ABSTRACT

Treasure in Heaven: Returns to Schooling in Clergy Labor Markets

Grant M. Seiter

Director: Charles M. North, Ph.D.

Despite the status of religious organizations as major inputs toward nonprofit sector productivity in the United States, the study of the labor markets for clergy has been limited in the social sciences. One possible reason is that clergy are often considered to have low responsiveness to market forces; they are believed to follow a calling to a profession that has little regard for economic incentives. Even so, many congregations and denominations expect their clergy to be well-educated, with at least a bachelor's degree and often a graduate degree as well. Such expectations raise questions about career alternatives for young people considering entering the clergy. With this paper, I join a growing literature that explores the financial incentives facing members of the clergy. Using cross-sectional U.S. Census Bureau data from 1950-2010, this research provides a descriptive study of clergy compensation relative to other occupations, examining changes in returns to schooling. I find significant statistical evidence that supports a higher rate of return to schooling for non-clergy overall, and an increasing difference between clergy and non-clergy returns over the sample period. Additionally, the data suggest that the clergy could be a substitute for schooling for less educated African Americans and that the rise of women selecting into the occupation could be partially explained by decreasing opportunity cost for female clergy.

APPROVED BY DIRECTOR OF HONORS THESIS:

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Dr. Charles M. North, Department of Economics

APPROVED BY THE HONORS PROGRAM:

_____

Dr. Elizabeth Corey, Director

DATE: _____

TREASURE IN HEAVEN: RETURNS TO SCHOOLING IN CLERGY LABOR

MARKETS

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Grant M. Seiter

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CHAPTER ONE

Introduction

Over the past few decades, there has been a notable rise in the economic analysis of religion. Economists have examined determinants of religious behavior, the economic impact of religion, and associations among such variables as religiosity and earnings rates, educational attainment, and crime rates (Iannaccone, 1998; Iyer, 2016). Only a small and nascent literature, however, has focused on questions involving clergy employment and the religious labor market.

The economic study of clergy remains limited to two primary lines of research. The first involves explaining variation in clergy compensation through a combination of denominational and individual differences. Variables such as individual education, gender, race, congregational size, and denominational organization have all been linked to variation in clergy compensation (Bonifield and Mills, 1980; Carroll, 2006; Carroll and Wilson., 1980; Condon, 2002; Haney, 2008; Hartzell, Parsons and Yermack, 2010; McMillan and Price, 2003; Trawick and Lile, 2007; Zech, 2007). For example, Haney (2008) studied the relationships between clergy compensation and church structure, location, and size. Trawick and Lile (2007) found that Southern Baptist clergy received higher salaries in areas with greater concentrations of Southern Baptist churches. And Zech (2007) discovered that ministerial pay was unrelated to self-reported performance scores and that ministers from larger communities receive more pay.

The second line of research compares the compensation of clergy to other occupations (McMillan and Price, 2003; Schleifer and Chaves, 2016). The primary result is that clergy earn less than other occupations with similar levels of education.

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I contribute primarily to this second line of research by establishing stylized facts on return to schooling for clergy. Using representative samples of the population from U.S. Census Bureau data, I estimate the rate of return to schooling among clergy and non-clergy for the period 1950 to 2010. I find that return to schooling coefficients increase on average for both clergy and non-clergy occupations. Additionally, for all sample periods, non-clergy occupations exhibit a higher estimated return to schooling, and the difference between clergy and non-clergy returns increases.

Given that education is often a required input in clergy labor supply and that there is a documented rise in the return to schooling in non-clergy labor markets (Juhn, Murphy and Pierce, 1993; Murphy and Welch, 1992), this descriptive analysis focuses on whether clergy exhibit a rising opportunity cost in labor supply. I make three key contributions. First, I consider the potential impact of such rising opportunity costs on the composition of clergy in the United States. Then, I discuss how rising opportunity costs may affect clergy composition under the club-good theory of religious organization. Finally, I consider returns to education in the market for black clergy and increasing female participation in the clergy labor market.

The remainder of this paper is organized as follows. Chapter 2 provides some background on the market for clergy and discusses the implications and results of previous literature. Chapter 3 presents the data and summary statistics relevant to clergy wages. Chapter 4 describes the empirical framework and provides the basic results from the return to schooling analysis. In the final chapters, I consider how rising opportunity cost affects the composition of the clergy and conclude.

CHAPTER TWO

Background and Literature Review

The Economics of Religion

Adam Smith (1776) grounded the economic analysis of religion in a largely overlooked chapter of *The Wealth of Nations* that argued for a similar comparison of churches and secular firms. Smith was convinced that self-interest motivates clergy, market forces constrain churches, and the benefits of competition, constraints of monopoly, and forces of regulation press upon churches in a similar manner to any secular firm (Smith, 1776).

The first grand work of the subfield, following Adam Smith's 1776 introduction, appeared in 1975 with Corry Azzi and Ronald Ehrenberg's individual religious choice and household allocation model (Azzi and Ehrenberg, 1975). Then in the 1990s, Laurence Iannaccone published his seminal works on the organizational structure of religious firms (Iannaccone, 1992,9).

Since then, many economists and social scientists have contributed to the understanding of religion in terms of an economic market. In several editions, Finke and Stark (2005) propose a model of the churching of America that relies heavily on economic perspectives. They consider the rapid increase in religious participation among Americans to be a primary by-product of our free-market religious environment, a growing supply of energetic clergy and religious options, and a constant stream of innovations (Finke and Stark, 2005). Hartzell, Parsons and Yermack (2010) analyze the compensation schemes and incentive structures for a sample of more than 2,000 Methodist ministers, highlighting the monetary incentives that affect ministerial compensation. They find that incremental financial incentives affect ministerial effort and result in pay-for-performance scenarios that affect overall congregational

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performance. Additionally, Smith (2014) writes on the features of religious labor markets, noting that churches are major components of the nonprofit sector and share some distinctive features with secular nonprofits.

<div align="center">Religion as a Market</div>

In America's religious economy, churches and religious organizations face substantial competition in a market that rewards religious leaders for their effort and skill. Clergy act as independent providers responsible for marketing their beliefs, and religious economies often function similarly to competitive commercial economies (Finke and Stark, 2005). For example, it is increasingly more common among many denominations to hire clergy based on objective criteria such as academic pedigree and performance, as opposed to more subjective criteria such as calling.[1] In this way, religious organizations act like secular firms in their hiring decisions.

Individuals electing to enter the clergy who are sufficiently qualified and meet denominational performance standards are often rewarded and incentivized to improve their performance. Typically, rewards come in the form of higher wages and benefits, usually by moving to more prestigious congregations. These monetary and non-pecuniary rewards are no different than the increases in wages or job opportunities granted to secular workers who perform well. In these ways, the literature is consistent in supporting the role of clergy self-interest and the economic similarities between religious and secular markets.

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[1] Spiritual calling refers to the intrinsic motivations felt by religious practitioners to make some contribution.

Occupational Choice

Ministers regularly make utility-maximizing choices when it comes to the duration and intensity of their work (Smith, 2014). These choice differences often help distinguish between the observationally effective and ineffective pastor. Smith (2014) notes that the choice sets, personalities, and leadership traits of pastors are often perceived to matter most in the performance outcome of churches.

The heavy ties between church performance and clergy choices have led Wildhagen, Mueller and Wang (2005) to observe that clergy hiring, in most congregational church settings, is often based on the bureaucratic and systematic scrutiny of resumes and interviews. The clergy occupation in this way functions as a senior manager position in a secular firm. Additionally, practical concerns over financial security and fair wages remain salient for many clergy (Smith, 2014). The same utility-maximizing structure used for decision-making by clergy in the workplace carries over to the hiring process, remuneration contract negotiation, and the original occupational choice scenario.

Clergy Motivations

Strong intrinsic motivation and faith-based spiritual factors pose a large barrier to any analysis on religion and decision-making. In some cases, strong intrinsic motivation might negate the need for explicit financial incentives in clergy compensation schemes, as clergy can be motivated by idealism and rewards that fall outside traditional economics. In other cases, robust financial incentives could also work against a minister's credibility among congregants. For example, in theological traditions that maintain a heavy reliance on sacrifice, lower wages could potentially bolster the appearance of a minister's motivation or commitment to his teachings.

There is an agency problem such that the reward granted to clergy for their efforts should be sufficient enough to align efforts with congregant desires, however,

not so large as to undermine credibility. The inability to evaluate the quality of a minister's theological claims ex-ante only adds complexity to this compensation problem. Additionally, spiritual factors hold significant weight in clergy decision-making, effort, credibility, and commitment.

Despite the typical view that clergy are motivated primarily by spiritual factors, research suggests that clergy respond significantly to market forces (Hartzell, Parsons and Yermack, 2010; Wildhagen, Mueller and Wang, 2005). In their study on the incentive compensation of Methodist ministers, Hartzell, Parsons and Yermack (2010) suggest that incremental financial incentives affect pastors' effort and service to parishioners. Also, Wildhagen, Mueller and Wang (2005) use data from a national survey of Protestant clergy to identify factors that influence job search decisions. They find that calling has little effect on a cleric's decision to switch congregations and that clergy consider many of the same factors as non-clergy in deciding whether to search for positions with other congregations.

Furthermore, Smith (2014) notes that the importance of faith for both churches and clergy does not exclude a significant role for rational criteria and economic modeling. In many lines of scholarship, the same economic models that apply to secular wage earners can be extended to the clergy. Additionally, profit and performance, in terms of clerical reward, can be measured and modeled in various ways. Numbers of congregants, perceived credibility, rank in the organizational hierarchy, and individual degree of popularity are all non-pecuniary incentives (and performance measures) that play a role in clergy motivation.

While a religious organization's fate depends on its congregational structure, religious doctrines, evangelization techniques, and several of other factors, clerical leadership and the incentives that motivate clerical leaders remain the single most important factor in organizational success. The success of religious firms historically depends more on its clergy and less on the spiritual factors that affect decision-making.

Clergy and Education

The competitive nature of the market for religion has increased the need for clergy to differentiate themselves through higher education. Many denominations now provide clergy members with opportunities for formal seminary instruction, making education even more important in clergy's careers (Perl and Chang, 2000). As clergy increase their career and human capital investments through seminary and professional degrees, they tend to recoup the cost of that investment through higher lifetime earnings.

Many denominations, however, will permit relatively low-educated clergy to serve churches that cannot pay high enough wages to attract highly educated applicants (Bonifield and Mills, 1980). The result is increased competitiveness among highly educated clergy searching for employment in a market saturated with low-wage options.

Among other factors, clergy tend to be more willing to sacrifice high wages for the intrinsic benefits of the profession. High wages might undermine clergy credibility with a congregation (calling into question a ministers motivations), and religion by its nature is a credence good, making it difficult to evaluate the quality (and monetary value) of theological claims and clergy motivations ex-ante (Hartzell, Parsons and Yermack, 2010; Iannaccone, 1998; Smith, 2014).

Return to Schooling

The qualitative aspects of wage structures in the United States remain effectively timeless. From 1968 through 1989, the variance of log earnings increased by approximately 80 percent, and there exists substantial secular growth in the demand for more educated and skilled workers (Juhn, Murphy and Pierce, 1993). The earnings of higher-educated individuals are greater on average and the trend toward increasing wage inequality is often attributed to increased premia on both unobserved and ob-

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served dimensions of skill (Juhn, Murphy and Pierce, 1993; Katz and Murphy, 1992; Murphy and Welch, 1992).

High educational attainment and seminary education are increasingly common among American church leaders. The clergy has historically been a highly educated occupation, and the recent labor market trend of increasing national average education applies to clergy as well. Many congregations require that ministers have a college degree, and social scientists have long acknowledged the importance of education in clergy career attainment (Smith, 2014).

It is unlikely that clergy earnings have kept up with the earnings of other college graduates. This would suggest that the return to schooling for clergy should be lower than equivalently specified returns for non-clergy occupations.[2]

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[2] Return to schooling is an estimation of the effect additional education has on wages (or other measures of income). Return on educational investment refers to the gain (or loss) associated with the cost of attending school. This analysis is concerned with estimating return to schooling.

CHAPTER THREE

Data and Descriptive Statistics

Data Summary

The data come from U.S. decennial census samples spanning 1950 to 2000 and an American Community Survey (ACS) sample for 2010.[1] The decennial census and ACS samples were extracted from the IPUMS-USA database at the University of Minnesota Population Center (Ruggles, Flood, Goeken, Grover, Meyer, Pacas and Sobek, 2020). Both surveys are conducted by the U.S. Census Bureau and collect data on occupation, income, educational attainment, homeownership, and other general demographics.

The decennial census and ACS samples have several advantages that make them particularly attractive for this study on clergy returns to schooling. Unlike denominational and U.S. Religion Census data, these samples include a representative set of all occupations from the population. This includes a sizable number of clergy observations and allows for the meaningful comparison of returns to schooling across occupations. Additionally, the data include multiple measures of wealth. Clergy are often remunerated in complex packages and are subject to special tax liabilities. For example, some clergy are granted access to a parsonage, manse, or rectory. Many others consider a portion of their income as a non-taxable housing allowance.

In this analysis, I consider income from wages and total personal income as financial variables of interest.[2] Income from wages includes total pre-tax wage and

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[1] The ACS was inaugurated in January 2005 and is largely compatible with the long form of the decennial census. I use the ACS in place of the 2010 census data for this paper. Public use micro-data samples for the 2010 census have yet to include variables related to education and earnings.

[2] For the models, the dependent variables are the natural logarithm of income from wages and the natural logarithm of total personal income. These values are expressed in current dollars, which is in the year the respondent receives the income.

salary income – that is, money received as an employee – for the previous 12 months. Total personal income includes pre-tax personal income (or losses) from all sources for the previous 12 months. While income from wages is used to analyze the specific income streams from a respondent's employer, total personal income provides a more holistic representation of the change in a respondent's total wealth in a given year.[3]

For the primary measurement of schooling, I assign to each respondent a schooling level based on a calculation for years of school completed.[4] The existing U.S. Census definitions for educational attainment measure the highest year of school or degree completed. For example, respondents who attended the 8th grade but did not finish (or progress to the 9th grade) are classified as having completed the 7th grade.

A wide variety of household and personal characteristics are available in the data. I correct for the possibility that return to schooling coefficients are overstated by including a standard set of characteristics related to income as controls. For example, I aggregate individual occupations into broader (discipline-related) categories to control for occupational variance. I divide observations into 25 distinct labor groups pooled from the approximately 493 individual occupations that vary across census periods. Additionally, I include simple indicator variables for male, Hispanic white, black, and state of residence to account for gender, race, and geographic variances respectively.

To identify clergy I use the Census Bureau's 2010 ACS occupation codes.[5] Clergy are considered all individuals who earn income by conducting religious worship

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[3] In the results, I focus primarily on coefficients from the natural log of income from wage regressions. I present regressions on the natural log of total personal income for robustness.

[4] Years of schooling are calculated based on the census classification scheme for the highest grade attended. Levels correspond to a single year of schooling, and numerical values 0 (for no schooling) through 20 (advanced degree) are assigned. Each degree conferred beyond high school (12 years) is assigned a value calculated as the average number of years to complete the degree + 12 years (i.e., one year of college=13; bachelor's degree conferred=16; master's degree conferred=18, and so on...).

[5] The U.S. Census Bureau regularly adjusts its coding scheme to reflect a broader set of occupations. The harmonized occupation codes for the 2010 ACS identify clergy (Clergy = 2040), directors of religions activities and education (Directors = 2050), and other religious workers (Religious Workers = 2060) separately.

or performing other spiritual functions associated with the practice of religious faith. Because of a lack of denominational or religious classification in the data, the results are to be interpreted for the clergy occupation generally, taking into account religious and denominational variances.

Summary Statistics

The full appended sample for 1950 to 2010 contains approximately 68 million observations. Following convention, I restrict the sample to individuals age 18 years or older ($n = 48,904,865$). This sample includes 104,150 individuals who report clergy as their primary occupation. All summary statistics are reported for respondents with non-missing income from wages cells, and all models are estimated excluding observations with missing data.[6]

Summary statistics for the full appended sample are presented in Table 3.1. Percentiles and means of selected characteristics are displayed for clergy and non-clergy. Furthermore, earnings measures are CPI inflated to reflect 2010 dollars.

Table 3.2 presents summary statistics by year. In this table, I compare clergy and non-clergy statistics over time. The top panel displays data organized by clergy and the bottom panel by non-clergy. Columns represent the appropriate sample year.

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[6] There are 30,348,100 observations with non-missing income from wages cells, of which 91,053 (0.30%) report clergy as their primary occupation. Additionally, there are 41,991,366 observations with non-missing total personal income cells, of which 100,595 (0.24%) report clergy as their primary occupation.

Table 3.1: Means of selected characteristics for all data

Variables	Clergy	Non-Clergy
Male	88.37 %	54.34 %
Married	77.15 %	59.74 %
White	88.92 %	83.01 %
Black	6.73 %	9.80 %
Hispanic White	3.16 %	8.15 %
Other Race	0.93 %	2.78 %
Only Bachelor's Degree	20.21 %	13.77 %
Advanced Degree	53.31 %	8.08 %
Age	48.49	39.60
Years of Schooling	16.25	12.75
Income from Wages*	$35,282	$38,138
Total Personal Income*	$41,907	$41,763
Observations *(N)*	91,053	30,257,047

Table 3.2: Means of selected characteristics for clergy and non-clergy, by year

Clergy

Variables	1950	1960	1970	1980	1990	2000	2010
Male	97.40 %	98.03 %	97.19 %	94.06 %	90.12 %	85.80 %	82.03 %
Married	74.81 %	77.60 %	77.44 %	77.05 %	79.28 %	76.95 %	79.20 %
White	89.87 %	92.34 %	93.29 %	92.98 %	91.37 %	86.31 %	85.71 %
Black	10.13 %	7.07 %	6.02 %	5.51 %	5.49 %	7.26 %	7.64 %
Hispanic White	1.04 %	1.13 %	1.51 %	1.97 %	2.53 %	3.87 %	4.51 %
Other Race	0.00 %	0.07 %	0.05 %	0.08 %	0.80 %	1.46 %	1.40 %
Only Bachelor's Degree	19.48 %	13.59 %	13.88 %	14.03 %	20.94 %	22.65 %	23.69 %
Advanced Degree	42.86 %	56.46 %	57.64 %	58.59 %	52.59 %	51.15 %	51.6 %
Age	44.97	44.03	45.80	45.73	47.59	49.75	51.27
Years of Schooling	14.46	15.68	15.87	16.80	16.19	16.23	16.33
Income from Wages*	$21,140	$28,471	$36,173	$33,524	$34,850	$36,971	$37,311
Total Personal Income*	$23,056	$32,183	$40,570	$39,322	$41,364	$44,985	$44,611
Observations (N)	385	8,594	3,919	12,214	18,092	21,584	26,265

Non-Clergy

Variables	1950	1960	1970	1980	1990	2000	2010
Male	66.84 %	63.44 %	58.87 %	55.47 %	52.97 %	52.24 %	51.28 %
Married	64.32 %	69.47 %	67.14 %	61.20 %	59.42 %	56.31 %	56.07 %
White	89.36 %	88.89 %	88.67 %	87.18 %	83.94 %	78.42 %	79.51 %
Black	10.23 %	10.24 %	10.08 %	10.21 %	9.26 %	10.18 %	9.30 %
Hispanic White	1.92 %	2.87 %	3.49 %	05.61 %	7.49 %	10.70 %	11.66 %
Other Race	0.02 %	0.10 %	0.11 %	0.31 %	3.30 %	4.83. %	4.03 %
Only Bachelor's Degree	4.42 %	5.39 %	7.08 %	9.53 %	14.16 %	16.15 %	19.69 %
Advanced Degree	2.23 %	3.44 %	5.06 %	7.98 %	7.19 %	8.58 %	11.35 %
Age	38.39	39.64	39.01	37.18	38.41	39.86	42.22
Years of Schooling	9.81	10.55	11.53	12.53	12.95	13.18	13.62
Income from Wages*	$20,443	$28,020	$35,410	$35,388	$37,357	$41,767	$42,839
Total Personal Income*	$21,800	$30,173	$38,027	$38,513	$41,138	$45,983	$47,066
Observations (N)	160,137	3,201,366	1,644,490	5,189,417	6,032,632	6,780,538	7,248,467

This table presents summary statistics for clergy and non-clergy from U.S. decennial census and ACS data from 1950-2010.
Data include only respondents with non-missing income from wages cells. *CPI inflated to reflect 2010 dollars

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I note similar means for income from wages and total personal income among clergy and non-clergy in Table 3.1. Despite the similarities in mean earnings measures, these summary data indicate that clergy are older and more highly educated than non-clergy. The mean age of clergy is 8.89 years greater than non-clergy and clergy complete 3.5 years more schooling on average. The clergy also contains a significantly higher proportion of male respondents. Males account for 88.37 percent of clergy compared to 54.34 percent of non-clergy.

Summary statistics on gender and race show a decline in the male dominance of the clergy and in all other occupations. Male clergy decline as a percentage from 97.4 percent in 1950 to 82.03 percent in 2010. The percentage of male employees among non-clergy decline from 66.84 percent in 1950 to 51.28 percent in 2010. The percentage of Hispanic white clergy quadruples over the sample period, while the percentage of Hispanic whites in the non-clergy cohort increases from 1.92 percent to 11.66 percent. The percentage of black clergy declines, however, from 10.13 percent to 7.64 percent, while the proportion of blacks in the non-clergy cohort remains relatively constant.

I also note the increase in the proportion of clergy to non-clergy. In 1950 there is one clergy member to every 416 non-clergy and in 2010 one for every 276 non-clergy. This result could suggest an increase in the number of operating religious congregations per capita (in the form of churches, mosques, synagogues, etc.) or a reduction in congregation size during the sample period.

Graphical Analysis

To more aptly illustrate the relationship between clergy and non-clergy wages, I graph changes in mean wage over time for clergy in Figure 3.1, and for non-clergy in Figure 3.2. Both illustrations plot mean wages for respondents with a high school education (or less), only a bachelor's degree, or with an advanced degree. Additionally,

mean years of schooling are bulleted and correspond to the values on the secondary y-axis. Wages are CPI inflated to reflect 2010 dollars.

Both figures show increasing wage inequality by education level. The clergy has always been a highly educated occupation, while average schooling for non-clergy has increased dramatically. In 1950, the mean years of schooling for non-clergy is 9.81 and by 2010 is 13.62 years. Unsurprisingly, clergy earnings have not kept up with the earnings of other college graduates. In 2010, clergy with advanced degrees earned just under 45,000 dollars, and similarly educated non-clergy earned over 80,000 on average. Wages for low educated clergy have remained similar to wages for low educated non-clergy. It is clear that the increase in mean wage over the sample period is driven by the higher educated cohorts.
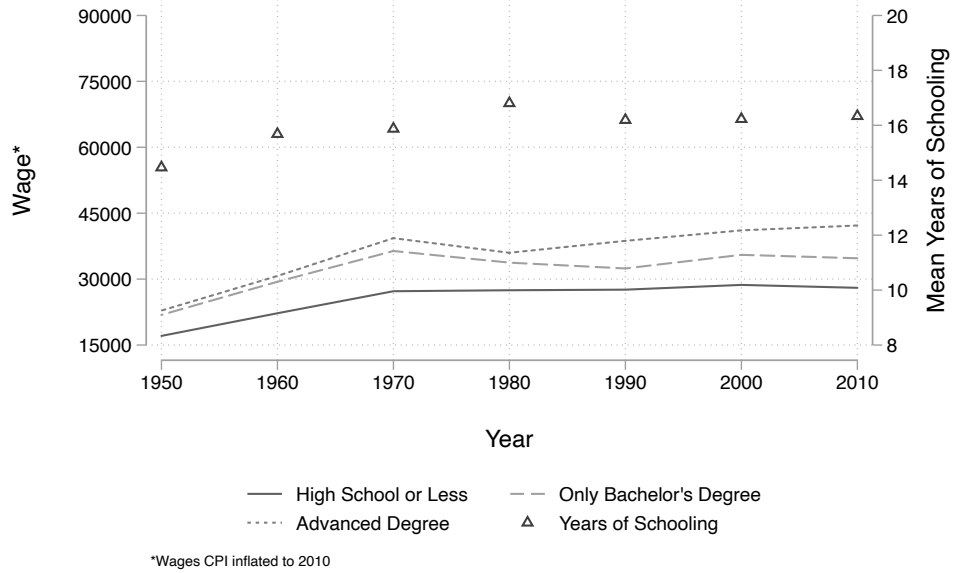
Figure 3.1: Clergy Wages and Schooling (1950-2010)
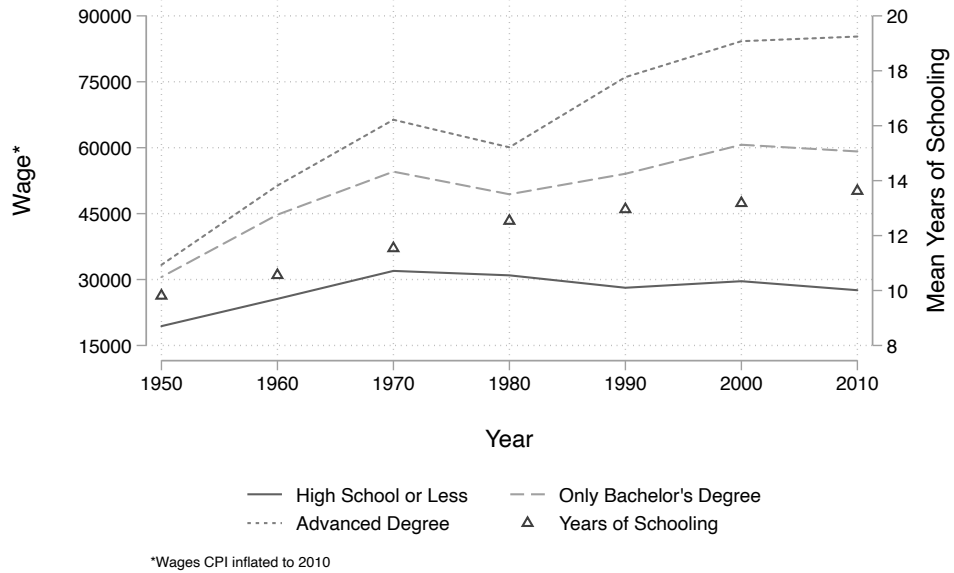
Figure 3.2: Non-Clergy Wages and Schooling (1950-2010)

CHAPTER FOUR

Methods and Results

I employ a modification of the Mincer (1974) human capital earnings function to estimate returns to schooling in each year using ordinary least squares (OLS). The basic model regresses a measure of earnings on years of education and a quadratic function of years of potential labor market experience. Given that a worker's experience is not directly observable, I use respondent age as a proxy for potential experience.[1] To account for earnings expressed as a quadratic in potential experience I also include a control for age squared. Finally, simple indicator variables for male, Hispanic white, black, state of residence, and occupation group are utilized to control for state and occupation fixed effects and isolate the effect of demographic variables on wage.

Methodology

The Mincer (1974) human capital earnings function specifies:

$$ln[w(s,x)] = \beta_0 + \beta_1 s + \beta_2 x + \beta_3 x^2 + \varepsilon_i \tag{4.1}$$

where $w(s,x)$ is wage income at schooling level s and potential work experience x, β_1 is the rate of return to schooling assumed to be the same for all schooling levels, and ε_i is an error term with zero mean (i.e. $\mathbb{E}(\varepsilon_i|s,x) = 0$).

My modification of the human capital earnings function results in the multivariate linear regression model:

$$y = \beta_0 + \beta_1 s + \beta_2 a + \beta_3 a^2 + \beta_i X + \varepsilon_i \tag{4.2}$$

where y is some measure of earnings (either the natural log of income from wages or the natural log of total personal income), β_1 is the rate of return to schooling

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[1] Potential experience is traditionally calculated: *Potential Experience = Age - Schooling - 6*

assumed to be the same for all schooling levels, s is years of schooling, a is respondent age, and X is a vector of demographic variables thought to influence wage.[2] ε_i remains an error term with expected zero mean (i.e. $\mathbb{E}(\varepsilon_i|s,x) = 0$).

I utilize an iterative modeling strategy that restricts Equation 4.2 to include only one group of interest (clergy, non-clergy, blacks, or females) at a time. I begin with a model that includes sex, race, and state indicator variables as controls in vector X. In successive iterations, regressions add occupational group controls, and in the case of blacks and females, interaction terms for clergy and schooling. The result is a series of 10 regression models: seven with the natural log of income from wages as the dependent variable and three with the natural log of total personal income. I also introduce regressions for clergy and non-clergy in a reduced sample for college-educated respondents. OLS regression results for all models are available in the Appendix. I summarize the key findings for the primary wage and personal income regressions in the following sections.

Basic Results

I find significant statistical evidence that supports a higher rate of return to schooling for non-clergy over all periods. Additionally, the difference between clergy and non-clergy returns increases significantly from 1950 to 2010. The primary results for the return to schooling analysis can be found in Tables 4.1 and 4.2.[3] Table 4.1 reports the regression results for clergy and non-clergy with log income from wages as the dependent variable, and Table 4.2 reports similar results for clergy and non-clergy with log total personal income as the dependent variable. For both tables, row (a) displays the coefficients for return to schooling for clergy, row (b) displays

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[2] Selected demographic variables include sex, Hispanic white, black, state of residence, and occupation group.

[3] The full OLS regression results for Table 4.1 can be found in Tables A.1, A.2, and A.3. Similarly, the results for Table 4.2 can be found in Tables A.4, A.5, and A.6.

coefficients for non-clergy, and row (c) displays coefficients for non-clergy with controls for occupation group included. At the bottom of each table I calculate the difference in return to schooling between clergy and non-clergy.[4] The Difference (b)-(a) row compares the naive model returns, while the Difference (c)-(a) row shows the gap between returns when occupational controls are added.

In Table 4.1 the return to schooling estimate for clergy (β_1) is 0.053 in 1950. From 1950 to 1980 the coefficient estimates decrease from 0.053 to 0.024 and increase from 1990 to 2010. For non-clergy, the coefficients for years of schooling (β_1) in the naive model are higher for all sample years and increase from 0.057 to 0.122. Excluding the coefficient for 1950, controlling for variation in occupation among non-clergy yields similar restults.

Table 4.2 shows that the difference between clergy and non-clergy returns increases (b)-(a) until controls for occupation are added, (c)-(a). In controlling for occupation, the non-clergy returns experience a near-level downward shift. This result contributes to the absence of an increasing gap between clergy and non-clergy returns under this specification.

The results from Tables 4.1 and 4.2 are shown visually in Figures 4.1 and 4.2. Figure 4.1 depicts the return to schooling for clergy and non-clergy with the dependent variable log of income from wages, and Figure 4.2 shows results for the dependent variable log of total personal income.

I also introduce regressions for a reduced sample for college-educated respondents. Results for these regressions are found in Tables A.7 through A.12. The data suggest that increases in returns to schooling are driven primarily by college-educated respondents.

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[4] I conduct a joint hypothesis test for seemingly unrelated regression to determine the level of significance. The difference between returns to schooling represents the forgone (opportunity) cost of selecting into the clergy (or the premium of non-clergy returns to schooling over clergy returns) as opposed to all other occupations (and holding all else constant).

Table 4.1: Years of schooling coefficients from regressions on the natural log of wages

	1950	1960	1970	1980	1990	2000	2010
(a) Clergy	0.053***	0.039***	0.038***	0.024***	0.042***	0.043***	0.053***
	(0.016)	(0.003)	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)
(b) Non-Clergy†	0.057***	0.072***	0.072***	0.068***	0.101***	0.104***	0.122***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(c) Non-Clergy‡	0.046***	0.046***	0.048***	0.053***	0.078***	0.078***	0.084***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Difference (b)-(a)	0.004	0.033***	0.034***	0.044***	0.059***	0.061***	0.069***
Difference (c)-(a)	-0.007	0.007***	0.010**	0.029***	0.036***	0.035***	0.031***

We estimated the effect of education on the natural log of wages using OLS. Heteroskedastic robust standard errors are in parenthesis. †Models include controls for state level fixed effects. ‡Models include controls for state and occupation level fixed effects. P-values for the differences are given by joint hypothesis tests for seeming unrelated regression. *p<0.1, **p<0.05, ***p<0.01.

Table 4.2: Years of schooling coefficients from regressions on the natural log of total personal income

	1950	1960	1970	1980	1990	2000	2010
(a) Clergy	0.033***	0.038***	0.041***	0.033***	0.055***	0.059***	0.060***
	(0.010)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
(b) Non-Clergy†	0.062***	0.078***	0.080***	0.081***	0.113***	0.114***	0.125***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(c) Non-Clergy‡	0.050***	0.061***	0.059***	0.062***	0.085***	0.084***	0.086***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Difference (b)-(a)	0.029***	0.040***	0.039***	0.048***	0.058***	0.055***	0.065***
Difference (c)-(a)	0.017*	0.023***	0.018***	0.029***	0.030***	0.025***	0.026***

We estimated the effect of education on the natural log of total personal income using OLS. Heteroskedastic robust standard errors are in parenthesis. †Models include controls for state level fixed effects. ‡Models include controls for state and occupation level fixed effects. P-values for the differences are given by joint hypothesis tests for seeming unrelated regression. *p<0.1, **p<0.05, ***p<0.01.
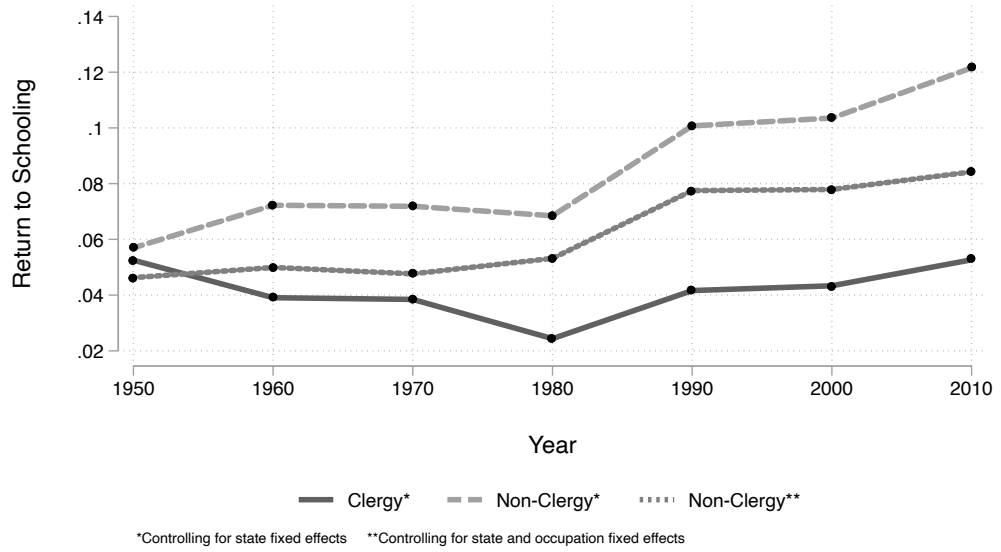
Figure 4.1: Return to Schooling for Clergy and Non-Clergy for ln(wage)
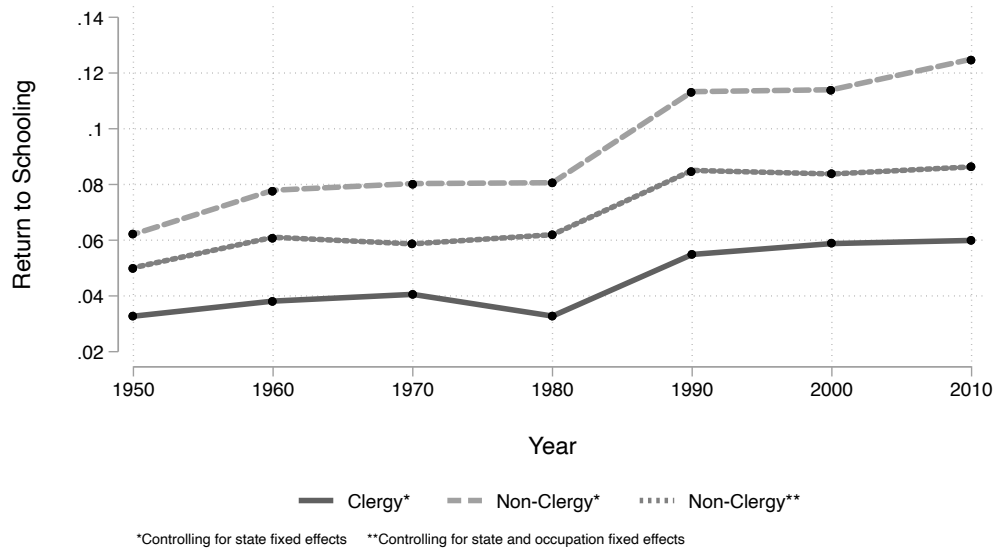
Figure 4.2: Return to Schooling for Clergy and Non-Clergy for ln(income)

Interpretation

The rate of return to schooling is best interpreted as the average percentage increase in respondent income associated with a one-year increase in schooling. These results suggest that non-clergy earned 6.9 percent more income from wages than clergy in 2010 for each additional year of schooling (3.1 percent when controlling for variation in occupation). The results in Table 4 are similarly described for the log of total personal income, suggesting that non-clergy earned 6.5 percent more income from wages than clergy for each additional year of schooling in 2010 (2.6 percent when controlling for variation in occupation).

The return to schooling estimates exhibit a slight off-trend disturbance in 1980 for most cases, but particularly for clergy. The values of the estimates either decline dramatically or remain near-constant. This 1980 disturbance in the U.S. wage structure is well-documented among labor economists, although much disagreement exists in the cause behind the disturbance. Katz and Murphy (1992) adapt a simple supply-and-demand framework for changes in the U.S. wage structure and hold that rapid growth for more educated, more skilled, and female workers appears to be the driving forces behind the 1967-83 changes. More specifically, they highlight increased skill differentials from industry shifts in labor demand and skill-biased technological change as contributors toward the 1980's disturbance. Likely, clergy are most affected by skill-based shifts in industry demand due to their relatively high level of education.

In summary, these basic results suggest that increased education is positively correlated with both clergy and non-clergy earnings, that the rate of return to schooling for non-clergy is consistently higher than clergy across different measures of respondent earnings, and that the opportunity cost for selecting into the clergy occupation is increasing. In other words, increasing years of schooling yield positive income benefits for both clergy and non-clergy generally. Choosing to enter the clergy, how-

ever, requires an increasing sacrifice over time as workers forgo the potential monetary gains associated with their alternative occupational choices.

Black Clergy

The labor market for black clergy warrants a separate analysis from the primary clergy set. Black respondents make up the largest minority of the clergy sample and show several differences in earnings and education. Descriptively, the percentage of black clergy (as a proportion of the total number of clergy) decreased from 1950 to 1990.[5] Black clergy are 10.13 percent of the market in 1950, decline to 5.49 percent in 1990, and increase to 7.64 percent in 2010.[6] On education, black clergy are less educated than average clergy for all years. However, at the mean, black clergy with advanced degrees and black clergy with a high school education tend to earn marginally more than similarly educated clergy of other races.[7]

Figure 4.3 shows the change in mean wage (over time) for black clergy evaluated at various education levels and the mean years of schooling attained by black clergy in each year. Figure 4.4 shows the same information for black non-clergy. The mean years of schooling for both occupational groups are increasing over time, with black clergy being more highly educated in all years. There is, most notably, a dramatic rise in mean years of schooling for black non-clergy over the period. Additionally, mean years of schooling for black respondents increased from 1950 to 2010 in a trend similar to the entire sample.[8]

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[5] See Table 3.2.

[6] This trend stands in contrast to the percentage of black respondents in the sample, which remained effectively constant over the period. Historically, blacks represent 10% of the samples in each year. See Table 3.2.

[7] See the comparison between Figures 3.1 and 4.3.

[8] See Table 3.2.
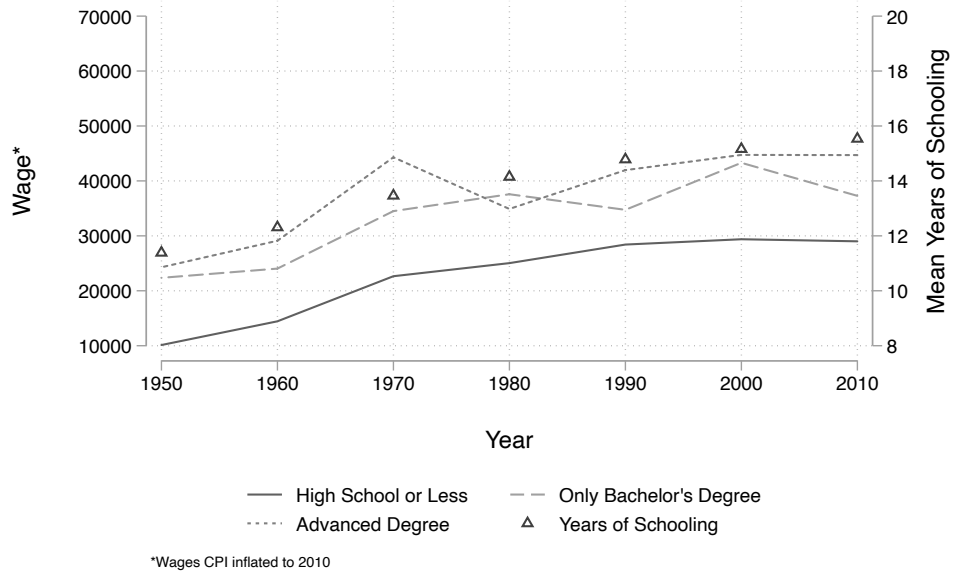
Figure 4.3: Black Clergy Wages and Schooling (1950-2010)
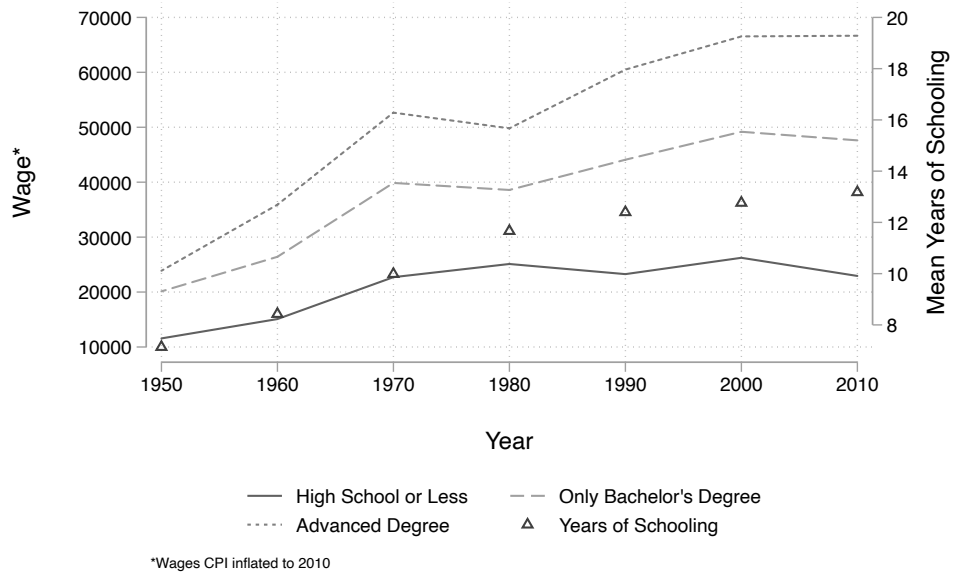
Figure 4.4: Black Non-Clergy Wages and Schooling (1950-2010)

Results from this basic return to schooling analysis show that black respondents generally earn less at the mean than white respondents.[9] They also imply a shrinking income and wage inequality that converges to zero for race comparisons among the clergy.

Black clergy earn 43.0 percent less in income from wages than white clergy in 1950 and 33.0 percent less in 1960. From 1970 to 2010 the income from wages earned by black clergy is not statistically different from the reference group or converges to zero.[10] When considering total personal income, black clergy received less than white clergy during the extended period 1950 to 1990.[11] This statistic decreased from 37.3 percent in 1950 to 6.9 percent in 1990. The result is not statistically different from zero in 2000 or 2010.

Black non-clergy also earn less than white non-clergy, at the mean, for the entire sample period.[12] The inequality gap for wages (when controlling for occupation) remains significant, falling from 25.9 percent for black non-clergy in 1950 to 13.4 percent in 2010, and for total personal income falling from 26.2 percent in 1950 to 15.0 percent in 2010.[13] These results suggest that among non-clergy, black workers earn significantly less than the reference group (over all years and with occupation controls).

Tables 4.3 and 4.4 show regression results for models restricted to the black labor market from 1950 to 2010. Table 4.3 details the estimated effect of schooling on the natural log of wages for blacks. The model includes interaction terms for clergy

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[9] The omitted reference group for the purpose of this analysis is is non-Hispanic white.

[10] See Table A.1.

[11] See Table A.4.

[12] See Tables A.2, A.3, A.5, and A.6.

[13] See Tables A.3 and A.6.

and schooling. Table 4.4 is similarly specified but includes additional controls for occupational variance.

In Table 4.3 I note that black clergy are not statistically different from black non-clergy from 1950-1970. When I include occupation level controls in Table 4.4, however, there exists a significant negative wage premium for clergy. For both models, with and without occupation level controls, beginning in 1980 black clergy earn a premium over black non-clergy. As years of schooling increases, however, the occupational premium decreases. For clergy above 12 years of schooling, the occupational premium becomes negative.

In summary, the data suggest that there exists an occupational premium for less-educated black clergy. Black respondents that choose to enter the clergy, and have less than 12 years of schooling, earn more on average than other low educated black respondents. These results are described in both Tables 4.3 and 4.4 and on Figures 4.3 and 4.4.

While a more rigorous evaluation is warranted, the summary data suggest that black clergy earn the same or slightly more than similarly educated clergy of other races post-1980. Additionally, from 1970 until 2010, black clergy with advanced degrees appear to earn a slight premium on average clergy of the same education cohort.[14]

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[14] For a visual representation of this statement compare Figures 3.1 and 4.3.

Table 4.3: Estimated effect of schooling on the natural log of wages for blacks with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.049***	0.070***	0.081***	0.080***	0.113***	0.119***	0.131***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Clergy=1	-0.658	-0.020	0.260	0.485***	1.124***	0.975***	1.243***
	(0.450)	(0.109)	(0.168)	(0.124)	(0.137)	(0.117)	(0.121)
Clergy=1 × Years of Schooling	0.048	-0.010	-0.035***	-0.051***	-0.091***	-0.077***	-0.090***
	(0.034)	(0.008)	(0.011)	(0.008)	(0.009)	(0.008)	(0.008)
Age	0.083***	0.122***	0.114***	0.161***	0.167***	0.144***	0.173***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Squared Age	-0.001***	-0.001***	-0.001***	-0.002***	-0.002***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.840***	0.998***	0.748***	0.467***	0.329***	0.264***	0.182***
	(0.016)	(0.004)	(0.005)	(0.003)	(0.003)	(0.002)	(0.003)
R-squared	0.32	0.34	0.27	0.22	0.26	0.24	0.27
N	16429	328693	166076	530517	559711	692349	676424
Peak of age-earnings parabola	44.38	46.15	46.98	46.85	48.24	48.79	48.91
Mean of dependent variable	6.72	7.14	7.87	8.67	9.23	9.68	9.87

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table 4.4: Estimated effect of schooling on the natural log of wages for blacks with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.029***	0.035***	0.049***	0.058***	0.081***	0.087***	0.088***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Clergy=1	-1.623***	-1.028***	-0.441***	0.093	0.543***	0.450***	0.521***
	(0.481)	(0.112)	(0.168)	(0.122)	(0.134)	(0.116)	(0.120)
Clergy=1 × Years of Schooling	0.069**	0.030***	0.001	-0.026***	-0.055***	-0.044***	-0.045***
	(0.033)	(0.008)	(0.011)	(0.008)	(0.009)	(0.007)	(0.007)
Age	0.061***	0.109***	0.111***	0.151***	0.156***	0.134***	0.157***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Squared Age	-0.001***	-0.001***	-0.001***	-0.002***	-0.002***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.691***	0.871***	0.698***	0.442***	0.330***	0.249***	0.177***
	(0.018)	(0.004)	(0.006)	(0.003)	(0.003)	(0.003)	(0.003)
R-squared	0.44	0.41	0.33	0.26	0.31	0.28	0.32
N	16429	328693	166076	530517	559711	692349	676424
Peak of age-earnings parabola	44.77	46.19	47.87	47.61	48.73	49.12	49.10
Mean of dependent variable	6.72	7.14	7.87	8.67	9.23	9.68	9.87

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Female Clergy

In recent decades, the labor market for clergy has seen a rapid feminization. The percentage of female clergy increased dramatically from 1950 to 2010.[15]   In 1950, female clergy accounted for 2.6 percent of the market, and by 2010, nearly 18 percent of clergy in the U.S. are female. The majority of this increase took place in the decades since 1970 when females accounted for only 2.81 percent of the market. While shifts in theology, organizational leadership, and other progressive factors have certainly played a role in the ordination of more women into the clergy, decreasing opportunity costs for female clergy (and rising opportunity costs for male clergy) could also contribute to the rise in female participation rates.

Figures 4.5 and 4.6 illustrate the change in mean wage over time for females. Both figures plot mean wage at various education levels and include data on mean years of schooling, corresponding to the secondary y-axis. Figure 4.5 includes data on clergy and Figure 4.6 shows the same specifications for non-clergy.

These illustrations depict a case of low female earnings at the mean.[16]   Female clergy earn less income from wages than men and black clergy at all education levels. Highly educated female clergy earn less than highly educated female non-clergy. All females, regardless of occupation and with a high school education or less, earn similarly lower wages. And females, not considering occupational variance, earn less on average than males at similar education levels.[17]

The mean years of schooling for both clergy and non-clergy increase over time, with trends in the female non-clergy similar to that of average non-clergy. There is, most notably, a dramatic rise in mean years of schooling for female clergy in 1980.

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[15] See Table 3.2.

[16] Mean income from wages statistics are CPI inflated to 2010 dollars and do not consider experience, occupation, or location fixed effects.

[17] For a visual representation of these statements compare Figures 3.1, 3.2, 4.3, 4.5, and 4.6.
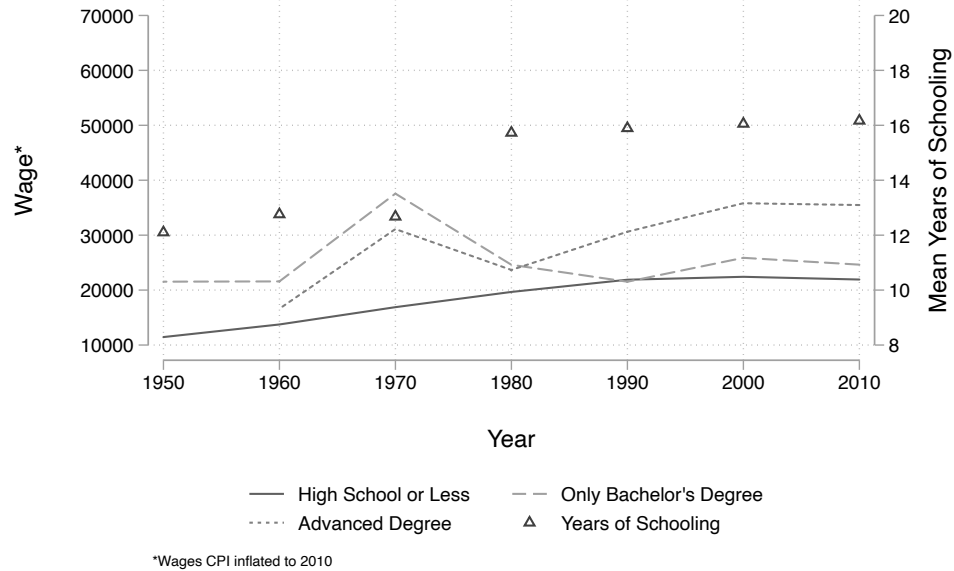
Figure 4.5: Female Clergy Wages and Schooling (1950-2010)

Before then, average female clergy were less educated than male clergy. Beginning in 1980, however, the average education gap between male and female clergy became negligible. The data also suggest that female clergy are higher educated than black clergy and female non-clergy.[18]

These summary details from the figures corroborate results from the basic return to schooling analysis. The data suggest that female clergy earn less than male clergy from 1950 to 2010. The wage gap does decline, however, from 46.8 percent to 38.2 percent, and the total personal income gap from 68.5 percent to 41.7 percent.[19] For female non-clergy, the earnings gap declines most significantly from 1960 to 2010. After controlling for occupation, the income from wages gap declines from 93.5 percent to 40.5 percent, and the total personal income gap from 94.3 to 43.7. In 1950, the

[18] For a visual representation of these statements compare Figures 3.1, 3.2, 4.3, 4.5, and 4.6.

[19] See Tables A.1 and A.4.
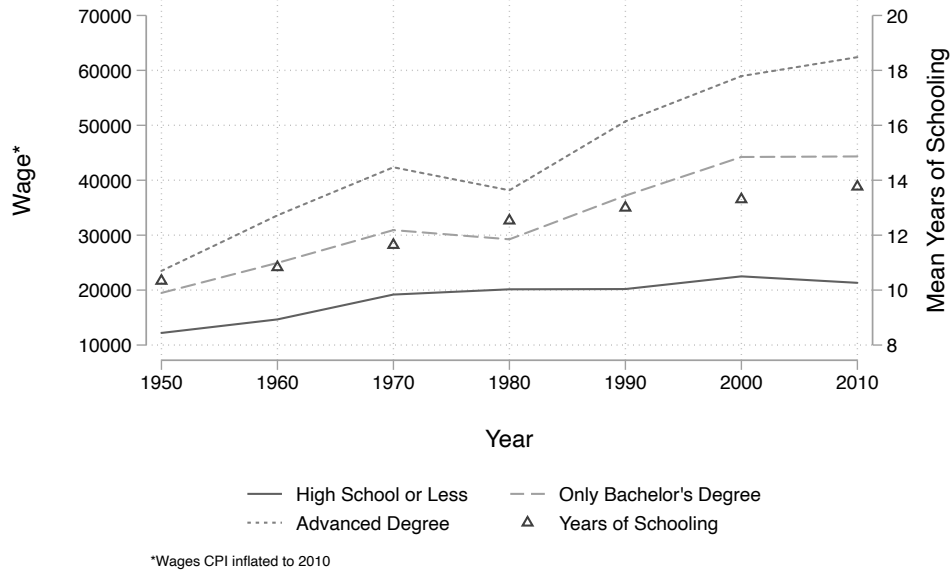
Figure 4.6: Female Non-Clergy Wages and Schooling (1950-2010)

earnings premium for males was 57.5 percent for wages and 63.0 percent for total personal income.[20]

Tables 4.5 and 4.6 show regression results for models restricted to the female labor market from 1950 to 2010. Table 4.5 details the estimated effect of schooling on the natural log of wages for females. The model includes interaction terms for clergy and schooling. Table 4.6 is similarly specified but includes additional controls for occupational variance.

From 1980 to 2010, female labor force participants saw an increase in their return to schooling from 7.8 percent to 12.9 percent. These values experience a level shift decline when controlling for occupation. Including occupation controls, return to schooling increases from 5.0 percent in 1980 to 8.8 percent in 2010. During this same period, females experienced an average occupational premium of 52.15 percent for entering the clergy. Similarly to black clergy, the occupational premium declines

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[20] See Tables A.3 and A.6.

as schooling increases. When controlling for occupation, the clergy premium is not statistically different from zero, and female clergy still receive a negative return on each additional year of schooling beginning in 1990.[21]

In summary, the data suggest that males earn significantly more than females and that male clergy earn significantly more than female clergy. The gender-based earnings gap is lower, however, for clergy than non-clergy. This is the case despite no educational difference between average male and female clergy beginning in 1980. Existing literature supports these results. In their recent work, Cortes, Jaimovich and Siu (2018) show that gains in the high-skilled labor market have not been equally distributed across genders. I also note that among females, wage premiums for clergy become negative with greater than a 10th-grade education.

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[21] See Tables 4.5 and 4.6.

Table 4.5: Estimated effect of schooling on the natural log of wages for females with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.085***	0.098***	0.085***	0.078***	0.112***	0.114***	0.129***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Clergy=1	0.021	0.457*	0.002	0.419**	0.549***	0.477***	0.641***
	(0.679)	(0.248)	(0.316)	(0.196)	(0.146)	(0.120)	(0.104)
Clergy=1 × Years of Schooling	-0.013	-0.050***	-0.000	-0.044***	-0.053***	-0.050***	-0.060***
	(0.064)	(0.019)	(0.022)	(0.012)	(0.009)	(0.007)	(0.006)
Age	0.064***	0.087***	0.089***	0.105***	0.130***	0.139***	0.166***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R-squared	0.14	0.12	0.11	0.11	0.17	0.21	0.24
N	53110	1170448	676472	2311231	2838367	3240878	3535661
Peak of age-earnings parabola	46.71	49.97	50.16	46.92	46.40	46.96	47.94
Mean of dependent variable	6.83	7.15	7.69	8.47	9.14	9.62	9.89

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table 4.6: Estimated effect of schooling on the natural log of wages for females with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.046***	0.041***	0.039***	0.050***	0.083***	0.085***	0.088***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Clergy=1	-0.828	-0.592**	-0.982***	-0.106	0.072	0.001	-0.021
	(0.669)	(0.247)	(0.317)	(0.195)	(0.146)	(0.120)	(0.103)
Clergy=1 × Years of Schooling	0.027	0.011	0.048**	-0.015	-0.022**	-0.019***	-0.017***
	(0.063)	(0.019)	(0.022)	(0.012)	(0.009)	(0.007)	(0.006)
Age	0.046***	0.082***	0.081***	0.093***	0.117***	0.125***	0.147***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.000***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R-squared	0.33	0.23	0.19	0.17	0.24	0.27	0.32
N	53110	1170448	676472	2311231	2838367	3240878	3535661
Peak of age-earnings parabola	47.53	50.77	51.07	47.24	46.52	46.99	47.85
Mean of dependent variable	6.83	7.15	7.69	8.47	9.14	9.62	9.89

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * $p<0.10$, ** $p<0.05$, *** $p<0.01$

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CHAPTER FIVE

Discussion

With these results, I examine the financial incentives facing members of the clergy and provide a descriptive study of clergy compensation relative to other occupations. I find significant statistical evidence that supports a higher rate of return to schooling for non-clergy and an increasing gap between clergy and non-clergy returns over the sample period. Additionally, the data suggest that the clergy could be a substitute for schooling for less-educated African Americans and that the rise of women selecting into the occupation could be partially explained by decreasing opportunity cost for female clergy.

In discussing the results, I look to highlight the cases where clergy exhibit a rising opportunity cost in labor supply. The issues surrounding this rise include the effects on clergy composition in the U.S. and the impacts rising opportunity costs bear on the markets for black and female clergy. Additionally, these results open a conversation into whether overall church quality is declining in the U.S. and whether the Church should be concerned about the exodus of potential talent and leadership.

In analyzing the paper's general result of a higher rate of return to schooling for non-clergy and an increasing gap between clergy and non-clergy returns, there exist two competing theories. One possible conclusion, in line with the traditional labor market theory, suggests that rising opportunity costs for clergy would result in a decline and exodus of talent. Another theory considers the role of sacrifice and stigma in the clergy occupation. While both theories yield different conclusions, they are not necessarily mutually exclusive.

Traditional labor market theory suggests that rising opportunity costs for clergy would hurt the quality of individuals selecting into the occupation. Ministers and po-

tential clergy regularly make utility-maximizing decisions regarding the duration and intensity of their work (Smith, 2014). Additionally, practical concerns over financial security and fair wages remain salient for many clergy (Smith, 2014). Therefore, the potential highest-quality clergy may choose other occupations with more lucrative income benefits, never even entering the labor market for clergy. And if the clergy of today are of lower quality than those in the past, then declines in American church attendance over time could have been a result.

An alternate theory arises out of the club-good theory of religious organization (Iannaccone, 1992). Under this approach to explaining religious behavior, churches are clubs that produce a public good for their members; think of high-quality worship services and teaching, opportunities to do good works for others, and a form of social insurance among members. Such clubs are prone to abuse by free riders, people who consume the church's product without contributing to it. To combat free-riding, churches require (or at least use strong social pressure to expect) sacrifices from their members. In this way, church members willing to incur the cost of the sacrifice are those who participate most vigorously in generating the church's product, increasing the overall value of the club good by more than the personal cost of the sacrifice.

The outcome suggested by the club-good theory is that an increasing opportunity cost of joining the clergy could screen less-committed individuals out of the occupation; they become bankers and lawyers instead. As a result, only the most devoted and highest-quality ministers end up in the occupation. Both the traditional labor market approach and the club-good theory approach offer plausible explanations of the consequences of the increased opportunity cost of entering the ministry; whether one dominates the other in reality is an empirical question that needs to be taken to the data.

For the African American church, the data suggest an occupational premium for less-educated blacks who choose to enter the clergy. In this way, the clergy occupation

functions as a substitute for additional years of schooling for blacks. Black labor force entrants on the margin can maximize their income by entering the clergy instead of pursuing more education. In fact, for black clergy above 12 years of schooling, the occupational premium becomes negative. While a more rigorous evaluation is warranted, it also appears that black clergy (at the mean) earn the same or slightly more than their educationally equivalent counterparts of other races post-1980. Additionally, from 1970 until 2010, black clergy with advanced degrees appear to earn a slight premium on average clergy of the same education cohort. These general results could indicate that African American congregations place a higher value on their clergy (of all education levels and when compared to other congregations).

The data also suggest a dramatic increase in the number of women selecting into the clergy. The proportion of female clergy has been increasing since the 1970s and the decision to ordain women stands as one of the largest changes to recent church polity. While some denominations prohibit or discourage the ordination of women, such as the Roman Catholic Church and the Southern Baptist Convention, females represent nearly a third of students training in Protestant seminaries, and the percentage of congregations led by women is expected to rise (Smith, 2014). While shifts in theology, organizational leadership, and other progressive social factors certainly played a role in the decision to ordain women, many denominations most likely felt some labor market pressure that further incentivized these changes.

Many religious groups from liberal and moderate protestant traditions granted full clergy rights to women between 1950 and 1990. In fact, of the ten largest religious bodies in the U.S. (as of 1980), five resolved to ordain women during this period.[1] Based on the results, both the club-good theory of religious organization

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[1] The following religious groups allow for the ordination of women. The year in which their ministry opened to women is shown in parenthesis. The United Methodist Church (1956), Presbyterian Church (U.S.A.) (1956), Evangelical Lutheran Church of America (1970), Episcopal Church (1976), and American Baptist Church (1981).

and traditional labor market theory would suggest pressure on church hiring in the form of shortages beginning in 1970. Rising opportunity costs for male clergy either incentivize potential candidates into more lucrative occupations or leave a faithful-remnant of the most devoted ministers depending on which theory dominates. Both models suggest a reduction in the number of qualified male candidates.

In addition to these labor market pressures, the large gap in return to schooling for males (and the increasing opportunity cost for male clergy) could increase the demand for female clergy, especially in smaller, lower-paying congregations. As highly educated and able males were incentivized to select into higher-paying occupations, churches could look towards similarly qualified females as candidates for their leadership positions. Women begin entering the ministry in those denominations that are already liberalizing and beginning as soon as 1980 the educational level of female clergy is indistinguishable from the average.

Furthermore, increasing return to schooling for clergy as a whole, combined with a rise in nondiscriminatory denominations, could make the clergy more favorable than the previous occupational choices of women. McMillan and Price (2003) find that over the period 1976 to 1999 clergy earnings decreased relative to doctors and lawyers but increased relative to social workers and teachers.

CHAPTER SIX

Conclusion

Further research into clergy labor markets has the potential to provide substantial insights into the state of American churches and other religious organizations. With clergy compensation and return to schooling more specifically, the potential conclusions from these results play an important role in the conversations of whether overall church quality is declining in the U.S. and whether the church should be concerned about the exodus of talent to other occupations. A decline in the quality of clergy could help explain the increasing lack of identification with religion among Americans.

On the other hand, ministers might respond to a higher opportunity cost by becoming more entrepreneurial, taking advantage of new technologies to build bigger churches able to pay more and somewhat make up the pay gap incurred by entering the ministry. Similarly, smaller churches lacking the resources to pay more might change to women ministers, especially those whose spouses also earn high salaries.

Despite a small number of top entrepreneurial ministers who serve large congregations and amass a large following, clergy income has almost always been less than other highly educated occupations. While few choose to enter the clergy simply because of the monetary and non-pecuniary benefits, as McMillan and Price (2003) acknowledge, the issue of clergy compensation cannot simply be ignored. With these results, should it surprise us when high-ability, highly talented, and achievement-oriented college students overlook the ministry when making occupational decisions? The results from this paper establish the stylized facts necessary to approach this question and many of the larger compositional problems facing the state of American religion.

APPENDIX: Data

Table A.1: Estimated effect of schooling on the natural log of wages for clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.053***	0.039***	0.038***	0.024***	0.042***	0.043***	0.053***
	(0.016)	(0.003)	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)
Age	0.079***	0.108***	0.117***	0.131***	0.124***	0.110***	0.118***
	(0.020)	(0.005)	(0.008)	(0.005)	(0.004)	(0.003)	(0.003)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.468*	0.654***	0.425***	0.411***	0.386***	0.339***	0.382***
	(0.261)	(0.079)	(0.101)	(0.040)	(0.024)	(0.019)	(0.016)
Hispanic White	-0.505	-0.139**	0.027	-0.086	-0.127**	-0.142***	-0.155***
	(0.532)	(0.058)	(0.105)	(0.060)	(0.050)	(0.036)	(0.031)
Black	-0.430**	-0.330***	-0.071	0.070*	0.055*	0.073***	-0.025
	(0.169)	(0.037)	(0.054)	(0.037)	(0.029)	(0.024)	(0.022)
R-squared	0.25	0.17	0.19	0.12	0.17	0.16	0.18
N	385	8594	3919	12214	18092	21584	26265
Peak of age-earnings parabola	50.55	47.02	46.61	46.08	45.76	46.05	46.90
Mean of dependent variable	7.51	8.00	8.46	8.99	9.60	9.95	10.22

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.2: Estimated effect of schooling on the natural log of wages for non-clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.057***	0.072***	0.072***	0.068***	0.101***	0.104***	0.122***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.102***	0.134***	0.136***	0.150***	0.163***	0.157***	0.184***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.734***	0.979***	0.890***	0.757***	0.613***	0.518***	0.467***
	(0.005)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.100***	-0.101***	-0.057***	-0.060***	-0.056***	-0.038***	-0.027***
	(0.017)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)
Black	-0.379***	-0.433***	-0.229***	-0.162***	-0.163***	-0.144***	-0.187***
	(0.008)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)	(0.001)
R-squared	0.25	0.33	0.32	0.28	0.29	0.29	0.31
N	160137	3201366	1644490	5189417	6032632	6780538	7248467
Peak of age-earnings parabola	46.20	47.10	47.90	46.56	46.86	47.19	48.09
Mean of dependent variable	7.32	7.77	8.23	8.91	9.47	9.88	10.11

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.3: Estimated effect of schooling on the natural log of wages for non-clergy with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.046***	0.050***	0.048***	0.053***	0.078***	0.078***	0.084***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.078***	0.124***	0.125***	0.138***	0.152***	0.145***	0.167***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.575***	0.935***	0.850***	0.700***	0.572***	0.456***	0.405***
	(0.006)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.045***	-0.043***	-0.037***	-0.043***	-0.027***	-0.014***	0.010***
	(0.016)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.001)
Black	-0.259***	-0.236***	-0.125***	-0.108***	-0.109***	-0.102***	-0.134***
	(0.008)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)	(0.001)
R-squared	0.37	0.38	0.37	0.32	0.33	0.33	0.37
N	160137	3201366	1644490	5189417	6032632	6780538	7248467
Peak of age-earnings parabola	47.52	47.21	48.03	46.58	46.79	47.13	48.04
Mean of dependent variable	7.32	7.77	8.23	8.91	9.47	9.88	10.11

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table A.4: Estimated effect of schooling on the natural log of total personal income for clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.033***	0.038***	0.041***	0.033***	0.055***	0.059***	0.060***
	(0.010)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Age	0.079***	0.078***	0.082***	0.073***	0.057***	0.054***	0.059***
	(0.019)	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)	(0.002)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.685**	0.657***	0.549***	0.537***	0.441***	0.404**	0.417***
	(0.295)	(0.063)	(0.082)	(0.034)	(0.022)	(0.017)	(0.014)
Hispanic White	-0.706	-0.153***	-0.076	-0.229***	-0.218***	-0.233***	-0.175***
	(0.517)	(0.056)	(0.093)	(0.059)	(0.043)	(0.037)	(0.027)
Black	-0.373***	-0.408***	-0.234***	-0.126***	-0.069***	-0.014	-0.035*
	(0.117)	(0.031)	(0.046)	(0.029)	(0.025)	(0.022)	(0.019)
R-squared	0.22	0.15	0.17	0.14	0.14	0.14	0.15
N	486	10488	4771	15158	18964	22820	27908
Peak of age-earnings parabola	50.53	49.70	50.25	53.44	56.79	59.53	59.01
Mean of dependent variable	7.61	8.09	8.57	9.22	9.84	10.19	10.46

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table A.5: Estimated effect of schooling on the natural log of total personal income for non-clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.062***	0.078***	0.080***	0.081***	0.113***	0.114***	0.125***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.089***	0.101***	0.102***	0.089***	0.091***	0.081***	0.096***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.840***	1.021***	0.929***	0.785***	0.658***	0.560***	0.503***
	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.096***	-0.072***	-0.046***	-0.060***	-0.079***	-0.057***	-0.029***
	(0.015)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.001)
Black	-0.342***	-0.351***	-0.213***	-0.200***	-0.234***	-0.196***	-0.209***
	(0.007)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
R-squared	0.30	0.34	0.33	0.28	0.28	0.25	0.25
N	210007	4309257	2160489	7038888	8283741	9364184	10524205
Peak of age-earnings parabola	46.38	48.92	50.13	52.52	54.59	55.95	56.95
Mean of dependent variable	7.30	7.68	8.13	8.86	9.43	9.83	10.05

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.6: Estimated effect of schooling on the natural log of total personal income for non-clergy with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.050***	0.061***	0.059***	0.062***	0.085***	0.084***	0.086***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.060***	0.089***	0.083***	0.068***	0.070***	0.061***	0.071***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.630***	0.943***	0.842***	0.692***	0.581***	0.483***	0.437***
	(0.005)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.055***	-0.030***	-0.030***	-0.046***	-0.063***	-0.045***	-0.006***
	(0.014)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.001)
Black	-0.262***	-0.206***	-0.130***	-0.130***	-0.171***	-0.145***	-0.150***
	(0.007)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
R-squared	0.40	0.38	0.38	0.33	0.34	0.31	0.33
N	210007	4309257	2160489	7038888	8283741	9364184	10524205
Peak of age-earnings parabola	51.36	50.25	52.85	59.77	63.77	68.49	67.95
Mean of dependent variable	7.30	7.68	8.13	8.86	9.43	9.83	10.05

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.7: Estimated effect of schooling on the natural log of wages for college-educated clergy, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.004	0.028***	0.033***	0.017***	0.053***	0.053***	0.061***
	(0.041)	(0.006)	(0.009)	(0.005)	(0.004)	(0.003)	(0.003)
Age	0.076***	0.108***	0.117***	0.138***	0.132***	0.115***	0.121***
	(0.020)	(0.005)	(0.008)	(0.005)	(0.004)	(0.004)	(0.003)
Squared Age	-0.001***	-0.001***	-0.001***	-0.002***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.358	0.752***	0.171	0.419***	0.380***	0.331***	0.373***
	(0.476)	(0.107)	(0.117)	(0.044)	(0.026)	(0.020)	(0.016)
Hispanic White	-0.385	-0.148**	-0.076	-0.122	-0.103*	-0.115***	-0.159***
	(0.525)	(0.069)	(0.120)	(0.074)	(0.055)	(0.038)	(0.034)
Black	-0.063	-0.167***	-0.054	0.079*	0.040	0.080***	-0.021
	(0.213)	(0.039)	(0.064)	(0.044)	(0.033)	(0.027)	(0.024)
R-squared	0.28	0.13	0.16	0.12	0.17	0.17	0.18
N	295	7223	3323	10598	16214	19547	24025
Peak of age-earnings parabola	52.64	47.58	46.37	46.14	45.62	45.88	46.57
Mean of dependent variable	7.60	8.06	8.52	9.02	9.63	9.98	10.25

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.8: Estimated effect of schooling on the natural log of wages for college-educated non-clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.071***	0.099***	0.110***	0.075***	0.107***	0.120***	0.144***
	(0.004)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.169***	0.185***	0.180***	0.185***	0.179***	0.174***	0.194***
	(0.003)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.537***	0.858***	0.771***	0.675***	0.566***	0.496***	0.464***
	(0.013)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.159**	-0.067***	-0.062***	-0.070***	-0.060***	-0.082***	-0.085***
	(0.070)	(0.010)	(0.009)	(0.004)	(0.003)	(0.003)	(0.002)
Black	-0.320***	-0.242***	-0.035***	-0.086***	-0.082***	-0.070***	-0.133***
	(0.031)	(0.006)	(0.006)	(0.003)	(0.002)	(0.002)	(0.002)
R-squared	0.27	0.39	0.41	0.33	0.30	0.29	0.30
N	26802	705024	503057	2188780	3112805	3861195	4624523
Peak of age-earnings parabola	47.56	47.84	48.25	46.53	46.38	46.52	47.44
Mean of dependent variable	7.50	8.01	8.35	9.04	9.69	10.09	10.32

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.9: Estimated effect of schooling on the natural log of wages for college-educated non-clergy with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.041***	0.074***	0.082***	0.063***	0.092***	0.101***	0.113***
	(0.004)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.114***	0.166***	0.159***	0.168***	0.165***	0.159***	0.173***
	(0.003)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.421***	0.807***	0.736***	0.612***	0.514***	0.422***	0.392***
	(0.014)	(0.003)	(0.004)	(0.002)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.078	-0.045***	-0.043***	-0.049***	-0.033***	-0.052***	-0.044***
	(0.064)	(0.009)	(0.009)	(0.004)	(0.003)	(0.003)	(0.002)
Black	-0.205***	-0.100***	0.018***	-0.048***	-0.039***	-0.037***	-0.090***
	(0.029)	(0.005)	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)
R-squared	0.39	0.42	0.44	0.37	0.34	0.34	0.37
N	26802	705024	503057	2188780	3112805	3861195	4624523
Peak of age-earnings parabola	48.09	47.92	48.26	46.38	46.28	46.47	47.37
Mean of dependent variable	7.50	8.01	8.35	9.04	9.69	10.09	10.32

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.10: Estimated effect of schooling on the natural log of total personal income for college-educated clergy, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	-0.025	0.028***	0.041***	0.027***	0.062***	0.062***	0.069***
	(0.036)	(0.005)	(0.008)	(0.003)	(0.003)	(0.003)	(0.002)
Age	0.074***	0.082***	0.082***	0.077***	0.058***	0.055***	0.058***
	(0.023)	(0.004)	(0.005)	(0.003)	(0.003)	(0.003)	(0.002)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.334	0.743***	0.390***	0.523***	0.425***	0.390***	0.407***
	(0.396)	(0.084)	(0.099)	(0.039)	(0.023)	(0.018)	(0.014)
Hispanic White	-0.670	-0.167**	-0.146	-0.308***	-0.195***	-0.261***	-0.176***
	(0.520)	(0.068)	(0.106)	(0.080)	(0.046)	(0.043)	(0.029)
Black	-0.237	-0.285***	-0.190***	-0.117***	-0.044	0.005	-0.032
	(0.165)	(0.037)	(0.053)	(0.036)	(0.028)	(0.023)	(0.020)
R-squared	0.21	0.11	0.12	0.13	0.13	0.13	0.14
N	364	8610	4009	13008	16893	20585	25512
Peak of age-earnings parabola	51.76	50.15	50.13	53.67	56.46	59.30	58.42
Mean of dependent variable	7.69	8.16	8.64	9.26	9.87	10.23	10.49

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

Table A.11: Estimated effect of schooling on the natural log of total personal income for college-educated non-clergy with state level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.094***	0.117***	0.129***	0.091***	0.122***	0.134***	0.156***
	(0.004)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.133***	0.145***	0.142***	0.123***	0.114***	0.099***	0.109***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.776***	1.035***	0.877***	0.736***	0.618***	0.543***	0.506***
	(0.012)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.164***	-0.054***	-0.071***	-0.091***	-0.093***	-0.105***	-0.091***
	(0.059)	(0.009)	(0.009)	(0.003)	(0.003)	(0.003)	(0.002)
Black	-0.319***	-0.217***	-0.053***	-0.106***	-0.121***	-0.096***	-0.139***
	(0.028)	(0.005)	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)
R-squared	0.29	0.36	0.39	0.31	0.28	0.24	0.25
N	34667	870342	587109	2592530	3743548	4768459	6034437
Peak of age-earnings parabola	49.13	50.53	51.06	52.10	53.36	54.36	54.76
Mean of dependent variable	7.59	8.04	8.39	9.09	9.75	10.12	10.32

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table A.12: Estimated effect of schooling on the natural log of total personal income for college-educated non-clergy with state and occupation level controls, OLS

	1950	1960	1970	1980	1990	2000	2010
Years of Schooling	0.063***	0.086***	0.097***	0.074***	0.102***	0.111***	0.122***
	(0.004)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.081***	0.124***	0.118***	0.098***	0.089***	0.074***	0.078***
	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Squared Age	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.601***	0.963***	0.841***	0.669***	0.548***	0.466***	0.437***
	(0.012)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)
Hispanic White	-0.100*	-0.032***	-0.059***	-0.072***	-0.072***	-0.081***	-0.057***
	(0.054)	(0.009)	(0.009)	(0.003)	(0.003)	(0.002)	(0.002)
Black	-0.242***	-0.085***	-0.003	-0.060***	-0.078***	-0.061***	-0.096***
	(0.026)	(0.005)	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)
R-squared	0.41	0.40	0.43	0.35	0.34	0.31	0.32
N	34667	870342	587109	2592530	3743548	4768459	6034437
Peak of age-earnings parabola	53.19	51.76	52.60	56.26	59.16	62.42	63.04
Mean of dependent variable	7.59	8.04	8.39	9.09	9.75	10.12	10.32

Heteroskedastic robust standard errors in parenthesis. All models include Census division fixed effects. * p<0.10, ** p<0.05, *** p<0.01

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