

The Wages of Religion

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Abstract

This research attempts to quantify the impact of religious affiliation on an individual's hourly wage rate. In addition to estimating a wage equation as a function of religious affiliation for our entire sample of observations from the 2006 wave of the 1979 National Longitudinal Survey of Youth, we also decompose our sample to analyze the effects of religious affiliation on wages by race, sex, and region. Contrary to the majority of previous literature, we are unable to conclude that Jews receive a wage premium over members of other religious groups or those with no religious beliefs. However, we find ample evidence of a Catholic wage premium. Furthermore, we find the wage premium for Catholics to be largest in the Northeast U.S. Our results also show that Protestants do not receive a statistically different hourly wage rate from non-religious individuals.

Keywords: Religion, Wages, Jewish, Catholic, Protestant.

JEL Codes: J31, Z12

1. Introduction

Since Europeans came to America to escape religious oppression, religious beliefs have played a vital role in the formation of the U.S. The majority of early European Americans were Protestants. Over time, however, due primarily to the evolution of religious beliefs and mass immigration into the country, America has become home to numerous religions and denominations. Title VII of the Civil Rights Act of 1964 prohibits discrimination by employers on the basis of race, color, religion, sex, and national origin. However, there continues to be an inequitable distribution of income among religious groups.

A recent report by *Good Magazine* (2010) details the income distribution among major religious groups in the U.S. According to the report, adherents of the Hindu religion are the wealthiest Americans with about 80 percent of Hindus earning an annual income equal to or greater than \$50,000. Adherents of the Jewish faith rank second with about 75 percent of Jews earning an annual income of at least \$50,000. Catholics, the second most popular religious group in the country, rank in the middle of the pack with about 49 percent of its members earning an annual income of at least \$50,000. Protestants, the most popular religious group in the country, rank near the bottom of the pack with about 43 percent of its adherents earning an annual income of at least \$50,000. As for those with no religious beliefs, about 48 percent earn an annual salary of at least \$50,000. There are many reasons why a relationship would be observed between one's income and their religious beliefs. Perhaps the most likely explanation is that there are underlying factors at work such that members of a particular religious group are more likely to possess some positive wage enhancing attributes. For example, Lehrer (1999) finds that members of the Jewish faith place a greater value on education and achieve higher levels of educational attainment than members of other religious groups.

Also, both Lehrer (1999) and Darnell and Sherkat (1997) find that educational attainment tends to be lowest among Protestants, suggesting that Protestants may not place as great of a value on education. However, it may also be that educational opportunities are greater for Jews than Protestants and members of other religious groups due to differences in resources between religious groups.

Another underlying factor that could be at the root of the income-religion relationship is race. In particular, an overwhelming majority of African Americans are Protestants. This historically low-income group serves to reduce the average income of Protestants as a whole in addition to reducing average levels of educational attainment among Protestants. When those Protestants who attend historically black churches are excluded from the figures reported by *Good Magazine* (2010), there appears to be little difference in income between Catholics and Protestants – about 48 percent of Protestants and 49 percent of Catholics earn an annual salary of at least \$50,000. Another major underlying factor that is potentially a source of the observed income-religion relationship is location. Protestants are most well-represented in the Southern U.S., while Catholics and Jews are most well-represented in the Northeast. Hence, it may simply be that Protestants have a tendency to reside in relatively low-income areas compared to Catholics and Jews.

Another potential explanation for the differences in earnings among religious groups pertains to the relative importance of earnings in an individual's utility function. There may be a fundamental difference between the utility functions of individuals from different religious groups if their religious beliefs influence their behavior in regards to maximizing their earnings. It may be that members of some religious groups view aiming to maximize earnings as materialistic and a less moral approach to life, while members of other religious groups may not view maximizing their earnings in this way. This argument is perhaps particularly relevant when comparing the earnings of religious individuals in general to those of non-religious individuals. Such was the primary assumption of the first empirical study on the economics of religion. Azzi and Ehrenberg (1975) developed a production model of church attendance and contributions by households based on the assumption that religious households seek "to maximize lifetime and afterlife utility." Hence, those focused more on "afterlife utility" may be less concerned with maximizing their earnings. Azzi and Ehrenberg's (1975) analysis supports this view as they found wages to be negatively related to church membership. Similarly, Lipford and Tollison (2003) found that participation in a religious group mildly reduces an individual's income and conclude that Christians place more emphasis on "treasures in heaven as opposed to treasures on earth."

In this paper, we examine the relationship between an individual's wage and his or her religious affiliation. Chiswick (1983) was the first to analyze this relationship, using data from the 1970 U.S. Census to compare the earnings of Jewish males to those of non-Jewish males. Since the dataset did not provide explicit details about personal religion, the author identified Jewish males by either their "mother tongue" or by a language other than English that was used in their household growing up. Men reporting Hebrew, Ladino, or Yiddish for either one of these questions were considered to be Jewish. Chiswick (1983) found that Jewish males received earnings 16 percent higher than non-Jewish males and that Jewish males' return to schooling was 20 percent higher than non-Jewish males.

Using the NORC General Social Surveys of 1973-1980, Tomes (1984) analyzed the impact on earnings of growing up in Jewish, Protestant, or Catholic households and found no evidence that growing up in one of these household types had a significant impact on earnings. However, using the 1991 wave of the 1979 National Longitudinal Survey of Youth (NLSY79), Steen (1996) found that both Jews and Catholics have significantly higher earnings than Protestants. According to his results, Jews earned 38.9 percent more than Protestants, while Catholics earned 11.9 percent more. When family and demographic characteristics were added to his regressions, the earnings premiums for Jews and Catholics fell to 27.9 percent and 7.1 percent, respectively. Steen (1996) also concluded that the distribution of race across religions was unable to explain the Catholic-Protestant difference. Steen (2004) updated these findings using the 2000 wave of the NLSY79 and again found that Catholic and Jewish raised males have higher earnings than Protestants. Steen (2005) also used the 1991 and 2000 waves of the NLSY79 to study the effect of religious participation on female wages. Analyzing the 1991 wave, he found that women raised in Catholic households earned 14.4 percent more than women raised in Protestant households. Analyzing the 2000 wave, he found that Catholic women earned 9.2 percent more than Protestant women, suggesting that the earnings premium for Catholic women is diminishing. Studies using Canadian data to analyze the relationship between religious affiliation and earnings have similar conclusions for Jews, but not Catholics. Using the 1971 Canadian Census and only studying white males, Tomes (1983) found that Jews received a 46

percent higher rate of return on schooling than average and Protestants received a 9 percent higher return, while Catholics actually received a 5 percent lower return on schooling than average. Tomes (1983) also estimated the returns to experience and a university degree. The author found that Catholics received the lowest return to experience and Jews received the highest return to experience. In addition, Catholics received a lower return to a university degree than Protestants. Meng and Sentance (1984) used the 1973 Canadian National Mobility Study to study the impact of religion on earnings. Similar to Tomes (1983), the authors found that Jews have substantially higher returns to schooling and experience, while Catholics earn lower returns to education. Tomes (1985) revisited the issue by employing data from the 1981 Canadian Census. He found that Jews earned 12 percent more than Protestants, but that non-religious individuals earned 5 percent less than Protestants. Catholics' earnings were not significantly different from Protestants. In contrast to Tomes (1983), Tomes (1985) found no statistically significant difference in returns to education between the religious groups. There is also no evidence of a difference in returns to work experience between the groups.

To date, the empirical research strongly supports the conclusion that Jews earn more than both Catholics and Protestants. Although not as conclusive, there is also much evidence that Jews earn higher returns to education than Catholics and Protestants. Also, more recently, there appears to be evidence of a Catholic earnings premium over Protestants. We attempt to add to this body of literature by reexamining the relationship between religious affiliation and earnings. In particular, we seek to quantify the impact of religious affiliation on an individual's hourly wage rate. While analyzing the impact of religious affiliation on one's total annual income is interesting and has been the method of choice among many previous researchers, we also find it interesting to study its impact on wage rates. Whereas an individual's annual income may be supplemented by many factors, many of which may be beyond the researcher's control, the hourly wage rate the individual receives is likely more directly related to human capital and personal characteristics within the researcher's control. Thus, we see hourly wage rates as being subject to less variation from sources beyond the researcher's control.

Furthermore, the topic deserves renewed attention since, based on past research, there appears to be a trend of increasing earnings for Catholics relative to Jews and Protestants. We also give attention to the possibility of religious earnings premiums varying by race, gender, and region. We proceed as follows. In section 2, we detail the data used, in section 3 we report our empirical results, and in section 4 we state our main conclusions.

2. Data and Estimation

The data for this study comes from the 2006 wave of the 1979 National Longitudinal Survey of Youth (NLSY79). The NLSY79 dataset consists of observations on 12,686 men and women who were between the ages of 14 and 22 in 1979. However, our sample of the NLSY79 dataset consists of only 5,993 observations due to several limitations. The largest limitation on our sample is attributable to many NLSY79 respondents not participating in the 2006 survey; thus, utilizable data is not available for these non-participants. We also exclude individuals in the military from our sample since they account for a very small portion of the available observations.¹ Lastly, following previous researchers who have used the NLSY79 dataset, we exclude those individuals who report an hourly wage less than \$1 or greater than \$500 from our sample (for example, see Ragan and Tremblay, 1988; Green and Ferber, 2005). Table 1 contains definitions of the variables used in our analysis. We decompose these data into human capital measures, personal attributes and location variables, occupational characteristics, and religious affiliation variables.

-----Insert table 1 about here-----

Job tenure and years of education are included as human capital measures. In addition, we observe each individual's score on the Armed Forces Qualification Test (AFQT). This variable has been the subject of much debate in the literature², thus, we interpret the coefficients on the variable in our wage regressions with caution. Personal attributes include the individual's sex, race (white or minority), and marital status. Following Loury (1977, 1981, 1998), we also include a variable indicating whether or not the individual was raised in poverty to account for family background differences that may impact the attainment of productivity enhancing attributes in the formative years.

1 Only 12 useable observations are available for individuals serving in the military.

2 Many researchers argue that scores on the test are a measure of cognitive skills or natural ability (Neal and Johnson 1996; O'Neill 1990; Farkas and Vicknair 1996). However, Betts (1995) argues that the test is a measure of school quality, while Cordero-Guzmán (2001) suggests that scores on the test account for differences in family backgrounds.

The variable identifies those individuals that lived below the federal poverty line at any point during the years 1979-1983 and serves as a proxy for the economic environment in which the individual was raised. Several occupational characteristics are included in the model as well. These data include the individual’s occupational category, hourly wage, and whether they are employed in a part- or full-time capacity. Finally, we group each individual in the sample into five religious affiliation categories – Protestant, Catholic, Jewish, other religion (individuals affiliated with a religion other than the aforementioned three), and no religion (individuals not affiliated with any religion).

-----Insert table 2 about here-----

The descriptive statistics of the data, shown in Table 2, reveal some interesting patterns in regards to religious affiliation. Protestants are the dominant religious group in the U.S., accounting for about 54 percent of the sample, while less than one percent of the sample consider themselves Jewish. However, in the Northeast and West, Catholics and Protestants are more equally distributed. In the South, Protestants are overwhelmingly the dominant religious group, accounting for about 67 percent of the South subsample. Also, individuals in the South are more likely than individuals in other regions to participate in some form of religion, while individuals in the West are least likely to be affiliated with a religious group. Table 2 also indicates that females and minorities are more likely to affiliate themselves with a religious group than males and whites, on average. Furthermore, a substantial 69 percent of minorities are Protestants, whereas whites are more equally distributed among the Protestant and Catholic religions. These differences imply that an individual’s religious affiliation may impact their wages differently depending on their race, sex, and region of residence.

Employing the NLSY79 data, we estimate the following wage equation in our analysis:

$$\ln W_i = \beta_1 + \beta_2 X_i + \beta_3 Y_i + \beta_4 Z_i + \beta_5 R_i + \varepsilon_i, \tag{1}$$

where W_i is the hourly wage rate for individual i , X is a vector of individual human capital measures, Y is a vector of personal attributes and location variables, Z is a vector of occupational characteristics, and R is a vector of religious affiliation variables, the β ’s are parameters to be estimated, and ε_i is a random error term. Equation (1) is estimated for the full sample of observations. We then decompose the full sample to analyze the effects of religious affiliation on wages by race, sex, and region.

3. Regression Results

The ordinary least squares results for the full sample and each of the subsamples are presented in Table 3. Since significant evidence of heteroskedasticity is found in the data, White’s standard errors are reported. The first column of Table 3 reports the results of the entire sample of 5,993 observations. Columns 2-5 display our results by region, columns 6 and 7 list the results for male and female subsamples, and columns 8 and 9 show the results for white and minority subsamples.

-----Insert table 3 about here-----

The results for our human capital measures are consistent with predictions of human capital theory. In each sample, an additional year of tenure at a firm leads to between approximately a 3.9 percent and 5.5 percent increase in wages.³ An additional year of education also has a positive and significant impact on wages, ranging from 4.3 percent for minorities to 6.7 percent for whites. Higher scores on the AFQT are also associated with higher wages. The largest impact on wages appears to be in the South where a 10 percent increase in the AFQT score equates to a 4.5 percent increase in the hourly wage rate of Southern workers. This may indicate that cognitive skills influence wages greater in the South (Neal and Johnson, 1996; O’Neill, 1990; Farkas and Vicknair, 1996), or it may indicate that school quality is a better predictor of hourly wage rates in the South (Betts, 1995). Still, this may suggest that family background differences account for a significant amount of wage disparity in the South (Cordero-Guzmán, 2001). Whatever the proper interpretation of the AFQT score, we find that it performs well in predicting hourly wage rates. The results for our personal attributes are also largely consistent with previous research. In each of our samples, we find that males earn about 20 percent higher wages than females with similar attributes. We find little evidence of a racial wage gap as race is only significant in the West subsample. Our results show that minority workers in the West earn about a 12.8 percent wage premium over similar white workers.

3 These figures represent the returns to the first year of tenure at a firm and will slowly diminish over time. For example, we calculate the returns to tenure for workers in the North Central as $[(0.001056 - 2(-5.301e^{-07})) \times 52]$.

The results for the marital status variable are less consistent across samples. However, consistent with previous literature, we do find evidence of a marriage wage premium for males – married males earn about 16.8 percent higher hourly wages than otherwise equal non-married males, perhaps owing to specialization (for example, see Gray, 1997; Chun and Lee, 2001). We also find much evidence that being raised in poverty has a negative impact on one's earnings potential. Only in the North Central subsample is the coefficient on the poverty variable not significantly negative. The negative effect on earnings of being raised in poverty appears greatest in the Northeast subsample where an individual raised in poverty is expected to earn about 13.3 percent lower hourly wages than a similar individual not raised in poverty.

In regards to location, individuals working in the Western U.S. receive the highest wages. According to our results, individuals working in the West receive between a 6.4 percent and 25.2 percent wage premium over similar individuals working in the South. Also, individuals from the Northeast may receive as small as a 4.6 percent premium or as large as an 11.8 percent wage premium over similar individuals from the South. Those working in the North Central, however, generally receive significantly lower hourly wages than those working in the South. For example, the results for the full sample indicate that individuals working in the North Central earn about 4 percent lower hourly wages than individuals working in the South. We also find that working in a MSA tends to have a positive and significant impact on wages. For the full sample, those working in MSAs receive about 12.6 percent higher hourly wages than those not working in MSAs, *ceteris paribus*.

The occupational controls are mostly significant and positive. Those working in an educational occupation are the omitted category in our study. Not surprisingly, we find that those working in a management occupation receive the highest wages. Based on our results for the full sample, individuals in management occupations receive about 60.8 percent higher hourly wages than otherwise similar individuals in educational occupations. Those working in service occupations seem to earn wage rates most similar to those in educational occupational occupations. For the full sample, the wage premium received by service workers over educational workers is only 17.4 percent. In general, we also find that part-time workers earn lower wages than full-time workers – about 17.2 percent lower hourly wages according to the results for the full sample.

We now turn our attention to the primary purpose of this paper and discuss the effects of religious affiliation on hourly wage rates. For the full sample, we find the coefficients on each of the religion variables to be positive; however, only the coefficient on the Catholic variable is significant. Based on our results for the full sample, Catholics earn 7.1 percent higher hourly wages than similar non-religious individuals. Furthermore, ignoring the insignificance of the Jewish dummy variable, Catholics receive a slightly higher wage premium than Jews. This result is in contrast to the majority of previous research on the relationship between religious affiliation and earnings and perhaps reflects the trend in the literature showing a rising wage premium for Catholics and a declining wage premium for Jews. It may also be reflective of our employing an individual's wage rate as the dependent variable rather than their total annual income. If Jewish families have been historically more prosperous than non-Jewish families, then intergenerational transfers of wealth and other assets may lead to higher levels of total annual income for Jews even though their earnings in the labor market may not be substantially different from those of non-Jews. Although this may not be the case when comparing Jews to non-Catholics, our results do support such an argument when comparing Jews to Catholics.

As for the effects of religious affiliation on earnings by region, we once again find evidence of a wage premium for Catholics in the Northeast and the West. Catholics in the Northeast receive about 15.2 percent higher hourly wages than comparable non-religious individuals in the Northeast, while Catholics in the West earn a smaller wage premium of 9.8 percent. Similarly, individuals belonging to a religious group other than the main three earn a wage premium of about 15.0 percent over non-religious individuals in the Northeast. Also, we find that Catholics receive higher hourly wages than Jews in the Northeast, North Central, and West. However, the results for the South subsample are more consistent with previous literature. We find that Jews earn a substantial 38.9 percent wage premium over non-religious individuals, and this is also the only significant religion variable for the South subsample. Again, we find no evidence that the wages of Protestants are significantly different from those of non-religious individuals. Surprisingly for the South subsample, although insignificant, we find the sign on the coefficient of the Protestant dummy variable to be negative. The fact that Catholics earn the largest wage premium in the Northeast could perhaps be explained by social networking theory. Catholics are most well-represented in the Northeast and, hence, presumably have the most well-developed networks in this area as well.

That is, it is not entirely implausible that being Catholic in the Northeast marginally impacts the economic opportunities available to an individual. However, our results do not support such an argument for Protestants in the South – the region in which they are most well-represented. The results for the male subsample indicate that Catholic males earn a statistically significant 8.8 percent wage premium over similar non-religious males. However, consistent with previous literature, the results reveal a larger wage premium for Jewish males, although the coefficient is insignificant at conventional levels. As for females, none of the religion variables are significant, but the coefficient on the Catholic dummy variable does exceed the coefficients on the other religion variables, suggesting that Catholic women may earn higher wages than non-Catholic women.

For whites, we again find a statistically significant positive impact on wages associated with being Catholic. White Catholics receive about 7.0 percent higher hourly wages than otherwise equal white non-religious individuals. The results for the white subsample are also once again inconclusive on how the wages of Catholics compare to those of Jews. The coefficient on the Jewish variable is larger than the coefficient on the Catholic variable, but the coefficient on the Jewish variable is insignificant which may simply be a result of the small number of Jews in the sample. The results for the minority subsample are much different than those of other subsamples. We find that Jewish minorities actually earn a significantly lower hourly wage than non-religious minorities. According to our results, other things equal, minority Jews earn a substantial 50 percent lower hourly wage rate than minority non-religious individuals. Furthermore, the coefficients on the Catholic and Protestant dummy variables are similar in the minority subsample, although both are insignificant. This may be related to a positive externality on the social networks of minorities that is associated with being Protestant. That is, the majority of minorities are Protestant; hence, being Protestant may impact the opportunities available to minorities at the margin by increasing the size of their network.

-----Insert table 4 about here-----

Our data also allow us to briefly investigate one other topic in the literature relevant to the focus of this paper. Does one religious group receive higher returns to education or tenure than another group? Table 4 shows the coefficients on education and tenure acquired from estimation of wage equations for each of the five religious categories.⁴ Calculating 95 percent confidence intervals for each of the coefficients reported in Table 4 reveals that they are all overlapping for each subgroup. Thus, consistent with Tomes (1985) but inconsistent with Chiswick (1983), Tomes (1983) and Meng and Sentence (1984), we find no evidence that one religious group receives higher returns to education or experience than another religious group.

4. Summary and Conclusion

Casual observation reveals a relationship between an individual’s religious beliefs and their earnings. In particular, Jews tend to have higher earnings than those of Catholics and Protestants. This is a phenomenon that has been confirmed by past researchers such as Chiswick (1983), Steen (1996, 2004), and Tomes (1985). Further, Steen (1996, 2004, 2005) finds that Catholics have higher earnings than Protestants. A number of underlying factors may be at the root of the religion-income relationship, including education, access to resources, race, and regional clustering of religious groups. The importance of income in an individual’s utility function may also be influenced by their religious beliefs. In this paper, we reexamine the relationship between religious affiliation and earnings. Rather than investigating the impact of religious affiliation on total annual income, we analyze its effects on an individual’s hourly wage rate because we believe hourly wage rates are subject to less variation from variables for which it may be difficult to control.

Employing data from the 2006 wave of the 1979 National Longitudinal Survey of Youth to estimate our wage equations, we find much evidence of a Catholic wage premium. In our full sample of 5,993 observations, only Catholics receive a statistically significant higher hourly wage than non-religious individuals, which is the comparison group in our study. We find a similar result for individuals in the Northeast and West. However, we also find that adherents of a religion other than Catholic, Protestant, and Jewish earn a wage premium over non-religious individuals in the Northeast. In the South, however, we find that the wage premium is transferred from Catholics to Jews. Our results also show that only Catholic males earn a significantly higher wage than non-religious males. However, in comparing the wages of males, our results are inconclusive as to whether or not Catholic males earn higher wages than Jewish males. Although the coefficient on the Catholic dummy variable is the only significant coefficient on a religion variable in our male wage regression, the coefficient on the Jewish dummy variable is more than twice as large as the coefficient on the Catholic dummy variable.

4 We do not report the coefficients on the other variables included in these wage regressions in the interest of saving space.

Among females, we find no evidence that their religious affiliation has a significant impact on their wages. We again find evidence of a Catholic wage premium among whites, but an insignificant Jewish coefficient again exceeds a significant Catholic coefficient for whites. We also find support for a wage penalty among minority Jews. Lastly, we find no evidence that the returns to education or experience vary among the different religious groups. Contrary to much of the previous literature on the topic, we are unable to find much evidence to conclude that Jews receive a wage premium over members of other religious groups or those with no religious beliefs in the U.S. We are also cautious about comparing the wages of Catholics to those of Jews considering the small number of Jews in our sample. However, we believe that we can state with much confidence through ample evidence from our analysis that Catholics earn wages higher than those earned by Protestants, members of “other religions”, and the non-religious. These results are consistent with a trend in the literature that has shown an increasing Catholic earnings premium and a decreasing Jewish earnings premium.

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Table 1: Definitions of Variables

Variable	Definition
<u>Human Capital Measures</u>	
Tenure	Number of weeks individual has been working at their current job divided by 1,000
Education	Years of education completed
AFQT	Percentile score on the Armed Forces Qualification Test
<u>Personal Attributes and Location Variables</u>	
Male	Equals 1 if male; 0 otherwise
Female	Equals 1 if female; 0 otherwise
White	Equals 1 if white; 0 otherwise
Minority	Equals 1 if not white; 0 otherwise
Married	Equals 1 if married; 0 otherwise
Poverty	Equals 1 if individual indicates that their family lived in poverty at any point during the period 1979-1983; 0 otherwise
Northeast	Equals 1 if individual lives in the Northeast; 0 otherwise
North Central	Equals 1 if individual lives in the North Central; 0 otherwise
South	Equals 1 if individual lives in the South; 0 otherwise
West	Equals 1 if individual lives in the West; 0 otherwise
MSA	Equals 1 if individual lives in a Metropolitan Statistical Area; 0 otherwise
<u>Occupational Characteristics</u>	
Management	Equals 1 if individual works in a management occupation; 0 otherwise
Professional	Equals 1 if individual works in a professional occupation; 0 otherwise
Educational	Equals 1 if individual works in an educational occupation; 0 otherwise
Medical	Equals 1 if individual works in a medical occupation; 0 otherwise
Service	Equals 1 if individual works in a service occupation; 0 otherwise
Sales	Equals 1 if individual works in a sales occupation; 0 otherwise
Office	Equals 1 if individual works in an office or administrative occupation; 0 otherwise
Construction	Equals 1 if individual works in a construction occupation; 0 otherwise
Production	Equals 1 if individual works in a production occupation; 0 otherwise
Transportation	Equals 1 if individual works in a transportation occupation; 0 otherwise
Wage	Hourly wage individual earns at their current job
Log Wage	Natural logarithm of hourly wage
Part-Time	Equals 1 if individual is employed in a part-time job; 0 otherwise
<u>Religious Affiliation Variables</u>	
Protestant	Equals 1 if individual is Protestant; 0 otherwise
Catholic	Equals 1 if individual is Catholic; 0 otherwise
Jewish	Equals 1 if individual is Jewish; 0 otherwise
Other Religion	Equals 1 if individual has a religious affiliation other than Protestant, Catholic, or Jewish; 0 otherwise
No Religion	Equals 1 if individual has no religious affiliation; 0 otherwise

Source: 1979 National Longitudinal Survey of Youth

Table 2: Descriptive Statistics

Variable	Full	Northeast	North Central	South	West	Male	Female	White	Minority
Tenure	0.472 (0.359)	0.516 (0.376)	0.518 (0.373)	0.447 (0.354)	0.435 (0.332)	0.501 (0.370)	0.442 (0.346)	0.497 (0.363)	0.425 (0.348)
Education	13.168 (2.566)	13.324 (2.627)	13.282 (2.359)	13.004 (2.583)	13.256 (2.697)	13.080 (2.616)	13.255 (2.513)	13.366 (2.647)	12.807 (2.370)
AFQT	0.401 (0.283)	0.446 (0.295)	0.464 (0.286)	0.340 (0.270)	0.420 (0.275)	0.410 (0.295)	0.392 (0.271)	0.491 (0.280)	0.236 (0.204)
Male	0.500 (0.500)	0.503 (0.500)	0.505 (0.500)	0.491 (0.500)	0.509 (0.500)			0.508 (0.500)	0.484 (0.500)
Female	0.500 (0.500)	0.497 (0.500)	0.495 (0.500)	0.509 (0.500)	0.491 (0.500)			0.492 (0.500)	0.516 (0.500)
White	0.646 (0.478)	0.683 (0.466)	0.765 (0.424)	0.519 (0.500)	0.743 (0.437)	0.657 (0.475)	0.635 (0.482)		
Minority	0.354 (0.478)	0.317 (0.466)	0.235 (0.424)	0.481 (0.500)	0.257 (0.437)	0.343 (0.475)	0.365 (0.482)		
Married	0.543 (0.498)	0.548 (0.498)	0.575 (0.495)	0.516 (0.500)	0.561 (0.497)	0.562 (0.496)	0.524 (0.499)	0.633 (0.482)	0.380 (0.486)
Poverty	0.466 (0.499)	0.412 (0.492)	0.390 (0.488)	0.535 (0.499)	0.451 (0.498)	0.439 (0.496)	0.492 (0.500)	0.353 (0.478)	0.672 (0.470)
Northeast	0.149 (0.356)					0.150 (0.357)	0.148 (0.355)	0.158 (0.364)	0.133 (0.340)
North Central	0.235 (0.424)					0.237 (0.425)	0.232 (0.422)	0.278 (0.448)	0.156 (0.363)
South	0.415 (0.493)					0.408 (0.492)	0.423 (0.494)	0.334 (0.472)	0.565 (0.496)
West	0.201 (0.401)					0.205 (0.404)	0.197 (0.398)	0.231 (0.421)	0.146 (0.353)
MSA	0.942 (0.233)	0.978 (0.148)	0.943 (0.232)	0.916 (0.278)	0.971 (0.168)	0.939 (0.240)	0.946 (0.226)	0.941 (0.236)	0.945 (0.227)
Management	0.157 (0.364)	0.177 (0.382)	0.169 (0.375)	0.137 (0.343)	0.172 (0.377)	0.168 (0.374)	0.147 (0.354)	0.187 (0.390)	0.104 (0.306)
Professional	0.086 (0.281)	0.108 (0.310)	0.079 (0.270)	0.076 (0.266)	0.099 (0.299)	0.092 (0.289)	0.080 (0.271)	0.099 (0.299)	0.062 (0.242)
Educational	0.038 (0.191)	0.031 (0.174)	0.028 (0.164)	0.045 (0.206)	0.041 (0.198)	0.015 (0.120)	0.061 (0.239)	0.040 (0.195)	0.034 (0.182)
Medical	0.074 (0.261)	0.073 (0.260)	0.078 (0.269)	0.073 (0.260)	0.071 (0.256)	0.022 (0.146)	0.125 (0.331)	0.072 (0.258)	0.077 (0.266)
Service	0.149 (0.356)	0.139 (0.346)	0.142 (0.349)	0.157 (0.364)	0.148 (0.355)	0.129 (0.335)	0.169 (0.375)	0.114 (0.318)	0.213 (0.409)
Sales	0.073 (0.260)	0.083 (0.276)	0.075 (0.263)	0.070 (0.256)	0.069 (0.253)	0.069 (0.253)	0.077 (0.267)	0.085 (0.279)	0.050 (0.219)
Office	0.156 (0.363)	0.180 (0.385)	0.142 (0.349)	0.155 (0.362)	0.158 (0.365)	0.062 (0.241)	0.250 (0.433)	0.161 (0.368)	0.148 (0.355)
Construction	0.106 (0.308)	0.097 (0.297)	0.097 (0.297)	0.110 (0.313)	0.115 (0.320)	0.203 (0.402)	0.010 (0.100)	0.107 (0.310)	0.104 (0.306)
Production	0.088 (0.283)	0.054 (0.226)	0.120 (0.325)	0.094 (0.292)	0.061 (0.240)	0.119 (0.323)	0.057 (0.231)	0.079 (0.269)	0.104 (0.305)
Transportation	0.073 (0.260)	0.058 (0.234)	0.069 (0.254)	0.083 (0.276)	0.066 (0.249)	0.123 (0.328)	0.023 (0.150)	0.056 (0.229)	0.104 (0.306)

Note: Standard deviations are in parentheses under the means.

Table 2 (continued)

Variable	Full	Northeast	North Central	South	West	Male	Female	White	Minority
Wage	20.558 (20.366)	23.102 (20.458)	20.008 (17.660)	18.705 (20.881)	23.149 (21.685)	23.493 (21.880)	17.629 (18.272)	22.620 (22.155	16.797 (15.945)
Log Wage	2.787 (0.648)	2.913 (0.651)	2.778 (0.631)	2.690 (0.636)	2.905 (0.655)	2.922 (0.653)	2.652 (0.614)	2.877 (0.655)	2.623 (0.602)
Part-Time	0.031 (0.173)	0.030 (0.171)	0.031 (0.174)	0.033 (0.178)	0.027 (0.163)	0.019 (0.136)	0.043 (0.204)	0.025 (0.155)	0.043 (0.203)
Protestant	0.544 (0.498)	0.393 (0.489)	0.569 (0.495)	0.668 (0.471)	0.373 (0.484)	0.526 (0.499)	0.563 (0.296)	0.464 (0.499)	0.691 (0.462)
Catholic	0.262 (0.440)	0.418 (0.493)	0.260 (0.439)	0.161 (0.368)	0.358 (0.480)	0.264 (0.441)	0.260 (0.439)	0.332 (0.471)	0.134 (0.341)
Jewish	0.007 (0.082)	0.018 (0.133)	0.003 (0.053)	0.004 (0.066)	0.008 (0.091)	0.008 (0.087)	0.006 (0.077)	0.010 (0.100)	0.001 (0.031)
Other Religion	0.078 (0.269)	0.073 (0.260)	0.059 (0.236)	0.086 (0.281)	0.089 (0.285)	0.076 (0.266)	0.080 (0.272)	0.068 (0.252)	0.097 (0.296)
No Religion	0.108 (0.311)	0.099 (0.298)	0.110 (0.312)	0.080 (0.272)	0.172 (0.377)	0.126 (0.331)	0.091 (0.288)	0.126 (0.331)	0.077 (0.266)

Note: Standard deviations are in parentheses under the means.

Table 3: Ordinary Least Squares Results

Variable	Full	Northeast	North Central	South	West	Male	Female	White	Minority
Constant	1.052 ^c (0.230)	1.052 ^c (0.230)	0.865 ^c (0.162)	0.989 ^c (0.108)	1.210 ^c (0.150)	1.093 ^c (0.165)	1.116 ^c (0.094)	0.919 ^c (0.084)	1.128 ^c (0.128)
Tenure	0.859 ^c (0.064)	0.759 ^c (0.165)	1.056 ^c (0.132)	0.761 ^c (0.092)	0.916 ^c (0.153)	0.752 ^c (0.091)	0.882 ^c (0.088)	0.861 ^c (0.083)	0.861 ^c (0.097)
Tenure ²	-0.417 ^c (0.047)	-0.328 ^c (0.012)	-0.530 ^c (0.097)	-0.375 ^c (0.068)	-0.428 ^c (0.012)	-0.381 ^c (0.067)	-0.405 ^c (0.065)	-0.423 ^c (0.061)	-0.412 ^c (0.070)
Education	0.059 ^c (0.004)	0.053 ^c (0.010)	0.060 ^c (0.008)	0.062 ^c (0.005)	0.056 ^c (0.008)	0.059 ^c (0.005)	0.058 ^c (0.005)	0.067 ^c (0.004)	0.043 ^c (0.007)
AFQT	0.337 ^c (0.033)	0.294 ^c (0.080)	0.216 ^c (0.065)	0.452 ^c (0.055)	0.342 ^c (0.072)	0.353 ^c (0.045)	0.314 ^c (0.047)	0.306 ^c (0.038)	0.388 ^c (0.064)
Male	0.215 ^c (0.016)	0.221 ^c (0.042)	0.242 ^c (0.032)	0.203 ^c (0.023)	0.196 ^c (0.036)			0.241 ^c (0.020)	0.158 ^c (0.025)
White	-0.013 (0.016)	-0.027 (0.045)	-0.002 (0.037)	0.021 (0.024)	-0.128 ^c (0.036)	0.005 (0.023)	-0.023 (0.022)		
Married	0.066 ^c (0.014)	0.059 (0.039)	0.095 ^c (0.028)	0.059 ^c (0.021)	0.048 (0.032)	0.168 ^c (0.020)	-0.028 (0.019)	0.059 ^c (0.018)	0.077 ^c (0.022)
Poverty	-0.085 ^c (0.014)	-0.133 ^c (0.040)	-0.013 (0.028)	-0.073 ^c (0.021)	-0.118 ^c (0.032)	-0.106 ^c (0.020)	-0.073 ^c (0.020)	-0.089 ^c (0.018)	-0.083 ^c (0.023)
Northeast	0.079 ^c (0.021)					0.083 ^c (0.029)	0.089 ^c (0.029)	0.046 ^a (0.027)	0.118 ^c (0.033)
North Central	-0.040 ^b (0.017)					-0.030 (0.026)	-0.055 ^b (0.023)	-0.073 ^c (0.021)	0.002 (0.031)
West	0.122 ^c (0.019)					0.107 ^c (0.026)	0.133 ^c (0.028)	0.064 ^c (0.023)	0.252 ^c (0.036)
MSA	0.126 ^c (0.026)	0.058 (0.093)	0.151 ^b (0.060)	0.110 ^c (0.032)	0.148 ^b (0.064)	0.138 ^c (0.035)	0.115 ^c (0.037)	0.100 ^c (0.030)	0.176 ^c (0.047)
Management	0.608 ^c (0.047)	0.805 ^c (0.173)	0.591 ^c (0.113)	0.554 ^c (0.064)	0.622 ^c (0.093)	0.649 ^c (0.146)	0.574 ^c (0.047)	0.616 ^c (0.055)	0.596 ^c (0.086)
Professional	0.499 ^c (0.050)	0.649 ^c (0.176)	0.540 ^c (0.116)	0.472 ^c (0.067)	0.464 ^c (0.105)	0.553 ^c (0.148)	0.464 ^c (0.054)	0.490 ^c (0.058)	0.533 ^c (0.093)
Medical	0.480 ^c (0.048)	0.636 ^c (0.171)	0.425 ^c (0.112)	0.471 ^c (0.065)	0.519 ^c (0.100)	0.513 ^c (0.160)	0.454 ^c (0.045)	0.527 ^c (0.056)	0.400 ^c (0.085)
Service	0.174 ^c (0.047)	0.347 ^b (0.173)	0.128 (0.111)	0.152 ^b (0.064)	0.191 ^b (0.095)	0.250 ^a (0.146)	0.119 ^b (0.047)	0.215 ^c (0.056)	0.112 (0.083)
Sales	0.366 ^c (0.052)	0.507 ^c (0.178)	0.438 ^c (0.121)	0.340 ^c (0.074)	0.276 ^b (0.108)	0.444 ^c (0.151)	0.304 ^c (0.055)	0.394 ^c (0.062)	0.286 ^c (0.091)
Office	0.344 ^c (0.045)	0.562 ^c (0.165)	0.261 ^b (0.109)	0.334 ^c (0.060)	0.335 ^c (0.091)	0.307 ^b (0.148)	0.336 ^c (0.043)	0.335 ^c (0.053)	0.365 ^c (0.082)
Construction	0.438 ^c (0.050)	0.562 ^c (0.180)	0.449 ^c (0.119)	0.414 ^c (0.070)	0.448 ^c (0.100)	0.498 ^c (0.145)	0.346 ^c (0.134)	0.483 ^c (0.060)	0.360 ^c (0.091)
Production	0.312 ^c (0.048)	0.336 ^a (0.175)	0.338 ^c (0.113)	0.308 ^c (0.063)	0.272 ^c (0.101)	0.365 ^b (0.146)	0.276 ^c (0.050)	0.315 ^c (0.057)	0.309 ^c (0.085)
Transportation	0.300 ^c (0.051)	0.549 ^c (0.175)	0.184 (0.120)	0.311 ^c (0.069)	0.285 ^c (0.107)	0.353 ^b (0.146)	0.315 ^c (0.070)	0.314 ^c (0.062)	0.279 ^c (0.088)

Note: White's standard errors are in parentheses under the coefficients.

^a Significant at the 10% level

^b Significant at the 5% level

^c Significant at the 1% level

Table 3 (continued)

Variable	Full	Northeast	North Central	South	West	Male	Female	White	Minority
Part-Time	-0.172 ^c (0.040)	-0.115 (0.108)	-0.073 (0.092)	-0.173 ^c (0.061)	-0.298 ^c (0.075)	-0.294 ^c (0.091)	-0.108 ^c (0.041)	-0.212 ^c (0.052)	-0.132 ^b (0.062)
Protestant	0.001 (0.022)	0.027 (0.058)	0.006 (0.038)	-0.039 (0.039)	0.045 (0.043)	0.020 (0.029)	-0.034 (0.032)	-0.011 (0.026)	0.032 (0.037)
Catholic	0.071 ^c (0.023)	0.152 ^c (0.058)	0.041 (0.045)	0.021 (0.045)	0.098 ^b (0.043)	0.088 ^c (0.031)	0.034 (0.035)	0.070 ^b (0.028)	0.039 (0.045)
Jewish	0.068 (0.122)	0.083 (0.166)	-0.013 (0.357)	0.389 ^a (0.223)	-0.207 (0.268)	0.190 (0.182)	-0.106 (0.135)	0.081 (0.126)	-0.502 ^c (0.142)
Other Religion	0.004 (0.030)	0.150 ^b (0.072)	-0.028 (0.065)	-0.042 (0.048)	0.013 (0.063)	0.003 (0.040)	-0.011 (0.043)	-0.025 (0.039)	0.042 (0.046)
Model Statistics									
R ²	0.402	0.367	0.406	0.426	0.363	0.400	0.368	0.393	0.374
Adjusted R ²	0.399	0.350	0.396	0.421	0.351	0.395	0.362	0.389	0.367
Observations	5,993	893	1,406	2,490	1,204	2,994	2,999	3,871	2,122

Note: White's standard errors are in parentheses under the coefficients.

^a Significant at the 10% level

^b Significant at the 5% level

^c Significant at the 1% level

Table 4: Returns to Education and Tenure by Religious Affiliation

Variable	Protestant	Catholic	Jewish	Other Religion	No Religion
Education	0.061 ^c (0.005)	0.051 ^c (0.007)	0.082 (0.056)	0.061 ^c (0.014)	0.064 ^c (0.010)
Tenure	0.998 ^c (0.080)	0.626 ^c (0.136)	2.503 ^a (1.337)	0.663 ^c (0.239)	0.715 ^c (0.201)

Note: White's standard errors are in parentheses under the coefficients.

^a Significant at the 10% level

^b Significant at the 5% level

^c Significant at the 1% level