Journal of Economic Behavior & Organization 106 (2014) 254–268

Contents lists available at ScienceDirect

Journal of Economic Behavior & Organization

journal homepage: www.elsevier.com/locate/jebo

Consumption–savings decisions under upward-looking comparisons☆

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ARTICLE INFO

Article history:
Received 6 December 2013
Received in revised form 26 June 2014
Accepted 9 July 2014
Available online 23 July 2014

JEL classification:
D12
D11
D91
E21
C23

Keywords:
Household consumption
Household savings
Interdependent preferences
Reference consumption
Relative income hypothesis
Income inequality

ABSTRACT

We demonstrate that upward-looking comparisons induce "keeping up with the *richer* Joneses"-behaviour. Using data from the German Socio-Economic Panel, we estimate the effect of reference consumption, defined as the consumption level of all households who are perceived to be richer, on household consumption. When controlling for own income as well as unobserved individual and local area heterogeneity, a 1% increase in reference consumption leads households to raise own consumption by about 0.3%. At the mean values of own and reference consumption this implies that a 100 euro increase in reference consumption leads to an increase in own consumption of approximately 18 euros. Our findings establish an important microeconomic link between changing income inequality and aggregate consumption.

1. Introduction

This paper addresses the question as to whether interpersonal comparisons affect households' consumption–savings decisions. The literature on self-reported well-being and happiness leaves little doubt that positional concerns do affect people's utility. That is, people's utility functions not only depend on absolute consumption but also on relative consumption. Most prominently, Luttmer (2005) shows that, after controlling for own income, higher local average earnings lead to lower

☆ We thank Daniel Kienzler, Johannes Pfeifer, Thomas Theobald, Till van Treeck and two anonymous reviewers for their helpful comments and suggestions. We also thank Martin Adler and Gerd Ronning for helpful comments on an earlier draft of this paper.

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http://dx.doi.org/10.1016/j.jebo.2014.07.006
0167-2681/

levels of self-reported happiness for U.S. households.[1] However, little is known about the extent to which these consumption externalities actually influence the consumption–savings decisions of households.[2]

Such behaviour would bear important implications for research on the relationship between income inequality and macroeconomic stability, which has attracted attention in the aftermath of the recent financial and economic crisis. This has led many economists to assert that rising income inequality might have been a central root-cause for the crisis. Among others, Rajan (2010) argues that, as consumption of rich households increases with rising income inequality, low and middle class households reduce their savings despite of the rather poor evolution of their own income. Rising income inequality at the top of the distribution could thus trigger expenditure cascades.[3] A central behavioural assumption underlying this line of argument is the presence of *upward-looking* interpersonal comparisons, i.e. households compare their levels of consumption to those of *richer* households and develop higher consumption needs. Throughout this analysis we refer to this behaviour as "keeping up with the *richer* Joneses" (KURJ-behaviour).

Using household panel data from the German Socio-Economic Panel (SOEP), we present evidence that households raise consumption expenditures if the consumption level of households that are perceived to be richer increases.

Assuming upward-looking comparisons, we define a household's reference group to include all households that belong to a consumption decile above the household's own consumption decile. Thereby, we use the consumption distribution as an approximation of the perceived income distribution since households cannot directly observe other households' incomes but may recognize changes in the consumption level of others. We find that reference consumption, defined as the mean consumption of all households in the reference group, positively affects household consumption. A 1% increase in reference consumption induces an increase in own consumption by about 0.3%. A 100 euro increase in reference consumption increases own consumption at the mean by approximately 18 euros. Depending on the household's position in the income distribution, the effect amounts to up to 35 euros.

This paper builds on previous studies that have empirically analysed the economic consequences of positional concerns. Despite the insights from well-being research, there has been little evidence for the impact of relative concerns on the actual economic behaviour of agents.[4] Valuable recent contributions that are most closely related to our analysis include Ravina (2011), Alvarez-Cuadrado et al. (2012), Alvarez-Cuadrado and El-Attar Vilalta (2012) as well as Bertrand and Morse (2013).

Alvarez-Cuadrado and El-Attar Vilalta (2012) use the U.S. Panel Study of Income Dynamics and explain household saving rates with different measures of inequality and average state income, i.e. they assume outward-looking comparisons. They find a robust negative effect of inequality on aggregate household savings. Besides this, they find that increases in upward-looking reference income, i.e. the mean income of all quintiles above the household's own income quintile, induce lower levels of household savings when controlling for changes in own income. Ravina (2011) and Alvarez-Cuadrado et al. (2012) estimate Euler-equations derived from a utility function that features both internal and external habits. Both show that regional average expenditures influence the growth rate of consumption. Bertrand and Morse (2013) present evidence for expenditure cascades using U.S. micro data from the Consumer Expenditure Survey: Based on state–year variation, the authors find a positive correlation between the expenditures of middle class households and households in the top income quintile.

Our analysis contributes to the literature in three ways. First, we estimate the effect of reference consumption on households' consumption–savings decisions using German household data from the German Socio-Economic Panel (SOEP). Our model reliably identifies the coefficient on reference consumption for several reasons: The panel structure of the SOEP allows us to control for unobserved individual fixed effects. In addition, we do not define reference groups solely along demographic characteristics. This prevents our results from being driven by unobserved peer effects. Finally, as our empirical strategy does not rely on regional variation in reference consumption, we are able to eliminate unobserved local area characteristics. Our results prove to be robust to changes in specification.

Second, we take into account the fact that comparisons are directed upwards which allows us to assess whether inequality changes can cause expenditure cascades. By examining multiple alternative definitions of a household's reference group, we are able to test this important assumption and draw a number of other conclusions with regard to the appropriate definition of reference group: (i) Comparisons are indeed directed upwards. When including households who are perceived to be poorer in the reference group, the effect of reference consumption becomes insignificant. (ii) The effect of reference consumption is strongest when the reference group is not restricted to a certain area or social peer-group. (iii) The effect of

[1] Other studies that examine interpersonal comparisons and the relationship between relative standing and well-being include for example Veenhoven (1991), Diener et al. (1993), Van de Stadt et al. (1985), Kapteyn et al. (1997), Clark (1996), McBride (2001), Ferrer-i-Carbonell (2005) and Dynan and Ravina (2007). See Frey and Stutzer (2002) or Luttmer (2005) for a more detailed discussion of this literature.

[2] The idea that a household's consumption–savings decision is determined by changes in its position in the income distribution was first introduced by Duesenberry (1949) as the Relative Income Hypothesis (RIH). See Van Treeck (2014) for a detailed discussion of the literature on the macroeconomic impact of inequality and the reemergence of the RIH.

[3] Rajan (2010) concludes that rising consumption needs of low and middle class U.S. households were eventually financed through the expansion of loans rather than incomes. This unsustainable credit-driven consumption brought about drastic economic consequences. Other prominent contributions that stress the macroeconomic risks of inequality comprise Stiglitz (2009), Galbraith (2012), Kumhof et al. (2012) and Al-Hussami et al. (2012).

[4] The research by Robert Frank is the most prominent exception. He has been arguing for economic effects of interdependent preferences for decades. See for example Frank (1984), Frank (1985), Frank (1999) or Frank (2007).