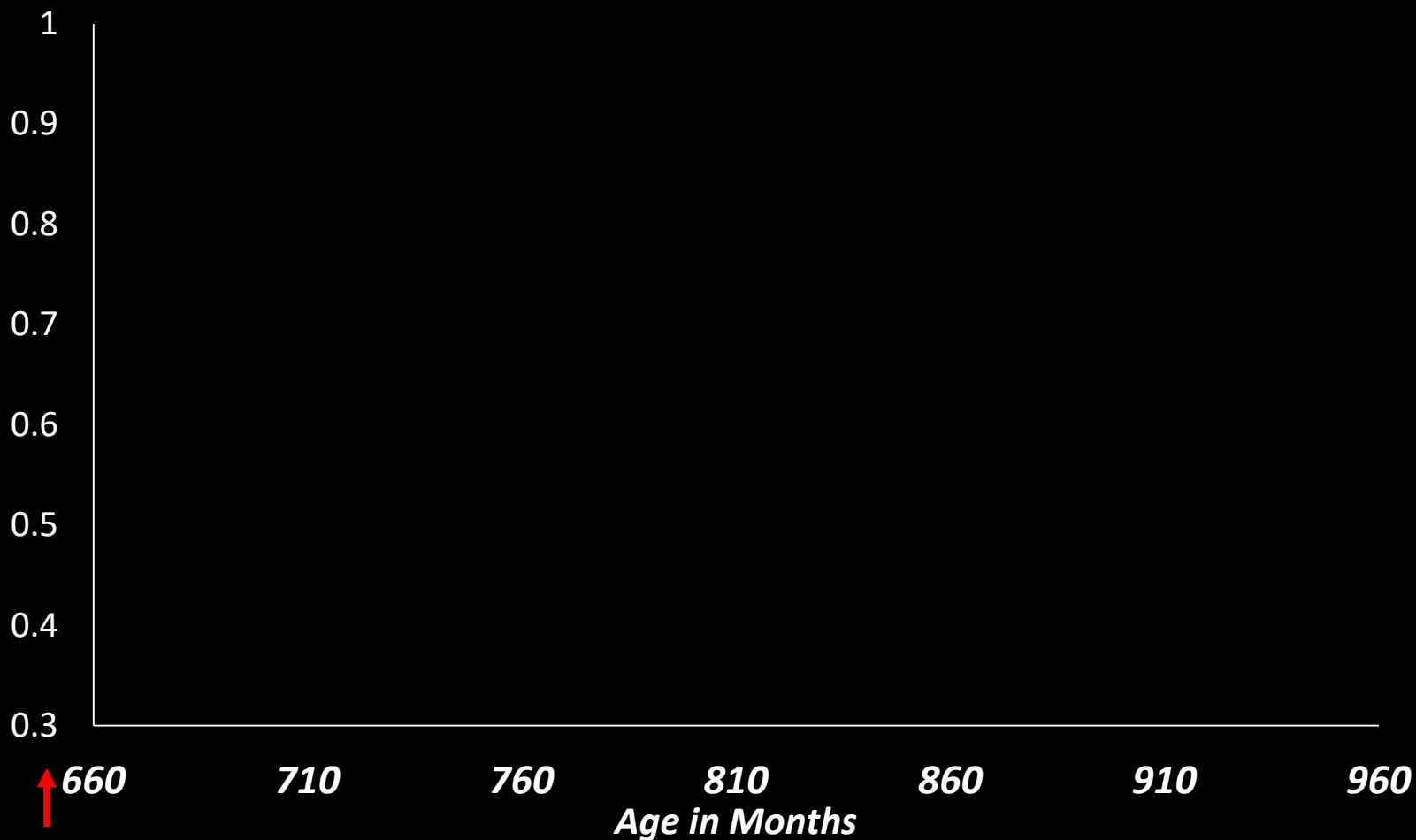# Union Employment and Old-Age Health
Evidence from the Health and Retirement Study

Darren Grant

Sam Houston State University

- Taking the Long View
- Union Workers Are Less Healthy
- Even though Union Jobs Are Better for Your Health
- Why?

# Survival in the First Cohort of the Health and Retirement Study:
~1000 *Long-Tenure* (≥ 10 yrs) Union Workers

Chart axes: Y-axis labeled from 0.3 to 1 (in increments of 0.1). X-axis labeled "Age in Months" with values 660, 710, 760, 810, 860, 910, 960.
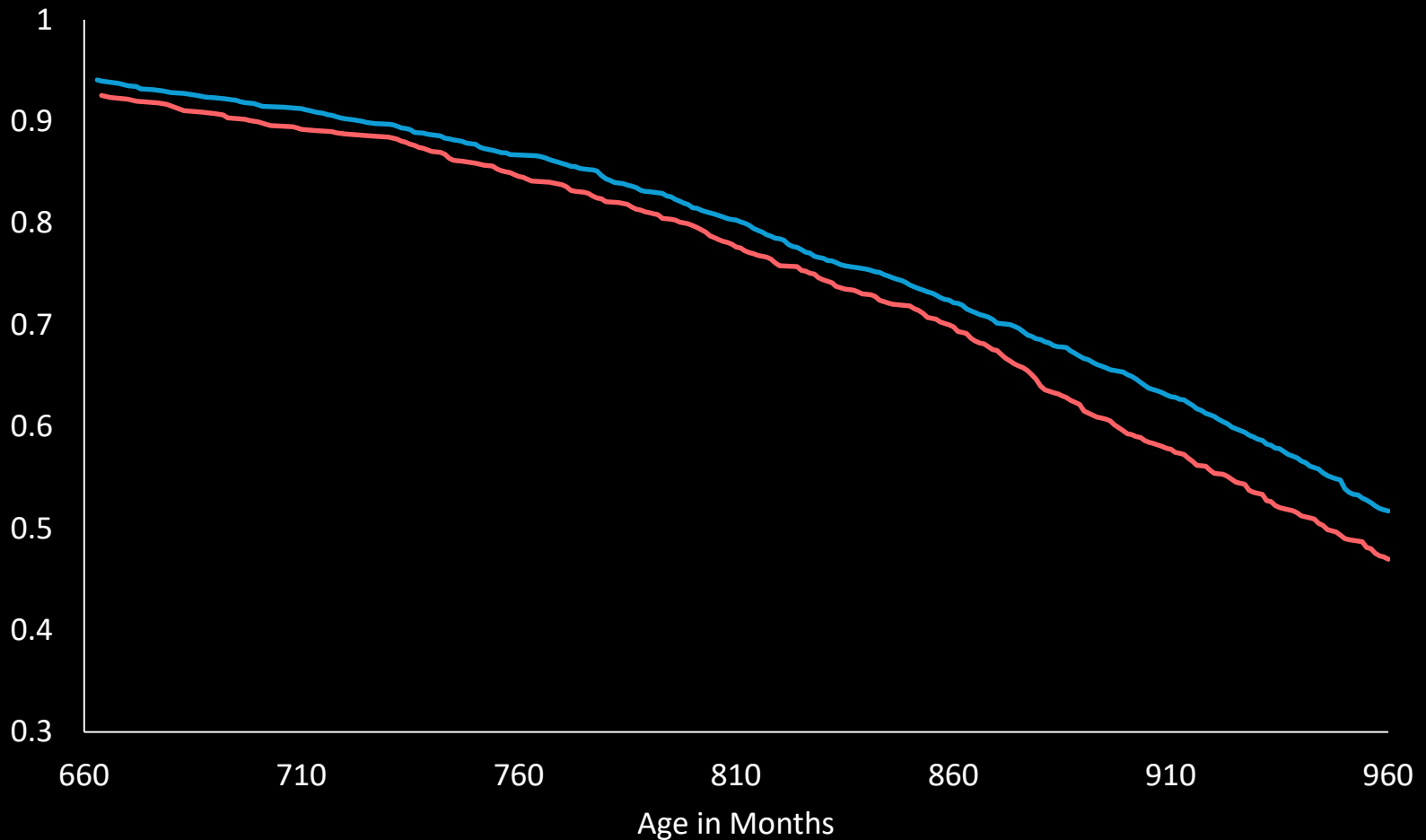
↑ Union Status Determined Here

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Survival in the First Cohort of the HRS:
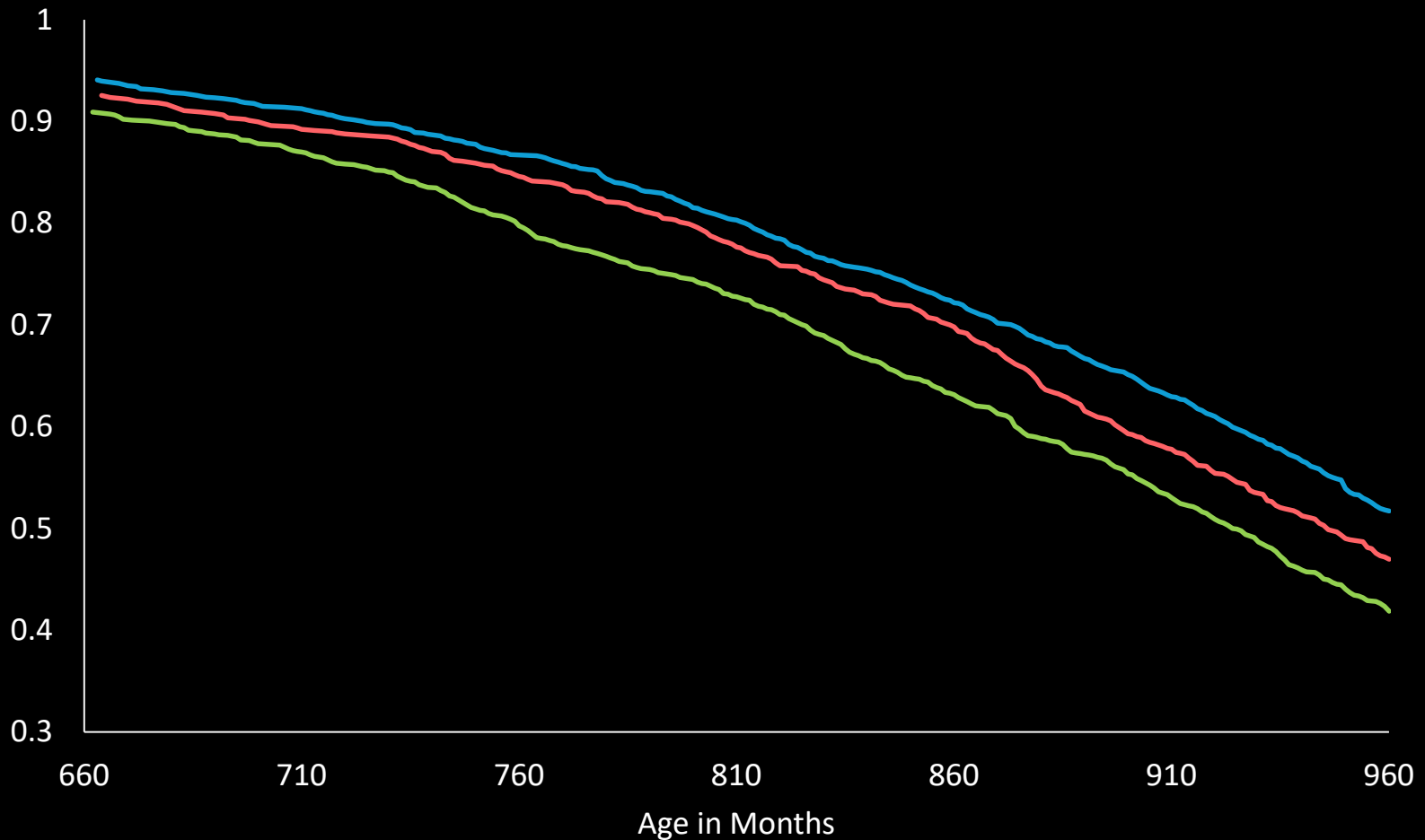## ~1000 *Long-Tenure* Union Workers
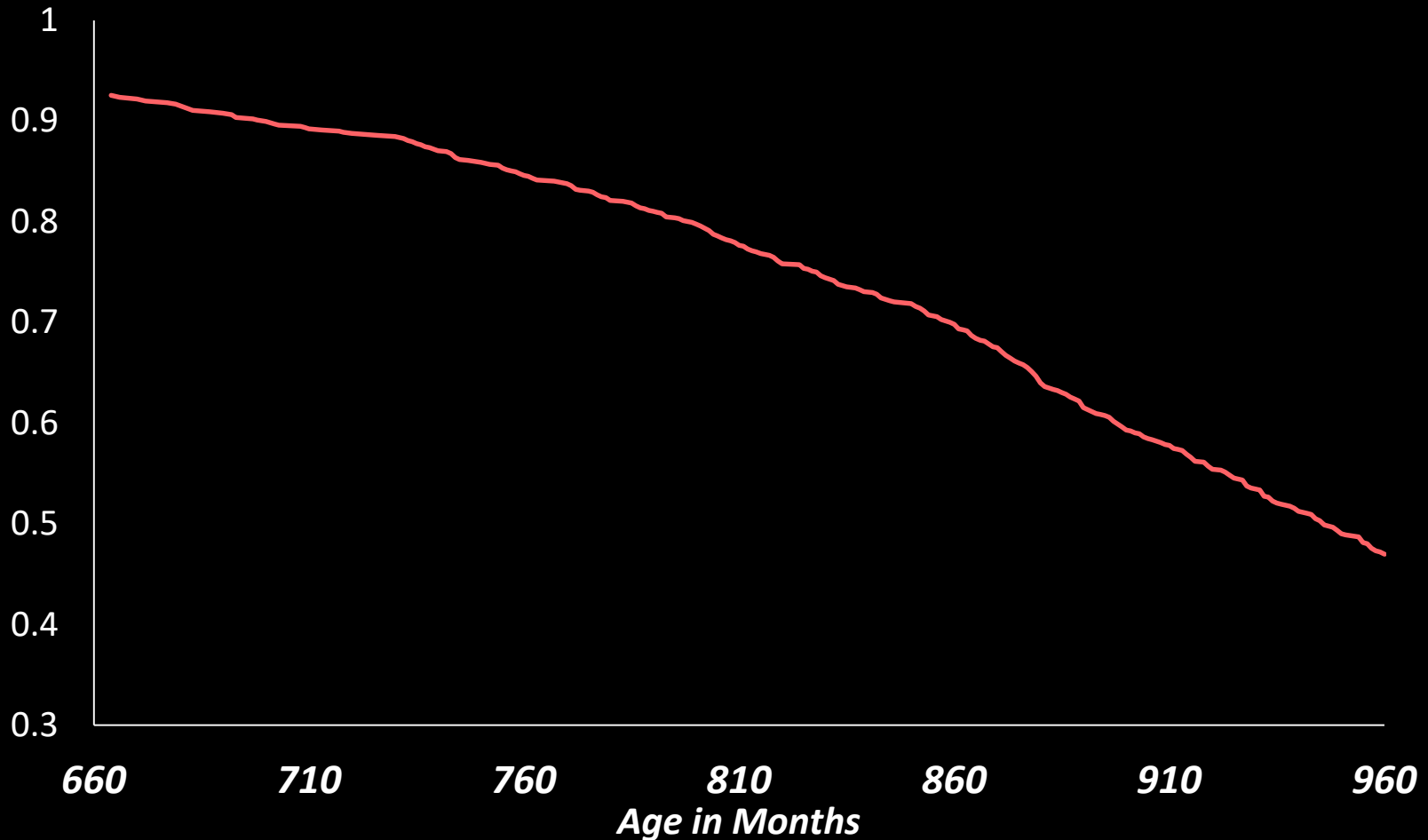
Survival Analysis:
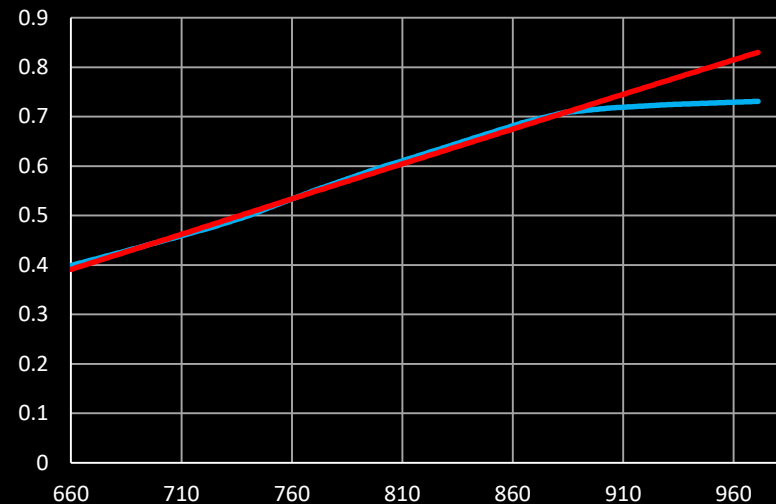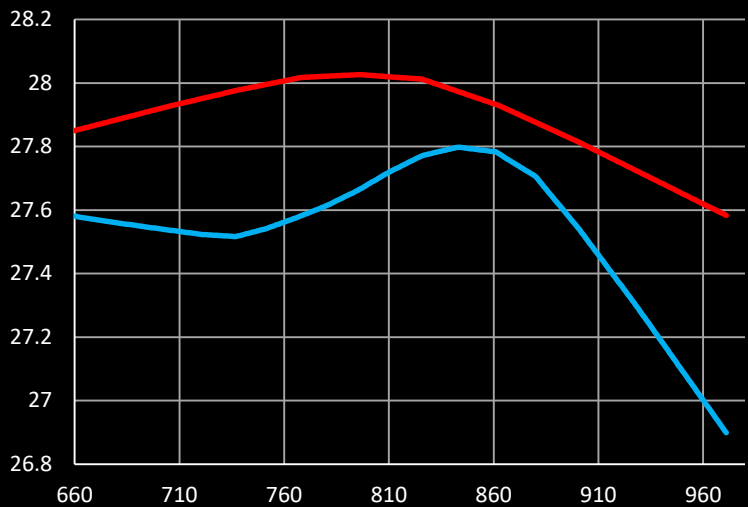Long-Tenure Union, Long-Tenure Nonunion

Age in Months

Survival Analysis: Long-Tenure Union, Long-Tenure Nonunion, Short-Tenure Workers

Index of Major Physical Conditions, Heart Problems, BMI, High Blood Pressure
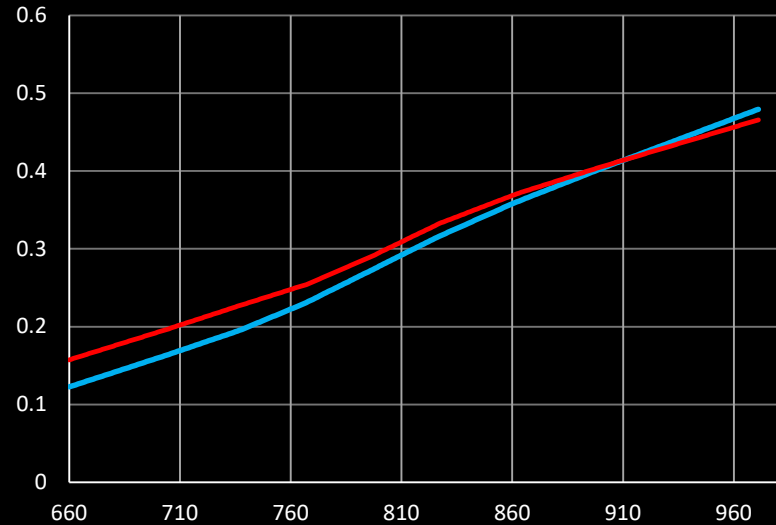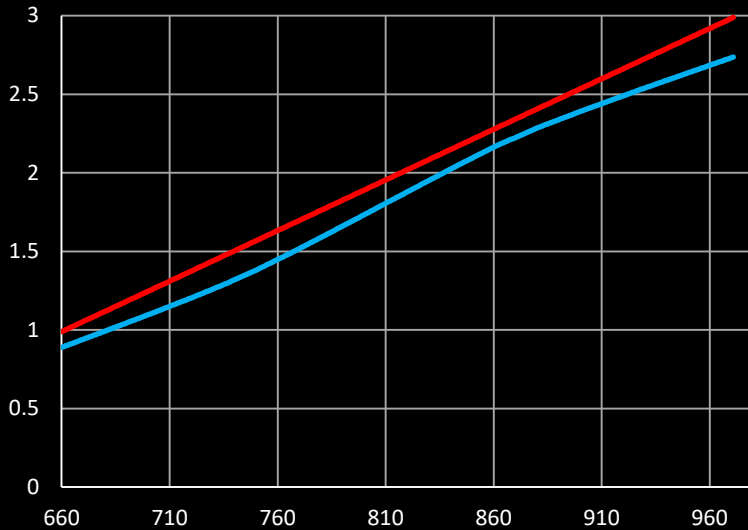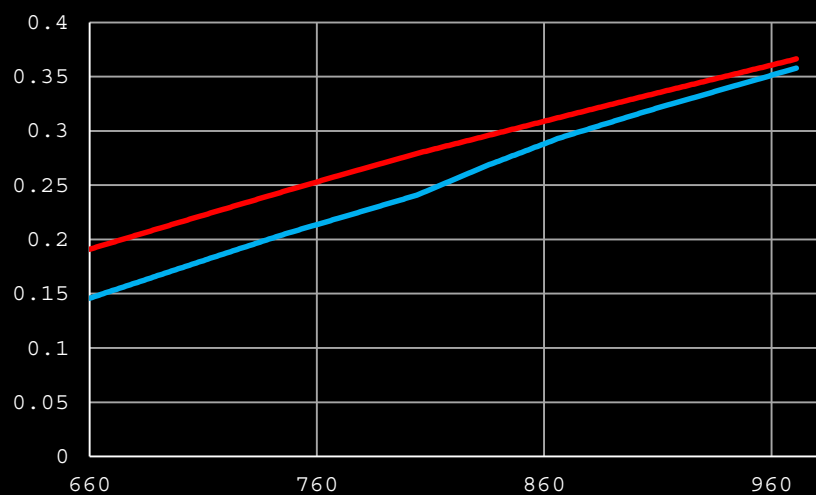
UNION   NONUNION   LOWER IS BETTER

Mobility Problems, Large Muscle Problems, Cognitive Skills*, Hospitalization
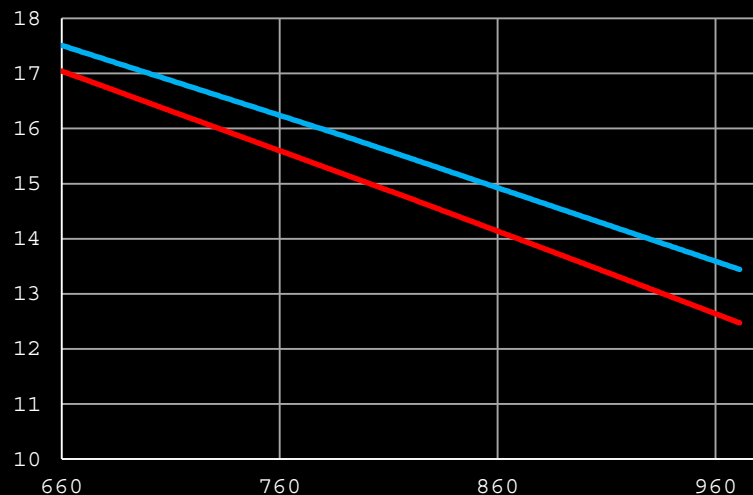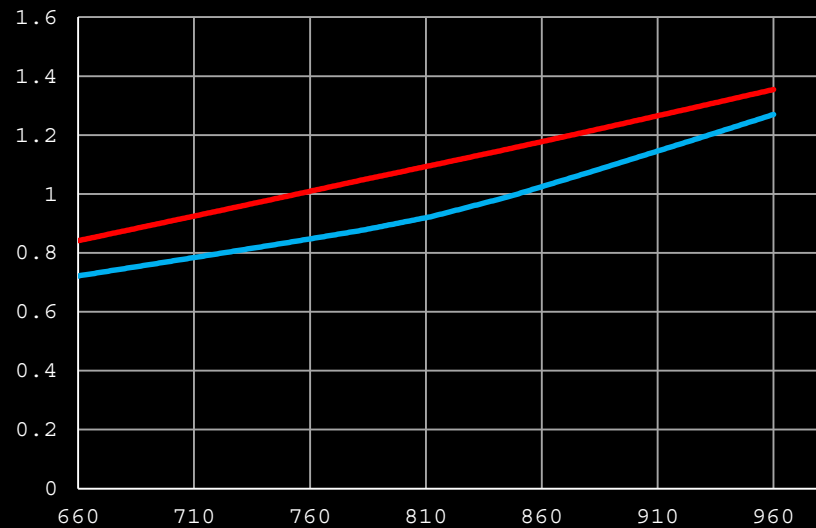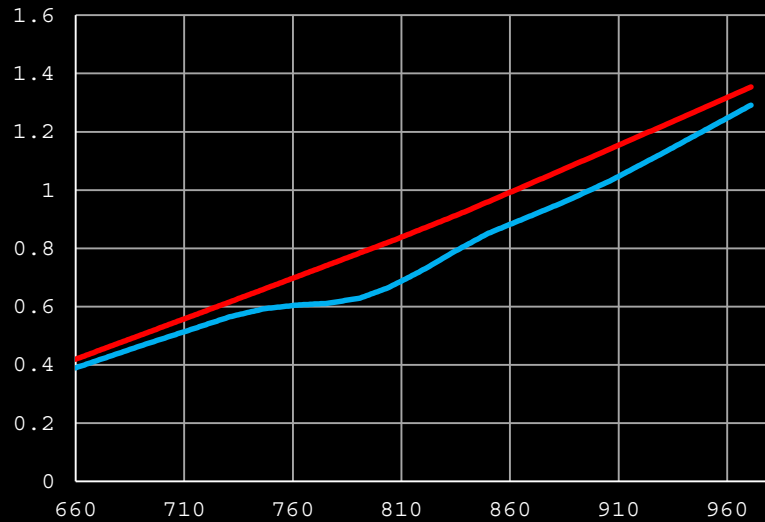
UNION NONUNION LOWER IS BETTER EXCEPT FOR *

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Evidence on Unions' Effects on Possible Mechanisms

Subject	Findings	Authors
Health Insurance	Greater Incidence	Buchmueller et al., 2002
Occupational Safety / Worker Compensation	Improves	Hirsch et al., 1997
Pensions	Greater Incidence	Freeman and Medoff, 1984
Wages and Earnings	15-25% Higher	Budd and Na, 2000, and many others
Job Stress	Less Stress	Branchflower and Bryson, 2020 Farber et al., 2018

Differences in Selected Job Characteristics

VARIABLE	UNION MEAN	NONUNION MEAN	EFFECT ON HEALTH
Log(Wages)	3.0	2.8	+
Log(HH Inc)	10.6	10.8	+
Hours/Week	43.0	46.4	~ 0
Physical Effort*	2.47	2.81	~ 0
Heavy Lifting*	3.05	3.33	-
Health Ins. in Retirement	0.74	0.50	+
Pension	0.96	0.58	+
Defined Benefit	0.53	0.30	~ 0

* On a scale of 1-4, where 1 = most and 4 = least.

Methods

Analyze:

- Indices of specific conditions (regression)
- Mortality (proportional hazard model)
- Self-Reported Health (ordered logit)

With three sets of controls:

- None
- Basic (occupation, industry, education, demographics)
- Full (add job characteristics, income, benefits)

Key Parameter Estimate:

- Long Term Union Dummy (vs. Long Term Nonunion)

Results
(estimates on long term union dummy, all significant)

Dependent Variable	No Controls	Basic Controls	Full Controls
Self-Reported Health (units of latent variable)	0.50	0.30	0.59
Mortality (mortality rate)	0.16	0.09	0.18
Index of Eight Major Health Conditions	0.17	0.10	0.12
Hospitalization in Previous 2 Years (dummy)	0.03	0.03	0.04
Functional Limitations and Mental Health	sizeable gaps	much smaller gaps	even smaller gaps

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No Sign of Selection

Self-Reported Health

Basic Spec.	Short Tenure	Long Tenure
Nonunion	0.054 (0.122)	----
Union	-0.056 (0.175)	0.293 (0.093)

Full Spec.	Short Tenure	Long Tenure
Nonunion	0.164 (0.144)	----
Union	0.025 (0.211)	0.575 (0.117)

Mortality

Basic Spec.	Short Tenure	Long Tenure
Nonunion	0.051 (0.085)	----
Union	0.034 (0.118)	0.089 (0.064)

Basic Spec.	Short Tenure	Long Tenure
Nonunion	-0.029 (0.116)	----
Union	0.061 (0.166)	0.192 (0.095)

in both models, negative estimates are good

Factors Worsening Union Health

On net, income works *against* union workers. Lower HH income outweighs higher own-earnings.

Family structure plays a small contributory role (in addition to any effects on income). Union workers are more family-oriented (more marriages, children).

Psychosocial factors play at best a small contributory role. Less stress is offset by less "happiness."

In Conclusion

Union workers have higher mortality and worse health and functionality, even though union jobs are better for your health. Go figure.

Differences in family structure and psychosocial factors play a small contributory role. No sign of negative selection (by health into unions).

No Sign of Selection: Self-Reported Health
(average two waves before & two waves after)

Before	Stay	Switch to:	After	Stay	Switch to:
Nonunion	0	0.005 (0.077)	Nonunion	0	0.001 (0.078)
Union	0.001 (0.029)	-0.102 (0.092)	Union	0.025 (0.175)	-0.152 (0.093)

Scale: 1 = Excellent . . . 5 = Poor,
Control for age, race, education,
All HRS Cohorts