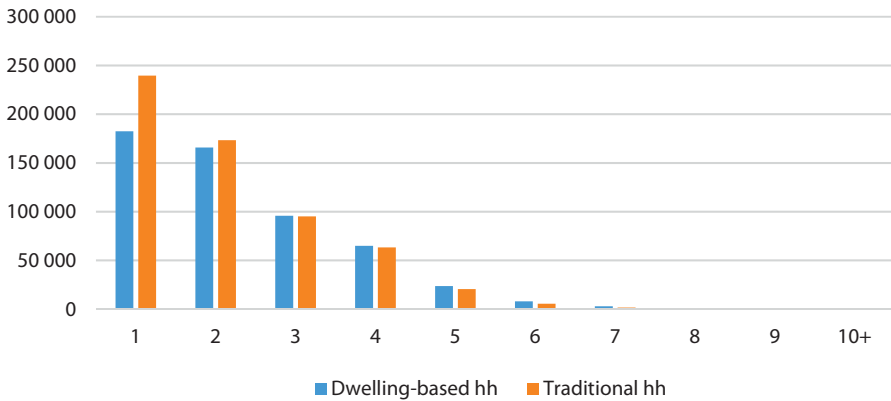


Figure 22. Distribution of household members according to two definitions of the household

It is evident that when the number of households decreases, the share of small households will decrease, and the share of large households will increase. The biggest decrease is in the number of one-person households: about 24% of them disappear. That means, 57 thousand single persons who live in the same dwelling with another household will be additional members of a household in the new statistical context.

The same happens with two-person households – their number decreases by 4%, and more than 7000 two-person households will be joined with another household. As a result, the number of households with two or more nuclei increases.

The number of bigger households will increase – the number of households with six and seven persons will increase by 43% and 76% respectively; the number of households with more than seven persons will duplicate.

CONCLUSION

The fact that the population of Estonia is changing is commonly known. The share of aged persons is increasing due to increasing life expectation; unmarried cohabitation is a normal lifestyle for the younger generation; the age of giving birth is increasing, and the number of children per woman is falling. Still, there are several effects that are not linear: during the last years the share of marriages has increased; the child-bearing pattern has also somewhat changed: the share of the third children is the highest compared with the last twenty years.

The household structure has been quite stable during the decade, but due to the change in the definition, the average number of family members will increase, and the share of single persons fall. It is important to notice that this change is rather formal.

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All statistical materials are taken from the open database of Statistics Estonia, <https://www.stat.ee/>

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