Who Values Human Capitalists' Human Capital? Healthcare Spending and Physician Earnings

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This paper

Objective 1: Describe physician earnings

- Contribution: use linked tax & administrative data

Objective 2: How much are earnings determined by:

- Government policy?
- Standard labor market returns?

Why you should care:

- Public finance: top income inequality is salient; physicians common in top 1%
- Health care: Physician spending is 20% of NHE
- Labor economics: Rent-sharing among top earners

Data

- NPPES = list of active and delisted NPIs
  - Includes specialty
- Merge NPPES with universe of tax filers
  - Form 1040 key fields
  - W-2s from 2005–2017
  - Location
  - Panel w/ all available years for each person included
- Merge with ACS responses
  - Work hours
  - Demographics
- Share of specialty US-trained (AAMC)

Measures from tax data

Income measures:

1. "Professional earnings": AGI minus spouse's W-2, taxable interest, dividends, SS
2. W-2 wages (physician)
3. AGI (household)

Training:

- Use tax data to measure empirical length of training by specialty

Employment:

- Use employer ID (EIN) to determine practice size and diversification

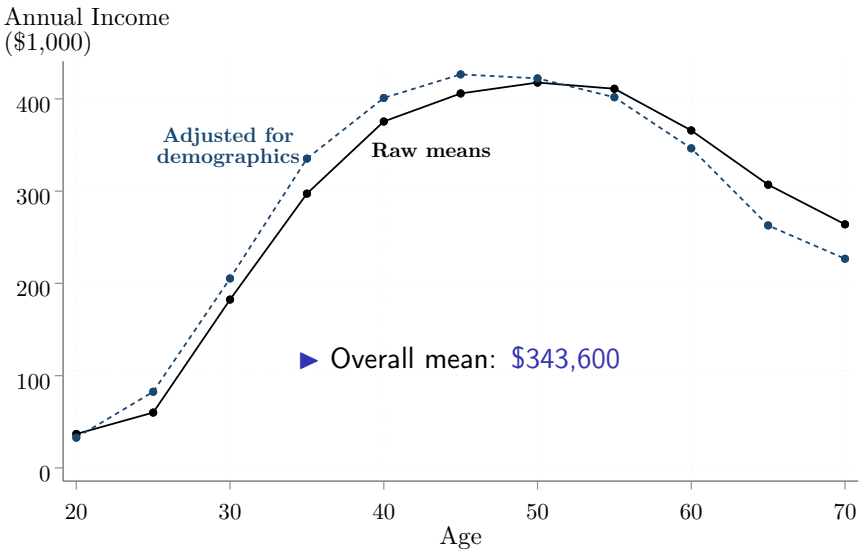
Plan

1. Describe physician earnings
2. Measure the government's influence

Plan

1. Describe physician earnings
2. Measure the government's influence
3. How much could be saved vs. returns to labor market fundamentals
4. Much more in paper

Physician Age-Earnings Profile



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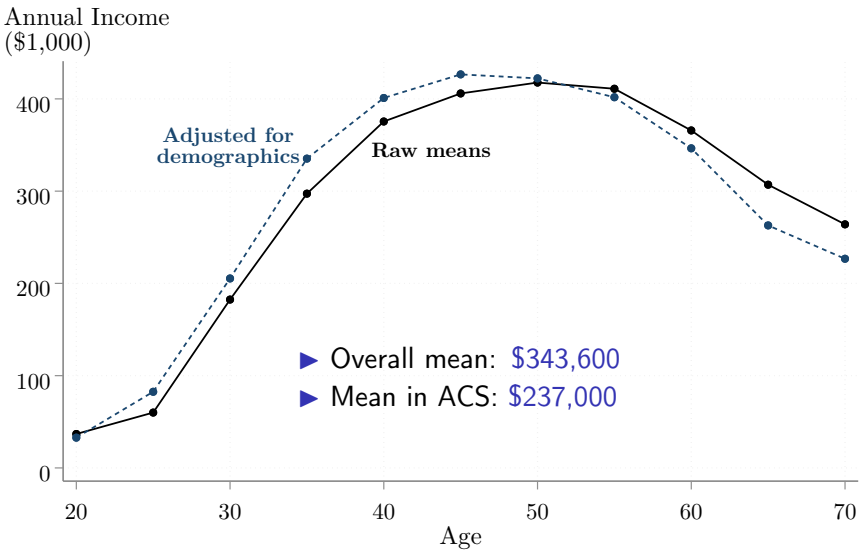

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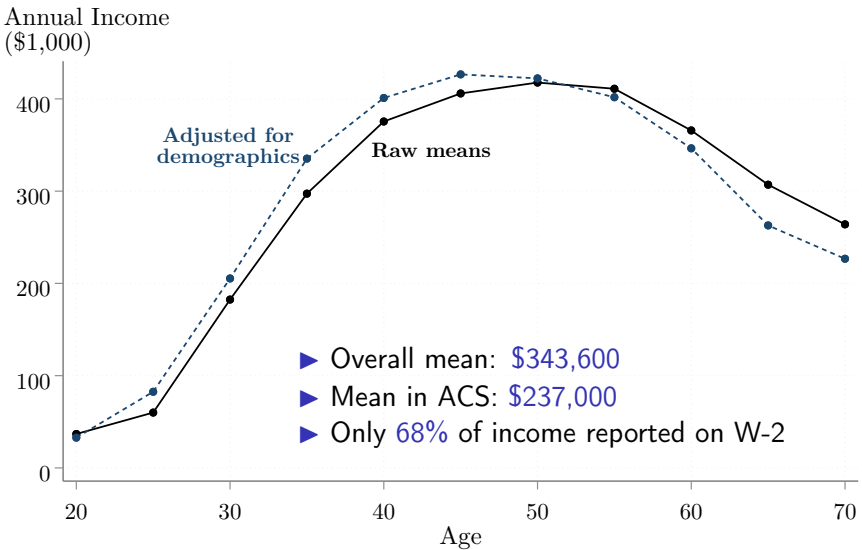
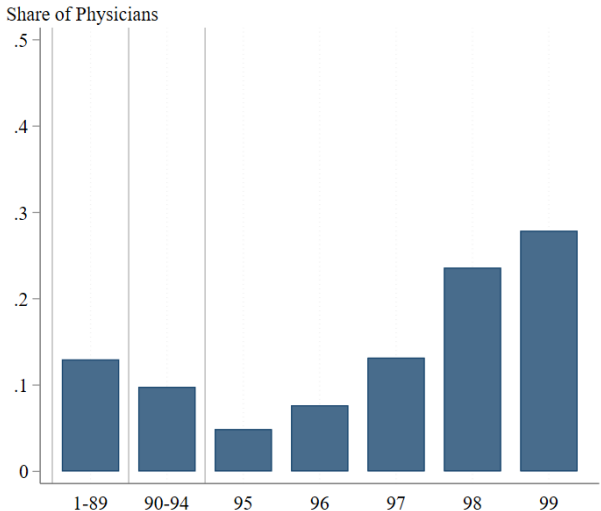
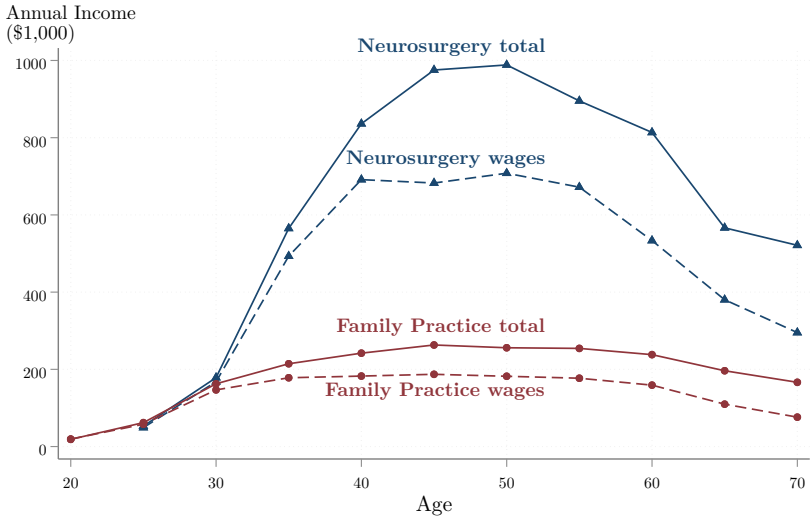


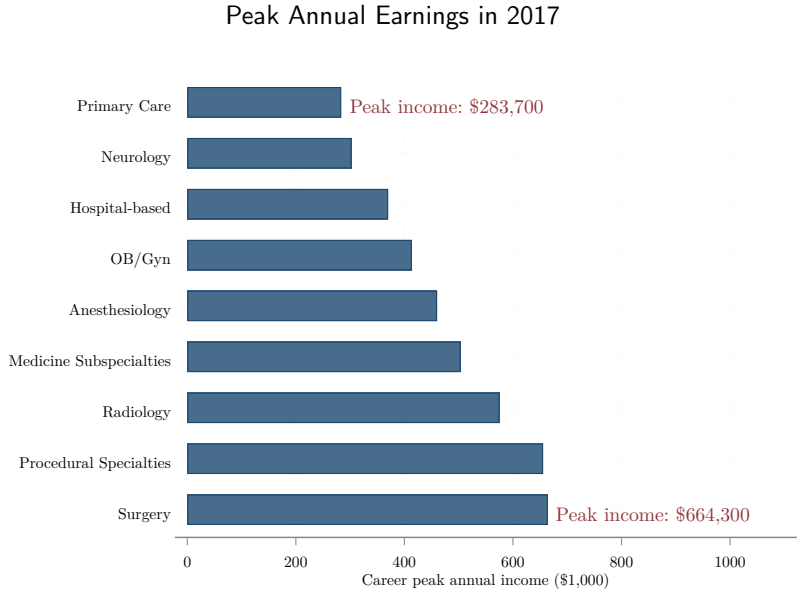
Where are Physician Households in the National Income (AGI) Distribution?



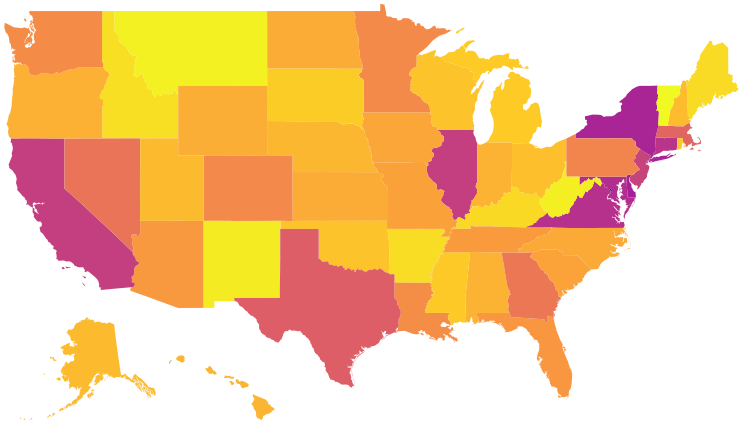
Age Profile for Top and Bottom Earning Specialties



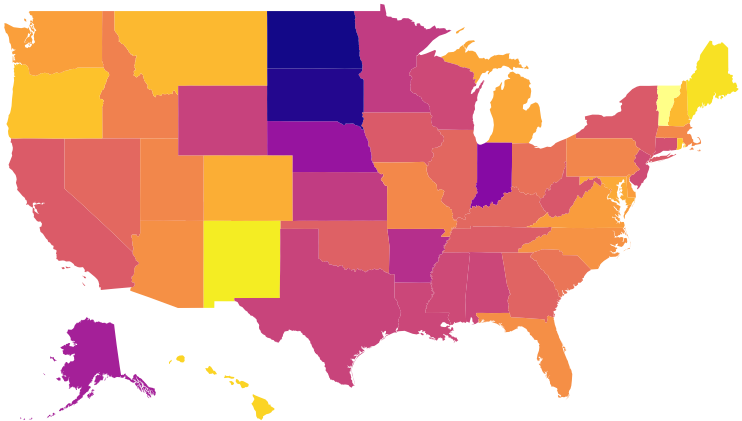
Variation in Earnings by Specialty



Lawyer Earnings by State



Physician Earnings by State



Does Government Value Human Capitalists' Human Capital?

Do physicians personally benefit from increased government payments?

- Partial equilibrium
- Short-run

Considerations:

- Generally low rent-sharing (Card et al. 2018)
- Higher for high-income (Kline et al. 2019)
- Physicians more likely to be in smaller firms
- Payments for their own personal services

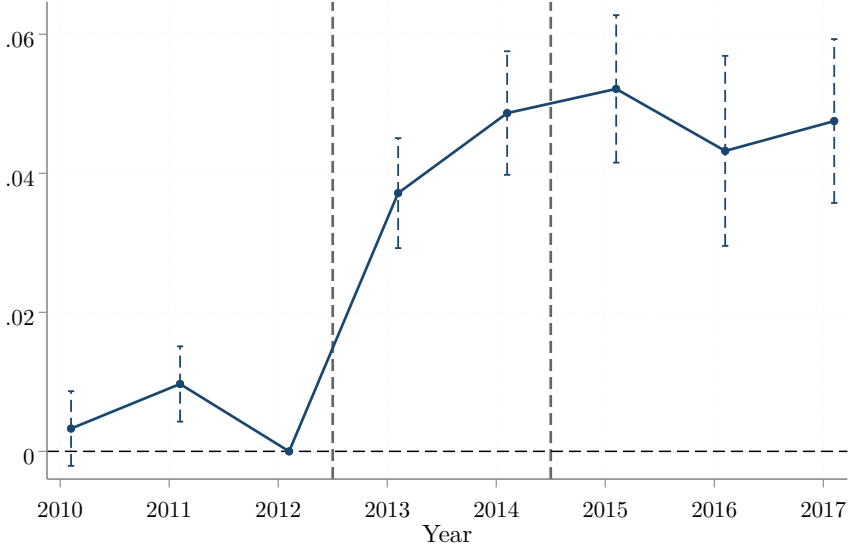
Impact of Medicaid Fee Bump on Physician Earnings

- ACA increased Medicaid primary care payments to Medicare rates in 2013–14
- Increased Medicaid primary care access (Alexander & Schnell 2019, Polsky et al. 2015)
- Diff-in-diff comparing primary care physicians (PCP_i) with medicine subspecialists:

$$\ln(y_{ist}) = \left[\sum_{t \neq 2012} \beta_t \times \mathbb{1}_t \times PCP_i \right] + \gamma PCP_i + \delta_t + \lambda_s + \theta^{PCP}_{a(i,t)} + \theta^{-PCP}_{a(i,t)} + \epsilon_{ist}$$

y_{ist} = income of physician i in state s, year t
δ_t = year FE
λ_s = state FE
θ^{PCP}_a, θ^{-PCP}_a = age-by-specialty FE

Event Study: Introduction of Primary Care Medicaid Fee Bump



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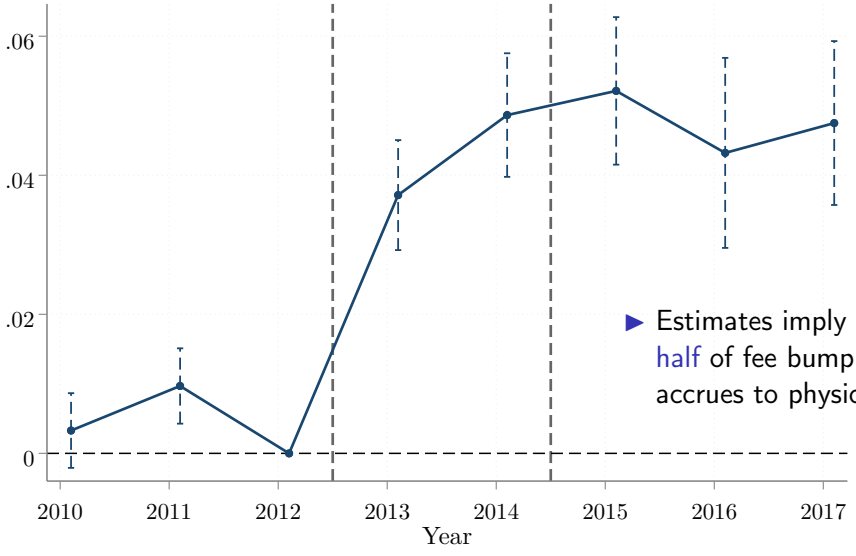


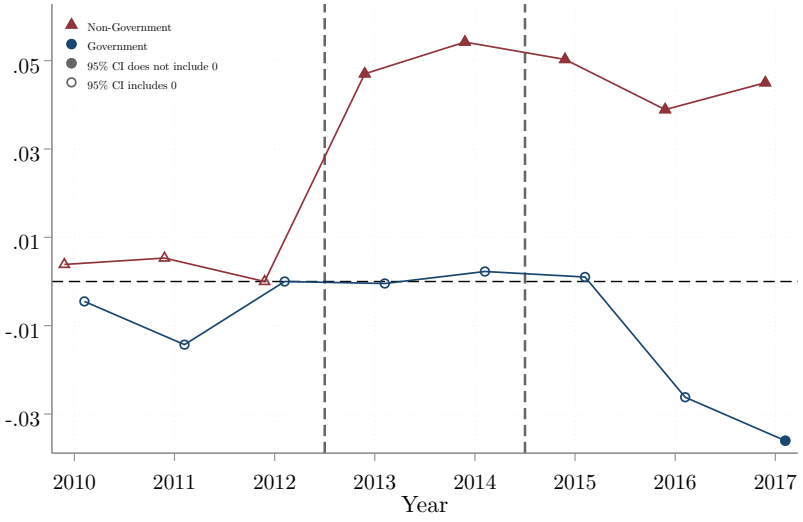
- Estimates imply around half of fee bump spending accrues to physicians

Why Such a Large Incidence on Physicians?

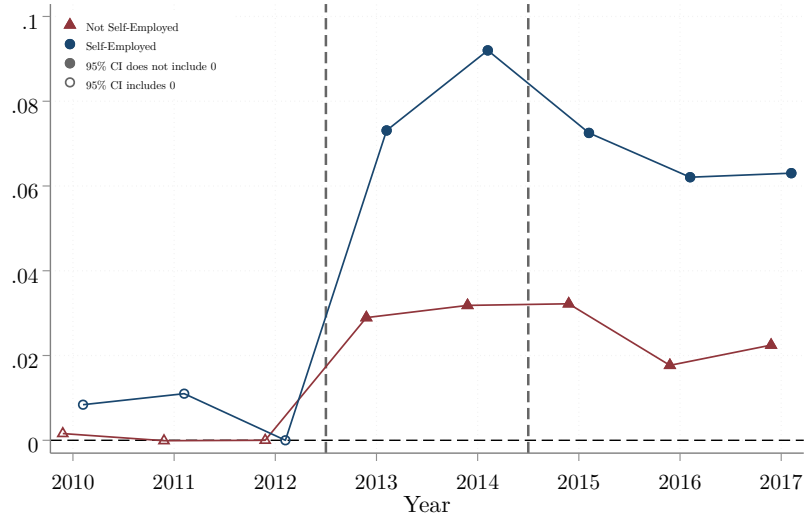
Examine heterogeneity by:

- Government employment
- Self-employment
- Firm size (# of physicians)
- Specialty diversification
- Local competition

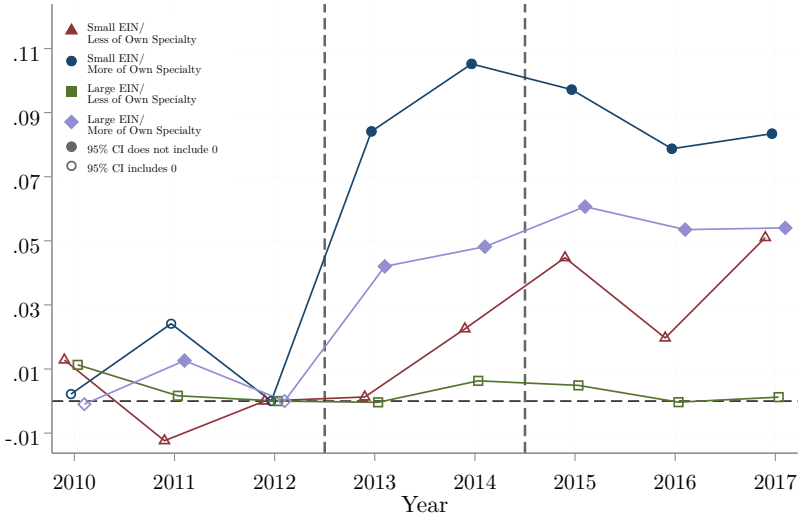
Heterogeneity by Government Employment



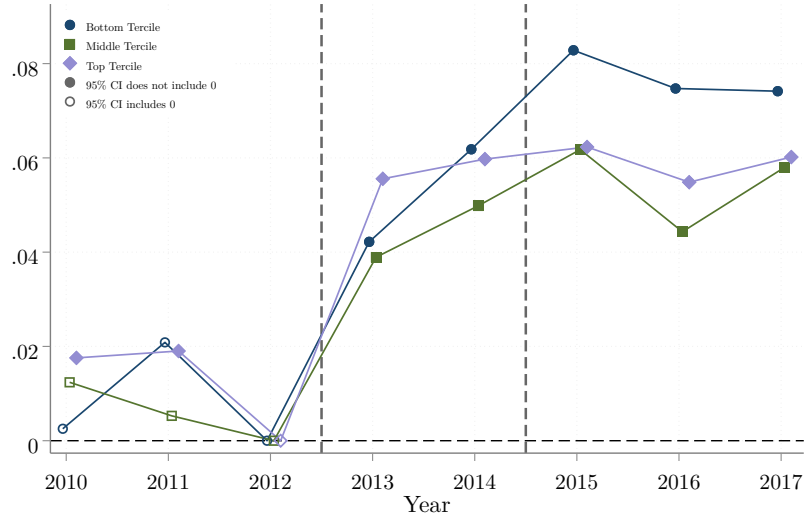
Heterogeneity by Self Employment



Heterogeneity by Firm Size and Specialty Concentration



Heterogeneity by Physician Market Concentration (HHI)

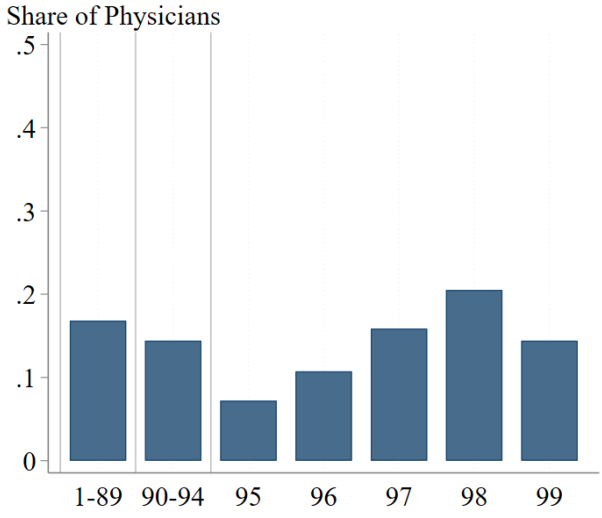


Predicted Effect of Tax Changes on Income

Elasticity	Income growth	Original tax rate	New tax rate
ϵ	Δy	τ_0	τ_1
0.19	0.05	37%	18%
0.19	-0.05	37%	51.6%
0.19	0.05	39.6%	21.4%
0.19	-0.05	39.6%	53.6%
0.57	0.05	37%	31.2%
0.57	-0.05	37%	42.3%

Income tax elasticities from Gruber & Saez (2002) & Kopczuk (2005)

Where are PCP Households in the National Income Distribution?



- 28% of physicians are in top percentile
- 14% of PCPs are in top percentile
- Fee bump moved 1.7% of PCPs into top percentile
- *i.e.* 12% increase in PCPs' probability of being in top 1%

Putting in Context

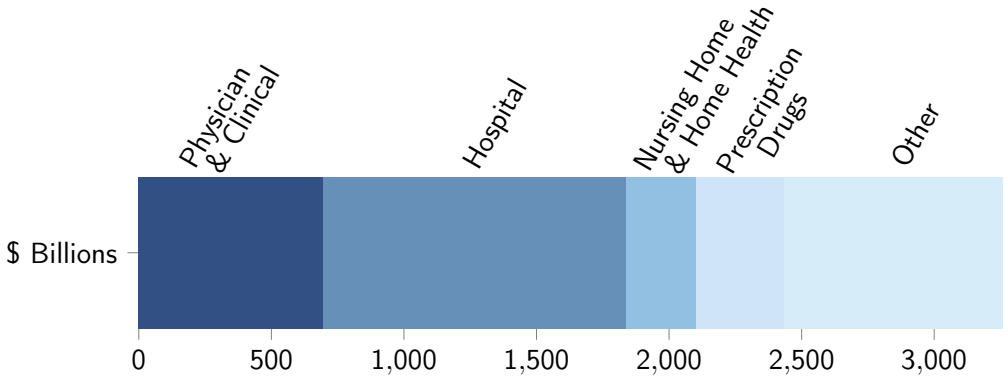
Summary so far:

- Physicians concentrated near top of income distribution
- Reimbursements affect earnings significantly (at least short-run)

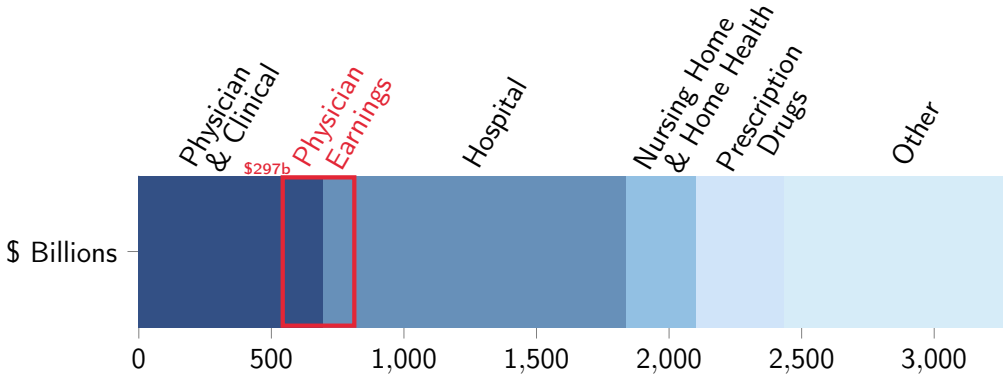
> *The [healthcare] industry is not very good at promoting health, but it excels at promoting wealth among healthcare providers, including some successful private physicians who operate extremely profitable practices.*
>
> *(Case & Deaton, 2020)*

> *My hand surgeon should have been paid $4.5 billion for fixing my broken wrist, not $1,000*
>
> *(Crawford, 2019)*

Composition of US Health Spending

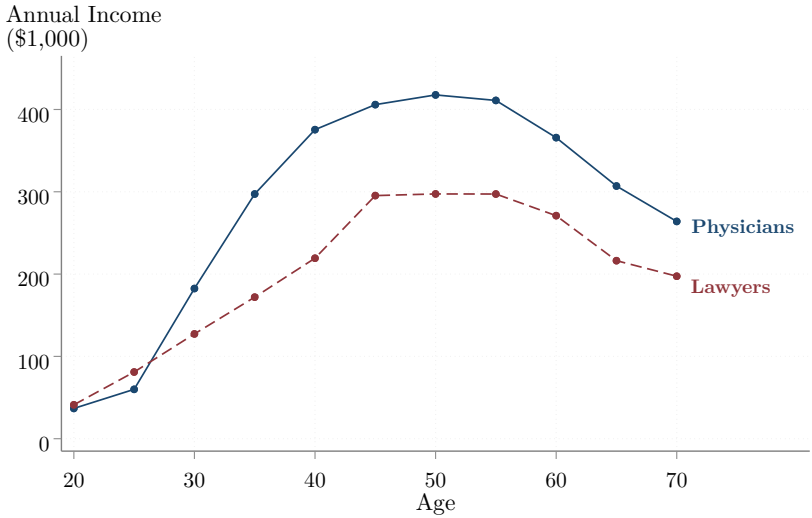


Total Physician Earnings

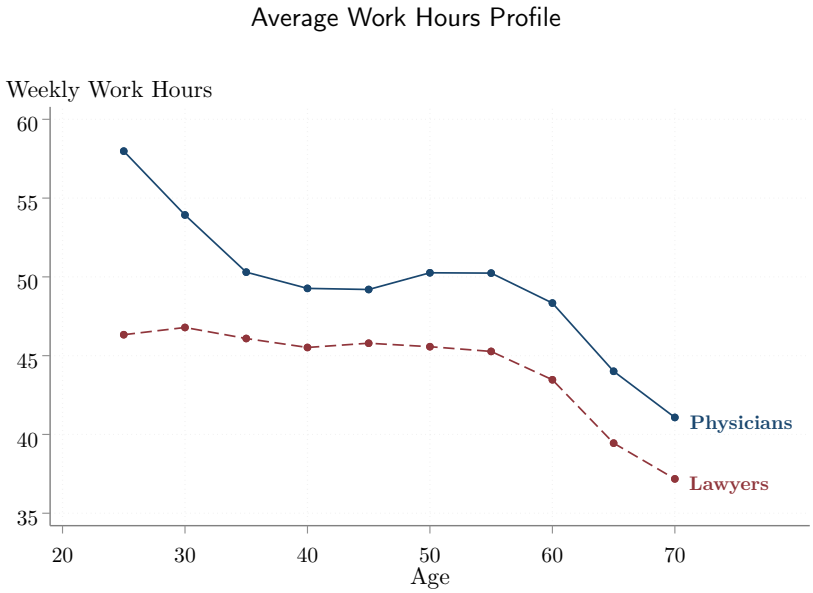


- N = 863,000
- Mean earnings = $343,600
- Total earnings = $297 billion = 9.1% of National Health Expenditures

Physicians' and Lawyers' Incomes by Age

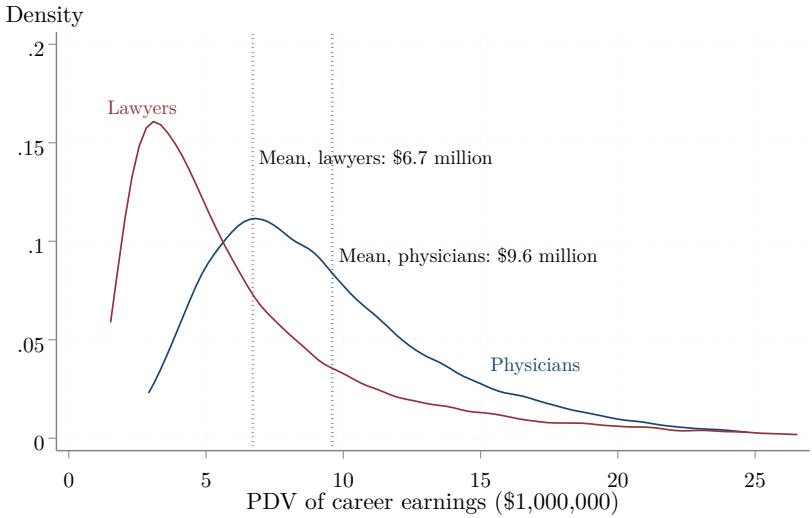


Physicians' and Lawyers' Work Hours by Age

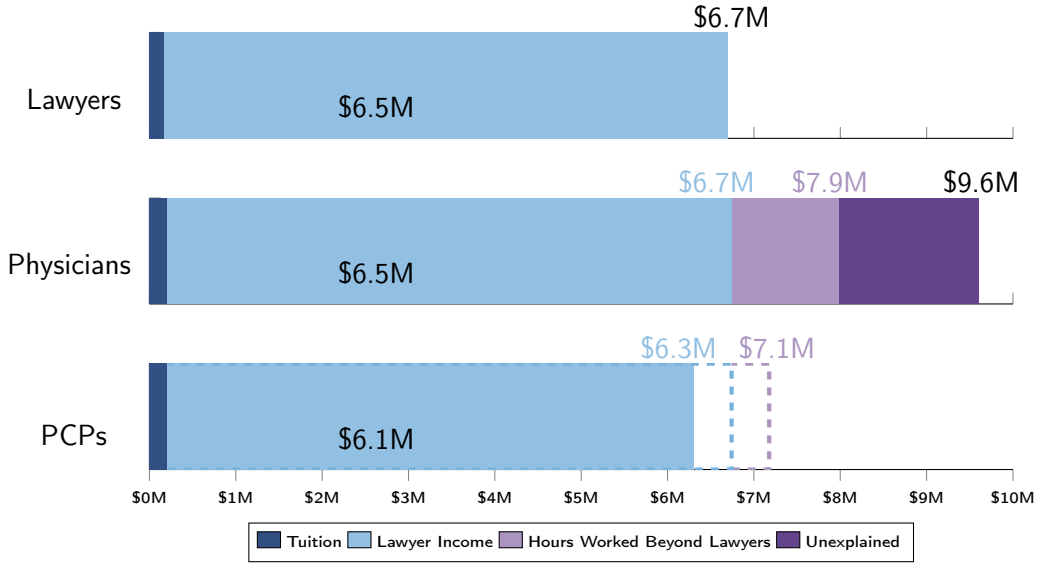


Incomes of Physicians and Lawyers

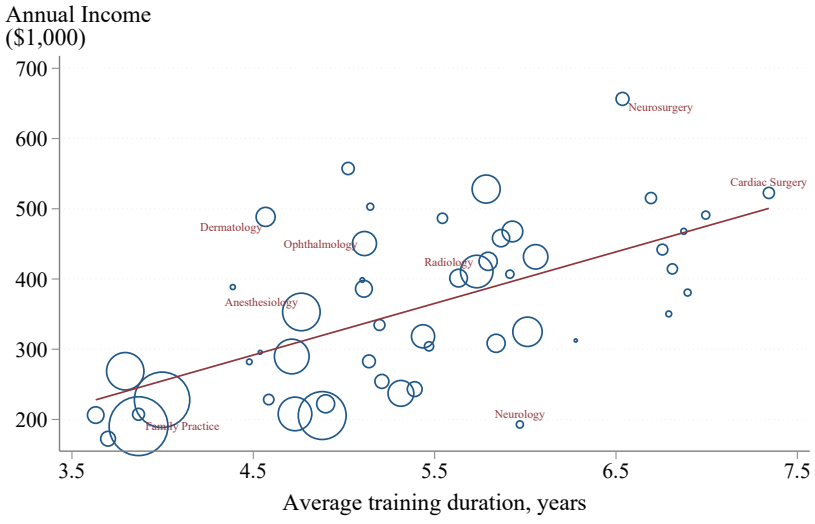
Distribution of discounted career earnings at age 20, $\beta = 0.97$



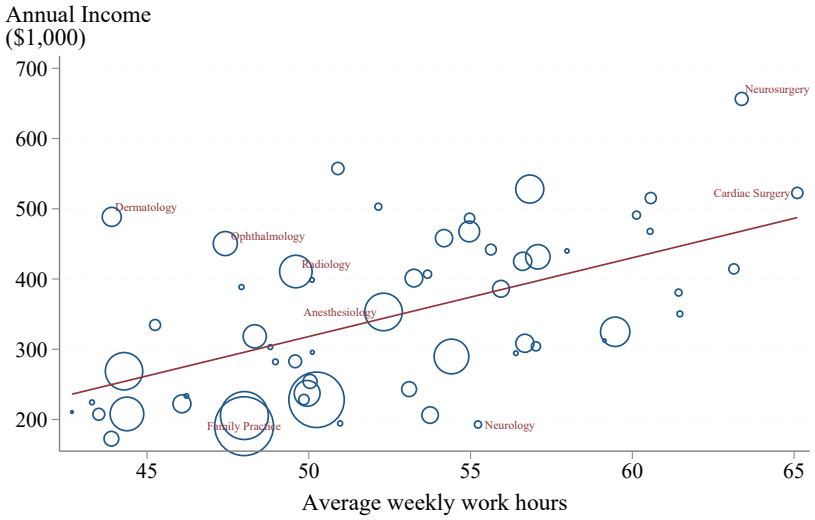
Decomposing Lifetime Earnings Difference



Specialty Earnings vs. Length of Training



Specialty Earnings vs. Hours of Work



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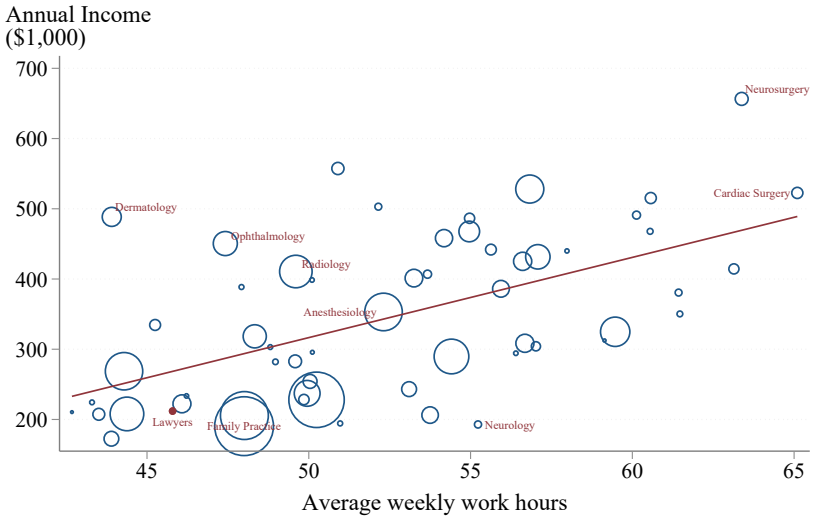
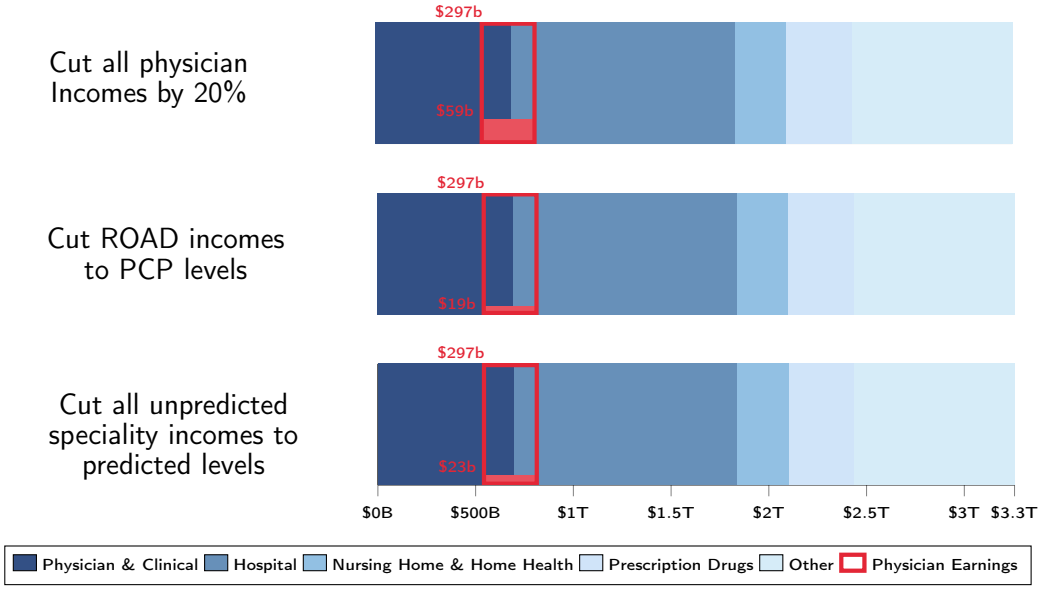
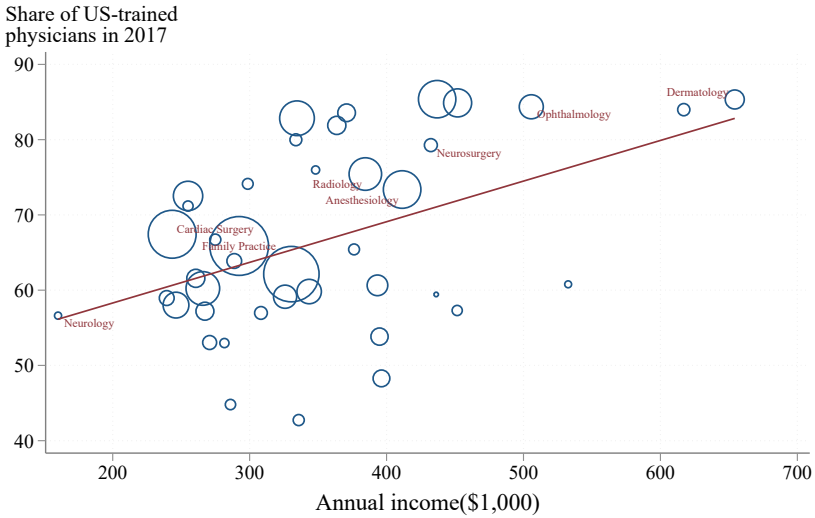


Potential Savings if Doctors Earned Less



Residualized share of U.S.-trained physicians vs. income



Potential Savings if Doctors Earned Less

Reduce incomes to Swedish level

Change incomes to Swedish percentile distribution