Table 1 Empirical Estimates of the Marginal Propensity to Consume (MPC) out of Transitory Income

Authors	Consumption Measure				Event/Sample
	Nondurables	Durables	Total PCE	Horizon*	
Agarwal and Qian (2014)			0.90	10 Months	Growth Dividend Program Singapore 2011
Blundell, Pistaferri, and Preston (2008)‡	0.05				Estimation Sample: 1980–92
Browning and Collado (2001)			∼ 0		Spanish ECPF Data, 1985–95
Coronado, Lupton, and Sheiner (2005)			0.36	1 Year	2003 Tax Cut
Hausman (2012)			0.6–0.75	1 Year	1936 Veterans' Bonus
Hsieh (2003)‡	∼ 0		0.6–0.75		CEX, 1980–2001
Jappelli and Pistaferri (2014)	0.48				Italy, 2010
Johnson, Parker, and Souleles (2009)	∼ 0.25			3 Months	2003 Child Tax Credit
Lusardi (1996)‡	0.2–0.5				Estimation Sample: 1980–87
Parker (1999)	0.2			3 Months	Estimation Sample: 1980–93
Parker, Souleles, Johnson, and McClelland (2013)	0.12–0.30		0.50–0.90	3 Months	2008 Economic Stimulus
Sahm, Shapiro, and Slemrod (2010)			∼ 1/3	1 Year	2008 Economic Stimulus
Shapiro and Slemrod (2009)			∼ 1/3	1 Year	2008 Economic Stimulus
Souleles (1999)	0.045–0.09	0.29–0.54	0.34–0.64	3 Months	Estimation Sample: 1980–91
Souleles (2002)	0.6–0.9			1 Year	The Reagan Tax Cuts of the Early 1980s

Notes: *: The horizon for which consumption response is calculated is 3 months or 1 year. The papers which estimate consumption response over the horizon of 3 months typically suggest that the response thereafter is only modest, so that the implied cumulative MPC over the full year is not much higher than over the first three months. ‡: elasticity. Broda and Parker (2014) report the five-month cumulative MPC of 0.0836–0.1724 for the consumption goods in their dataset. However, the Homescan/NCP data they use only covers a subset of total PCE, in particular grocery and items bought in supercenters and warehouse clubs. We do not include the studies of the 2001 tax rebates, because our interpretation of that event is that it reflected a permanent tax cut that was not perceived by many households until the tax rebate checks were received. While several studies have examined this episode, e.g., Shapiro and Slemrod (2003), Johnson, Parker, and Souleles (2006), Agarwal, Liu, and Souleles (2007) and Misra and Surico (2011), in the absence of evidence about the extent to which the rebates were perceived as news about a permanent versus a transitory tax cut, any value of the MPC between zero and one could be justified as a plausible interpretation of the implication of a reasonable version of economic theory (that accounts for delays in perception of the kind that undoubtedly occur).

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Table 2 Parameter Values and Steady State

Description	Parameter	Value	Source
Representative agent model			
Time discount factor	β	0.99	JEDC (2010)
Coef of relative risk aversion	ρ	1	JEDC (2010)
Capital share	α	0.36	JEDC (2010)
Depreciation rate	δ	0.025	JEDC (2010)
Time worked per employee	ℓ	1/0.9	JEDC (2010)
Steady state			
Capital/(quarterly) output ratio	$\boldsymbol{K/Y}$	10.26	JEDC (2010)
Effective interest rate	$\mathsf{r} - \delta$	0.01	JEDC (2010)
Wage rate	W	2.37	JEDC (2010)
Heterogenous agents models			
Unempl insurance payment	μ	0.15	JEDC (2010)
Probability of death	D	0.00625	Yields 40-year working life
FBS income shocks			
Variance of log $\theta_{t,i}$	σ^2_θ	0.010×4	Carroll (1992), Carroll et al. (2013)
Variance of log $\psi_{t,i}$	σ^2_ψ	$0.010 \times 4/11$	Carroll (1992), DeBacker et al. (2013), Carroll et al. (2013)
Unemployment rate	u	0.07	Mean in JEDC (2010)
Variance of log Ξ_t	σ^2_Ξ	0.00001	Authors' calculations
Variance of log Ψ_t	σ^2_Ψ	0.00004	Authors' calculations
KS income shocks			
Aggregate shock to productivity	$\triangle^a$	0.01	Krusell and Smith (1998)
Unemployment (good state)	u^g	0.04	Krusell and Smith (1998)
Unemployment (bad state)	u^b	0.10	Krusell and Smith (1998)
Aggregate transition probability		0.125	Krusell and Smith (1998)

Notes: The models are calibrated at the quarterly frequency, and the steady state values are calculated on a quarterly basis.

Table 3 Average (Aggregate) Marginal Propensity to Consume in Annual Terms

Model / Wealth Measure	Krusell–Smith (KS) Aggregate Process					Friedman/Buffer Stock (FBS) Aggregate Process	
	KS-JEDC Our Solution	KS-Hetero Our Solution	β-Point Net Worth	β-Dist Net Worth	β-Dist Liquid Financial and Retirement Assets	β-Dist Net Worth	β-Dist Liquid Financial and Retirement Assets
Overall average	0.05	0.09	0.1	0.23	0.43	0.21	0.42
By wealth/permanent income ratio							
Top 1%	0.04	0.04	0.07	0.05	0.12	0.06	0.12
Top 10%	0.04	0.04	0.07	0.06	0.12	0.06	0.12
Top 20%	0.04	0.04	0.07	0.06	0.13	0.06	0.13
Top 40%	0.04	0.05	0.07	0.08	0.2	0.07	0.17
Top 50%	0.05	0.05	0.07	0.09	0.23	0.07	0.22
Top 60%	0.04	0.06	0.07	0.12	0.28	0.09	0.24
Bottom 50%	0.05	0.13	0.13	0.35	0.59	0.33	0.58
By income							
Top 1%	0.05	0.04	0.08	0.14	0.17	0.18	0.36
Top 10%	0.05	0.04	0.08	0.16	0.27	0.18	0.36
Top 20%	0.05	0.04	0.09	0.17	0.31	0.18	0.37
Top 40%	0.05	0.05	0.1	0.19	0.34	0.2	0.38
Top 50%	0.05	0.05	0.11	0.19	0.35	0.2	0.39
Top 60%	0.05	0.06	0.1	0.2	0.37	0.21	0.39
Bottom 50%	0.05	0.13	0.09	0.27	0.5	0.22	0.45
By employment status							
Employed	0.05	0.09	0.09	0.2	0.39	0.19	0.39
Unemployed	0.06	0.18	0.22	0.54	0.8	0.42	0.73
Time preference parameters[‡]							
$\grave{\beta}$			0.9899	0.9849	0.9573	0.9876	0.9636
∇				0.0094	0.0206	0.0060	0.0133

Notes: Annual MPC is calculated by $1 - (1-\text{quarterly MPC})^4$. ‡: Discount factors are uniformly distributed over the interval $[\grave{\beta} - \nabla, \grave{\beta} + \nabla]$.

Table 4 Proportion of Wealth Held by Percentile (in Percent)

	Net Worth	Liquid Financial and Retirement Assets
Top 1%	33.9	34.6
Top 10%	69.7	75.3
Top 20%	82.9	88.3
Top 40%	94.7	97.5
Top 60%	99.0	99.6
Top 80%	100.2	100.0

Notes: The data source is the 2004 Survey of Consumer Finances.

References

AGARWAL, SUMIT, CHUNLIN LIU, AND NICHOLAS S. SOULELES (2007): "The Reaction of Consumer Spending and Debt to Tax Rebates–Evidence from Consumer Credit Data," *Journal of Political Economy*, 115(6), 986–1019.

AGARWAL, SUMIT, AND WENLAN QIAN (2014): "Consumption and Debt Response to Unanticipated Income Shocks: Evidence from a Natural Experiment in Singapore," *American Economic Review*, 104(12), 4205–4230.

BLUNDELL, RICHARD, LUIGI PISTAFERRI, AND IAN PRESTON (2008): "Consumption Inequality and Partial Insurance," *American Economic Review*, 98(5), 1887–1921.

BRODA, CHRISTIAN, AND JONATHAN A. PARKER (2014): "The Economic Stimulus Payments of 2008 and the Aggregate Demand for Consumption," *Journal of Monetary Economics*, 68, S20–S36.

BROWNING, MARTIN, AND M. DOLORES COLLADO (2001): "The Response of Expenditures to Anticipated Income Changes: Panel Data Estimates," *American Economic Review*, 91(3), 681–692.

CARROLL, CHRISTOPHER D. (1992): "The Buffer-Stock Theory of Saving: Some Macroeconomic Evidence," *Brookings Papers on Economic Activity*, 1992(2), 61–156, http://econ.jhu.edu/people/ccarroll/BufferStockBPEA.pdf.

CORONADO, JULIA LYNN, JOSEPH P. LUPTON, AND LOUISE M. SHEINER (2005): "The Household Spending Response to the 2003 Tax Cut: Evidence from Survey Data," FEDS discussion paper 32, Federal Reserve Board.

HAUSMAN, JOSHUA K. (2012): "Fiscal Policy and Economic Recovery: The Case of the 1936 Veterans' Bonus," mimeo, University of California, Berkeley.

HSIEH, CHANG-TAI (2003): "Do Consumers React to Anticipated Income Changes? Evidence from the Alaska Permanent Fund," *American Economic Review*, 99, 397–405.

JAPPELLI, TULLIO, AND LUIGI PISTAFERRI (2014): "Fiscal Policy and MPC Heterogeneity," *AEJ: Marcoeconomics*, 6(4), 107–36.

JOHNSON, DAVID S., JONATHAN A. PARKER, AND NICHOLAS S. SOULELES (2006): "Household Expenditure and the Income Tax Rebates of 2001," *American Economic Review*, 96(5), 1589–1610.

——— (2009): "The Response of Consumer Spending to Rebates During an Expansion: Evidence from the 2003 Child Tax Credit," working paper, The Wharton School.

KRUSELL, PER, AND ANTHONY A. SMITH (1998): "Income and Wealth Heterogeneity in the Macroeconomy," *Journal of Political Economy*, 106(5), 867–896.

LUSARDI, ANNAMARIA (1996): "Permanent Income, Current Income, and Consumption: Evidence from Two Panel Data Sets," *Journal of Business and Economic Statistics*, 14(1), 81–90.

MISRA, KANISHA, AND PAOLO SURICO (2011): "Heterogeneous Responses and Aggregate Impact of the 2001 Income Tax Rebates," discussion paper 8306, CEPR.

PARKER, JONATHAN (1999): "The Reaction of Household Consumption to Predictable Changes in Social Security Taxes," *American Economic Review*, Vol 89(4), 959–73.

PARKER, JONATHAN A., NICHOLAS S. SOULELES, DAVID S. JOHNSON, AND ROBERT MCCLELLAND (2013): "Consumer Spending and the Economic Stimulus Payments of 2008," *American Economic Review*, 103(6), 2530–2553.

SAHM, CLAUDIA R., MATTHEW D. SHAPIRO, AND JOEL B. SLEMROD (2010): "Household Response to the 2008 Tax Rebate: Survey Evidence and Aggregate Implications," *Tax Policy and the Economy*, 24, 69–110.

SHAPIRO, MATTHEW D., AND JOEL SLEMROD (2003): "Consumer Response to Tax Rebates," *American Economic Review*, 93(1), 381–396.

——— (2009): "Did the 2008 Tax Rebates Stimulate Spending?," *American Economic Review*, 99(2), 374–79.

SOULELES, NICHOLAS S. (1999): "The Response of Household Consumption to Income Tax Refunds," *American Economic Review*, 89(4), 947–958.

——— (2002): "Consumer Response to the Reagan Tax Cuts," *Journal of Public Economics*, 85, 99–120.