

*The Labor Supply Effects of Disability
Insurance Work Disincentives:
Evidence from Administrative Data*

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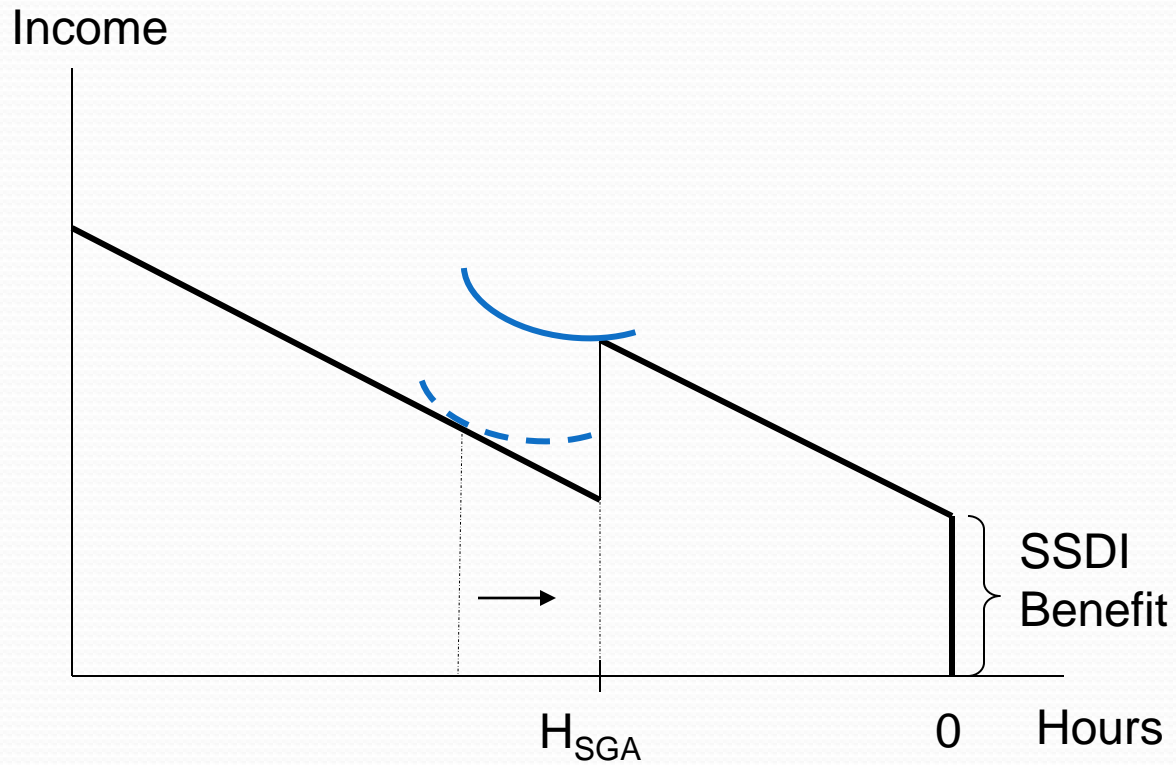
Introduction

- The causal effect of DI on labor force participation is hard to estimate because all face same benefit schedule
 - Bound (1989) used rejected applicants to establish upper bound for 1970's
 - Chen and van der Klauuw (2008) use age-based discontinuities in eligibility formulas to establish upper bound for 1990's
- We use a little-studied interaction between DI and OA:
 - DI benefits payable until FRA, at which point they automatically convert to OA benefits
 - No change in benefit amount, but SSA earnings test applies instead of strict DI work rules
 - Abrupt relaxation of implicit high marginal tax on earnings:
 - 100,000% to 33% before 2000
 - 100,000% to 0% after 2000
- If work disincentives binding, then we should observe an increase in labor supply at FRA

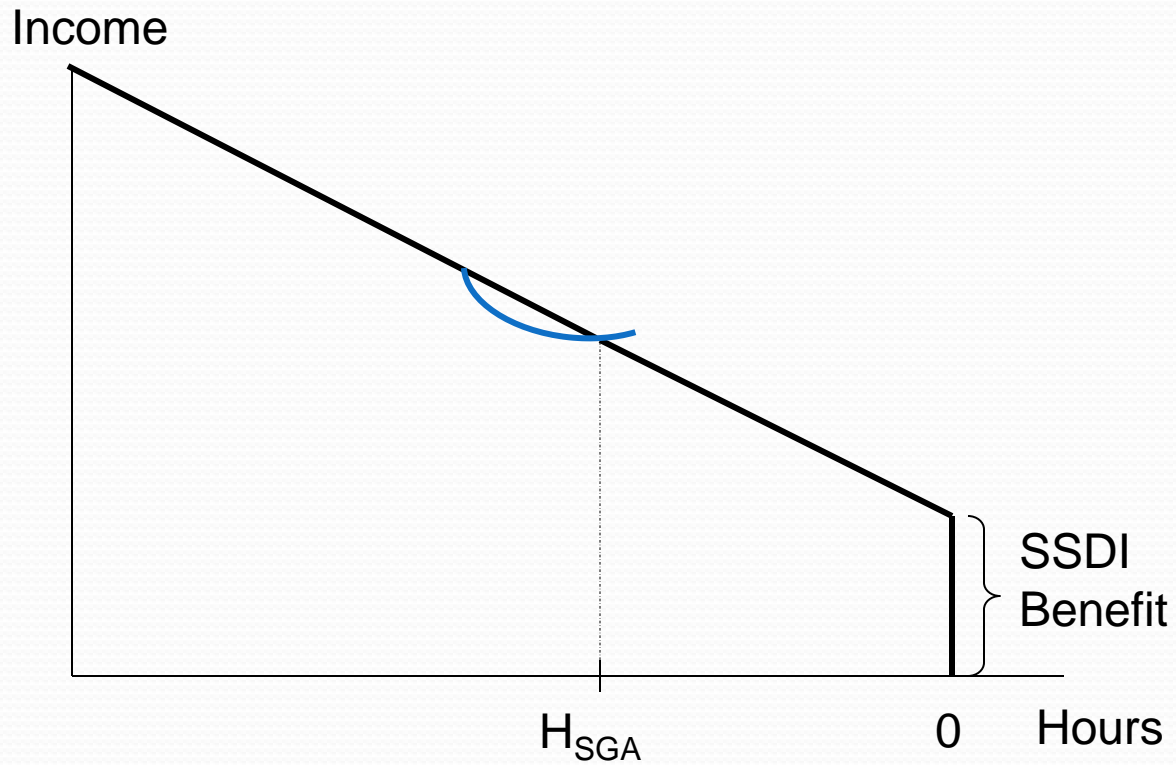
SSDI Work Rules

- Waiting Period
 - Earnings must be below Substantial Gainful Activity (SGA) threshold for 5 months prior to entitlement
 - SGA threshold in 2010 is \$1000/month
- Trial Work Period (TWP)
 - Once entitled, beneficiaries can test ability to work
 - Earnings unrestricted
 - Once earnings exceed SGA for 12 months, **benefits suspended** for all subsequent months when earnings exceed SGA
 - Implicit marginal tax on average beneficiary of 100,000%
- Extended Period of Eligibility
 - Benefits paid for months when earnings below SGA, for 3 years after TWP
 - If earning above SGA at end of 3 years, **benefits terminated**
 - Expedited reinstatement for 5 years

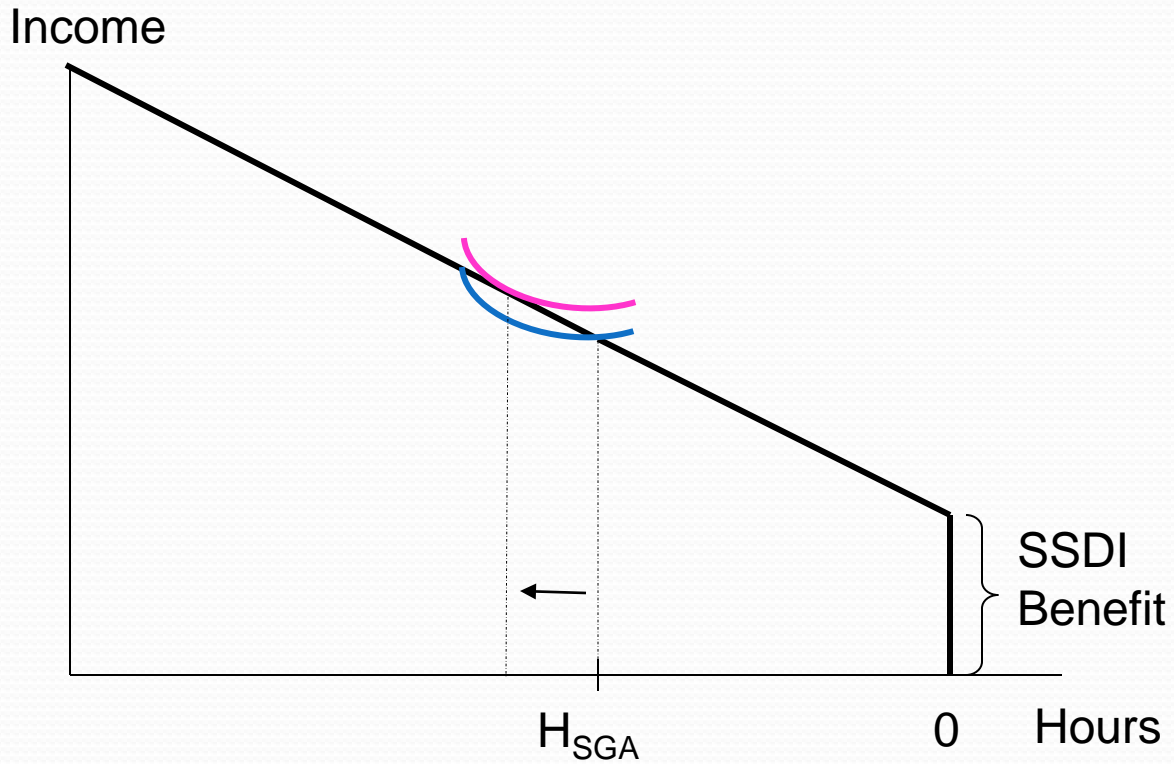
SSDI Budget Constraint



Budget Constraint at Conversion



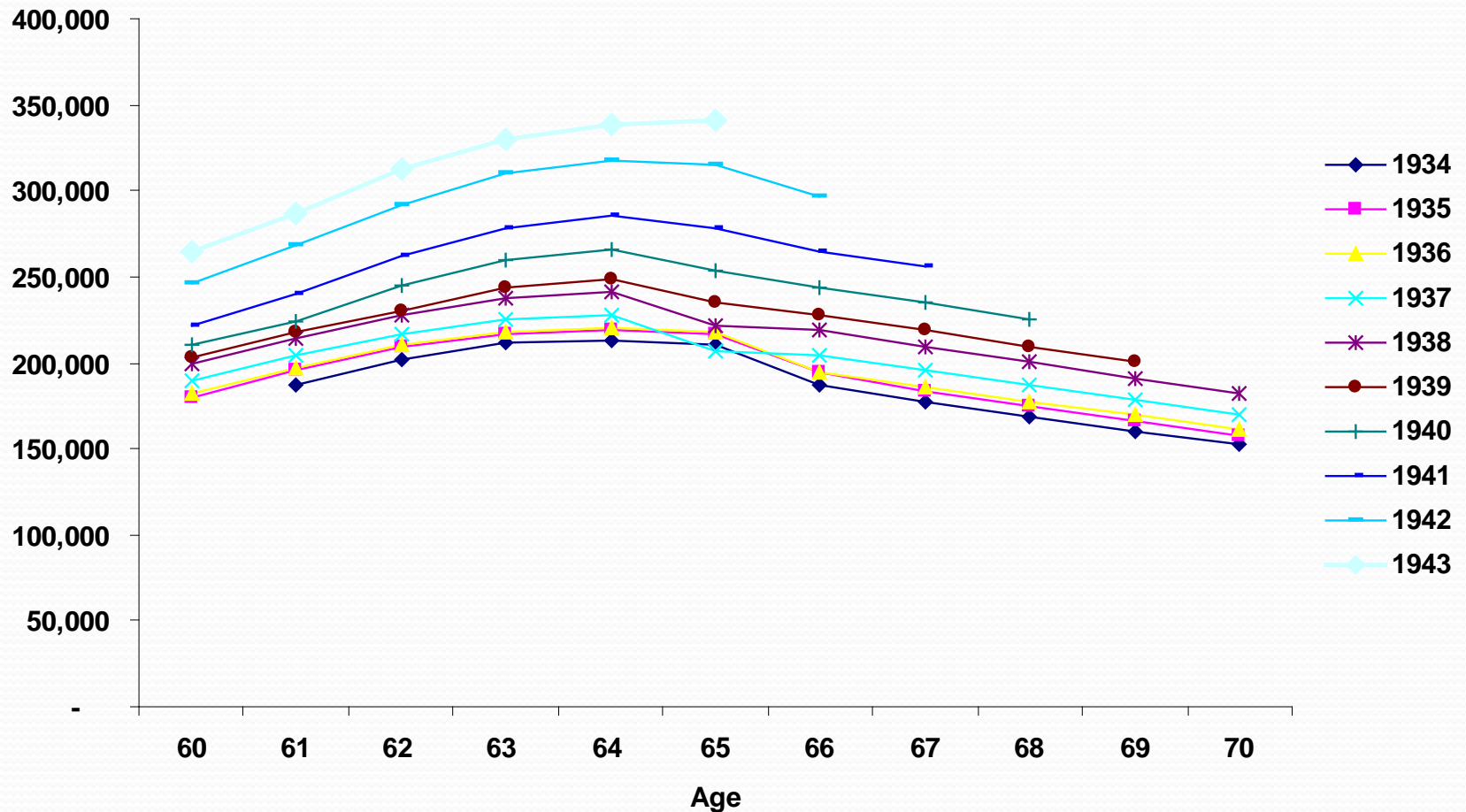
Budget Constraint at Conversion



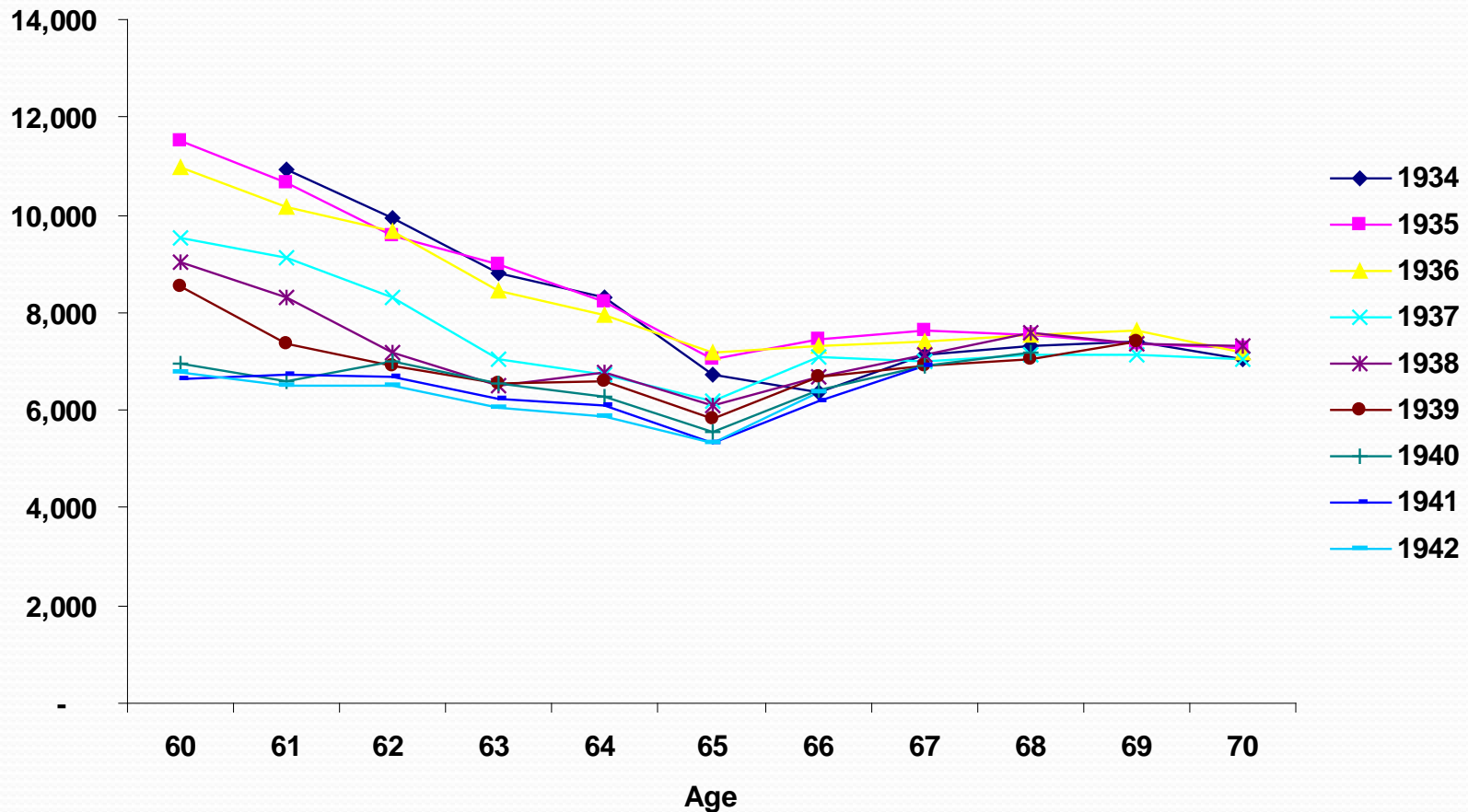
SSA Administrative Data

- All Primary Worker SSDI beneficiaries in 1995-2008
- Born 1934 to 1943
- In current pay status at the end of each year
- Sample identified from Disabled Beneficiaries and Dependents (DBAD) MBR Extracts
- Matched to Master Earnings File, 831 File, Master Beneficiary Record

Number of DI Beneficiaries in Birth Cohort by Age



Mean Annual Earnings of DI Beneficiaries if Earnings > 0

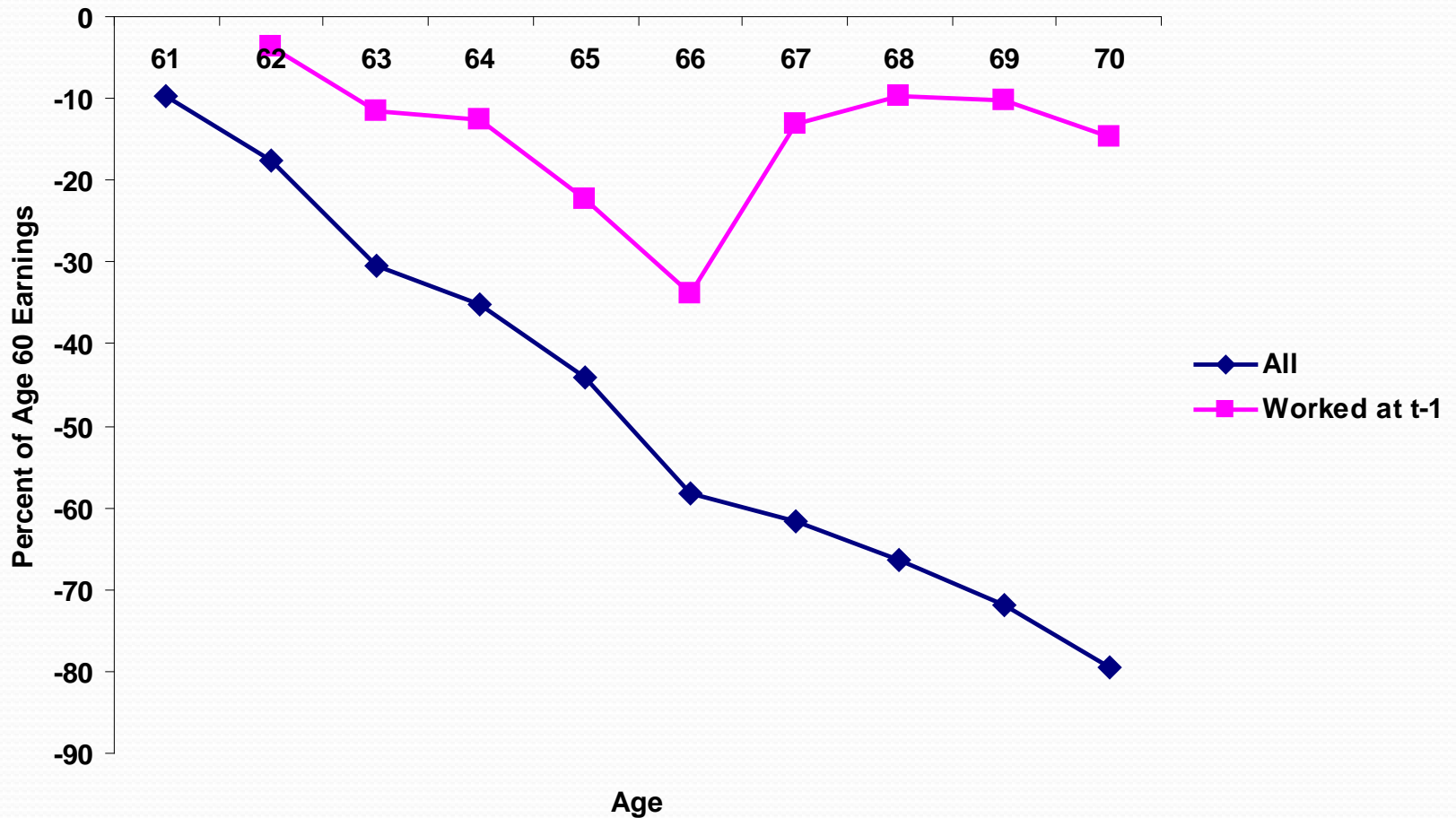


Research Design

- Estimate change in labor supply as birth cohort reaches their FRA
- Regression discontinuity estimator
 - Regress individual labor supply outcome on series of age dummies
 - Coefficients of interest are for age 66 and age 67
 - Control for diagnostic group, year of birth, age at entitlement, sex, PIA, education
- Assumes other factors trend smoothly through FRA

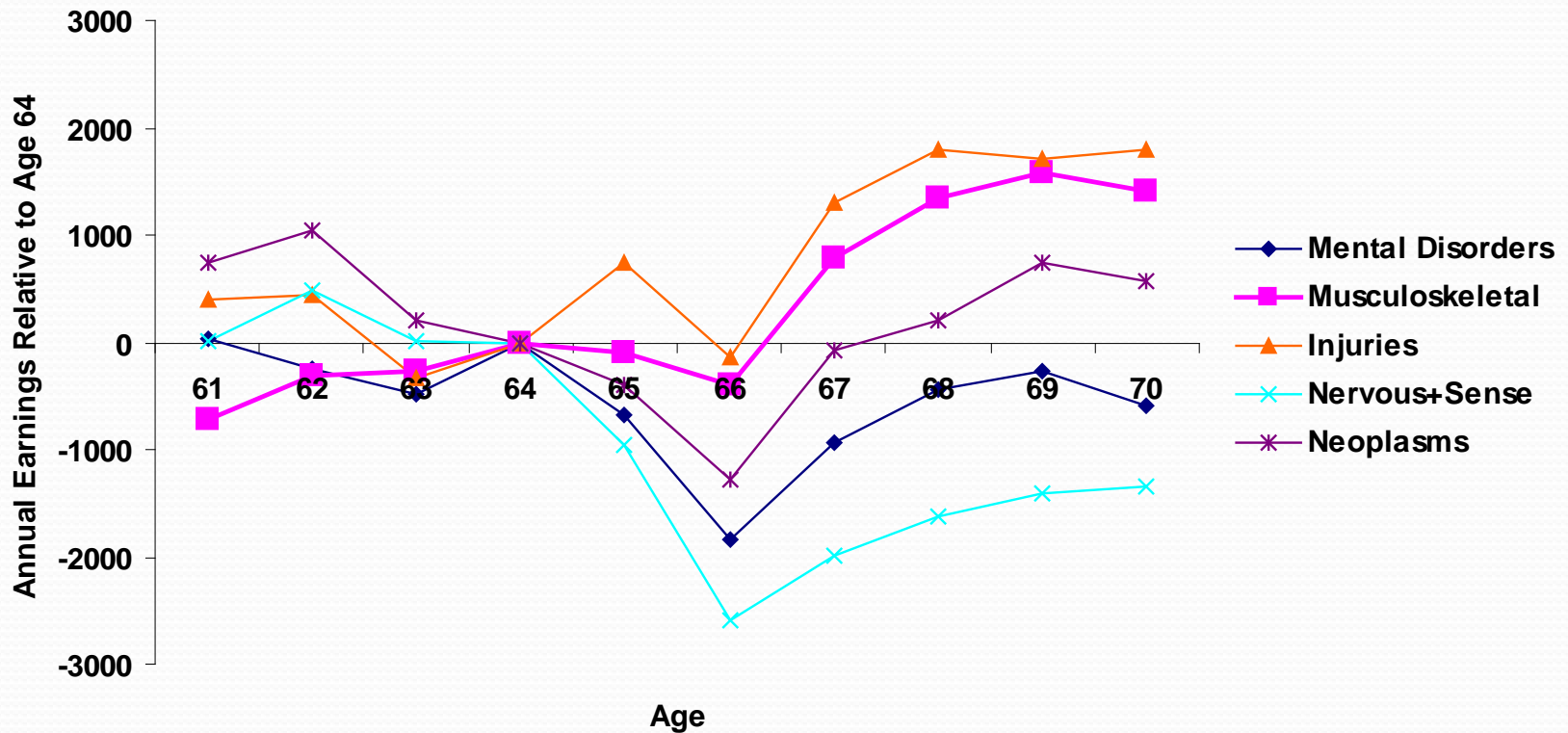
Regression-Adjusted Earnings by Age

(As Percent of Earnings at Age 60)



Regression-Adjusted Earnings by Age and Diagnostic Group (Relative to Age 64)

Subsample with Recent Work Activity (Worked at $t-1$)



Conclusion

- DI recipients respond to changes in work incentives
- Evidence of some untapped work capacity among even the oldest DI beneficiaries
 - About 20-25% of caseload is ages 60-65 during 1992-2006
- Our results are likely a *lower bound* estimate of the work capacity of all DI beneficiaries



Extra Slides

**Figure 3. Age Profile in Labor Force Participation
by DI Status at Age 63-64**

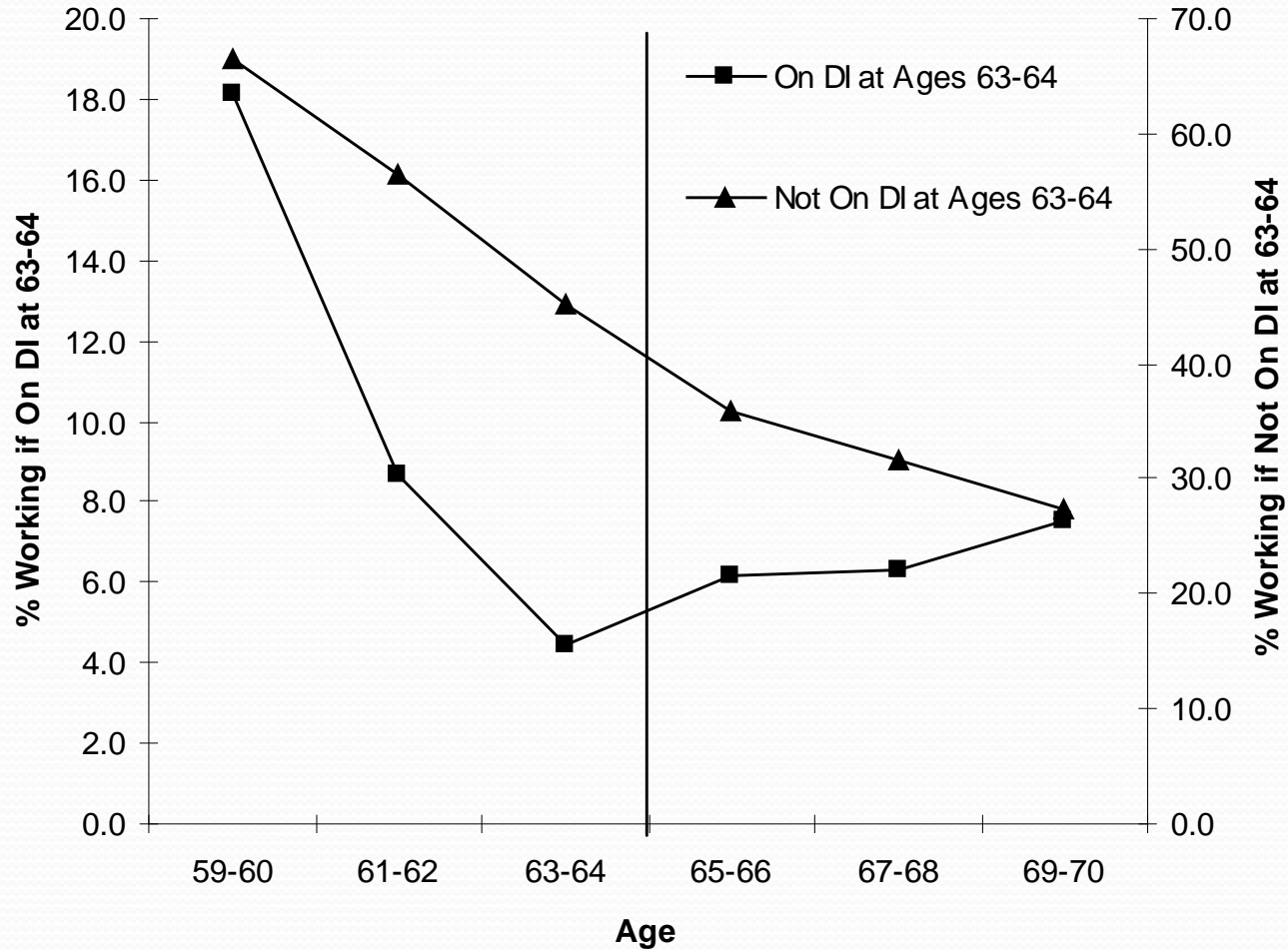


Table 6. Adjusted DD Estimates of Effect of Relaxing DI Work Disincentive on Hours, Weeks, and Earnings

	ΔHours per Week	ΔWeeks per Year	ΔWorks Full-Time	ΔAnnual Earnings	Δ(Earnings>= SGA)
<i>D_j</i>	4.288** (0.414)	5.093** (0.479)	0.080** (0.008)	3,005.699** (416.312)	0.072** (0.009)
ΔDemographics	X	X	X	X	X
ΔNet Worth and ΔIncome	X	X	X	X	X
ΔHealth Status	X	X	X	X	X
ΔHealth Insurance Coverage	X	X	X	X	X
Covariates Fully Interacted with Treatment	X	X	X	X	X
Multiple Pre-/Post Periods	X	X	X	X	X
Mean for DI Participants at 63-64	1.135	1.603	0.016	754.518	0.025
No. Obs	29083	28976	29611	29642	29642