

Life Cycle Consumption of Food: Evidence from French Data

Gayaneh Kyureghian

Louis-Georges Soler

Institut National de la Recherche Agronomique, ALISS, INRA

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Setup

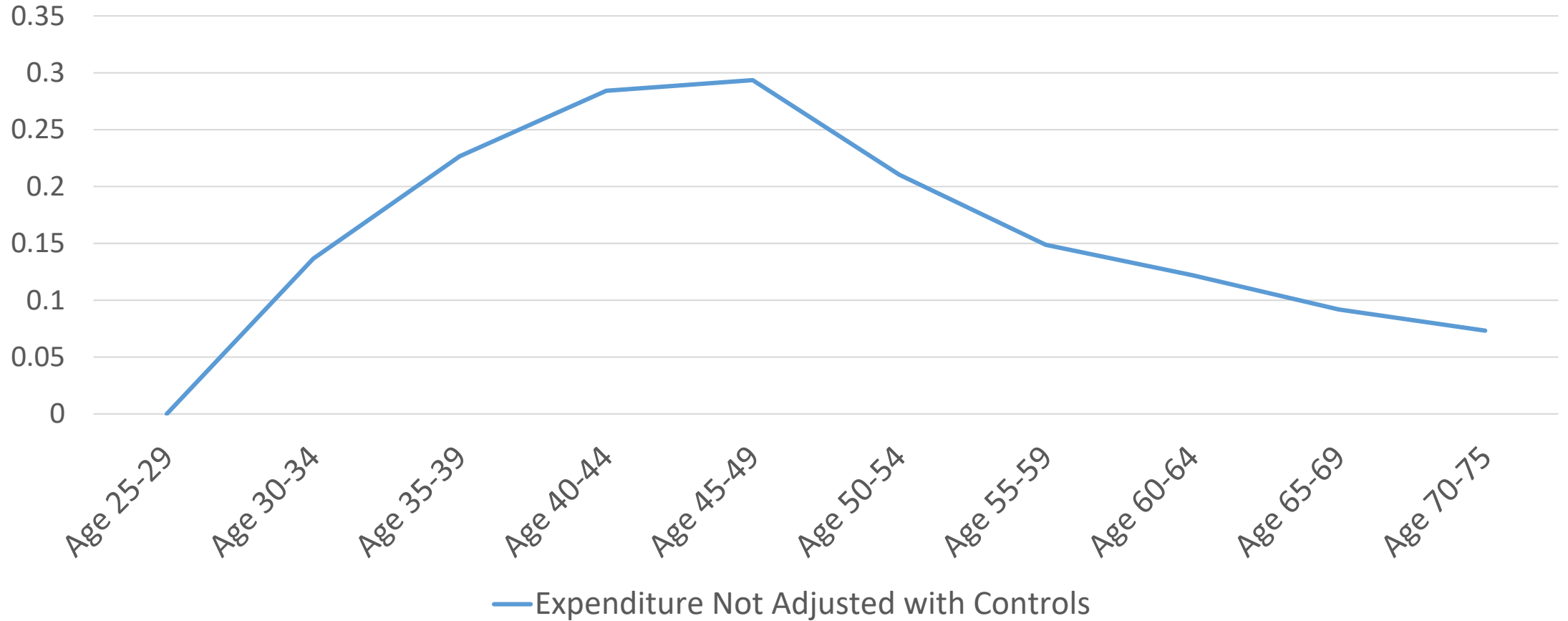
- Aging is a global trend.
- The United Nation projections indicate a rise in the number of individuals age 60 and over from 245 million in 2005 to 406 million in 2050.
- Over the next few decades, the share of the French population aged 65 and older will increase steadily, to reach about 25% in 2030 and nearly 30% in 2050.
- Aging of population may have profound impact on food demand and its composition.

Setup

The effect of aging on consumption is confounded by myriad of other changes:

- changes in household composition (becoming empty nests demanding less food)
- physical and mental health (demanding specific foods or food attributes)
- availability of monetary resources (decrease of both absolute income and the disposable income for food due to predictable (retirement) and unpredictable income shocks)
- availability of other resources – time.

Grocery Food Expenditures in France



Home Production Theory

But, these are the expenditures, not physical quantities – what happens to quantities as households age?

In Beckerian home production theory (Becker 1965), households engage in home meal production using inputs of time and market goods to produce home meals.

Throughout life cycles the relative availability of these inputs changes – opportunity cost of time.

Empirical Setup

In every period, in order to maintain consumption level C , households make consumption decision by minimizing the cost of meals

$$\min_{Q,s,h} p(s, S)q + \mu(s + h) \quad (1)$$

subject to the home technology possibilities of converting market goods to meals:

$$f(h, Q) = (\varphi h^\rho + Q^\rho)^{\frac{1}{\rho}} = C$$

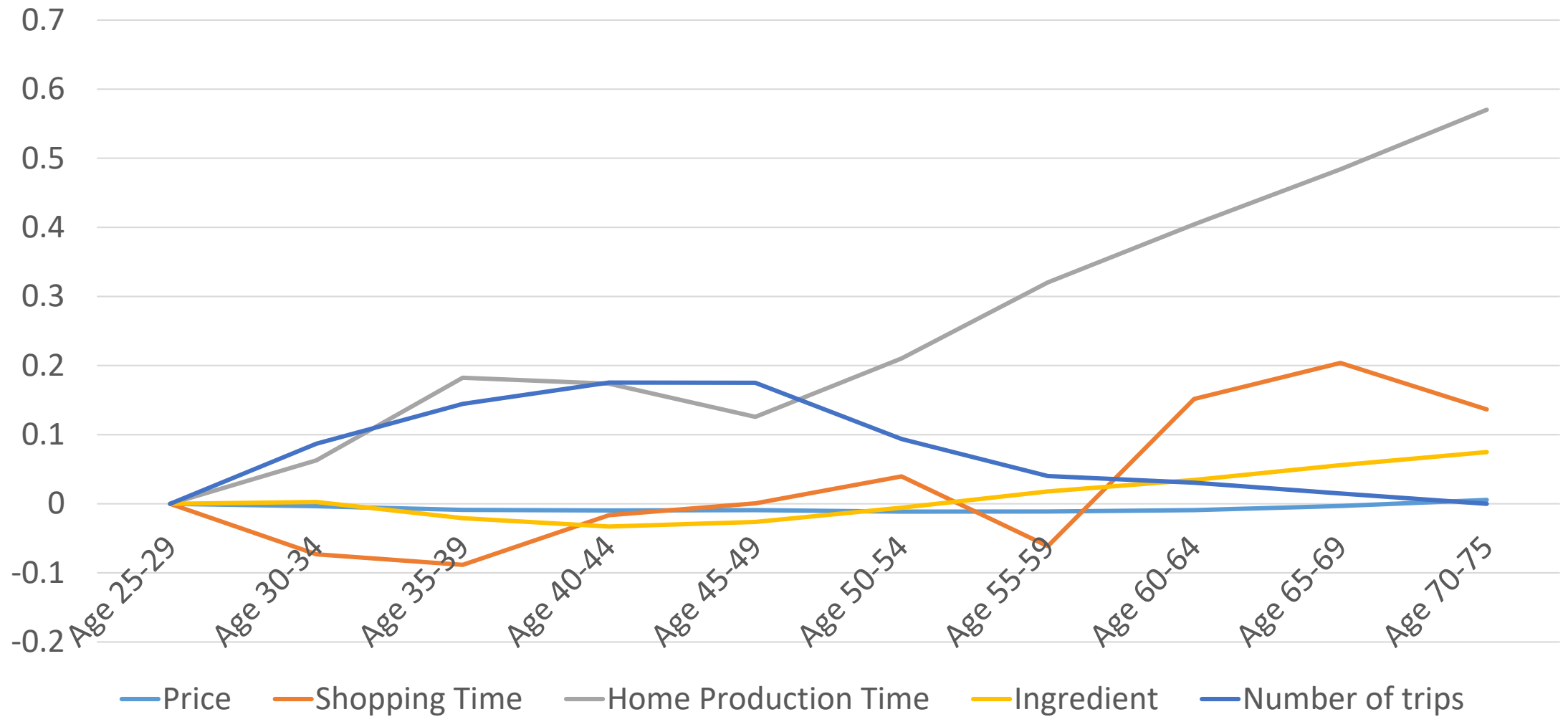
where s is time spent in search and shopping, h is time spent in home production, S is the shopping needs and μ is the opportunity cost of time.

Data

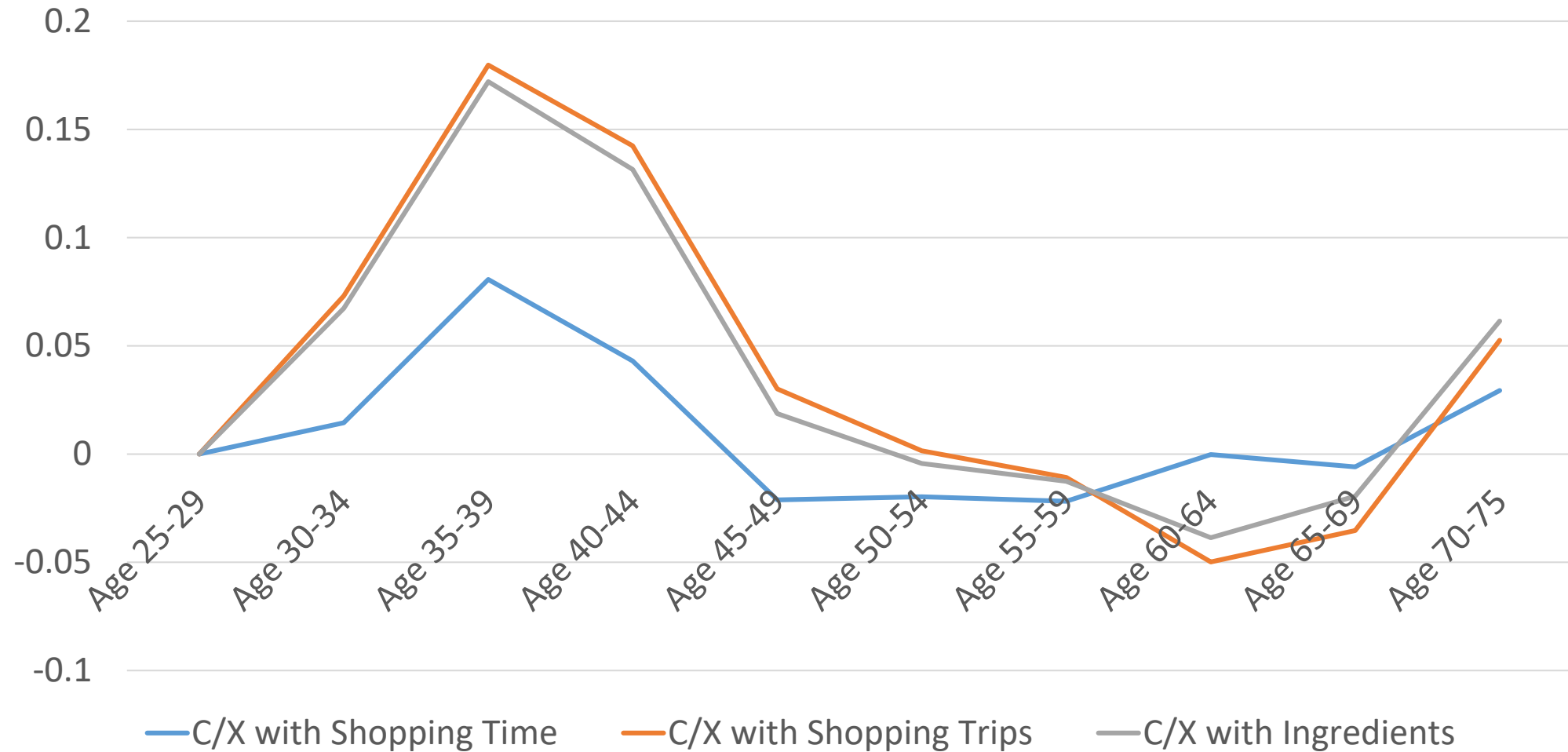
The purchase data are obtained from Kantar homescan panel from 2002 to 2013.

Time use data come from the Time Use and Decision-making within Couples Survey (Enquête Emploi du Temps et Décisions dans les Couples) in France for 1998-99 and 2009-10.

Food Prices and Shopping Intensity over Life Cycle: Log Deviation from 25-29 year-olds.



Ratio of Consumption to Expenditures: Log Deviations from 25-29 year-olds.



Concluding Remarks

Households do pay lower prices if shopping more intensively (shopping more frequently or spend more time shopping), but there is no evidence that older households shop more intensively.

Older households purchase increasingly more ingredient foods and spend more time in home production.

There is little change in quantities consumed over life cycle.