

TRICKLE-DOWN CONSUMPTION

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Discussion: Jan Zilinsky

This paper

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- What drove the rising consumption of the middle class from 1980 to 2008?
- Alternative question: why did the saving rate fall so much?
- Did the non-rich follow the top earners in consumption?

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- There is evidence of consumption cascades
- When the top 20% (10%) consume more, the middle 60% follow
- Evidence of **social comparisons** is stronger than competing explanations

- “Middle income households consume a larger share of their current income when exposed to higher upper income and consumption”
- Exposure is measured at the state level.
- Income of the 90P in a state increases up by 10 percent
⇒ Middle income households consumer 2.2% more
- Time trends, state effects, household observables controlled for.

- Systematic association of LOCAL inequality with a change in observed consumption of the median household.
- Possible explanations (3+3)
 - ① Permanent income expectations adjustment
 - ② Precautionary saving motives removed by the boom
 - ③ Wealth effects (housing)
 - ④ Biased expectations
 - ⑤ Sticky consumption
 - ⑥ Social comparisons

3 are traditional, 3 are behavioral

Main specification:

$$\begin{aligned} \text{Log}(\text{Consumption})_{ist} &= \text{Log}(\text{Consumption of Rich})_{st} + \text{Household controls}_{ist} \\ &+ \text{Household Income dummies}_{ist} + \text{State}_s + \text{Year}_t + \varepsilon_{ist}, \end{aligned}$$

Another approach to address measurement problems (see Aguiar and Bilis, 2012)

$$\begin{aligned} \text{Log}(\text{Consumption})_{ist} &= \text{Log}(80^{\text{th}} \text{Percentile Income})_{st} + \text{Household controls}_{ist} \\ &+ \text{Household Income dummies}_{ist} + \text{State}_s + \text{Year}_t + \varepsilon_{ist}, \end{aligned} \tag{2}$$

The middle tracks consumption of the rich

<i>Dependent Variable:</i>				
Sample:	All		<i>Log(Consumption)</i> Middle Income	
Log(ConsumptionofRich)	0.182		0.215	
	[0.036]**		[0.036]**	
Log(ConsumptionofVeryRich)		0.073		0.100
		[0.026]**		[0.025]**
State and Year F.E.s	Yes	Yes	Yes	Yes
Household income F.E.s	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Observations	78739	78161	60152	59720
R-squared	0.62	0.62	0.45	0.45

Non-rich track income of the rich

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Sample:	All		Middle Income		Low Income	
Log(80thPercentileIncome)	0.234		0.279		0.112	
	[0.112]*		[0.110]*		[0.139]	
Log(90thPercentileIncome)		0.184		0.226		0.078
		[0.093]		[0.096]*		[0.108]
Log(20thPercentileIncome)						
State and Year F.E.s	Yes	Yes	Yes	Yes	Yes	Yes
Household income F.E.s	Yes	Yes	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78739	78739	60152	60152	18587	18587
R-squared	0.62	0.62	0.45	0.45	0.48	0.48

Permanent income

- The non-rich might see consumption at the top as predictive of income growth. Not present in the data.

$$\begin{aligned} \text{Log}(\text{FutureIncome})_{i,t+j} &= \text{Log}(\text{80thPercentileIncome})_{st} + \text{Log}(\text{CurrentIncome})_{ist} \\ &+ \text{HouseholdControls}_{ist} + \text{State}_s + \text{Year}_t + \varepsilon_{ist} \end{aligned}$$

Permanent income

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<i>Dependent Variable:</i>	<i>Log(HH income) in t+1</i>		
Log(HH income)	0.689 [0.007]**	0.689 [0.007]**	0.17 [0.015]**
Log(80thPercentileIncome)	0.019 [0.096]	0.121 [0.159]	0.012 [0.213]
Log(50thPercentileIncome)		-0.047 [0.250]	0.223 [0.293]
Log(20thPercentileIncome)		-0.068 [0.094]	-0.023 [0.114]
State and Year F.E.s	Yes	Yes	Yes
Household F.E.s	No	No	Yes
HH time-varying controls	Yes	Yes	Yes
Observations	55870	55870	55870
R-squared	0.65	0.65	0.79

Precautionary saving

- Regress σ of $\text{Log}(\text{HH income})$ income from $t + 1$ to $t + 4$ on current income of the household and the current (period t) income of the rich
- Using PSID, fast income growth at the top not “predictive of more stable future income for non-rich households in that state”

Wealth effects

- Results hold in 1980-1995
- Results hold in areas with highly elastic housing supply (some data issues)
- Results hold for home owners and for renters

Behavioral explanations

- **Biased expectations:** Non-rich become too optimistic about income income growth
- Use U of Michigan Survey of Consumers
- “During the next year or two, do you expect that your (family) income will go up more than prices will go up, about the same, or less than prices will go up?”

$$\begin{aligned} \text{IncomeChangeExpectation}_{ist} = & \text{Log}(80\text{thPercentileIncome})_{st} + \text{Individual Controls}_{ist} \quad (4) \\ & + \text{HouseholdIncomedummies}_{ist} + \text{State}_s + \text{Year}_t + \varepsilon_{ist} \end{aligned}$$

Survey evidence

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Table 6: Expectations about Future Income Growth and Top Income Levels

Panel A	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dependent Variable:</i>	<i>Expect Real Income to Go Up in the Next Year (Y=1)</i>					
	All			Middle Income		
Sample:						
Log(80thPercentileIncome)	-0.054 [0.029]	-0.091 [0.056]			-0.069 [0.065]	
Log(90thPercentileIncome)			-0.055 [0.030]	-0.071 [0.045]		-0.055 [0.057]
Log(50thPercentileIncome)		0.025 [0.071]		0.008 [0.065]	0.007 [0.074]	-0.005 [0.071]
Log(20thPercentileIncome)		0.017 [0.038]		0.017 [0.039]	0.017 [0.045]	0.017 [0.046]
Household income F.E.s	Yes	Yes	Yes	Yes	Yes	Yes
State and Year F.E.s	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	126177	126177	126177	126177	105748	105748
R-squared	0.1	0.1	0.1	0.1	0.1	0.1

No positive correlation between top income levels and expectation changes.

[Expect real income to go up in the next year: 17%]

Local price pressure?

- Agents could be committed consumers
- Local CPI and top incomes are correlated
- Budget shares allocated to shelter increase notably with top income levels
- Not the sole explanation
- Categorize goods by income elasticity and by their visibility
- 29 categories

Budget shares

- Prior research: variety of goods supplied is a function of income
- Positive local shock of high-end goods
- H1: Non-rich do not scale back after consuming more “rich” goods
- H2: Social comparisons

Selected categories

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Heffetz (2011) phone survey to index (perceived) visibility of goods:

Consumption Category:	Income Elasticity	Visibility Index	Budget Share
Food Away from Home	1.241	0.620	0.05
Food at Home	0.234	0.510	0.24
Tobacco Products	-0.240	0.760	0.01
Alcohol Away from Home	1.148	0.600	0.00
Alcohol at Home	0.883	0.610	0.01
Clothing	0.748	0.710	0.03
Jewelry	0.788	0.670	0.00
Salons, Fitness Clubs	0.755	0.600	0.01
Furniture	1.006	0.680	0.02
Health Insurance	0.539	0.260	0.03
Business Services	0.957	0.260	0.01
Recreation and Sports Eq.	1.153	0.660	0.02
Other Recreation Services	0.982	0.580	0.03
Charity	0.865	0.340	0.02
Interest Paid (non-durables)	0.396	0.260	0.00
Home Improvement	0.787	0.500	0.01
Recre. Vehicles & Homes	0.256	0.660	0.00

2 behavioral hypotheses

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- H1: Share of income-elastic goods consumed \uparrow
- H2: Share of highly visible goods \uparrow

$$W_{ist}^k = \beta^k \text{Log}(80\text{thPercentileIncome})_{st} + \sum_{l=1}^5 \log\left(\frac{P_t^l}{P_t}\right) + \log\left(\frac{P_{st}}{P_t}\right) \\ + \text{HouseholdControls}_{ist} + \text{HouseholdIncomeDummies}_{ist} + \text{State}_s + \text{Year}_t + \varepsilon_{ist}$$

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- Examine the relationship between the vector of estimated coefficients β^k and the measures of 1) visibility, 2) income elasticity
- Coefficients on both income elasticity and visibility are positive

Selected categories

<i>Dependent Variable:</i>	<i>Estimated Coefficient on Log(80thPercentileIncome) Relative to Budget Share</i>	
	<i>Sample:</i> All	Exclude Shelter
Income elasticity	0.709 [0.242]**	0.709 [0.246]**
Visibility	1.306 [0.519]*	1.306 [0.529]*

Other results

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- Positive correlation between the number of personal bankruptcies in the state and top income levels
- Non-rich exposed to the rich self-report financial difficulties

Political Economy

- Individual voting records on H.R. 5334 which set affordable housing targets for GSEs
- Likelihood of voting in favor regressed on income inequality in the district
- Positive relationship: 1SD increase in inequality associated with 8 percent change of voting yes

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Information about the life-style of the high earners is
nationally/globally available.

Are observations fundamentally different if viewed on a
digital screen?

- Are the people in the 80th percentile really “rich”?
- Why does middle class seem to respond more to this group, rather than some other (possibly narrower) group? Are aspiration really about ‘acting like the top fifth’?
- The question in the Michigan Survey of Consumers of consumers is problematic. How could we measure expectations better?

How exactly did the political process facilitate the trickle-down?

- ① Encouragement? Complicity?
- ② Representatives of borrowers did lobby to lower lending standards