

# Divergent Paths: A New Perspective on Earnings Differences Between Black and White Men Since 1940

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# I. INTRODUCTION

## II. EARNINGS GAP: FORMULATION AND EMPIRICAL SPECIFICATION

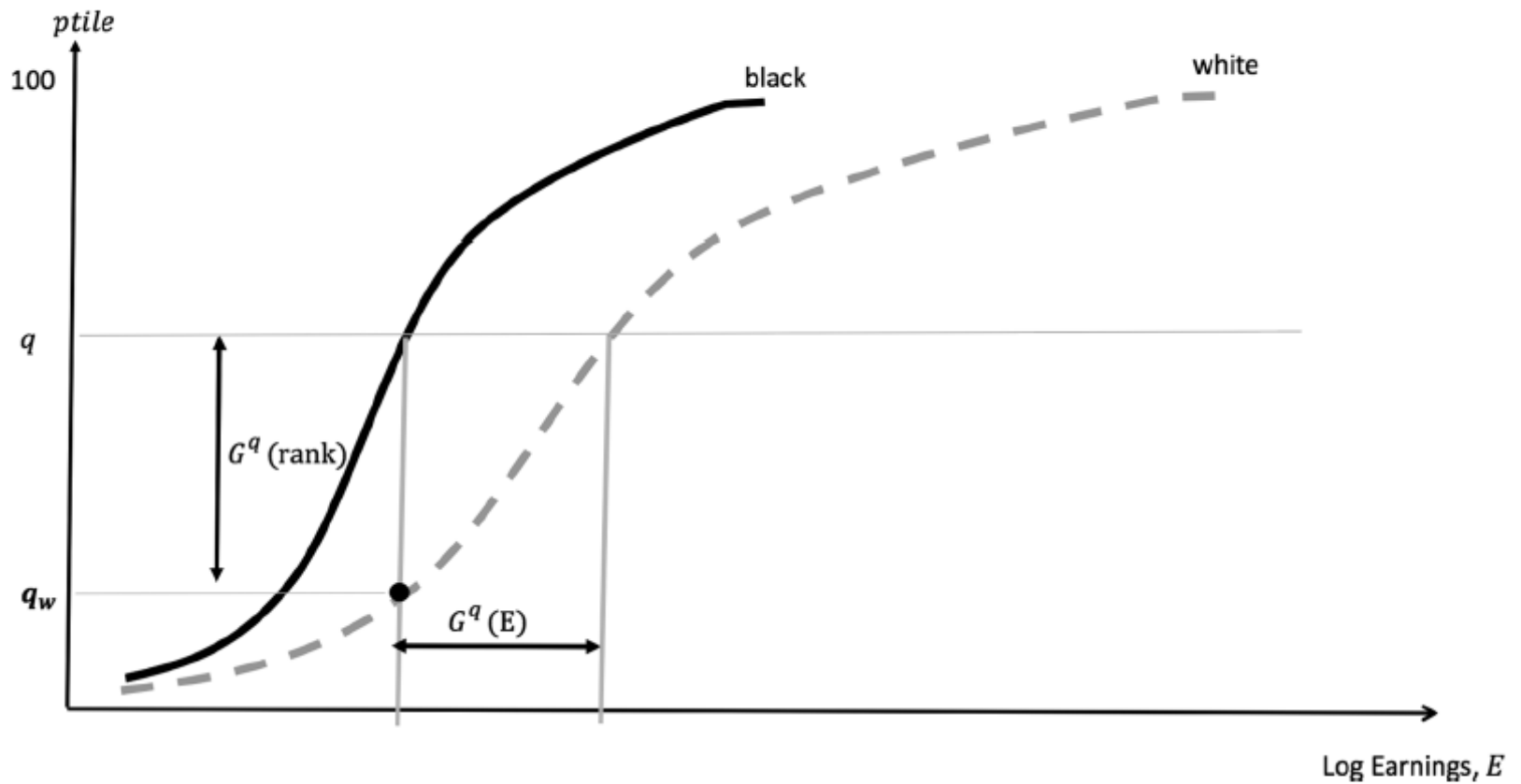


FIGURE I  
 Racial Earnings Level and Earning Rank Gaps

We use quantile regressions to measure the two types of earnings gaps. For the level gap, we estimate regressions of the form:

$$(1) \quad \log(E_{it}) = \alpha_t(q) + \beta_t(q)r_i + \varepsilon_{it}(q),$$

where  $r$  indicates a set of dummy variables for each category of race and ethnicity.

$\beta_t(q)$  measures the racial earnings gap at the  $q$ th percentile:

$$\beta_t(q) = f_t^w(q_t^w(q)) - f_t^w(q) = G^q(E).$$

To measure the rank earnings gap at a percentile  $q$ , we estimate quantile regressions of the form:

$$(2) \quad \text{rank}(E_{it}) = a_t(q) + b_t(q)r_i + u_{it}(q),$$

where the dependent variable is the percentile rank the person's earnings would hold in the white earnings distribution.

- $a_t(q)$  is simply the identity function  $a_t(q) = q$
- parameter  $b_t(q)$  measures the earnings position gap at a given percentile

# III. DATA AND SUMMARY STATISTICS



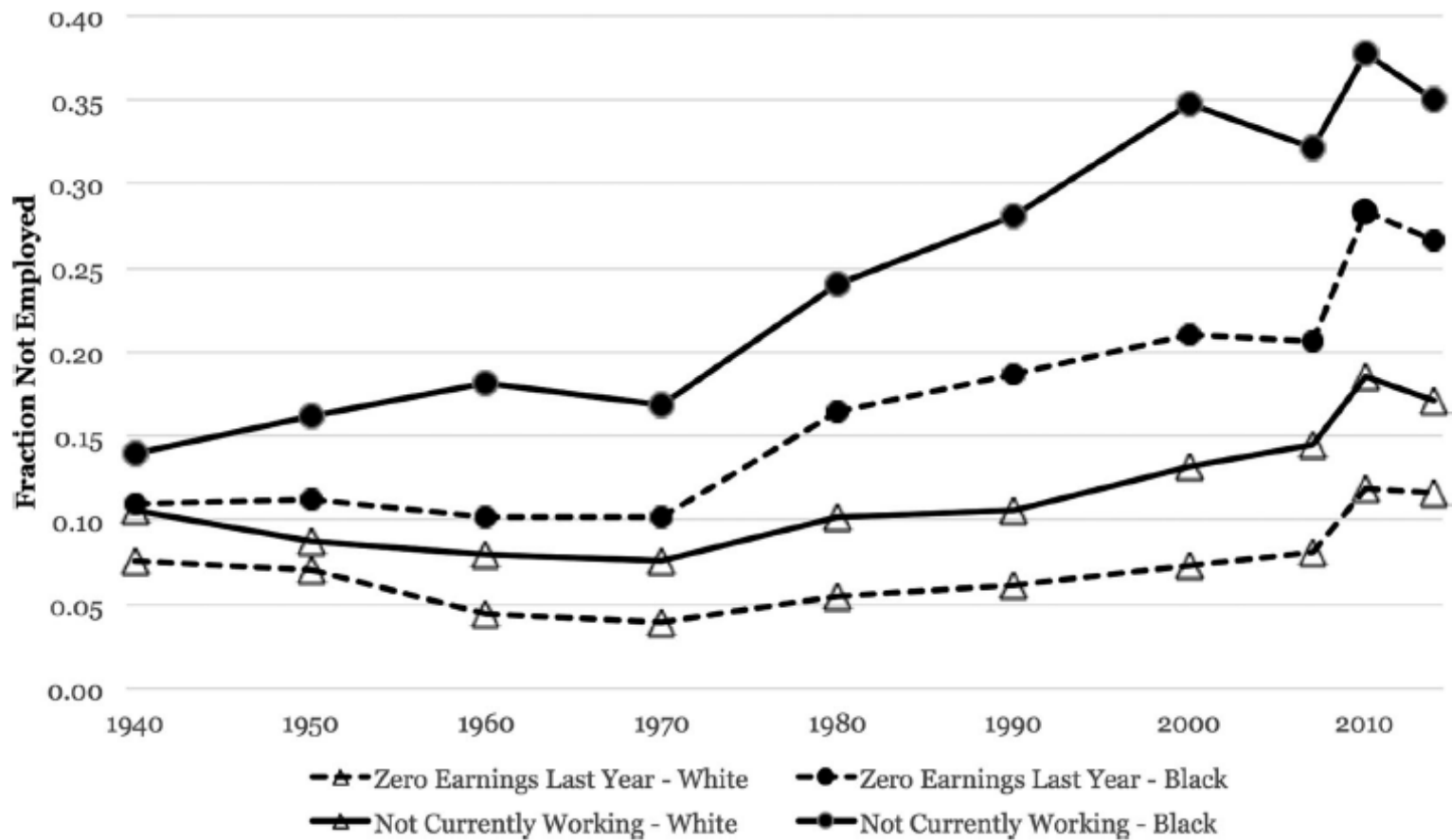


FIGURE II.A

Fraction of Men Not Employed, by Alternative Measure and Race

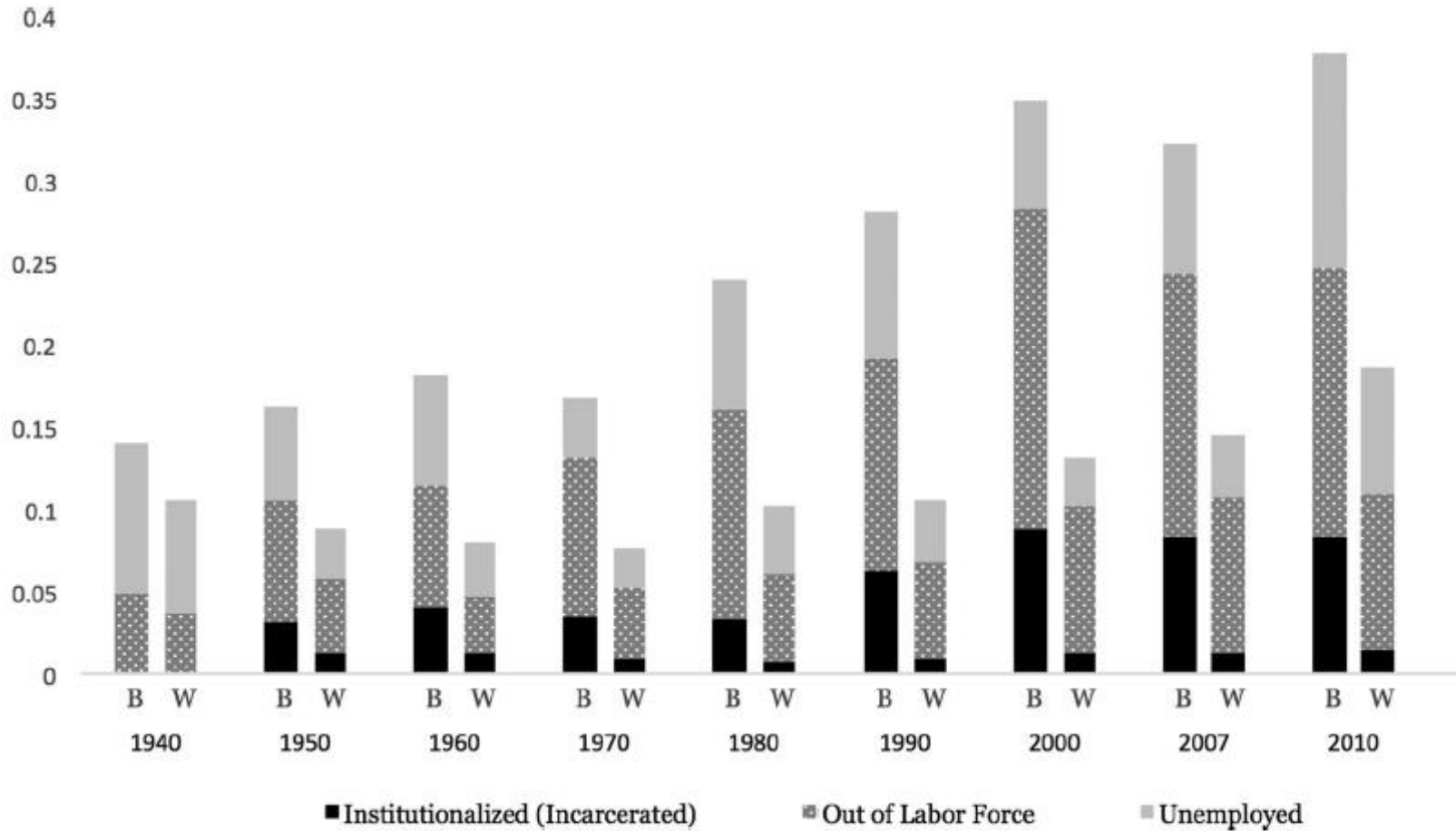


FIGURE II.B

Fraction of Men Not Currently Working, by Explanation and Race

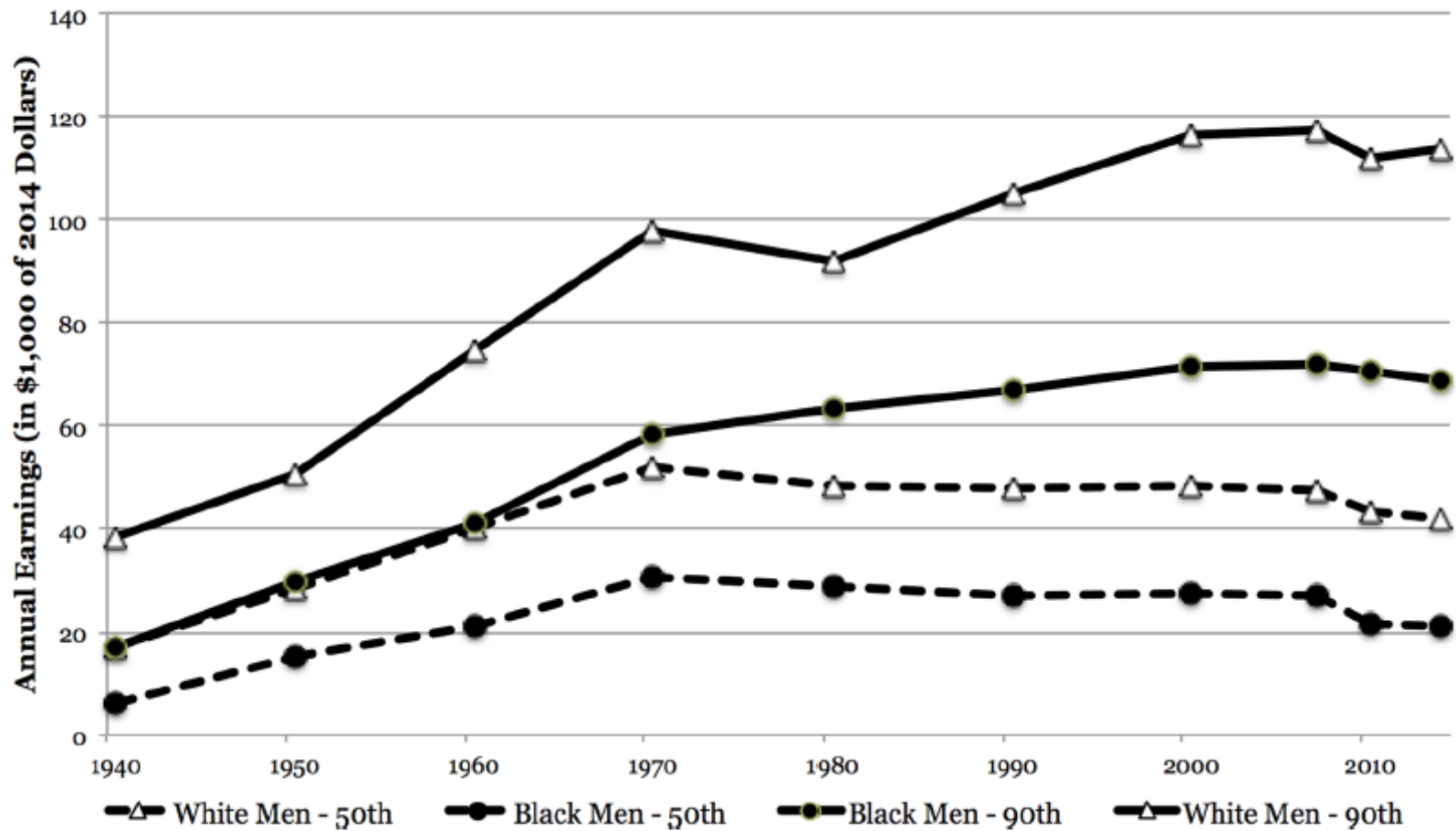


FIGURE III

Real Earnings of Black and White Men, Median and 90th Quantile

## IV. BENCHMARK ESTIMATES OF EARNINGS LEVEL AND RANK GAPS

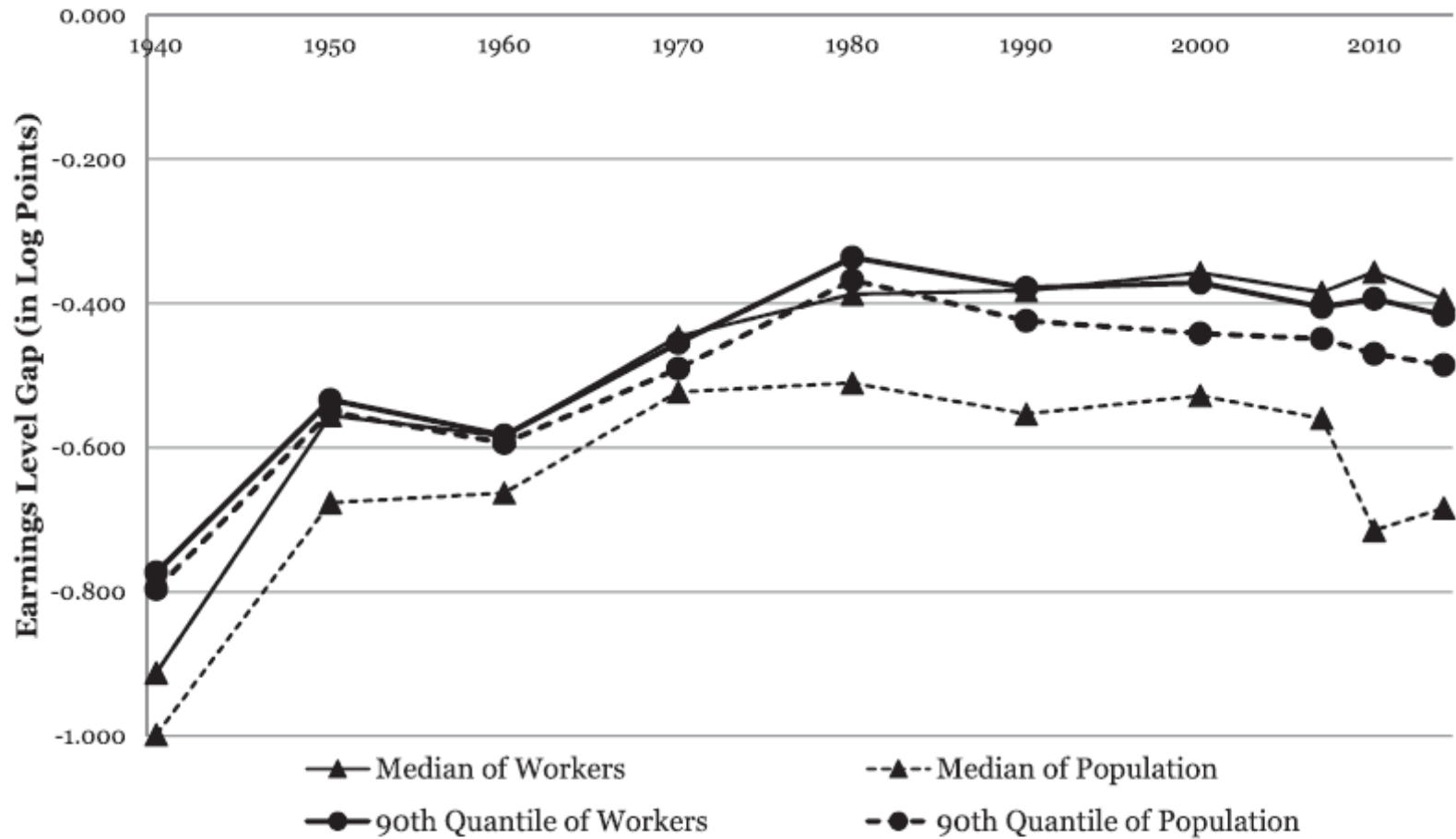


FIGURE IV

Racial Earnings Level Gap, Workers and Population, Median and 90th Quantile

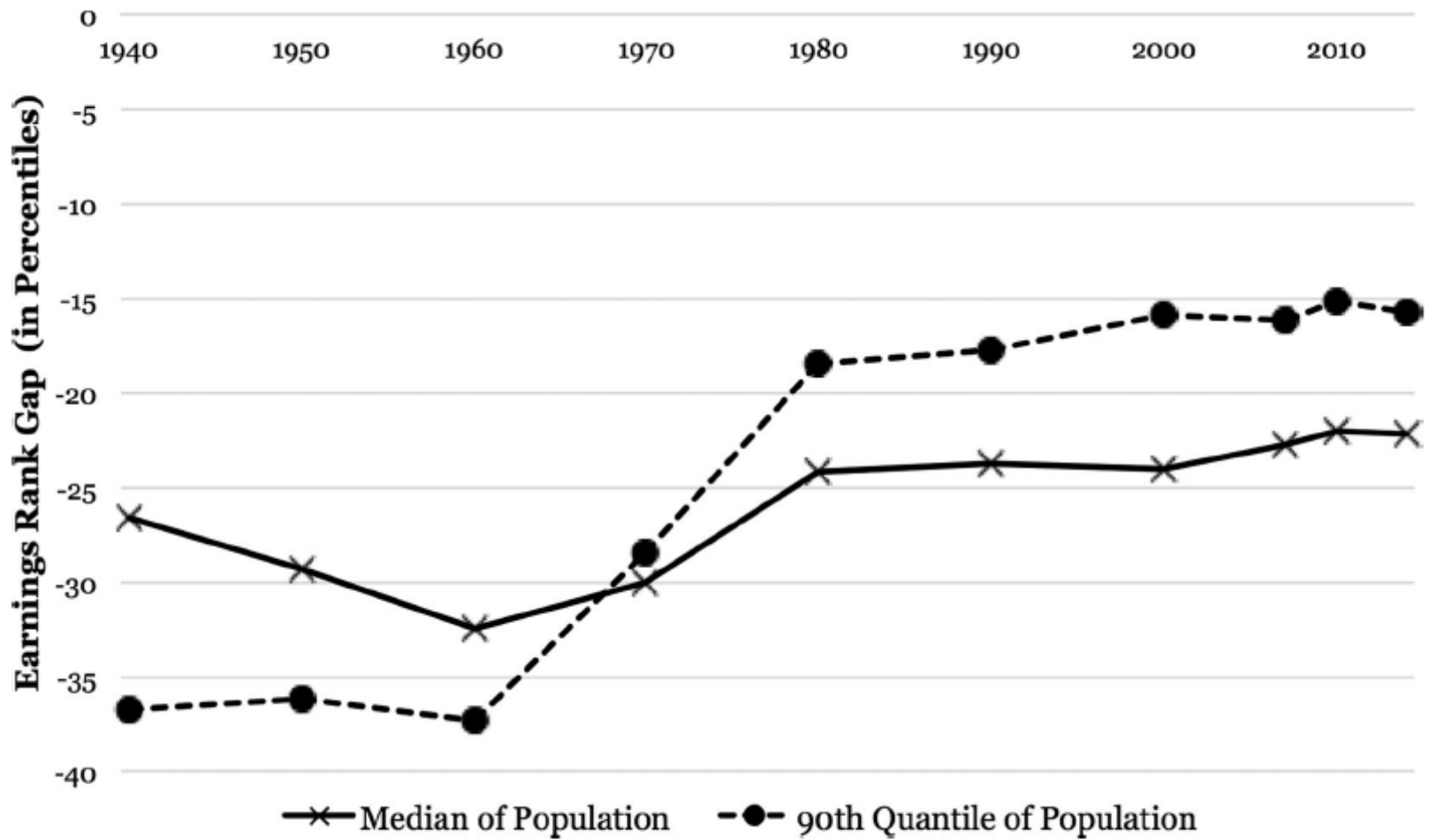


FIGURE V  
 Racial Earnings Rank Gaps, Median and 90th Quantiles

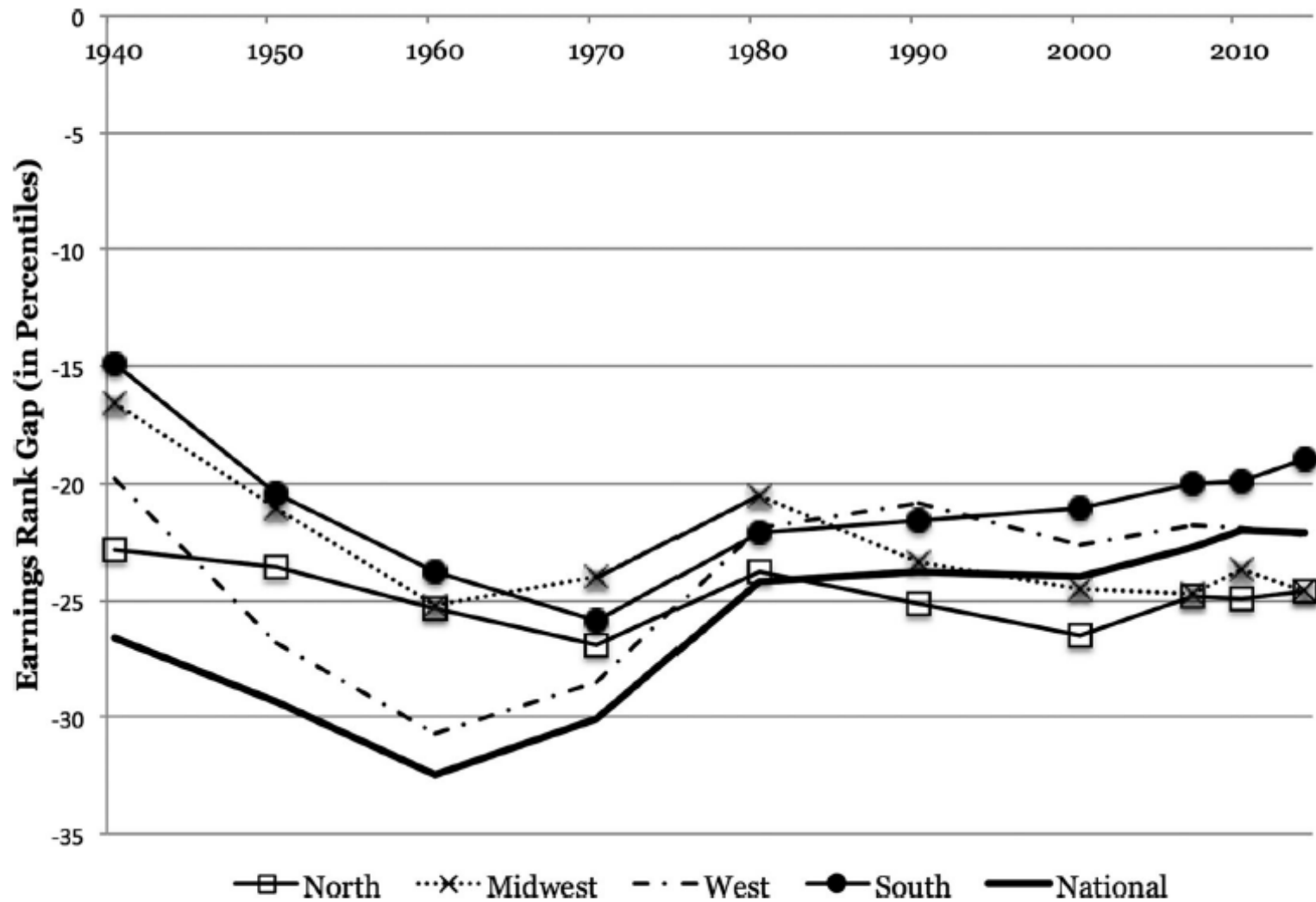


FIGURE VI  
Median Earnings Rank Gaps, by Region

**TABLE I**  
**MEDIAN EARNINGS LEVEL AND RANK GAPS, UNDER ALTERNATIVE SAMPLE AND DATA SPECIFICATIONS**

	1940	1970	2000	2007	2014
<b>Earnings level gap</b>					
Baseline	-0.999 (0.008)	-0.523 (0.008)	-0.528 (0.010)	-0.560 (0.004)	-0.684 (0.004)
Age 19–64 years	-0.960 (0.009)	-0.531 (0.006)	-0.584 (0.010)	-0.614 (0.005)	-0.734 (0.011)
Native-born men	-0.990 (0.008)	-0.515 (0.008)	-0.552 (0.011)	-0.591 (0.005)	-0.762 (0.005)
Weekly earnings	-0.827 (0.006)	-0.466 (0.005)	-0.466 (0.004)	-0.489 (0.004)	-0.602 (0.005)
Only labor mkt. earnings	-0.973 (0.014)	-0.491 (0.003)	-0.520 (0.004)	-0.543 (0.005)	-0.707 (0.008)
<b>Earnings rank gap</b>					
Baseline	-26.58 (0.08)	-30.03 (0.11)	-24.02 (0.05)	-22.77 (0.12)	-22.10 (0.12)
Age 19–64 years	-25.02 (0.14)	-19.99 (0.14)	-17.71 (0.08)	-16.39 (0.11)	-18.95 (0.22)
Native-born men	-25.19 (0.08)	-30.24 (0.12)	-24.66 (0.06)	-23.38 (0.13)	-25.24 (0.13)
Weekly earnings	-27.34 (0.14)	-30.98 (0.34)	-23.02 (0.04)	-22.34 (0.13)	-22.00 (0.16)
Only labor mkt. earnings	-17.07 (0.13)	-24.57 (0.20)	-20.96 (0.06)	-19.64 (0.12)	-21.52 (0.16)



# V. DECOMPOSING CHANGES IN RACIAL EARNINGS GAPS

TABLE II  
90TH QUANTILE EARNINGS LEVEL AND RANK GAPS, UNDER ALTERNATIVE SAMPLE AND  
DATA SPECIFICATIONS

	1940	1970	2000	2007	2014
<b>Earnings level gap</b>					
Baseline	-0.797 (0.006)	-0.491 (0.003)	-0.442 (0.003)	-0.449 (0.004)	-0.485 (0.003)
Age 19–64 years	-0.757 (0.007)	-0.441 (0.004)	-0.405 (0.001)	-0.437 (0.003)	-0.485 (0.005)
Native-born men	-0.799 (0.006)	-0.491 (0.003)	-0.442 (0.003)	-0.435 (0.004)	-0.499 (0.003)
Weekly earnings	-0.719 (0.007)	-0.444 (0.004)	-0.405 (0.001)	-0.428 (0.005)	-0.459 (0.002)
Only labor mkt. earnings	-0.792 (0.003)	-0.431 (0.013)	-0.413 (0.002)	-0.425 (0.004)	-0.461 (0.005)
<b>Earnings rank gap</b>					
Baseline	-36.72 (0.31)	-28.42 (0.52)	-15.91 (0.11)	-16.20 (0.17)	-15.76 (0.15)
Age 19–64 years	-25.90 (0.23)	-19.95 (0.15)	-11.58 (0.05)	-11.51 (0.10)	-11.71 (0.16)
Native-born men	-36.72 (0.31)	-28.57 (0.53)	-16.44 (0.12)	-16.40 (0.17)	-16.52 (0.16)
Weekly earnings	-37.26 (0.44)	-25.38 (0.36)	-13.46 (0.13)	-14.55 (0.20)	-14.98 (0.17)
Only labor mkt. earnings	-31.85 (0.22)	-26.75 (0.36)	-15.03 (0.14)	-15.06 (0.20)	-15.08 (0.17)

- Given our formulation of the earnings process, the change over time in the earnings level gap at a given percentile in period  $t$  can be written:

$$(3) \quad (f_t^w(q_t^w(q)) - f_t^w(q)) - (f_0^w(q_0^w(q)) - f_0^w(q)).$$

Adding and subtracting terms yields the decomposition:

$$(4) \quad \begin{aligned} & \left[ (f_t^w(q_0^w(q)) - f_0^w(q_0^w(q))) - (f_t^w(q) - f_0^w(q)) \right] \\ & \quad \quad \quad [A] \\ & + \left[ f_t^w(q_t^w(q)) - f_t^w(q_0^w(q)) \right]. \\ & \quad \quad \quad [B] \end{aligned}$$

(A) Distributional Convergence

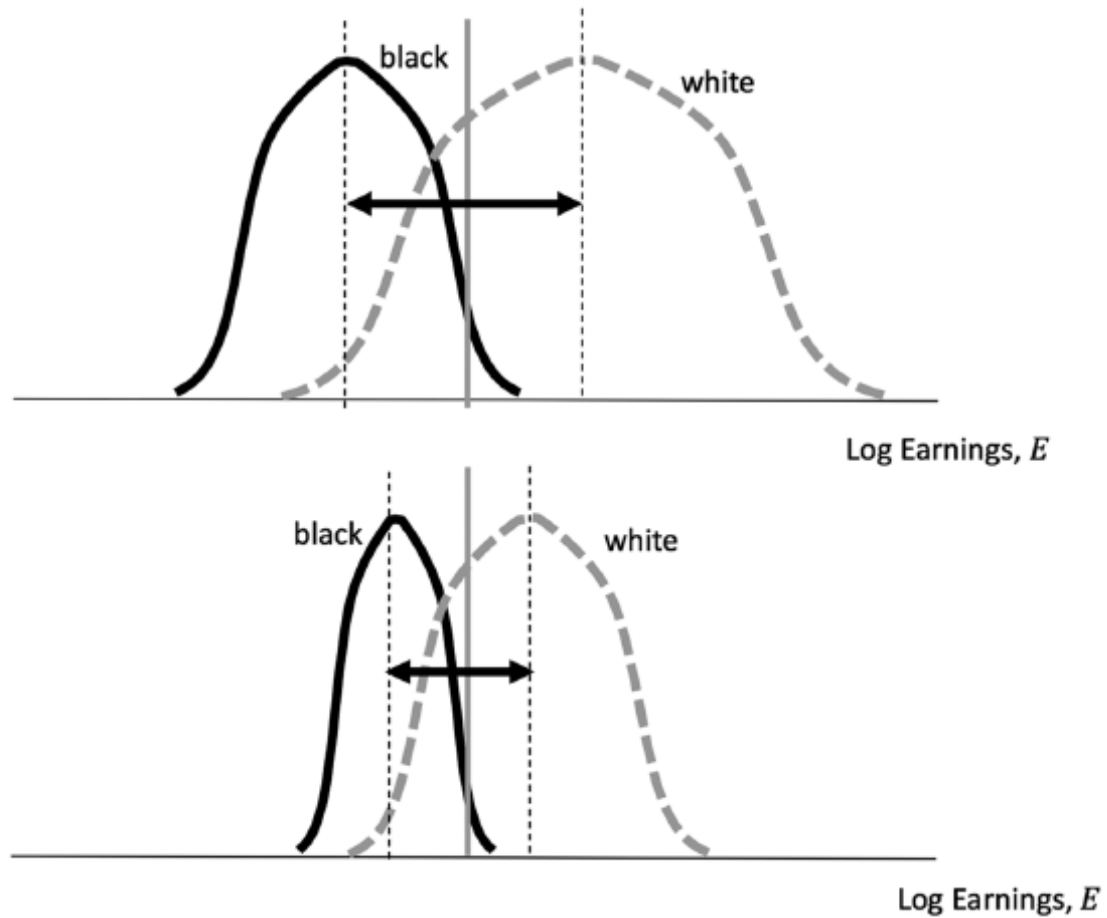


FIGURE VII

Two Sources of Changes in Racial Earnings Gaps

(B) Positional Convergence

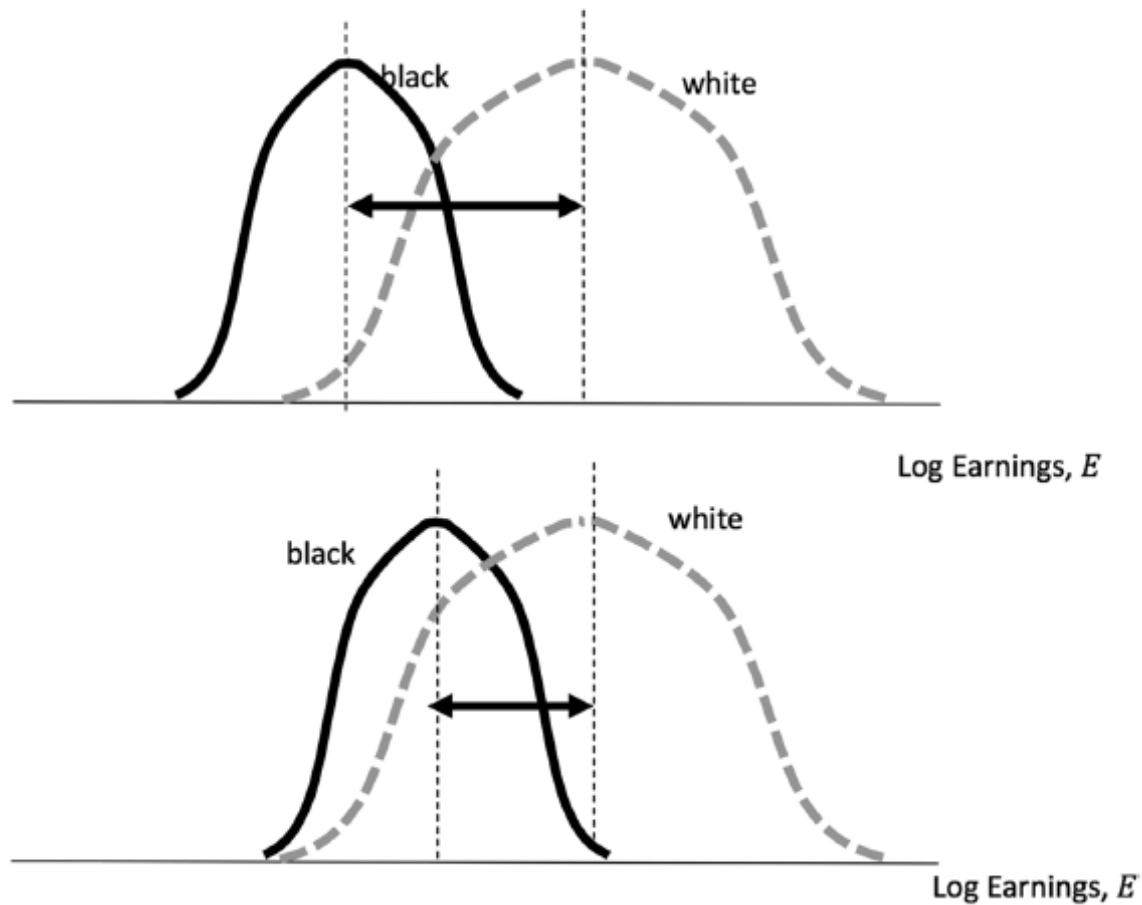


FIGURE VII

Two Sources of Changes in Racial Earnings Gaps

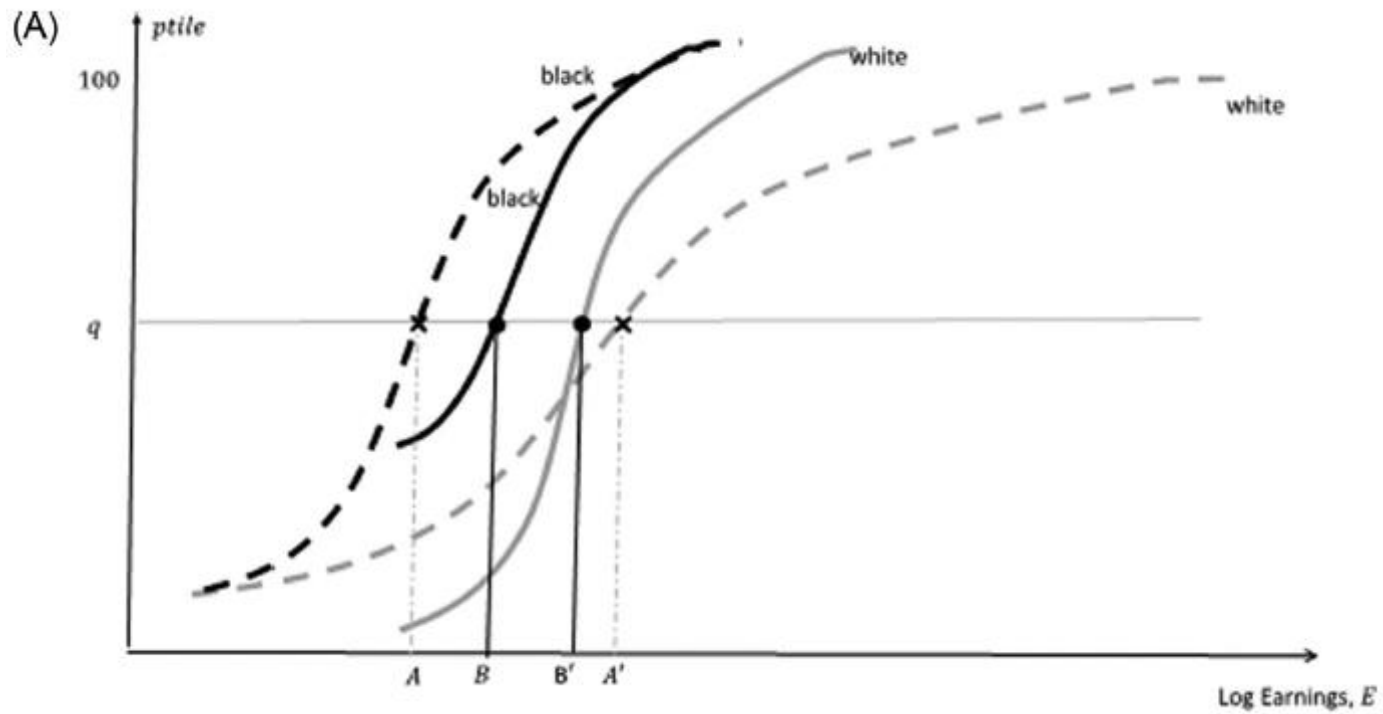


FIGURE VIII

Illustrating Decomposition Method

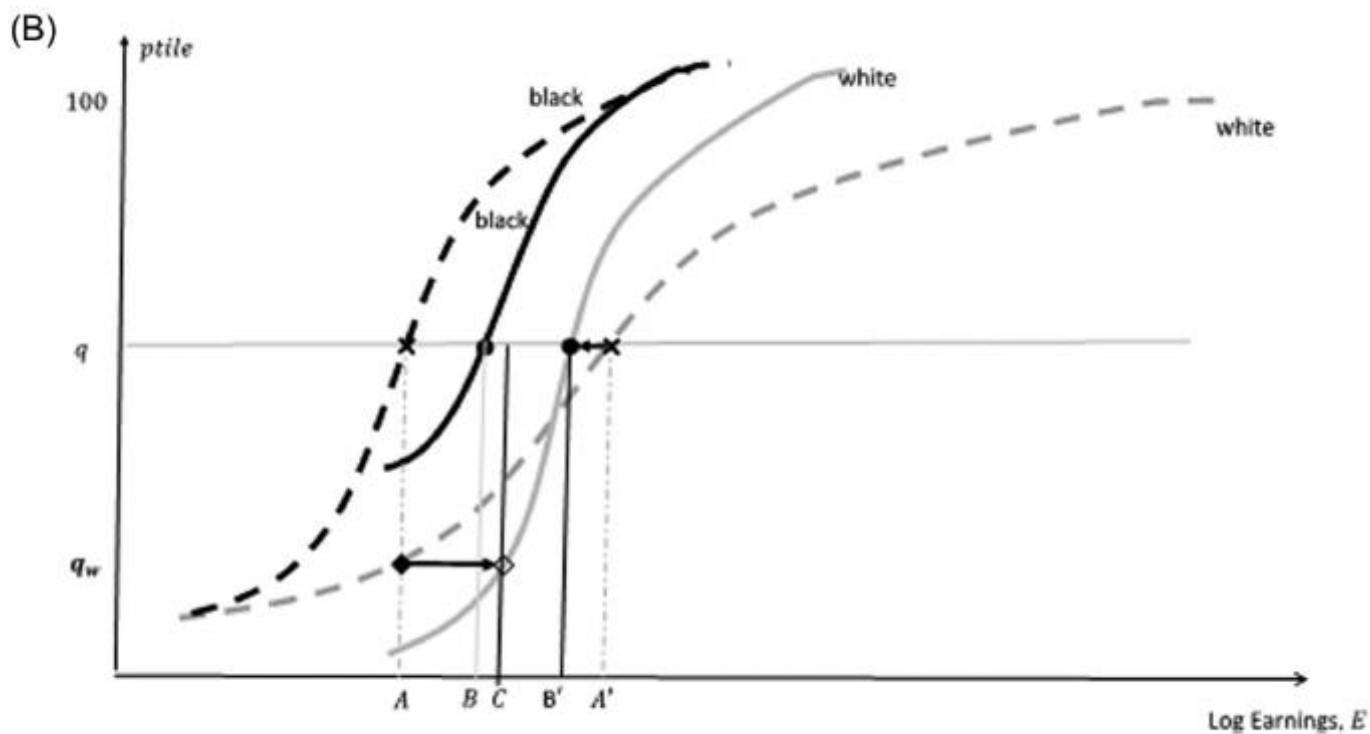


FIGURE VIII

Illustrating Decomposition Method

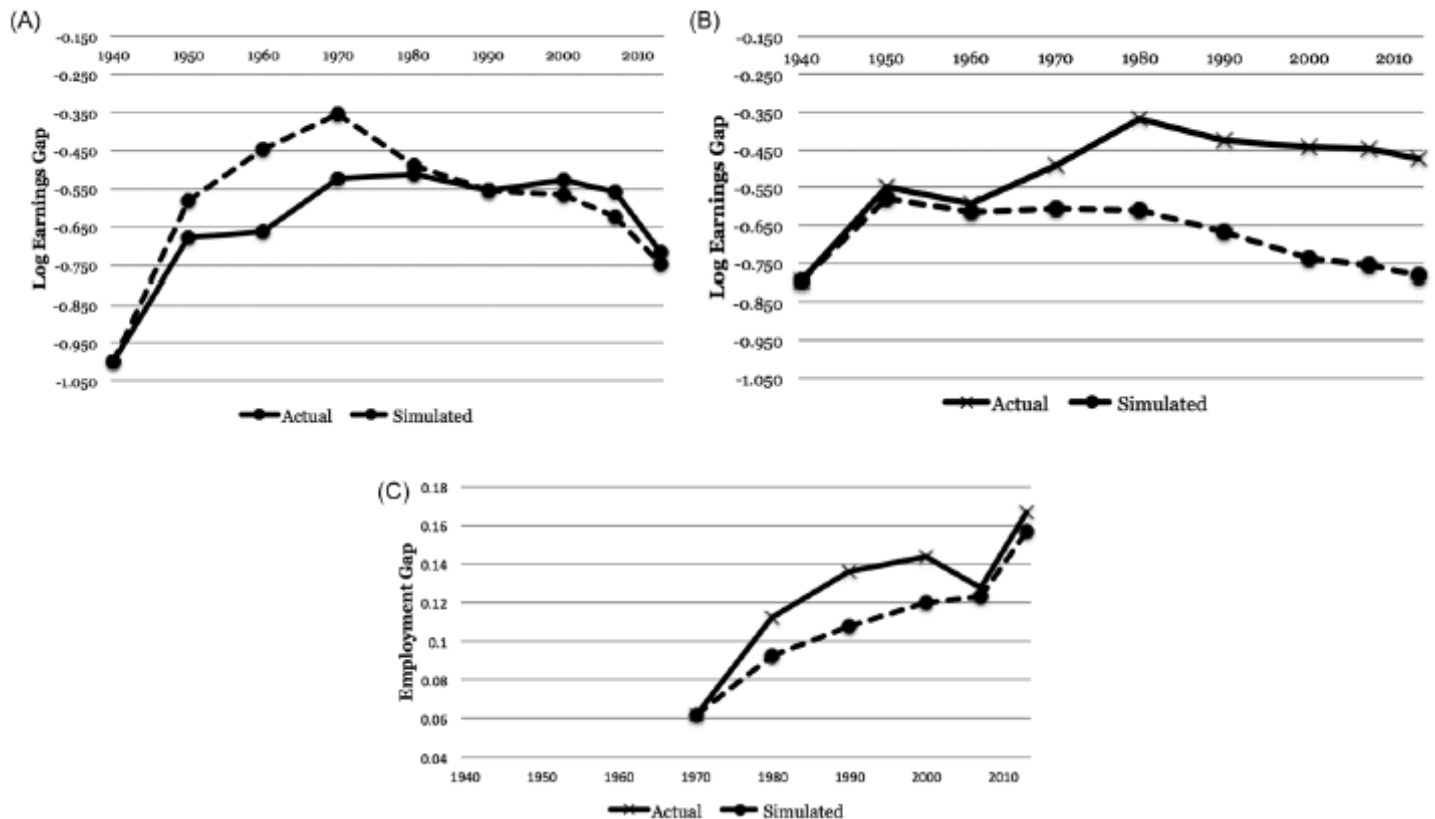


FIGURE IX

(A) Actual vs Simulated Racial Earnings Gap - Median. (B) Actual vs Simulated Racial Earnings Gap - 90th Quantile. (C) Actual vs Simulated Racial Employment (Positive Annual Earnings) Gap.



**TABLE III**  
**DECOMPOSITION OF CHANGES IN RACIAL EARNINGS AND EMPLOYMENT GAPS:**  
**POSITIONAL VERSUS DISTRIBUTIONAL CONVERGENCE**

	1940–1970	1970–2014	1940–2014
Panel A: Median earnings level gap			
Total Change	0.476	–0.193	0.283
Distributional convergence	0.643	–0.392	0.251
Positional convergence	–0.167	0.199	0.032
Panel B: 90th quantile earnings level gap			
Total change	0.306	0.019	0.325
Distributional convergence	0.192	–0.177	0.015
Positional convergence	0.114	0.196	0.310
Panel C: Employment gap			
Total change		–0.105	
Distributional convergence		–0.095	
Positional convergence		–0.010	

# VI. SCHOOLING AND RACIAL EARNINGS GAPS

TABLE IV  
 RACIAL EARNINGS RANK GAPS WITHIN EDUCATION CATEGORY, 1940–2014

	1940	1970	2000	2007	2014
<b>Median</b>					
College degree or more	–26.20 (1.63)	–17.00 (0.83)	–9.26 (0.15)	–11.12 (0.26)	–11.19 (0.30)
HS degree	–19.95 (0.66)	–16.62 (0.39)	–15.95 (0.16)	–14.00 (0.16)	–15.58 (0.20)
Less than HS	–8.70 (0.19)	–13.95 (0.18)	–15.03 (0.26)	–13.83 (0.38)	–14.05 (0.24)
<b>90th quantile</b>					
College degree or more	–9.14 (0.80)	–3.98 (0.30)	–3.81 (0.07)	–4.47 (0.14)	–4.35 (0.16)
HS degree	–16.39 (4.01)	–12.58 (0.86)	–9.82 (0.24)	–10.73 (0.20)	–11.49 (0.16)
Less than HS	–21.33 (0.12)	–17.94 (0.25)	–14.24 (0.28)	–16.23 (0.46)	–16.52 (0.47)

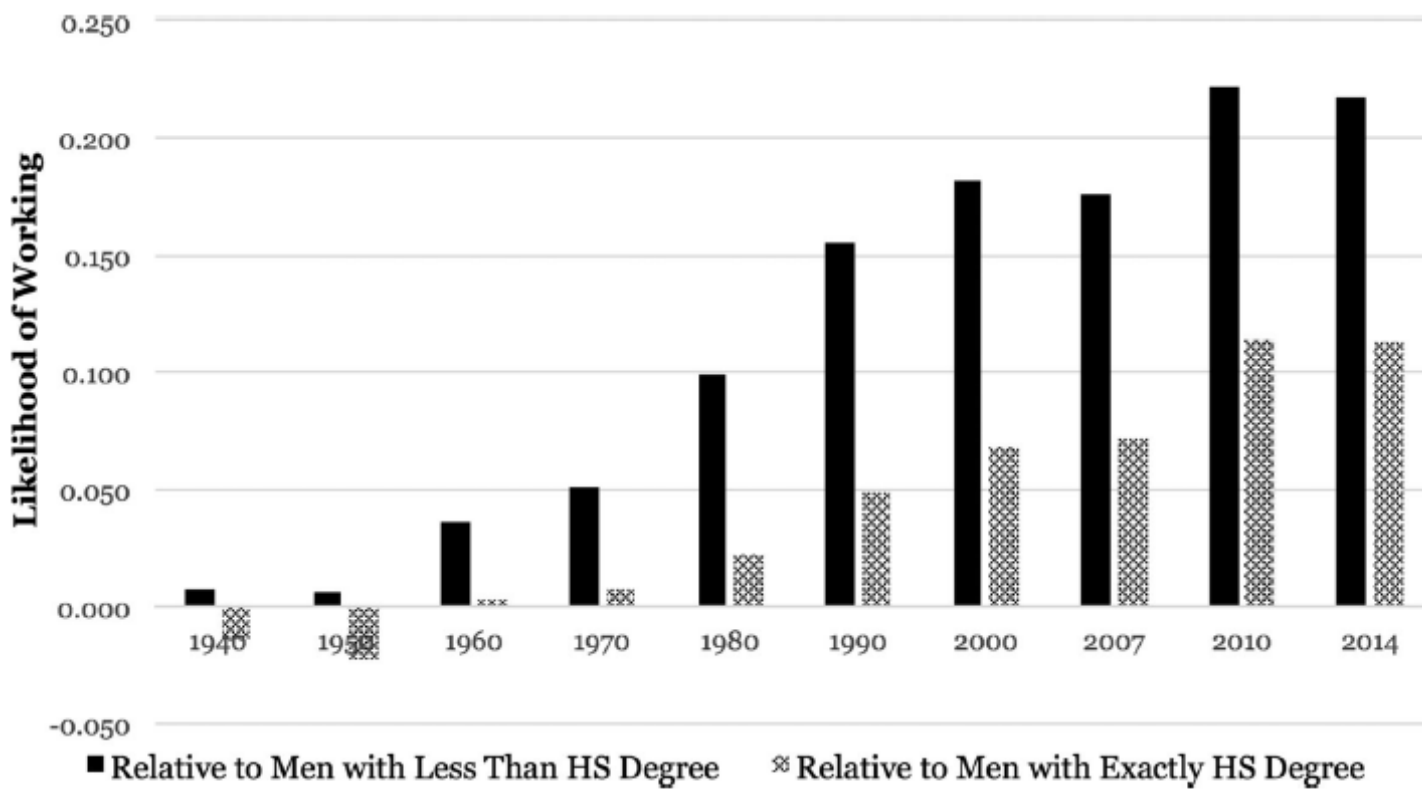


FIGURE X  
 Additional Likelihood of Working for College Educated Men, Relative to Other Education Categories

TABLE V  
 DECOMPOSITION OF CHANGES IN RACIAL EARNINGS AND EMPLOYMENT GAPS: THE  
 ROLE OF EDUCATION

	1940–1970	1970–2014	1940–2014
Panel A: Median earnings level gap			
Total change	0.476	– 0.193	0.283
Distributional convergence	0.643	– 0.392	0.251
Positional convergence	– 0.167	0.199	0.032
Convergence in educational attainment	0.133	0.247	0.380
Within-education positional convergence	– 0.065	0.194	0.129
Returns to education	– 0.236	– 0.242	– 0.477
Panel B: 90th quantile earnings level gap			
Total change	0.306	0.019	0.325
Distributional convergence	0.192	– 0.177	0.015
Positional convergence	0.114	0.196	0.310
Convergence in educational attainment	– 0.097	0.052	– 0.045
Within-education positional convergence	0.101	0.147	0.248
Returns to education	0.110	– 0.003	0.107
Panel C: Employment gap			
Total change		– 0.105	
Distributional convergence		– 0.095	
Positional convergence		– 0.010	
Convergence in educational attainment		0.081	
Within-education positional convergence		– 0.024	
Returns to education		– 0.067	

## VII. CONCLUSION