

## Population ageing, cohort effects and personal consumption expenditure

Topic: Demographic Shifts and Economic Modelling

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### Overview

Most developed economies are undergoing a deep transformation in their population structure with both an ageing process and a reduction of size. These changes influence, among others, the aggregate demand for goods and services, the amount of labour available for production and the circumstances under which that labour will be offered, and the public expenditures, raising the expenses for health care and pensions, while reducing the tax bases. This paper focuses on the impact of this demographic shift on personal consumption by expenditure categories using a demand system built in a multisectoral input-output model. The changing age structure is likely to affect both the level and the composition of personal consumption shifting consumer spending away from durable and non-durable goods to services. However, population aging does not imply that individuals at the same age but in different generations should behave similarly. There is a growing literature investigating how specific challenges and experiences people face in their daily lives can have a lasting influence on consumption behaviour. This experience-based learning give rise to heterogeneity in behaviour across generations because there are persistent effects through the lifetime of individuals (Malmendier and Shen, 2018). Therefore, it could be misleading to attribute the elderly current level of personal consumption to future generations: when the Millennial cohorts, which reached adulthood after 2000, will get 60 years old, their consumption choices will be determined by a set of experiences, norms and technologies largely different from their parents and grandparents. Moreover, growing inequalities in several dimensions – health, education, employment – interact and accumulate with age. The change in age structure combined with these trends results in ageing unequally (OECD, 2017).

### Methods and data

Our modelling approach includes estimated age and cohort effects in a demand system of a long-term structural model. This demand system is based on the approach designed by Almon (1998) and uses both time-series and cross-section data (Bardazzi and Barnabani, 2001). In this paper, we estimate the pure age and cohort effects on sectoral consumption and include these effects in the demand system. This approach is novel because it encompasses not only the issue household disaggregation by age as in Kim, Kratena and Hewings (2015) but also the generational heterogeneity which persists across different ages. This source of heterogeneity matters in long-term economic modelling.

The upgraded demand system is designed to be included in an INFORUM input-output econometric model of the Italian economy based on national accounts published by the Italian Statistical Office and microdata of the annual Household Budget Surveys for the period 1997-2017.

### References

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