

Heterogeneity of the Marginal Propensity to Consume (MPC): Evidence from Germany

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Motivation

- ▶ Impact of targeted transfers, helicopter drops, or balanced budget redistributive fiscal policy?
- ► MPC heterogeneous in income / wealth position? Mixed evidence so far. MPC higher for richer HH (Hayo and Uhl, 2014) vs. MPC lower for richer HH (Jappelli and Pistaferri, 2014)

Research Question

- ▶ Do MPCs significantly fall with cash-on-hand (current income + liquid net wealth)?
- ▶ If so, what theoretical channels might explain this fact?

Contribution of the Paper

- ► Exploit specific question in German SOEP 2010 that can be used to calculate individual MPC to unexpected, transitory income shock
- ► Estimate dependency of MPC on cash-on-hand position and further controls
- Discriminate between competing explanations

Theory – Why should MPCs to Income Shocks > 0?

- ightharpoonup Permanent Income Hypothesis (Friedman, 1957) ightharpoonup MPC close to 0
- ► Credit constraints (Deaton, 1991)
- Downpayment on durable goods
- Precautionary saving / prudence (Kimball, 1990)
- ► Imperfect intertemporal optimization / fundamental uncertainty

Theory – Why should MPCs be Heterogeneous in Cash-On-Hand?

- ► Heterogeneous severity of credit constraints
- ► Heterogeneous precautionary motive, decreasing in cash-on-hand
- ▶ Basic needs, saving as luxury good (Carroll, 1998)
- ► Heterogeneous planning horizon

Descriptive Statistics

Figure: Histogram of MPC answer

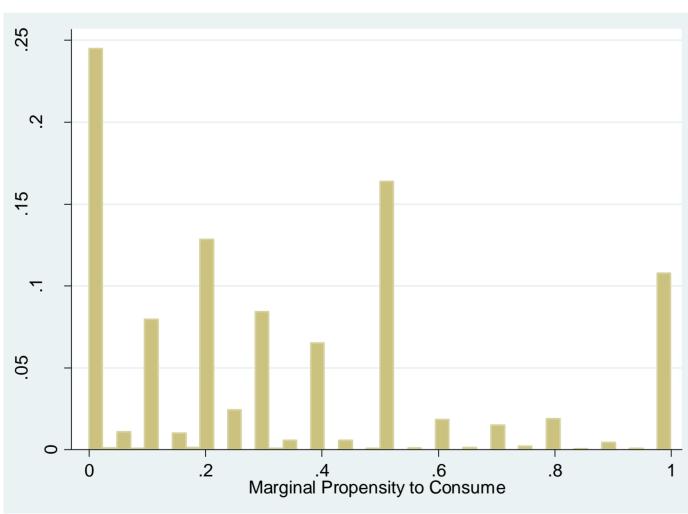
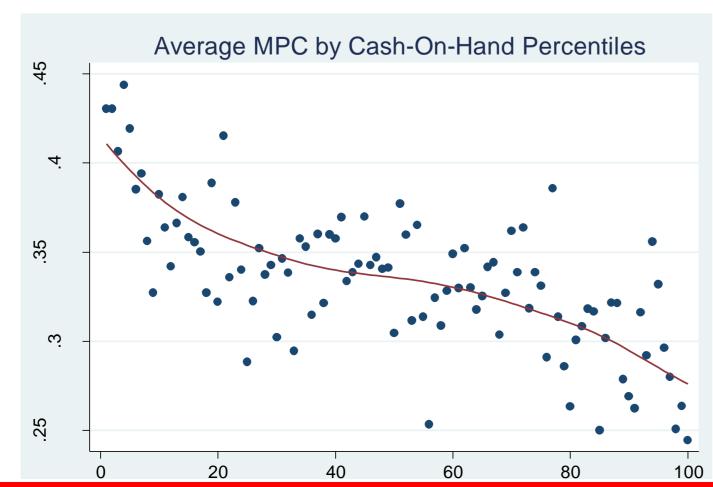


Figure: Scatter MPC and Cash-on-Hand Percentiles



Preliminary Findings

- ▶ MPC on average about 0.34
- ightharpoonup Poor agents have significantly higher MPC than rich ones (around +0.20lowest to highest quintile)
- ▶ Precautionary saving and credit constraints can only partly explain variation → Saving as a luxury good? Planning horizon?
- ► Targeted public transfers to poor individuals more efficient
- \triangleright Balanced budget redistribution \rightarrow AD \uparrow , but effect is not too strong and only partial equilibrium

Dataset

- ► Cash-on-Hand:
 - current income (SOEP 2010, HH level, equivalized)
 - ► + net financial wealth (SOEP '07, '12 (individual data cumulated to HH level, equivalized)
- Demographics (individual data of breadwinner)
- ► MPC? Answer to specific SOEP 2010 question (breadwinner)

#122 of individual question form

"Imagine that you unexpectedly received a gift of 10,000 euros. How would you use this money? How much would you save, how much would you give away, and how much would you spend?"

Two-Limit Tobit Regression

$$mpc_i = \alpha + cohq_i\beta + Z_i\gamma + \varepsilon_i \tag{1}$$

- cohqi vector of cash-on-hand quintile dummies
- \triangleright Z_i vector of control variables

Regression Results

Table: Tobit Regression, Dep. Var.: MPCi

	base07	base12	mpc eq 0.5	mpc eq 0, 1	credit prud
cohql	.20245***	.19220***	.25081***	.04989***	.16476***
cohqll	.12553***	.10760***	.15633***	.02572***	.10624***
cohqIII	.10417***	.08732***	.12662***	.02336***	.09040***
cohqIV	.07661***	.06472***	.09408***	0.00165	.06862***
age18-30	.08228***	.06493***	.12129***	02642**	.07212***
age31-45	.08778***	.08894***	.11367***	0.0034	.06927***
age46-60	.05728***	.05059***	.07227***	0.00226	.03976**
male	.04368***	.04444***	.04853***	.02917***	.04401***
married	0.0104	0.01624	0.01027	0.0061	0.0036
edutime	.00498**	.00468**	.00674**	-0.0003	.0045**
east	02272*	02672*	-0.0206	01668***	02318*
unempl	-0.00794	0.0027	-0.0054	-0.0067	-0.0196
hown	.06244***	.05624***	.07437***	.02624***	.04428***
posdebt					.06371***
fear1					.05999***
fear2					.03710***
const	0.01756	0.03183	-0.11551***	.31991***	0.01098
N	8250	7211	6898	5082	8229

Results are also robust to...

- Cohort age<60 (rule out likely dis-savers)</p>
- ightharpoonup Split wealth + income \rightarrow wealth dominates
- Cohort debt=0 (rule out mis-understanding debt repay = spending)

Open Questions / Caveats

- ightharpoonup Time horizon that respondents have in mind? ightharpoonup Planning horizon?
- ightharpoonup Size of the shock? ightharpoonup Better: proportional to income?
- ▶ 2010 special year? External validity?
- \triangleright Symmetric reaction to income gain / loss? \rightarrow excessive loss aversion?