HOUSEHOLDS OF INDIVIDUALS IN THE CZECH REPUBLIC

Ondřej Nývlt

Abstract

The first part of the analysis will be focused on the description of number of households of individuals in the Czech Republic in the period 1995-2016. The analytical part will describe the growth of households of individuals of total number of households in the Czech Republic. There are two sources of potential growth. The second demographic transition with emphasis on the individual level can cause the growth of households of individual in young age. One of the sign of aging population is the higher proportion of old persons living alone. The age and gender will be a complementary factor in this analysis. The second part of the analysis will focus on projection of the households of individual in 2050. Data from Labour Force survey will be an essential source for this study. The headship rate approach will be used as a basic methodological approach for this study.

Key words: households of individuals, second demographic transition, headship rate method.

JEL CODE: J10, J11, J13

Introduction

The development of the particular types of households is influenced by a number of factors. In the Czech Republic, the number of households of individuals in the 1990s would be relatively low. This was mainly caused by the extremely low number of households of individuals in younger age, when the Czech Republic was characterized by an extremely low age of entry into the first marriage, absence of cohabitation or other alternative forms of cohabitation (including for example Mingles, Singles) (Kučera, 1994). The development in the Czech Republic was characterized by the phenomenon of relatively high divorce rates (Nývlt – Bartoňová, 2011). This caused the rise of the number of single-parent family households. The normalization in Czechoslovakia contributed to a delay in the onset of the

second demographic transition, with the exception of the extension of single-parent family households and one-member households (Kučera, 2005). Higher number of households of individuals was only in the older age of the individuals. Since the mid-1990s the situation has changed. There was the minimum number of households of individuals in young age. However, the social changes after 1989 brought the growth of other forms coexistences than life in marriage cohabitation (for example Nývlt, 2016, Nývlt, 2017). These forms also included the "Singles" or "Mingles". It can be expressed in demographic view by growth of the number of household of individuals in young age. However, for the whole period, the highest number of households of individuals was in older age. This number grew throughout the period for reason population ageing.

The term "Second Demographic transition" was first used by Lesthaeghe and van de Kaa to describe changes in family formation in Western Europe since World War II (Lesthaeghe - Kaa, 1986). Emphasis on individual rights and the freedom of the individual has brought in the first step the increase of cohabitations at the expense of the marriage (for example Lesthaeghe, 1983, Kennedy - Bumpass, 2008, Heuveline - Timberlake, 2004, Dominguez-Folgueras, 2013). The growth and emancipation of women allowed the economic independence from a partner and therefore the possibility of living alone (Becker, 1993, Sobotka, 2008). In a population projection, are considered to be related to the individual person, together influence the entire process of household formation, extension, reduction, and dissolution (Linke, 1989).

1   Data Source

Labour Force Survey is the main data source for this study. LFS is a household sample survey, the largest in the Czech Republic. This is a continuous survey which has been providing comparable data in the time series since 1993. The sample includes approximately 25,000 households, representing approximately 63,000 people. The survey covers all persons usually living in surveyed private household dwellings. The usual residence is based on the intension to remain in the territory of the Czech Republic at least one year.

2   Methodology

The number of households may be projected by using either the microsimulation or macrosimulation approach. The first approach requests access to individual data on one hand, and a relatively large number of assumption about individual transition probabilities on the other hand (Linke, 1988). The macrosimulation model does not require access to individual data. The headship rate method in modelling households is one of the best-known application of the macroanalytical approach. The advantage of this method is the possibility of linking to population projection. The population projection is the basic source for the following projection of households.

This model projection of households is based on the calculation headship rate according to age groups and the relative share of individual types of households. This approach was used in previous studies (for example Nyvlt, 2017). There is short description of methodology:

The headship rate is calculated for each five-year age group according to the sex of the person in the head of the household:

$$K_{x,t} = \frac{H_{x,t}}{P_{x,t}} \qquad (1)$$

where $H_{x,t}$ *is the number of the person in the head of the household in age group x, in year t* *and $P_{x,t}$ average population in age group x, in year t*

In this projection, we assume unchanging headship rate for the whole period until 2050. For this reason we can calculate the total number of the persons in the head of the household according to the formula:

$$H_{x,t}^{p} = v_{x,t} * P_{x,t}^{p} \qquad (2)$$

where $H_{x,t}^{p}$ is the projected number of the persons in the head of the household in the household in the age group x, in year t,

$v_{x,t}$ is projected headship rate in the age group x in year t,

a $P_{x,t}^{p}$ is projected population in the age group x, in year t

After that, it is only sufficient to change the total number of heads of households for the total number of households and to divide by the age of the head of the household and sex, depending on the projected relative size of each household type according to the formula:

$$H_{x,t}^{p,j} = h_{x,t} * H_{x,t}^{p} \qquad (3)$$

where $H_{x,t}^{p,j}$ *is the projected number of the persons in the head of the household according to the type of the household in the age group x, in year t,*

$h_{x,t}$ *is the projected relative share of individual types of households in the age group x, in year t*

*a* $H_{x,t}^{p}$ *is the projected number of the persons in the head of household in the age group x, in year t*

By summing up the five-year age groups we obtain the projected numbers of individual types of households in year t according to the formula:

$$H_{x,t}^{p} = \sum_{i=1}^{n} H_{x,t}^{p,j} \qquad (4)$$

3   Analysis

Except for the last year of 2016, there has been a steady increase in the number of households of individuals since 1995. This growth was due in part to the growth of the population, mostly due to the increase in the relative number of households of individuals from the total number of households. This growth was more significant until 2008 then began to slow down and overall stagnation occurred in recent years. In 1995 there were 670 thousands of households of individuals, in 2008 1 173 thousands and in 2016 1 385 thousands of households of individuals. In relative terms, the share of households of individuals in the total number of households in 1995 were 18.8 %, in 2016 already 29.9 %. The number of female households of individuals was higher in whole time period of 1995-2016.

Fig. 1: Households of individuals in the Czech Republic (1995-2016)
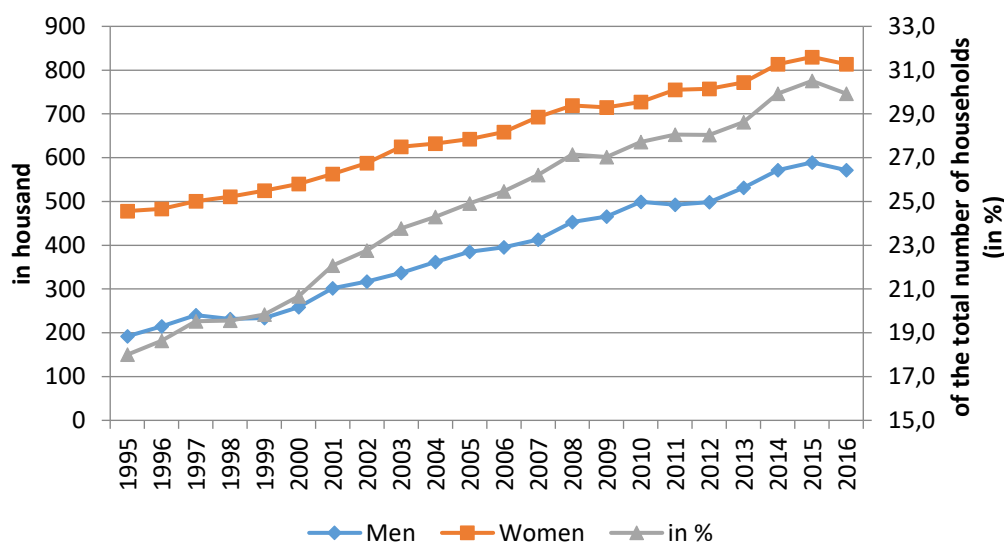
Source: Labour Force Survey 1995-2016

The growth in the number of male households was recorded in all age groups between 1995 and 2016. In all age groups, the proportion of households of individuals was relatively higher for different reasons. In young age groups the growth was caused the consequences of the growth of the second demographic transition. The young people postponed the entry to the partner households from the nineties to the last century. Until then in the Czech Republic there were very few households of individuals due to entry to the partner household directly from the parent household. The postponement of entry into a partner household and the birth of the first child can be considered as an essential feature of the second demographic transition. In the age group 25-29 years only 2.6 % of men lived in households of individuals, in 2015 it was 14.0 %. The dissolution of partner households and lower intensity of entry into other partnership has led to an increase in the number and the share of households in the middle age of male respondents. At a higher age, the higher number and the proportion of households of individuals was due to the process of population aging.

Fig. 2: Men living in households of individuals from total number of men by age groups in the Czech Republic (1995-2015)
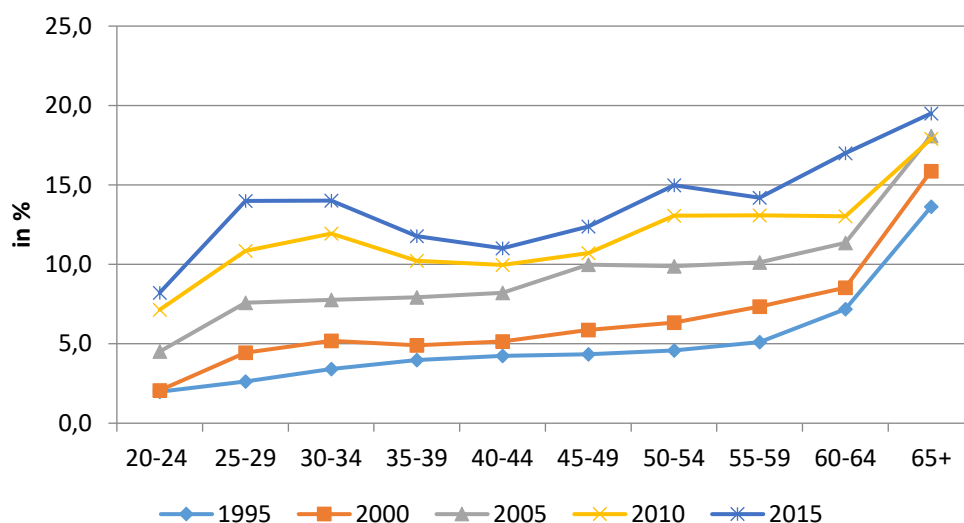
Source: Labour Force Survey 1995-2015

Similar trends have been recorded even in the development of proportion of female households of individuals, but in different intensity. In comparison with the male households of individuals there was less proportion of female households of individuals in young and middle age (the children stayed with their mother mostly in the households). On the contrary in the age 65 years and more in 2015 mostly 50 % of women lived in the households of individuals. That was from two main reasons. Women compared to men have a higher life expectancy and in partnership there are on average the higher age of men in entry to the partnership.

Fig. 3: Women living in households of individuals from total number of women by age groups in the Czech Republic (1995-2015)
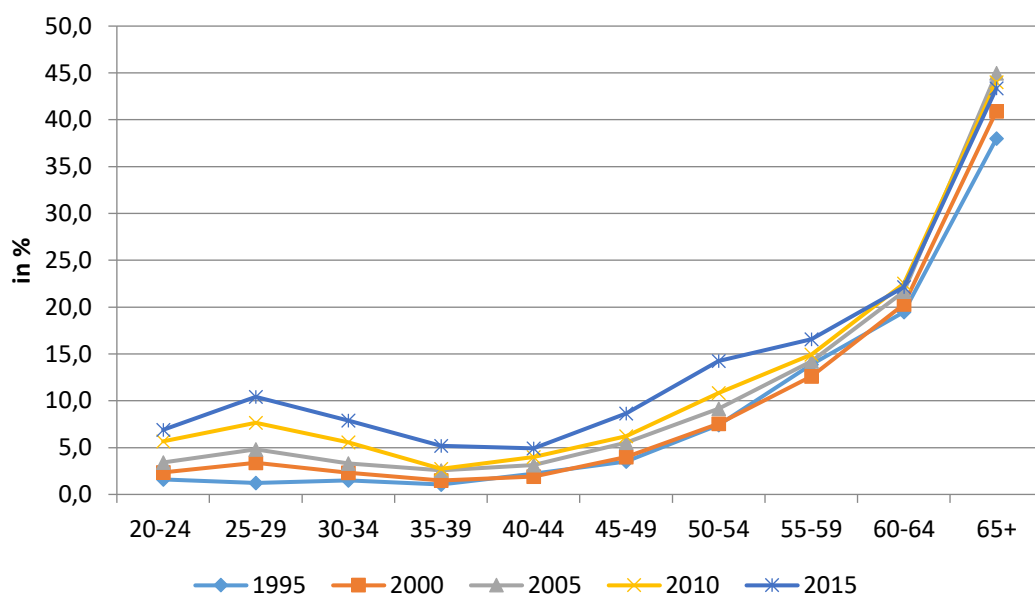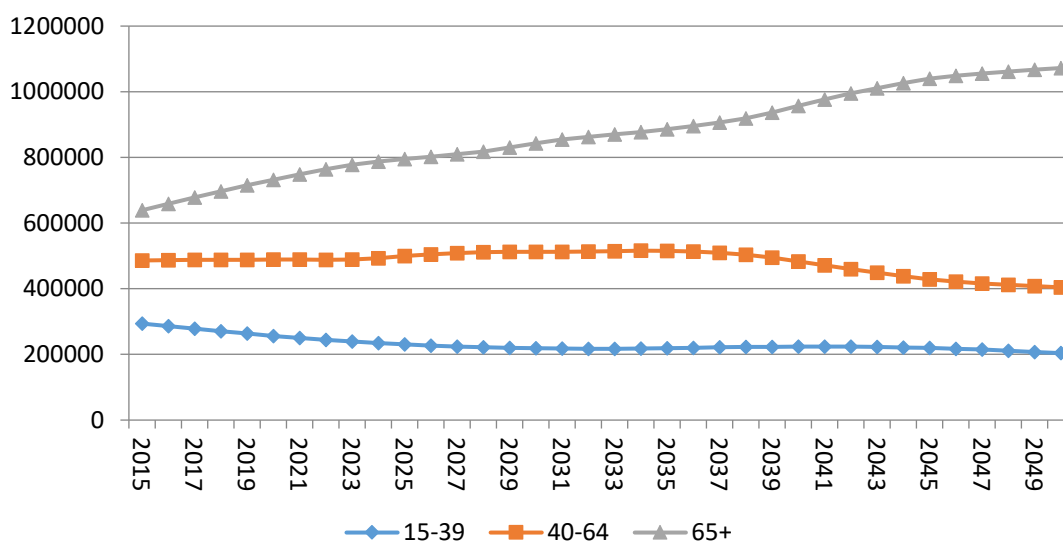

Source: Labour Force Survey 1995-2015

Household projections are based on the basic projection of the population. In the first step we will have a look at the average population for year 2013 according to the basic age groups. For the purposes of this study, the projection of the Czech Statistical Office from 2013 has been chosen (Projekce obyvatelstva do roku 2100, 2013). We will take into account only the middle variation of the projection. It then calculates the formulas described above.

Due to the decrease in the number of people in the younger and middle age, the number of households of individuals will be lower. On the contrary, the growth of households of individuals in age 65 years and more were significantly caused by the process of population aging. For that reason, the number of households of individual will grow for whole reference period 2015-2050. In 2015, the number of household of individuals in age 65 years and more was 639.1 thousands, in 2030 already 843.2 thousands and in 2050 already 1 072.3 thousands. It is necessary to mention that the intensity of creating of individual types of households remains the same in this model. The growth of number and proportion of households of individuals is only given by the process of population aging.

Fig. 1: Projection of households of individuals by age groups in the Czech Republic, 2015–2050

Source: Labour Force Survey 2015, Projekce obyvatelstva do roku 2100.

Conclusion

The growth of households of individuals is a basic trend of demographic changes after 1989. This growth was obvious in all age categories, most intensive in younger age groups. This development is related to process of postponing of entry into a partner household and the birth of the first child. However, the increase was the highest in age group 65+, if we take into account an absolute increase of households of individuals. In 1995, the total number of households of individuals was 670 thousands, in 2016 already 1 384.8 thousand. If we use the gender classification, in younger and middle age groups was higher the number of male households of individuals mainly because of the formation of the male households of individuals after dissolution the two-part family household. In older age groups there was a higher number of female households of individuals (a higher life expectancy and in partnership there are on average the higher age of men in entry to the partnership).

In the second part, the study focused on the household projection to 2050. The headship rate method was used as the application of the macroanalytical approach. The advantage of this method is the possibility of linking to the population projection. Given the aging of the population, the number of households of individuals constantly grew until 2050. This study is based on the unchanged intensity of creating individual types of

households, yet there has been a significant increase in the number of households of individuals.

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Contact

Ondřej Nývlt

University of Economics

Winston Churchill Sq. 1938/4

Prague

ondrej.nyvlt@vse.cz