Understanding Tax Policy: How do People Reason?

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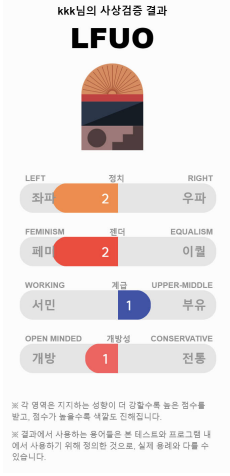
October 15, 2024

Lead-in: A Korean TV Show

The Thought Verification Zone: The Community (2024), a political survival social experiment.



Source: NamuWiki, and you can click on this link to do this test (Similar to MBTI).

Lead-in: A Korean TV Show

The Thought Verification Zone: The Community (2024), a political survival social experiment.

Outline

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Motivation

People hold stark different views on policies, but reasons are not always apparent.

Two Explanations

- Perceptions concerning the economic effects, different benefits and costs assessment
- Disagreement about the goals of a policy and divergent views on the fairness

For example, Income Taxes

- Behavioral or efficiency effects
  - Will people stop working if income taxes increase?
- Distributional effects
  - Who benefits if taxes are cut?
- Weight winners and losers (normative criteria)
  - How fair is income inequality?
- Trustworthiness and efficiency of government
  - Will the government waste a lot of the tax revenue?
  - Will revenues finance investments infrastructure or defense, or be redistributed to low-income households?

In this article

Two Large-scale social economics surveys and experiments

- **Survey Part**: elicit factual knowledge about tax policy and mechanisms
  - Decompose policy views into primary factors
- **Experiment Part**: instructional videos from three perspectives
  - ① Redistribution, ② Efficiency, ③ Economist

Contributions

- **Benefit** more structural approaches ⇒ perceived parameters and counterfactual
- **Identify** gaps in the public's knowledge or incoherent reasoning
- **Disentangle** diverging perceptions from different value judgments and fairness criteria
  - provide better information, shape normative views

Findings

- Very large partisan gaps ⇒ "polarization of reality" (Alesina et al., 2020)
- Factors related to social preferences are important from Galbech decomposition (Gelbach, 2016)

Literature

People's Perceptions of Economy and Policies

- Misunderstanding of the distinction between marginal and average tax rates
  - De Bartolome (1995), Gideon (2017), Ballard and Gupta (2018)
- "Schmeduling": approximation heuristics along the income tax rate schedule
  - Rees-Jones and Taubinsky (2019) Illustration
- Misperceptions about the incidence of taxes
  - Slemrod (2006), Bartels (2005)
- About the broader economy: ideology is the most important determinant
  - Blinder and Krueger (2004)

Effects of Experimentally Information Provision (Cappelen et al., 2020)

- Kuziemko et al. (2015): only moderate effects (reducing the trust in government)
- Sides (2011): "estate tax is paid by only 1 in 1,000 households" can increase the support
- Fisman et al. (2020): joint preferences over income and wealth taxation using online surveys
- the role of trust in government in shaping support for more progressive taxation
  - Kuziemko et al. (2015), Di Tella et al. (2016), Almås et al. (2020)

Outline

Respondents' Perceived Economic Model

For respondent j, a specific model of the economy in his/her mind, parameters $\Leftrightarrow$ perceptions

Components

- Agent: i, Output y_i, Payment $z_i = \eta_i \cdot y_i$
- Gap: $\pi_i = (\eta_i - 1)y_i$
  - $\eta_i > 1$: above marginal product, rents earning (e.g., monopoly power)
  - $\eta_i < 1$: below marginal product, positive spillover (e.g., "job creators")
- Function Forms: $h_i(y)$ (increasing and convex) and $k_i(\eta)$

Utility Payoff

$$u_i(c, \eta, y) = c - h_i(y) - k_i(\eta)$$

Top Earners' Tax

- Average income: $z(1-\tau) := \int_{i:z_i \geqslant \bar{z}} z_i di$
- Average rent: $\pi(1-\tau) := \int_{i:z_i \geqslant \bar{z}} \pi_i di$
- Elasticity: $e = d\log(z)/d\log(1-\tau)$, $e_\pi = d\log(\pi)/d\log(1-\tau)$
- Pareto parameter: $\alpha = \frac{z}{z-\bar{z}}$ (top tail) Details
- Efficiency: γ (the share not dissipated by the government)

Respondents' Objective

How does the government maximize the social welfare according to j?

Generalized Marginal Social Welfare Weights (MSWW) (Saez and Stantcheva, 2016)

$$g_i = g(c_i, T_i, w_i, \mathbb{X}_{-i}, \mathbb{X}_i)$$

- c_i: consumption; T_i: total tax paid; w_i: effort
- $\mathbb{X}_i$ (vector): personal characteristics (e.g., age, family status...)
- **Interpretation**: the **social value** of transferring \$1 to person i.

Different Types of Social Preferences

- **Utilitarian or Welfarist**: g_i decrease in disposable income c_i
  - Diminishing MU of income, social aversion to inequality or both
- **Libertarian**: more weight on people pay higher taxes
  - people are entitled to their incomes ("taxation is theft")
- **Meritocratic or Equality of Opportunity**: place weight on effort and penalize "luck"

Income-Weighted MSWW relative to average weight in the economy

$$\bar{g}^{top} = \frac{\int_{i:z_i \geqslant \bar{z}} z_i g_i}{z \int_i g_i}$$

Respondents' Preferred Top Income Tax Rate

$$\tau^{top} = \frac{1 - \frac{\bar{g}^{top}}{\gamma} + \alpha \cdot \frac{\pi}{z} \cdot e_{\pi}}{1 - \frac{\bar{g}^{top}}{\gamma} + \alpha \cdot e}$$

- $\alpha \downarrow$, $\bar{g}^{top} \downarrow \Rightarrow \tau^{top} \uparrow$
- $\gamma \downarrow$, $e \uparrow$, $\frac{\pi}{z} e_{\pi} \uparrow \Rightarrow \tau^{top} \downarrow$

Laffer Effects: **e** (economic efficiency of taxation)

- income tax cut could lead to an increase in tax revenues by stimulating economic activity
- additional tax revenue outweighs direct loss

Trickle-up or Trickle-down Effect: $\frac{\pi}{z} \cdot \mathbf{e}_{\pi}$ (spillover) Graphic Illustration

- **Up**: directly benefit lower income individuals will boost the income of society as a whole
- **Down**: spending by wealthy group will "trickle down" to those less fortunate in the form of stronger economic growth

Respondents' Preferred Estate Tax Rate

$$\tau_B = \frac{1 - \frac{\bar{g}^{children}(1+e_B) + \frac{1}{R}\bar{g}^{parents}}{\gamma}}{(1+e_B) \cdot \left(1 - \frac{\bar{g}^{children}}{\gamma}\right)}$$

- $e_b = \frac{db}{d(1-\tau_B)\frac{1-\tau_B}{b}}$ is the ss elasticity of aggregate bequests b wrt net-of-tax rate $1 - \tau_B$
- $\bar{g}^{children}$: the bequest-weighted marginal social welfare weight on heirs
- $\bar{g}^{parents}$: the bequest-weighted marginal social welfare weight on parents

Fairness issues revolve around two conflicting concerns

- **Parents**: it's **fair** to pass on wealth to children tax-free.
  - respect parents' choices, people can spend it how they wish
  - higher $\bar{g}^{parents} \Rightarrow$ lower τ_B
- **Children**: it's **unfair** some children receive much higher wealth through no fault or merit.
  - equality of opportunity, leveling the playing field for children
  - lower $\bar{g}^{children} \Rightarrow$ higher τ_B
- Aversion to wealth inequality $\Rightarrow$ lower $\bar{g}^{parents}$ and $\bar{g}^{children} \Rightarrow$ higher τ_B

Outline

Sample Characteristics

	U.S. population	Income tax survey	Estate tax survey
Male	0.49	0.48	0.46
18–29 years old	0.24	0.23	0.22
30–39 years old	0.20	0.20	0.20
40–49 years old	0.18	0.19	0.19
50–59 years old	0.19	0.21	0.19
60–69 years old	0.19	0.18	0.19
$0–$19,999	0.13	0.15	0.16
$20,000–$39,999	0.16	0.19	0.19
$40,000–$69,999	0.21	0.23	0.24
$70,000–$109,999	0.20	0.19	0.19
$110,000+	0.31	0.24	0.20
Four-year college degree or more	0.34	0.48	0.46
High-school graduate or less	0.38	0.19	0.19
Employed	0.70	0.63	0.62
Unemployed	0.03	0.07	0.06
Self-employed	0.07	0.07	0.06
Married	0.53	0.55	0.53
White	0.61	0.76	0.76
Black/African American	0.12	0.06	0.06
Hispanic/Latino	0.18	0.06	0.07
Asian/Asian American	0.06	0.07	0.07
Democrat	0.30	0.34	0.35
Republican	0.26	0.31	0.30
Independent	0.42	0.33	0.33
Voted for Clinton at the 2016 presidential election	0.48	0.44	0.44
Voted for Trump at the 2016 presidential election	0.46	0.44	0.44
Sample size		2,784	2,360

Representative Dimensions

- Targeted (age, gender,...)
- nontargeted (marital status, employment)
- political affiliation and voting pattern

Underrepresentative

- high-school graduate and less
- African American and Hispanic population
- reweight to address these imbalances

The Survey Structure

Background Socioeconomic Questions (income, education, **Political orientation**)

- views on economic policy on spectrum ranging from "very conservative" to "very liberal"
- political affiliation (Republican/Democrat/Independent/Other/Nonaffiliated)
- whom they voted/would have voted in 2016 elections

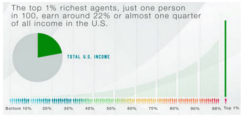
Knowledge (with a robustness test using monetary incentive)

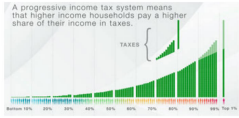
- top federal/state tax level now and in 1950
- threshold for the top income tax bracket
- the share of total income or wealth goes to the top 1%
- their occupational composition

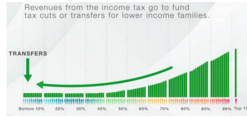
Information Treatments: short "Econ 101" video courses

- Redistribution
- Efficiency
- Economist

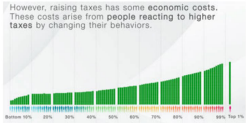
Income Tax Treatment Videos

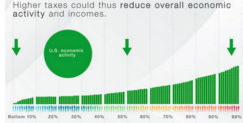


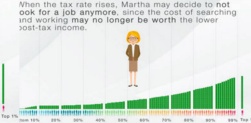




(A) Redistribution video
{https://youtu.be/_vq7ZTjBN3Y}







(B) Efficiency video
{https://youtu.be/9xd-RHMiIcE}

(C) Economist video

Source: *Social Economics Lab*

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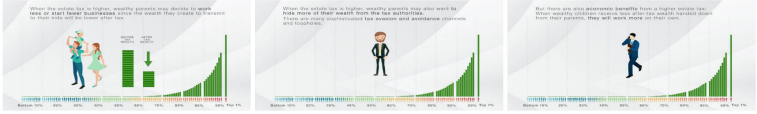
Estate Tax Treatment Videos

(A) Redistribution video
{https://www.youtube.com/watch?v=Wz5Xr723tJk}



(B) Efficiency video
{https://www.youtube.com/watch?v=pZ47JuiqoOU}

(C) Economist video

Source: *Social Economics Lab*

The Survey Structure (Cont'd)

Reasoning about Taxes

- behavior responses (save/work less, stop working, evade)
- efficiency effects, effects on the broader economy
- distributional consequences for different groups
- fairness concerns

Policy Views (current tax systems: fair? satisfactory?)

Views of Government (role and capacity to reduce inequality, trust)

Final Questions (to extract the WTP for information)

- **Begin**: enrolled in a lottery to win $1000
- **End**: forfeit part to receive the accurate answers to all the knowledge questions?
- randomized price: $1, $2, $5, and $10 (controls)
- feelings: left-wing/right-wing biased?

Outline

Misperceptions of the Tax System

Income Tax

- **(2)&(3)**: Underestimate the top tax rate in the 1950s and income threshold Results
- **(4)&(5)**: Closer median-income and top-tax bracket households' tax payment
  - the level of progressivity of the tax system is misunderstood
  - overinflate the tax paid by the median household
  - underestimate the tax paid by the top bracket household
  - "Schmeduling" (Rees-Jones and Taubinsky, 2019)
- **(6)**: overestimate the number of household under top tax rate
- **(7)**: but underestimate the share of household do not pay income taxes

Estate Tax

- Unaware of the high tax rate in 1950
- overestimate the share of households paying the estate tax (364/1000 vs. $< 1/1000$)
- lower exemption threshold

People may (mistakenly) consider themselves more likely directly affected by policies targeted at the top earners and wealth holders.

Misperceptions of the Income and Wealth Distribution

Inflate two extremes of the wealth distribution

- **Income Tax**: Overestimate the share of income going to the top 1% (45% vs. **20%**)
- **Estate Tax**: Overestimate the share of the bottom 50% (12% vs. **2%**)

Composition of Professions in the top 1%

- **More** entrepreneurs, arts, media and sports personalities, teachers, scientists
- **Less** executives/managers and physicians (less often seen in the media)

Uncertainty about "the Share of wealth inherited"

- 34% to 45% (Kopczuk and Lupton, 2007)
- 56% to 64% (Alvaredo et al., 2017)

Who Knows More?

Higher-income respondents

- More aware of variables the affect the top of the distribution

Higher self-reported knowledge

- generally smaller misperceptions on most margins (not all)

College graduates

- more accurate, except overestimate the shares of income and wealth of the top

Republicans

- tend to think taxes higher and more progressive
- less likely to be aware of the high top tax rates or estate taxes in the 1950s (interesting!)
- in line with a "polarization of reality" (even in the perception of facts) (Alesina et al., 2020)

WTP for Correct Information

Result

- Around 40% are willing to pay to learn more

The information

- **private good**: respondents are directly affected by tax policy
- **public good**: better informed voters are able to make better policy choices for whole economy

Heterogeneity

- Republican respondents less likely to be willing to pay (only on income taxes)
- more self-reported/college graduates: more willing to pay, consistent with (Alesina et al., 2020)
- **"perpetuation of misinformation"**

Knowledge, Misperceptions and WTP for info (Income Tax)

	Tax system								Income distribution
	Top tax rate today (1)	Top tax rate in the 50s (2)	Top tax threshold (3)	Share of income paid in taxes by median households (4)	Share of income paid in taxes in top bracket (5)	Share of households in top bracket (6)	Share of households not paying income taxes (7)	Share of U.S. income earned by top 1% (8)	WTP for info (9)
Panel A: Income tax									
Republican	3.74***	−2.52*	−8,632.43	1.46*	6.15***	3.24***	5.97***	−7.72***	−0.08***
	(0.84)	(1.38)	(8,915.36)	(0.80)	(0.88)	(1.03)	(0.98)	(1.41)	(0.02)
High income	0.23	1.32	59,858.63***	−0.00	0.15	−1.76*	0.08	−2.32	0.01
	(0.84)	(1.39)	(8,946.39)	(0.80)	(0.89)	(1.04)	(0.98)	(1.41)	(0.02)
Self-reported knowledge	2.78***	8.29***	24,268.44***	2.39***	3.70***	−0.11	5.38***	5.53***	0.07***
	(0.76)	(1.26)	(8,163.86)	(0.73)	(0.81)	(0.94)	(0.89)	(1.28)	(0.02)
College degree	0.93	6.12***	39,112.78***	−0.41	0.78	−4.94***	0.40	6.52***	0.04**
	(0.72)	(1.19)	(7,714.02)	(0.69)	(0.76)	(0.89)	(0.85)	(1.22)	(0.02)
Descriptive statistics:									
Actual value	37	91	600,000	13	32.7	0.73	44	20	
Average perception	31	33	187,914.8	26.3	27.4	20.3	25.3	44.7	0.37
Observations	2,779	2,779	2,651	2,780	2,777	2,762	2,779	2,780	2,783

Note: The dependent variables (in regression) are deviations of the respondent's answer from the correct answer.

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Knowledge, Misperceptions and WTP for info (Estate Tax)

	Tax system				Wealth distribution				
	Estate tax rate today (1)	Estate tax rate in the 50s (2)	No. households out of 1,000 paying estate tax (3)	Exemption threshold (4)	Share of estates unrealized capital gains (5)	Share of wealth inherited (6)	Share of wealth owned by top 1% (7)	Share of wealth owned by bottom 50% (8)	WTP for info (9)
Panel B: Estate tax									
Republican	−0.54	−3.51***	16.15	−486,504.56***	−4.92***	−2.96**	−7.13**	1.64	−0.02
	(1.05)	(1.24)	(15.53)	(182,797.77)	(1.24)	(1.22)	(2.79)	(1.01)	(0.02)
High income	−0.16	0.80	−42.81***	1,111,072.07***	1.94	−1.81	1.81	−0.35	0.02
	(1.06)	(1.25)	(15.65)	(184,273.68)	(1.25)	(1.23)	(2.75)	(1.00)	(0.03)
Self-reported knowledge	4.03***	6.48***	5.81	792,758.06***	3.32***	1.74	−0.98	0.74	0.11***
	(0.97)	(1.15)	(14.34)	(168,747.59)	(1.14)	(1.13)	(2.50)	(0.91)	(0.02)
College degree	0.00	4.33***	−50.69***	818,974.82***	1.22	2.23**	8.65***	−2.82***	0.05**
	(0.92)	(1.08)	(13.57)	(159,750.72)	(1.08)	(1.07)	(2.38)	(0.86)	(0.02)
Descriptive statistics:									
Actual value	40	77	0.7	11,400,000	55	≈ 50	41.8	2.5	
Average perception	33	29	364.1	2,428,139.6	45.7	41.9	49.1	12.5	0.40
Observations	2,350	2,335	2,357	2,357	2,354	2,357	695	695	2,360

Note: The dependent variables (in regression) are deviations of the respondent's answer from the correct answer.

Outline

Behavior Responses and Distortionary Effects (Income Tax)

	Evade taxes		Work less		Stop working		Spouse stop working		Move state		Be less entrepreneurial	
	High earners (1)	Middle class (2)	High earners (3)	Middle class (4)	High earners (5)	Middle class (6)	High earners (7)	Middle class (8)	High earners (9)	Middle class (10)	High earners (11)	Middle class (12)
Panel C: Descriptive statistics												
Control mean	0.80	0.60	0.48	0.39	0.33	0.28	0.43	0.32	0.78	0.64	0.50	0.45
Male control mean	0.84	0.66	0.50	0.40	0.33	0.31	0.42	0.32	0.80	0.63	0.52	0.46
Democrat control mean	0.84	0.53	0.45	0.34	0.33	0.25	0.41	0.29	0.75	0.59	0.41	0.39
Observations	2,782	2,782	2,783	2,781	2,781	2,781	2,783	2,781	2,783	2,782	2,782	2,782

Findings

- The margins people respond most strongly: evasion, moving states, and entrepreneurship
- behavior responses stronger for higher-income earners than for middle-class earners
- **Evidence**: mix of effects including avoidance and evasion (Saez et al., 2012) (Piketty et al., 2014)

Labor supply responses are the core ones in the optimal tax literature.

- **Intensive**: work fewer hours, exert less effort (small)
- **Extensive**: switch out of the labor force (lower income levels have high elasticity)

Behavior Responses and Distortionary Effects (Income Tax)

	Income tax			Estate tax	
	↑ Taxes on high incomes hurt economy (1)	Laffer effect high incomes (2)	Laffer effect middle class (3)	↑ Estate tax hurt economy (4)	Laffer effect (5)
Panel A: Personal characteristics					
Republican	0.35***	0.18***	0.02	0.15***	0.16***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Female	−0.04**	0.06***	0.05***	−0.03	0.05**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	−0.03	0.01	0.00	0.04	−0.04
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Age 50–69	0.01	0.02	0.04	0.03	0.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Middle income	0.02	−0.03	−0.00	−0.05*	−0.00
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
High income	0.04*	−0.03	−0.01	−0.07***	−0.04
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
Panel B: Video treatment effects					
Redistribution	−0.01	0.00	−0.05	−0.01	0.00
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Efficiency	0.14***	0.03	0.01	0.05	0.05
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Economist	0.06***	−0.03	0.00	0.07**	−0.00
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Panel C: Descriptive statistics					
Control mean	0.31	0.48	0.65	0.28	0.46
Male control mean	0.35	0.46	0.63	0.31	0.43
Democrat control mean	0.15	0.39	0.61	0.23	0.33
Observations	2,782	2,780	2,781	2,358	2,356

- **(1)**: not so many believe taxes on higher incomes would hurt economy
- **(2)&(3)**: quite a few believe Laffer effects exist, mostly to middle-class taxes

Heterogeneity of Reasoning (Income Tax)

Many more Republicans

- perceive negative effects on the economy from taxing high-income earners
- more powerful Laffer effects for high-income earner

Bipartisan consensus on a phenomenon not yet been convincingly established (ironically!)

	Evade taxes		Work less		Stop working		Spouse stop working		Move state		Be less entrepreneurial	
	High earners (1)	Middle class (2)	High earners (3)	Middle class (4)	High earners (5)	Middle class (6)	High earners (7)	Middle class (8)	High earners (9)	Middle class (10)	High earners (11)	Middle class (12)
Panel A: Personal characteristics												
Republican	−0.04*	0.08***	0.14***	0.14***	0.09***	0.11***	0.13***	0.13***	0.10***	0.17***	0.18***	0.19***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Female	−0.05***	−0.09***	0.00	0.01	−0.01	−0.00	0.01	0.01	−0.05***	0.02	−0.01	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	−0.01	−0.02	−0.06**	−0.06**	−0.06**	−0.04*	−0.03	−0.05*	−0.05**	−0.04*	−0.03	−0.04*
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)
Age 50–69	−0.02	−0.02	−0.13***	−0.11***	−0.12***	−0.13***	−0.08***	−0.11***	−0.10***	−0.11***	−0.06**	−0.12***
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Middle income	0.01	−0.02	−0.02	0.00	−0.02	−0.01	−0.03	−0.02	0.02	0.00	−0.03	−0.02
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
High income	0.02	−0.00	−0.04	−0.03	−0.01	−0.02	−0.03	−0.04*	−0.02	−0.00	−0.04*	−0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)

- **Older**: respond less strongly to taxes
- **Republicans**: strong behavior responses (exception: evasion of high-income earners)

Behavior Responses and Distortionary Effects (Estate Tax)

	Evade taxes		Work less		Stop working		Spouse stop working		Move state		Be less entrepreneurial		Save less	
	Wealthy (1)	Young (2)	Wealthy (3)	Young (4)	Wealthy (5)	Young (6)	Wealthy (7)	Young (8)	Wealthy (9)	Young (10)	Wealthy (11)	Young (12)	Wealthy (13)	Young (14)
Panel A: Personal Characteristics														
Republican	−0.01	0.01	0.06**	0.08***	0.00	0.03	0.03	0.09***	0.04**	0.07***	0.06**	0.14***	0.05*	0.07***
	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)
Female	−0.03*	−0.02	−0.03*	−0.02	−0.07***	−0.04**	−0.06***	−0.03	−0.07***	−0.00	−0.03	−0.01	−0.02	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	0.00	−0.01	−0.03	−0.05	−0.03	−0.04	−0.00	−0.03	−0.02	−0.05*	−0.04	−0.09***	−0.01	−0.07**
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age 50–69	−0.02	−0.00	−0.11***	−0.14***	−0.07**	−0.14***	−0.09***	−0.11***	−0.10***	−0.09***	−0.15***	−0.15***	−0.05	−0.07**
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Middle income	−0.01	−0.01	−0.03	−0.06**	−0.06**	−0.04*	−0.04	−0.06**	−0.01	0.00	−0.01	0.00	−0.01	−0.01
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
High income	0.00	0.00	−0.03	−0.06**	−0.05*	−0.01	−0.04	−0.04*	0.04	0.03	−0.01	−0.02	−0.00	0.01
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Panel B: Video treatment effects														
Redistribution	0.05*	−0.04	0.06	0.01	0.08**	0.02	0.01	−0.01	−0.01	−0.01	0.11***	0.03	0.02	−0.03
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Efficiency	0.04*	−0.00	0.26***	0.04	0.08**	0.03	0.06*	0.03	−0.05*	−0.04	0.24***	0.09**	0.22***	0.04
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)
Economist	0.03	−0.03	0.27***	0.07**	0.13***	0.07**	0.10***	0.07**	−0.02	−0.02	0.23***	0.07**	0.20***	0.06*
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Panel C: Descriptive statistics														
Control mean	0.88	0.78	0.50	0.53	0.39	0.37	0.57	0.46	0.83	0.73	0.50	0.52	0.59	0.61
Male control mean	0.88	0.74	0.52	0.51	0.44	0.39	0.58	0.47	0.85	0.74	0.53	0.51	0.60	0.59
Democrat control mean	0.89	0.76	0.51	0.53	0.43	0.34	0.57	0.41	0.80	0.68	0.48	0.41	0.59	0.56
Observations	2,357	2,356	2,356	2,356	2,357	2,355	2,355	2,355	2,356	2,357	2,356	2,356	2,356	2,356

- wealthy individuals and current young people (anticipation effects, such as plan labor supply, savings...)
- strongest perceived responses: evasion and moving states Back

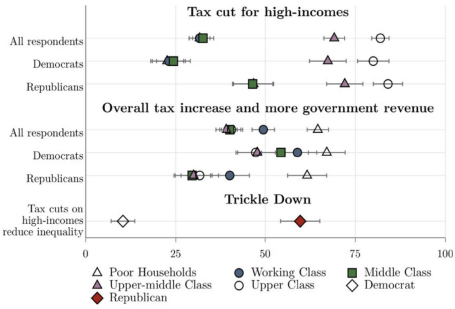
Heterogeneity of Reasoning (Estate Tax)

	Income tax			Estate tax	
	↑ Taxes on high incomes hurt economy (1)	Laffer effect high incomes (2)	Laffer effect middle class (3)	↑ Estate tax hurt economy (4)	Laffer effect (5)
Panel A: Personal characteristics					
Republican	0.35***	0.18***	0.02	0.15***	0.16***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Female	−0.04**	0.06***	0.05***	−0.03	0.05**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	−0.03	0.01	0.00	0.04	−0.04
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Age 50–69	0.01	0.02	0.04	0.03	0.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Middle income	0.02	−0.03	−0.00	−0.05*	−0.00
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
High income	0.04*	−0.03	−0.01	−0.07***	−0.04
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
Panel B: Video treatment effects					
Redistribution	−0.01	0.00	−0.05	−0.01	0.00
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Efficiency	0.14***	0.03	0.01	0.05	0.05
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Economist	0.06***	−0.03	0.00	0.07**	−0.00
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Panel C: Descriptive statistics					
Control mean	0.31	0.48	0.65	0.28	0.46
Male control mean	0.35	0.46	0.63	0.31	0.43
Democrat control mean	0.15	0.39	0.61	0.23	0.33
Observations	2,782	2,780	2,781	2,358	2,356

More Republicans

- perceive youth responses stronger in working less, spouse stop working, less entrepreneurial
- believe higher estate tax hurt the economy, there're Laffer effects from decreasing the tax

Distributional Effects (Income Tax)



Findings

- only 32% of respondents believe trickle-down effects
- consistent with the share believing lower-class will gain if reduce the taxes on high earners

Republicans

- more likely think all groups below the upper-middle benefits from tax cuts
- less likely believe anyone would gain from an overall tax increase
- more ardent believers in trickle-down effects

Social Preferences and Fairness Concerns (Income Tax)

	Wealth distribution unfair (1)	Inequality serious issue (2)	People rich due to luck (3)	High income entitled to keep their income (4)
Panel A: Personal characteristics				
Republican	−0.42***	−0.38***	−0.34***	0.36***
	(0.02)	(0.02)	(0.02)	(0.02)
Female	0.04**	−0.00	0.04**	−0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	0.01	0.05*	0.02	−0.02
	(0.02)	(0.03)	(0.03)	(0.02)
Age 50–69	0.00	0.01	0.04	−0.05**
	(0.02)	(0.03)	(0.03)	(0.03)
Middle income	−0.03	−0.06**	−0.03	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
High income	−0.04**	−0.06**	−0.09***	0.05**
	(0.02)	(0.02)	(0.02)	(0.02)
Panel B: Video treatment effects				
Redistribution	0.05	0.10***	−0.01	−0.01
	(0.03)	(0.03)	(0.03)	(0.03)
Efficiency	0.03	0.02	0.03	0.01
	(0.03)	(0.03)	(0.03)	(0.03)
Economist	0.02	0.06**	0.05*	0.00
	(0.02)	(0.03)	(0.02)	(0.02)
Panel C: Descriptive statistics				
Control mean	0.70	0.48	0.60	0.30
Male control mean	0.68	0.49	0.59	0.32
Democrat control mean	0.92	0.69	0.78	0.10
Observations	2,781	2,781	2,780	2,780

- **Much larger partisan gaps**: Republicans (right) vs. Democrats (left)
- **"Self-interest"**: high-income earners are entitled to keep their income? Back

Social Preferences and Fairness Concerns (Estate Tax)

				Parents' side:		Children's side:		Trade-off:
				Unfair tax estates of:		Fair that children from wealthy families:		
	Wealth distribution unfair	Inequality serious issue	Person wealthy due to luck	Hard workers	Wealthy heirs	Access better amenities	Inherit more	Parents should pass on wealth even if unequal for children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: Video treatment effects								
Redistribution	0.04	0.02	0.01	0.01	−0.05	0.03	−0.09**	−0.06*
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Efficiency	−0.06*	−0.02	0.07*	0.03	0.03	0.01	−0.03	0.02
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Economist	0.02	0.01	−0.00	−0.02	−0.03	0.03	−0.05	−0.08**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Panel C: Descriptive statistics								
Control mean	0.64	0.46	0.62	0.61	0.47	0.32	0.53	0.58
Male control mean	0.62	0.50	0.58	0.60	0.45	0.36	0.53	0.55
Democrat control mean	0.85	0.64	0.73	0.51	0.38	0.19	0.36	0.49
Observations	2,358	2,358	2,358	2,357	2,358	2,357	2,357	2,356

- Perspective of parents, heirs (children) and trade-off
- a lot of disagreement between respondents

Social Preferences and Fairness Concerns (Estate Tax)

				Parents' side:		Children's side:		Trade-off:
				Unfair tax estates of:		Fair that children from wealthy families:		
	Wealth distribution unfair (1)	Inequality serious issue (2)	Person wealthy due to luck (3)	Hard workers (4)	Wealthy heirs (5)	Access better amenities (6)	Inherit more (7)	Parents should pass on wealth even if unequal for children (8)
Panel A: Personal characteristics								
Republican	−0.39***	−0.45***	−0.26***	0.25***	0.25***	0.20***	0.24***	0.27***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
Female	0.06***	−0.01	0.07***	0.04*	0.03	−0.09***	−0.03	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age 30–49	0.01	0.00	0.02	−0.01	−0.01	0.02	0.07**	0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age 50–69	−0.01	−0.05	−0.00	0.01	0.04	0.01	0.11***	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Middle income	0.01	−0.01	−0.01	0.01	−0.02	0.03	0.01	−0.00
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
High income	−0.02	0.00	−0.07***	0.02	0.01	0.06**	0.04	0.04
	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)

Large Divides

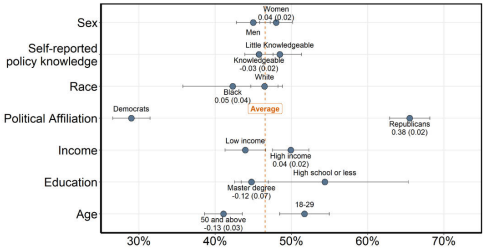
- **Democrats**: unfair wealth distribution, serious inequality
- **Republicans**: wealthy family pass on wealth to children tax-free is fair
- **Older People**: it's fair for children from wealthy families inherit more

Outline

Classify Respondents by Tax Policy Views

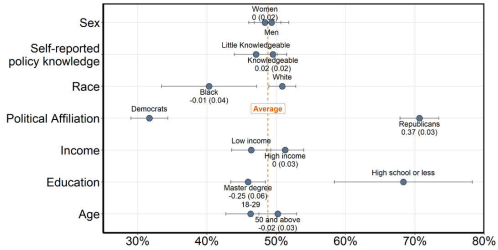
Use Latent Dirichlet Allocation (LDA) Machine Learning algorithm (unsupervised) to identify two major profiles of respondents on income and estate tax.

(A) Income Tax



Profile I: Unfair system; highlight inequalities; pro-redistribution
Profile II: Fair system; downplay inequalities

(B) Estate Tax



Profile I: Not concerned by estate tax system; highlight inequalities
Profile II: Concerned by estate tax system; unfair system

- **Biggest predictor**: political affiliation
- **Other two significant covariates**: income (+) and age (-)

Descriptive Statistics on Tax Policy Views

Construct a policy index increase when respondents

- support more progressive taxes
- more favorable to government intervention to reduce inequality

Income Tax Policy Index

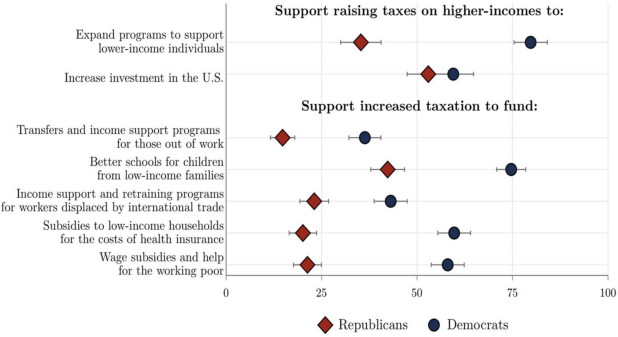
- progressive taxation is a good tool to reduce income inequality
- support increasing taxes on high-income households
- believe the government should be responsible for reducing income differences

Estate Tax Policy Index

- estate tax should exist
- should be increased
- is a good tool to reduce inequality
- government should be responsible for reducing intergenerational wealth transmission

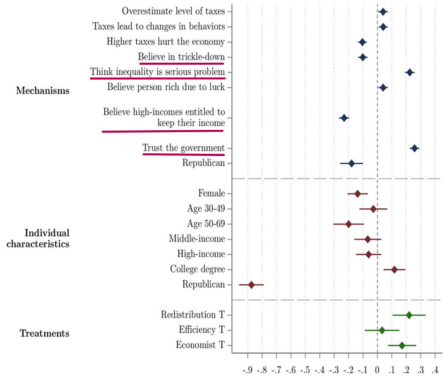
Descriptive Statistics on Tax Policy Views

How tax revenues are spent may shape respondents' views on tax reform.



- **Left-wing**: stronger supporters of increasing both spending and taxation
- Different uses generate very different levels of willingness
- More on **"equality of opportunity"** (e.g., better schools)
- Smaller partisan gap on **infrastructure and investment spending**

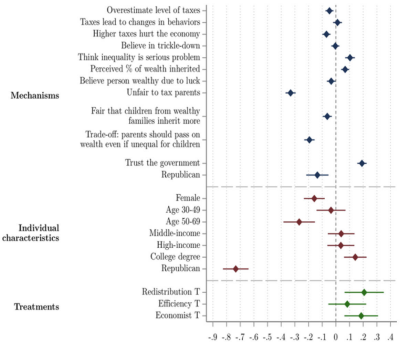
Decomposition of Policy Views (Income Tax)



- Respondents are more likely to support progressive income taxes if...
- Most important factors shaping views $\Rightarrow$ **social preferences** + **views of government**.

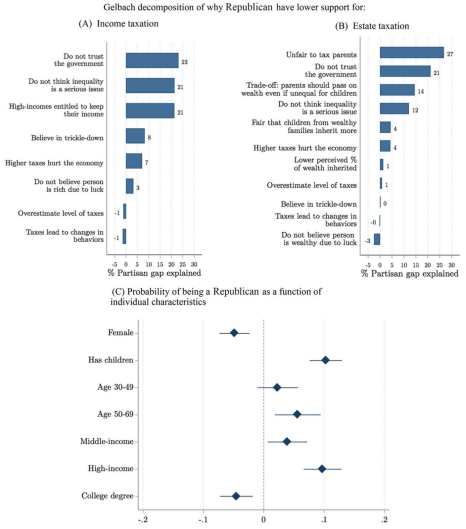
Back 1 Back 2

Descriptive Statistics on Tax Policy Views (Estate Tax)



- Similar results, how to resolve the **trade-off** matters (between conflicting fairness views)
- **Political Affiliation**: strongest correlation with policy views
- **Older**: less inclined toward redistribution through taxes
- **College-educated**: more supportive of taxes

Partisan Gaps using Gelbach Decomposition (Gelbach, 2016)



A: Income Taxes

- **Lower trust in government** (23% of the partisan gap)

B: Estate Taxes

- mainly shaped by the view that it's unfair to tax parents (**Social preference**)

C: Unclear causality

- Party affiliation can shape mental narratives and rhetorics
- Male, higher-income, older slightly more likely to be Republicans
- Political affiliation dominates the effect of other characteristics

Effects of the Video Courses (Income Tax as an example)

Basic Components Illustration

- **Redistribution (Re)** (2:08)
  - distribution of income, progressive tax system reduce inequality, declining MU
  - otherwise silent on explicit fairness issue
- **Efficiency (Effi)**: distortionary effects (2:40)
  - possible costs of reduced economic activity
  - working less (John), hiding more income, stop looking for a new job (Martha), move
  - no quantitative evidence, only potential effects
- **Economist (Econ)**: combination of above two (4:25)
  - ends with a scale weights the benefits from taxation against the economic costs
  - the right tax system should balance benefits and costs

Malleable to Info

- **Effi and Econ**: increase the perceived behavioral responses to taxation (similar to Table)
- **Re and Econ**: increase the view inequality is a serious issue Table
- **Re and Econ**: increase support for a progressive income tax system (Policy views) Figure

Heightened awareness of efficiency costs $\Rightarrow$ focusing more on redistribution considerations $\Rightarrow$ **Efficiency concerns not the major driver policy views**

Outline

Takeaways

Conclusions

- **Social preferences + Views of the government**: important drivers, **Efficiency**: minor
- **Large partisan gaps** in final policy views, underlying reasoning, and perceptions of facts

Implications

- **"Fairness"**: in the eye of the beholder
- Typical voter's preferences and reasoning may be quite different from typical population

Different from Conventional Econ Papers

- **Perspective**: Policy's Shock $\Rightarrow$ People's Perception
- **Methodology**: Empirical/Structural $\Rightarrow$ Survey/Experiment
- **Analysis**: Qualitative $\Rightarrow$ Model-based Qualitative $\Rightarrow$ Quantitative (?)

Extensions

- **Causality**: from political affiliation to policy views
- **Modification**: how can we describe the different perceptions in econ model?
- **Info Campaign**: Is a better informed or educated society a better society (at least for economists)? How can citizens learn more about economic policy issues?

Thank You!

Outline

Wealth Effects of Inflation

An NBER working paper did a similar RCT among citizens in Germany. (Schnorpfeil et al., 2023)

[Savings-erosion treatment group]

The **current inflation rate in Germany is 8.7%**, the highest rate in more than 70 years. That is, goods and services priced at €100 one year ago now cost €108.7 on average. This price increase has a relatively **negative effect on savers**: the savings amount (e.g., checking account, bond, life insurance) is unchanged nominally or lower, but worth less in real terms as a consequence of money depreciation.

As an example, consider a €50,000 savings product with a three-year maturity that you took out one year ago. The real value of the savings product has already fallen sharply, and will depreciate further if inflation remains high: **€50,000 savings value one year ago ⇓ €38,800 real value today**

[Loan-erosion treatment group]

The **current inflation rate in Germany is 8.7%**, the highest rate in more than 70 years. That is, goods and services priced at €100 one year ago now cost €108.7 on average. This price increase has a relatively **positive effect on borrowers**: the loan amount is unchanged nominally, but worth less in real terms as a consequence of money depreciation.

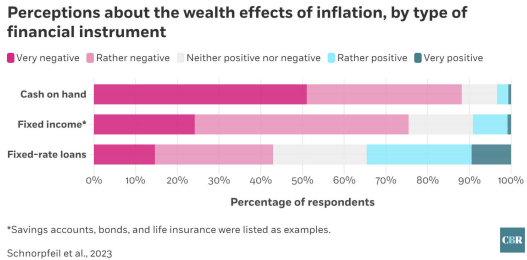
As an example, consider a €50,000 loan with a three-year maturity that you took out one year ago. The real value of the loan has already fallen sharply, and will depreciate further if inflation remains high: **€50,000 loan value one year ago ⇓ €38,800 real value today**

Source: NBER

Wealth Effects of Inflation

Asymmetric Awareness of the Erosion Channel

- **3/4** of all participants knew that inflation would reduce the real value of savings
- but only **1/3** understood it would also lower the real value of fixed-interest-rate debt



Implications

- All agents have **Full Information Rational Expectations (FIRE)** is a strong assumption
- Introduce **Information Rigidity** into macro models
- Information campaigns and robo-advise

Source: *Chicago Booth Review*

About the Researcher

Stefanie Stantcheva

Source: The Homepage of Stefanie Stantcheva

- "I am an economist studying the **taxation** of firms and individuals using models and data."
- "I explore the **long-run effects** of taxes on **innovation**, education & training, and wealth."
- "I also run large-scale **'Social Economics Surveys and experiments'** to explore the determinants of our **social preferences, attitudes, and perceptions.**"

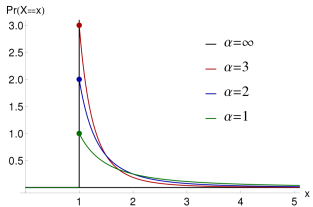
- Visit the Social Economics Lab Website to learn more.

Pareto Models for Top Incomes

- Pareto models have been often used for modelling the upper tail of distributions in economic inequality and economic losses.
- For Pareto Type I distribution bounded from below by $u > 0$, with tail scale parameter α.

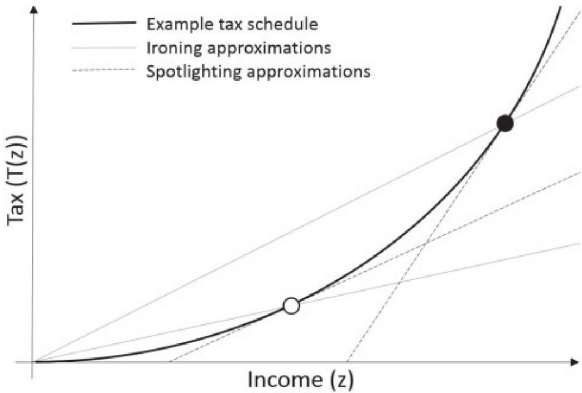
$$X \sim \mathcal{P}_1(u, \alpha) \Rightarrow f(x) = \frac{\alpha \bar{z}^\alpha}{x^{\alpha+1}} \text{ and } F(x) = 1 - \left(\frac{x}{\bar{z}}\right)^{-\alpha}, \text{ for } x \geqslant \bar{z}$$

$$z = \mathbb{E}(X|X > \bar{z}) = \frac{\alpha \bar{z}}{\alpha - 1}, \alpha > 1 \Rightarrow \alpha = \frac{z}{z - \bar{z}}$$



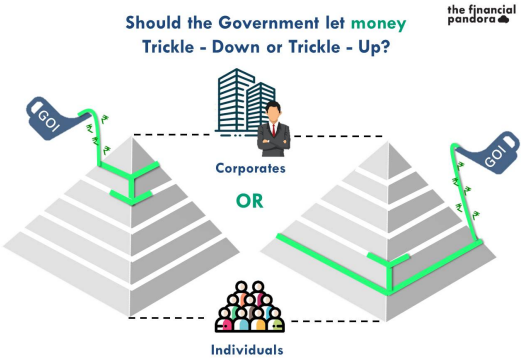
Source: *Wikiwand* and *HAL* Back

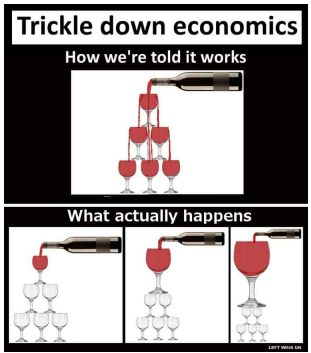
Schmeduling



Source: *Rees-Jones and Taubinsky (2019)* Back

Trickle-down versus Trickle-up





Source: *the financial pandora* *(left)* *and* *Foundation of Economic Education* *(right)*

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