

Religion and Earnings:  
Is It Good to Be an Atheist with Religious  
Parental Background?

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**Abstract:** Using German employee data, we find that being raised by two religious parents and having no current religious affiliation is associated with higher earnings. This conforms to the hypothesis that people who are raised religiously and reject religion as adults are economically more successful as they combine a strong, internalized work ethic with an increased interest in present consumption (as opposed to afterlife consumption).

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## 1. Introduction

From a theoretical point of view, the relationship between religion and economic outcomes is ambiguous. On the one hand, religion may strengthen employees' self-discipline and work ethic resulting in higher effort (Arrunada 2010, McCleary and Barro 2006). On the other hand, religious individuals may favor afterlife income over present income and, hence, are less engaged in activities contributing to their economic success in this life (Azzi and Ehrenberg 1977, Lelkes 2006, Lipford and Tollison 2003).

This raises the question of what happens to the economic success of individuals who are raised religiously and reject religion later in life. We hypothesize that these individuals are economically more successful than others as they combine two important characteristics. First, to the extent that these individuals have internalized the attitudes and values taught by their religious parents, they have strong self-discipline and work ethic even when they don't believe in God as adults.<sup>1</sup> Second, the value these people place on present consumption increases when they no longer believe in the possibility of afterlife consumption. Thus, atheists with a religious parental background should be people with both a strong work ethic and an increased incentive to engage in economically successful activities that lead to a high level of present consumption.

Using employee data from the German Socio-Economic Panel (SOEP), we run earnings regressions to examine the relationship between religion and economic success. The results conform to our hypothesis. Being raised by two religious parents and having no current religious affiliation is positively associated with an employee's earnings.

Previous studies on religion and earnings have included *either* variables for religious parental background *or* variables for current religious affiliation in the

regressions (Bettendorf and Dijkgraaf 2010, Ewing 2000, Steen 2004, Tomes 1984, 1985). As those studies do not include both groups of variables jointly, they do not disentangle the potentially opposing effects of being raised religiously and being religious later in life. Hence, they do not address the question of whether atheists with religious parental background have higher earnings.

## **2. Data and Variables**

The SOEP is a representative longitudinal survey of private households (Wagner et al. 1993). It is administered by the German Economic Institute (DIW). Infratest Sozialforschung, a professional survey and opinion institute, conducts the face-to-face interviews. A nucleus of socio-economic and demographic questions is asked annually. Different ‘special’ topics are sampled in specific waves. Our examination is based on the waves 1997, 2003, and 2007 as these waves provide the relevant information required for the empirical analysis. We consider employees in West Germany. Immigrants (including ethnic Germans) are excluded from the analysis.

Our dependent variable is the log of earnings. The survey asks “How high were your gross earnings from employment last month?” We calculate real monthly gross earnings by using the consumer price index of each respective year as deflator.

Catholicism and Protestantism are by far the main religions in Germany. Both religions promote similar work ethics (Arrunada 2010). We define an employee as being religious if he or she has a current Catholic or current Protestant affiliation.<sup>2</sup> An employee without any current religious affiliation is considered as being not religious. Accordingly, we define the religiosity of the mother and the religiosity of the father. Three types of

family background are considered: (a) Both parents are religious. (b) Only one parent is religious. (c) Both parents are not religious.

The SOEP allows to include a rich set of control variables. Further aspects of family background are captured by the number of siblings and the parents' education. Worker characteristics are controlled for by a gender dummy and variables for the years of schooling, full-time work experience, part-time work experience, and unemployment experience. To capture characteristics of the actual job we include variables for full-time work, actual working hours, tenure, and occupational status within the private or the public sector. Finally, industry dummies, federal state dummies and year dummies are taken into account.

### 3. Empirical Analysis

The panel structure of the data is accounted for by using a random effects model.<sup>3</sup> Let  $\ln(w_{it})$  be the log of worker  $i$ 's monthly earnings in year  $t$  ( $t = 1997, 2003, 2007$ ). The random effects model is given by

$$\ln(w_{it}) = \boldsymbol{\alpha}' \mathbf{x}_{it} + \varepsilon_{it} + u_i, \quad (1)$$

where  $\mathbf{x}_{it}$  is the vector of explanatory variables,  $\boldsymbol{\alpha}$  the vector of coefficients,  $\varepsilon_{it}$  the time-varying error term, and  $u_i$  the random error component that is associated with worker  $i$  but invariant over time. The random effects model is estimated by feasible generalized least squares.

Table 1 provides the results of earnings regressions. To relate our study to previous examinations, regression (a) uses only current religious affiliation while regression (b) uses only religious parental background. The dummy variable for a current

religious affiliation takes a significantly negative coefficient. However, the two dummy variables capturing the religious parental background do not emerge with significant coefficients. The pattern of influences may partially remain obscured until variables for current religious affiliation and religious parental background have been jointly included in the regression.

Column (c) provides the results of including the variables jointly. The dummy variable for two religious parents now emerges with a significantly positive coefficient. Current religious affiliation continues to be a significantly negative determinant of earnings. Thus, regression (c) demonstrates that it is indeed important to consider both current religious affiliation and religious parental background jointly in order to disentangle their opposing effects on earnings.

Finally, in regression (d) we use a more flexible specification and consider dummy variables for the various combinations of own and parents' religiosity. The reference group consists of workers with no current religious affiliation and no religious parents. Being raised by two religious parents and having no current religious affiliation is a positive determinant of earnings. The effect is not only statistically but also economically significant. Having two religious parents without being religious oneself is associated with a roughly 8 percent increase in monthly earnings. The other religion variables do not take significant coefficients. Altogether, the results of our empirical conform to our hypothesis. People who are raised religiously and reject religion later in life are economically more successful.

As a check of robustness, we distinguished between current Catholic and Protestant affiliation, as well as between Catholic and Protestant parents. This exercise

confirmed our basic conclusion. Regardless of whether parents are both Catholics, are both Protestants, or have different religions, employees who are raised by two religious parents, but are not religious themselves are more successful in terms of earnings. The results are available from the authors upon request.

#### **4. Conclusions**

This study shows that having two religious parents without being religious oneself is a positive determinant of earnings. This finding fits the hypothesis that people who are raised religiously and reject religion later in life are economically more successful as they combine two important characteristics. First, they have strong self-discipline and work ethic. Second, they place high value on present consumption as opposed to afterlife consumption.

We recognize the need for further research within this theme. Future research could fruitfully examine whether our conclusion holds true when examining the influences of own religiosity and parents' religiosity on other outcomes such as job satisfaction or unemployment risk.

**Table 1:** Determinants of earnings

	Mean	(a)	(b)	(c)	(d)
Log of earnings (in Euro)	7.74				
Worker is religious	0.74	-0.040 (0.011)**		-0.051 (0.012)**	
Both parents are religious	0.88		0.031 (0.020)	0.061 (0.021)**	
Only one parent is religious	0.04		0.023 (0.029)	0.040 (0.030)	
Worker is religious & both parents are religious	0.71				0.021 (0.021)
Worker is religious & only one parent is religious	0.02				0.026 (0.036)
Worker is religious & both parents are not religious	0.01				0.025 (0.038)
Worker is not religious & both parents are religious	0.17				0.083 (0.023)**
Worker is not religious & only one parent is religious	0.02				0.023 (0.038)
Rho		0.691	0.691	0.690	0.690
R <sup>2</sup>		0.742	0.741	0.742	0.743

Number of observations = 6,562. Number of workers = 4,421. Dependent variable: Log of real monthly gross earnings. Method: Random effects. A constant and all of the control variables discussed in section 2 are included in each regression but are suppressed to save space. Rho is the share of total variation of the error term in the earnings regression coming from the time-invariant, worker-specific component. Heteroskedasticity robust standard errors are in parentheses. \*\* Statistically significant at the 1 percent level.



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## **Endnotes**

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<sup>1</sup> Relatedly Guiso et al. (2006) argue that people raised religiously share some common preferences even if they reject religion later in life.

<sup>2</sup> In our sample of German employees there are no other religions than Catholicism and Protestantism. Islamic affiliation plays only a larger role among immigrants but not among Germans (Cornelissen and Jirjahn 2012).

<sup>3</sup> In our context, it is not feasible to estimate a fixed effects model as the variables on parental background are time-invariant. Time-invariant variables cannot be included in the fixed effects model.