Private Households in Turkey: Big Changes Ahead

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The average size, number and distribution by size of private households in Turkey are projected based on the official population projection and an extension of the headship rates method. Our results imply the plausibility of a quadrupled number of single-person households along with almost a doubling of the overall number of households in 2000-2025. Appreciating these changes is essential for evaluating housing needs, socio-economic developments and environmental issues in Turkey. Under current consumption patterns, change in households' composition is potentially more important for economic growth prospects than the population growth.

Turkey has a young population structure due to high fertility and growth rates of the recent past. On the other hand, prevailing demographic forces of the population have been changing in new directions. The growth rates of young age groups have been declining as older age groups have been rapidly increasing. Currently 7.2% of the total population (5.3 millions) is in 65 and above ages. It is expected that within 15 years the elderly population will constitute 10% of the total population (8.4 millions) (TSI 2011b). Thus, the changes in age structure of the population, especially increase in the share and size of older population, will have profound implications on families and households in the country.

An ongoing change of household composition in Turkey has been reported based on survey results (Yavuz 2004 and 2005; Canpolat 2008; Koç, Özgöre and Şirin 2010). This kind of rapid increase in the sheer number of households has been attributed to demographic dynamics (Eghbal 2007). Here, we contribute to studying this link by considering effects of population age composition and presenting implications for the dynamics of Turkish households until 2025. Household projections are important for appreciating and studying the socio-economic, environmental and other implications of population dynamics (MacKellar et al. 1995; O'Neill and Chen 2002; Perz 2001; Prskawetz, Jiang and O'Neill 2004). In some areas, such as housing and urban planning, projections of the distribution of households by size are of key importance (Hoque 2008; Jarosz 2008).

The official population projection by Turkish Statistical Institute (TSI)[4] (2011b) is the basis for our study. According to this projection, Turkey's population will increase by 18% in 2008-2025 with a predominant increase of the population at older ages (i.e. 30 years and above). This suggests a fast increase of the number of households together with a decrease in their average size and a significant evolution of household composition (with smaller households gaining in proportion). We undertake a quantitative assessment of these prospects.

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Projecting methodology

Projections for typology of households are often based on a simulation approach involving a number of assumptions regarding the probabilities of various life events such as leaving the parental home, marriage, cohabitation, etc. In many instances, however, including ours, deriving such assumptions would require too much subjective judgement and suffer from problems concerning data availability and consistency with the population projection assumptions. Linke (1983) and Leiwen and O'Neill (2004, 2009) propose an extension of the headship rates method by introducing age- and household size-specific headship rates (membership rates). Such an approach is promising, as it demands less data and fewer model assumptions compared to the micro-simulation approach. In applications like ours, however, there might still not be enough data to parameterise the model and the method may be overcomplicated due to reconciliation procedures and use of volatile parameters with non-trivial correlations between them and with projected fertility levels.

To overcome such problems, Gisser (1986a, 1986b) proposed to derive the distribution of households by size from the overall average household size which, in turn, is derived from the conventional age-specific headship rates (United States National Resources Planning Committee 1938; UN 1973; Kono 1987). This approach has been used in Austrian household projections ever since. One advantage of the approach is that the average household size indirectly reflects demographic developments, such as fertility change and population ageing, even though headship rates might be less sensitive to those developments. Unfortunately, like many other extensions of the headship rates method, the approach may eventually result in inconsistent projections. For example, the sum of the proportions of households of different sizes may deviate from one, and the population totals obtained directly from the age structure or from the distribution of households by size may differ considerably.

Those problems may be resolved and the merits of the approach may be used in a wider context based on models for conditional shares of households among households of the same or larger size (Ediev 2007), which is what we use here. The method was developed within the EU Technical Aid to the Commonwealth of Independent States (TACIS) project "System of current estimation, analysis and forecasting of number and structure of households in the periods between censuses" and is currently being used by statistical agencies in Austria and Russia.

Detailed calculation procedures of the method may be found in Ediev (2007) and also Ediev et al. (2012). Following, we outline the procedures in general.

The method starts, as the common headship rates method, by assessing the institutional population by age applying the age-specific proportions of the institutional population to the projected population by age.

The population in private households by age is obtained, then, as the total population net of the institutional population. Applying the age-specific headship rates to the population in private households by age yields the overall number of households H, their distribution by the age of the head and the average household size n.

Once the average size of private households is obtained, the *alfa*-model (Ediev 2007; Appendix 1) is applied iteratively to calculate number of households of size k from the number and average size of household with k or more members.

All in all, the method uses the projected population by age, proportions of the institutional population and headship rates as inputs and produces projected institutional population, population in private households and numbers of households of different sizes as outputs.

Results

Even assuming no future change in headship prevalence in Turkey, we come up with an almost quadrupled number of single-person households and a more than halved proportion of households with six or more members in 2000-2025. These prospects of household dynamics are astonishing as such and also when comparing them to the population increase of 'merely' 23% in 2000-2025 projected by TSI.

There are considerable differences between the conservative baseline and modernisation scenarios. In particular, the modernisation scenario indicates 20% more single-person households as compared to the conservative scenario. Yet, those differences are small as compared to the projected quantitative and structural change of Turkish households. Spectacular growth and grand redesign of households in Turkey seems to be close to certain.

The baseline and modernisation scenarios differ considerably in terms of the distribution of the population by types of household. The former scenario implies that large (6+) households will be the second most prevalent form in terms of the share of the total population (though their share in the total population drops from 43% in 2000 to 20% in 2025). The modernisation scenario yields dominant shares of population residing in four-person households (28%) followed by three- and five-person households (19% and 17%) by 2025. Altogether, more than one third the household population belongs to households of three or less persons in 2025 (as compared to 19% in 2000).

Further details:

Ediev D. M., Yavuz S., Yüceşahin M.M. 2012. Private Households in Turkey: Big Changes Ahead. *Population Review* 51(1): 28-50.

Ediev, D. M. (2007). "On Projecting the Distribution of Private Households by Size." *Working Paper 04/2007*. Vienna Institute of Demography of the Austrian Academy of Sciences. [http://www.oeaw.ac.at/vid/download/WP2007_04.pdf, accessed August 5, 2011].

Estimated (2000 and before) and projected (2008-2025) distribution of households in Turkey by size. Baseline scenario