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Mustafa Özer, Jan Fidrmuc, Emmanouil Mentzakis and Özcan Özkan

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Bank of Finland Helsinki 2024

## Mustafa Özer, Jan Fidrmuc, Emmanouil Mentzakis, and Özcan Özkan

# Does education affect religiosity? Causal evidence from a conservative emerging economy

## Abstract

Does education make people more or less religious? The previous literature offers mixed findings on the relationship between education and religiosity. This may be due to endogeneity bias: education and religiosity can be caused by a third variable such as culture or upbringing. We instrument education by exposure to the 1997 education reform in Türkiye which increased mandatory schooling from 5 to 8 years. The schooling reform increased the probability that young girls would complete 8 years of schooling and report lower religiosity later in life. The reform apparently did not influence such outcomes for boys. These effects are observed primarily for females growing up in strongly religious or poor areas.

Keywords: Education, religiosity, 2SLS, gender, social norms, Türkiye. JEL: H52; I26; J10; Z12.

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# Non-technical summary

### FOCUS

Our paper seeks to shed new light on the causal impact of education on religiosity. A possible reason earlier literature offers mixed results in this respect is endogeneity bias. Education and religiosity can be affected by other variables such as culture and upbringing. We address this problem by utilizing the 1997 reform of compulsory education in Türkiye. The reform increased mandatory schooling from 5 to 8 years.

### CONTRIBUTION

We use the exposure to the 1997 education reform to identify as good as random variation in educational outcomes between birth cohorts affected by the reform and those slightly older who were unaffected by it. Specifically, individuals born between 1981 and 1985 are used as the control group, as they were obliged to remain in school for only five years. Those born between 1987 and 1991 were affected by the reform and thus were required to complete eight years of schooling. Given that there was little change in the nature or quality of education changed after the reform was implemented, the sole difference between these two groups is the amount of schooling that they were required to complete.

### FINDINGS

The reform increased the probability that young girls complete 8 years of schooling, but had no similar impact on such outcome for boys. Girls subject to the reform, in turn, displayed lower self-reported religiosity when surveyed in 2013. These effects are primarily observed for females who grew up in poor or strongly religious areas.

A little philosophy inclineth man's mind to atheism, but depth in philosophy bringeth men's minds about to religion. – Francis Bacon

Where knowledge ends, religion begins. - Benjamin Disraeli

# 1 Introduction

The Encyclopedia Britannica defines *religion* as "human beings' relation to that which they regard as holy, sacred, absolute, spiritual, divine, or worthy of especial reverence."<sup>1</sup> By its nature, religion is based on premises that are unverifiable and taken at face value, supported by long-held beliefs, traditions, and occurrences interpreted as miracles. As such, religion is arguably at odds with *science*, defined by the Encyclopedia Britannica as a "system of knowledge that is concerned with the physical world and its phenomena and that entails unbiased observations and systematic experimentation."<sup>2</sup> This raises the immediate question as to whether an education based on scientific principles and experimental rigor might lead to a decline in the religiosity of an individual.

Religion has a number of important implications, both positive and negative, for personal well-being.

As to benefits, it offers a system of behavioral norms and values such as the *Ten Commandments* in Judaism, Christianity and Islam or the *Noble Eightfold Path* of Buddhism. These norms help improve the outcomes of inter-personal interactions and make them more predictable. Religious people also tend to be happier (see Deaton and Stone, 2013, and the references therein). Many religions even offer the prospect of eternal life, an afterlife existence or reincarnation. Religious communities provide insurance against income shocks (Clark and Lelkes, 2009; Dehejia et al., 2005) and club goods such as spiritual and monetary support, dispute resolution and passage rituals for birth, marriage, and death (Berman, 2000).

As to drawbacks, religion can impose restrictions on behavior and appearance that affect the believers' ability to participate in the public life, including their labor-market options, especially in conservative and traditional societies. O'Neil and Bilgin (2013) show that religious women in Türkiye are more likely to hold conservative and patriarchal views, while Dildar (2015) finds that religious women in Türkiye identify with patriarchal norms and are less likely to join the labor force than their secular counterparts. Submitting to such restrictions may diminish personal well-being. Inasmuch as education has an impact on religiosity, it can make an important

<sup>&</sup>lt;sup>1</sup> Encyclopedia Britannica, <u>https://www.britannica.com/topic/religion</u> (accessed September 2023).

<sup>&</sup>lt;sup>2</sup> Ibid.

contribution to a person's quality of life that impacting their labor-market participation and other outcomes.

The evidence on the relationship between education and religion is mixed. Glaeser & Sacerdote (2008) observe that participation in religious activities increases with an individual's education in the context of the United States. A similar positive correlation is found also in the UK and France, but is absent in other countries. However, Glaeser & Sacerdote (2008) also report a negative correlation between education and religious participation at the level of denominations: the members of the most religiously active groups tend to be the least educated. They attribute this to "sorting," whereby educated individuals (those with more outside options) migrate to less strict religions.

Other studies also fail to reach a consensus on the relationship between education and religion. Some find a negative correlation, e.g. Arias-Vazquez (2012) for the US; Hungerman (2014), Dilmaghani (2019) for Canada; and Mocan and Pogorelova (2017) for European countries. Others find a positive effect, e.g. Albrecht and Heaton (1984) for the Mormon community, and Gruber (2005) for Americans in general. Most such studies, however, constitute correlational evidence and thus lack causal identification free of endogeneity bias. For example, both education and religiosity could be caused by other unobserved variables such as parental upbringing or culture.

Several recent contributions present causal evidence on the relationship between education and religiosity. Using a reform in compulsory years of schooling as an instrumental variable, Hungerman (2014) concludes that higher education levels lead to lower levels of religious participation later in life. An additional year of education results in a 4-percent decrease in the likelihood of an individual identifying with any religious tradition. Becker et al. (2017), using data from 61 German cities between 1890 and 1930 and controlling for city-fixed effects, find that an increase in advanced-school enrollment rates in the studied cities was negatively related to the rate of Protestant church attendance. Mocan and Pogorelova (2014), employing microdata from 11 European countries, find that compulsory schooling reforms enacted in the 1960s and 1970s decreased various measures of religiosity and superstitious tendencies. Similarly, Masuda and Yudhistira (2020) use cohort variations in exposure to the 1978 education reform in Indonesia. They conclude that each extra year of education reduced self-declared religiosity by 4 percent.

Türkiye's Compulsory Education Law of 1997 raised the length of compulsory education from 5 to 8 years for persons born after 1985 (i.e. 11 or younger in 1997). While its stated objective was to prepare Türkiye for entry into the European Union (EU) by increasing access to education and reducing geographic and gender-specific educational disparities, the most pressing drivers of the reform were political (see discussion in next section). Access to education has been widely accepted by the EU as a way to increase economic and social development in Türkiye, as well as to enhance economic and social cohesion between the country's eastern and western regions. Crucially, the reform increased the duration of compulsory education without affecting the curriculum or the quality of education (Dulger, 2004). The raw figures show the net enrollment rate in primary education for girls increased from 78.97 % in the 1997-98 academic year, to 83.79 %, 88.45 %, and 90.79 % for the 1998-99, 1999-00, and 2000-01 academic years, respectively. It took another six years (i.e. the 2007-08 academic year) before net enrollments at primary education level between girls and boys equalized (Özgenur, 2019).

The findings for girls and their potential heterogeneities raise questions about the intended and unintended consequences of the reform. While there was no explicit government statement linking the policy to gender inequalities or disadvantaged groups, the already high enrollment rates in primary education among boys may explain the more pronounced effects among girls. However, given the significant social and educational inequalities across regions, other characteristics, in addition to gender, may have influenced the impact of educational reforms.

The following analysis seeks to tease out more nuanced effects of education on religiosity. Exploiting Türkiye's 1997 education reform, we estimate the causal effect of educational attainment on religiosity in Türkiye and explore the heterogeneity of this relationship across genders and socio-economic characteristics. Previous studies evaluating the effect of education on religiosity in Türkiye ignore the differential reform intensity across provinces and regions that might produce bias in estimates (Duflo, 2001). Our identification strategy employs instrumental variables with treatment interacted with regional reform intensity measured by teacher-student ratios at the provincial level. Our results show that the effect of education reform on both educational attainment and religiosity is restricted to girls, who report an increase in schooling and subsequent drop in religiosity. These effects, however, are limited to girls from relatively poor or religious regions. Our results are robust to the usage of different regression specifications and survive a multitude of robustness checks.

Our approach builds upon and extends the research of Cesur and Mocan (2018). Their work covers the same reform episode and concludes that urban women who received more education were less likely to vote for an Islamic party, less likely to wear Islamic head-covering and more likely to espouse modern social values. They also found little impact on rural women or men generally. Cesur and Mocan, however, determine "urban" or "rural" status based on the respondent's residence at the time of the survey rather than where the respondent received full-time education. This can introduce bias: individuals may move to urban areas or remain in rural areas based on

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their educational attainments or other characteristics. Our methodology, in contrast, segments data based on residence prior to the enactment of the schooling reform. Moreover, while Cesur and Mocan use date of birth as their primary metric for estimating the reform's impact, our analysis integrates date of birth *and* reform intensity across time and provinces. This approach both captures the direct effects of the reform based on birth cohorts and the dynamic changes in educational resources over time and across regions. By incorporating this temporal and provincial variation, we factor in the considerable differences in educational quality and access throughout Türkiye, providing a more comprehensive understanding of the reform's influence on religiosity.

Another closely related paper is Erten & Keskin (2019), which was based on the later educational reform of 2012. They find that the 2012 reform increased school attendance for both boys and girls, led to more girls in religious areas staying in school, and encouraged marginal students to choose vocational over academic high schools. We should note here the important differences between these two reforms. The 1997 reform only changed the duration of education, but it did not affect the content or quality of education. In this sense, the 1997 reform serves as a particularly clean exogenous instrument for studying the causal link between education and religiosity. In contrast, the 2012 education reform (a.k.a. the "4+4+4 reform") was implemented by Recep Erdoğan's Justice and Development Party (AKP), which has dominated Turkish politics since 2002. The 2012 reform increased the duration of compulsory education to 12 years and revised the curriculum. In particular, the reform strengthened the religious education curriculum within the school system and reduced the secular nature of education in Türkiye. The 2012 reform explicitly allowed students to opt for a religious education, which was not permissible under the 1997 rules. For this purpose, the institution of religion schools (the so called Imam Hatip schools) was reinstated (Gün & Baskan, 2014). This increased tolerance and state acquiescence to religious education could confound Erten and Keskin's findings. Indeed, Meyersson (2014) finds that greater tolerance of religious attitudes by some schools in 1994 increased school attendance of pious girls as their schools failed to enforce the headscarf bans in place at the time. No such bans were envisaged by the 2012 reform. By focusing on the 1997 education reform, our analysis provides a more straightforward examination of the relationship between education and religiosity without the confounding effects inherent in the subsequent reform.

Section 2 describes the education reform that increased the length of compulsory education in Türkiye. Section 3 introduces the data and methods. Section 4 presents the results. Section 5 contains the robustness checks, while Section 6 discusses and concludes.

# 2 The 1997 Compulsory Education Reform

The Turkish legislature passed the Compulsory Education Act in August 1997. The new law, which increased compulsory education from 5 to 8 years, applied to children born after 1985 (i.e. aged 11 or younger in 1997). The reform was politically motivated: it was adopted after the short tenure of a government headed by the religious *Welfare Party* (this government assumed office in June 1996 and was deposed by the military in February 1997).<sup>3</sup> Although the stated objective of the reform was to accelerate the process of harmonization with the EU, the reform served to restrict the enrollment of children in religious schools as such schools were not recognized by the reform (Dulger, 2004; Özer et al., 2018, 2023).

The new law combined the primary school (years 1 to 5) and the lower-secondary school (years 6 to 8) to form a new primary school covering years 1 to 8. The net enrollment rate went from 85.6% in 1997 to 96.3% in 2002, which translated to approximately 1.1 million additional students in years 1 to 8 (Figure 1). To meet rising demand, there was a substantial increase in the number of teachers employed with over 70,000 new primary school teachers hired after 1997 (Figure 2). In order to accommodate the increased demand for school placements, a total of 81,500 new primary school classrooms were built between 1997 and 2002, resulting in a roughly 40 % increase in capacity (World Bank, 2005). Various plans were implemented to improve access for rural children, including bus transport, the establishment of boarding schools, and the consolidation or closure of some village schools. Students from low-income families were given free textbooks and school meals (Dulger, 2004). Implementation of the Compulsory Education Plan, calculated to cost \$11.3 billion, was funded with allocations from the general budget and financial support from the World Bank.

<sup>&</sup>lt;sup>3</sup> The *Welfare Party* won the general elections held in December 1995, receiving 21.4 percent of the vote and 158 seats in the Grand National Assembly. The margin was insufficient to form a unity government, and the resulting coalition government only managed to enter office on June 28, 1996. On February 28, 1997, the Turkish Armed Forces seized power and forced the government to resign. On May 21, 1997, the Chief Public Prosecutor of the Supreme Court, filed a lawsuit against the *Welfare Party* for "acting against the principles of the secular republic." After 8 months of litigation, the Welfare Party was dissolved by the Constitutional Court on January 16, 1998.



Figure 1. Gross enrollment rates for Grades 1 to 8 over time.

*Source*: Authors' calculation from the National Education Statistics yearbooks of Türkiye's Ministry of Education. The ratio is calculated by dividing the number of students in 1 to 8 grades with a population aged 6 to 13, the population should be at school.



Figure 2. Number of teachers for Grades 1 to 8 over time.

Source: Authors' calculation from the National Education Statistics yearbooks of Türkiye's Ministry of Education.

## 3 Data and Methodology

### 3.1 Data

We use the 2013 wave of the Turkish Household Life Satisfaction Survey (THLSS) administered by the Turkish Statistical Institute. The use of a single wave was necessary as questions on respondents' province and region of residence (needed in the identification strategy) was only included in 2013. Our analysis is based on individuals born between 1981 and 1991. We designate those born after 1986 as the treatment group, while those born before 1986 constitute the control group. Due to the lax enforcement of the age cut-off, there remains ambiguity regarding the status of individuals born in 1986. Some may have been affected by the reform, some not. To circumvent potential misclassification, we omitted the respondents born in 1986 from the data. In our robustness checks, we assess the implications of including individuals born in 1986, by examining them as part of the treatment group and part of the control groups.

Educational attainment is measured with the following educational outcomes: did not receive any education; did not finish primary school; completed primary school; completed junior high school; completed senior high school; and graduated from university. From this variable, we isolate and construct three relevant educational outcomes to be used in the analysis: a) completed 8 years of schooling (graduated from junior high school, or JHSG), b) completed senior high school (graduated from senior high school, or SHSG) and c) completed university education (university graduate, or UG).

Religiosity is captured by three variables, namely: 1) "How important are the religious beliefs of other people around you to you?" with "important", "moderate" and "not important" as possible answers; 2) "How important is the opinion of the people around you (relatives, friends, neighbors, etc.) about your religious beliefs?" again with "important", "moderate" and "not important" as possible answers; and finally, 3) "To what extent are you interested in religion?" with "interested", "moderately interested" and "not interested" as possible answers.<sup>4</sup> Each of the three religiosity variables is dichotomized (1 for "important" or "interested" and 0 otherwise) and then all three are aggregated to form an index (i.e. ranging from 0 to 3) which is finally normalized by dividing the index values by three.

### 3.2 Empirical strategy

To address the potentially endogenous relationship between education and religiosity, we adopt an instrumental variable (IV) approach. The 1997 education reform increased the number of years of compulsory education from 5 to 8 and established new primary schools (years 1 to 8), integrating the previous compulsory primary (years 1 to 5) and non-compulsory junior high schools (years

<sup>&</sup>lt;sup>4</sup> A fourth response "I do not know" was also available. We record such responses as missing due to the lack of clarity on its interpretation. All questions were formulated in a neutral fashion, without implying judgement concerning the respondent's religious views.

5 to 8). The reform itself was politically motivated and unrelated to the Turkish educational situation at the time, rendering it a policy change that could provide exogenous variation to study the effects of education.

In practice, there was substantial geographical heterogeneity in reform implementation with greater intensity in regions with low pre-reform gross enrollment in secondary schools (Dinçer et al., 2014; Özer et al., 2018). Duflo (2001) argues that in countries where disparities in educational attainments are common across regions and provinces, the use of a single dummy variable as an instrument for schooling is inappropriate. Following Duflo (2001), and in contrast to most past studies on Turkish education reforms, we employ an identification strategy that interacts the treatment variable with intensity so as to capture the effect of the reform by province and year. For our reform intensity variable, we use variation in the number of teachers by province and year of birth.<sup>5</sup> The first stage regression is given in Eq. (1), whereby exposure to the education reform augmented by reform intensity is used as an instrument.

$$S_{ipc} = \beta_0 + \beta_1 (Teacher_{pc} * Treated_i) + \beta_2 Teacher_{pc} + \beta_3 (Genrol96_p * Treated_i) + \mu_p + \theta_c + \varepsilon_{ipc}$$
(1)

 $S_{ipc}$  denotes the education level of individual *i* living in city *p* and birth year *c*. *Treated*<sub>i</sub> denotes the treatment status and takes the value of 1 for the group born between 1987 and 1991, who completed 8 years of compulsory education due to the education reform. A value of 0 is given to the those born between 1981 and 1985 as they are assumed to not be affected by the education reform. *Teacher*<sub>pc</sub> is a treatment intensity variable and is obtained by dividing the number of teachers in years 1 to 8 in province *p* when the cohort with birth year *c* started in year 6 by the total number of students at primary and secondary schools for cohort *c* and province *p*. *Genrol*96<sub>p</sub> is the gross enrollment rate to sixth grade in the 1996-97 academic year, which we include to control for the pre-reform state of education in the province (see below for further details).  $\mu_p$  denotes the province fixed effects capturing unobserved and time-invariant regional factors (e.g. socio-economic development, school and teacher quality, urbanization rates),  $\theta_c$  stands for the birth-year

<sup>&</sup>lt;sup>5</sup> Data for the number of teachers by province and year were collected from the National Education Statistics yearbooks of the Ministry of Education. These allow detailed categorization according to the number of teachers and year. However, data collation requires reviewing all yearbooks and manually aggregating teacher numbers at the province level. Information on the number of children aged 6 to 13 comes from the censuses of 1985, 1990, and 2000. The exponential function method was used for the missing years between the censuses. The main source of the teacher-pupil ratio is the increase in the number of teachers. For this reason, filling the missing data with the exponential function method makes no significant difference in the calculations. However, we cannot say that the missing data imputations to fill the data between the census years are correct for the estimation requirement.

fixed effects, capturing cohort effects such as economic and social policies that may affect religion, education, or both, while  $\varepsilon_{ipc}$  is a random error term.

The effect of the reform on education of the treatment group is calculated as  $\beta_1 + \beta_2$ , while the effect on the control group is  $\beta_2$ .  $\beta_1$  therefore shows the effect of education reform on the treated group when the control and treatment groups are equally affected by other factors related to the intensity variable and the reform is exogenous. The identifying assumption is that there is no correlation between education reform and uncontrolled region-specific or time-varying variables (Duflo, 2001). As the intensity of the reform could be correlated with the pre-reform enrollment rates in 1996, the estimation may be biased without controlling for such factors. As a control, we interact the treatment dummy with gross enrollment rates in 1996, i.e. *Genrol*96<sub>p</sub>.

The effect of schooling on religiosity is given in the second stage, Eq. (2):

$$R_{ipc} = \beta_0^r + \beta_1^r S_{ipc} + \beta_2^r Teacher_{pc} + \beta_3^r (Genrol96_p * Treated_i) + \mu_p^r + \theta_c^r + \varepsilon_{ipc}^r, \quad (2)$$

where  $R_{ipc}$  is the religious outcome of individual *i* living in province *p* and born in year *c*, and the rest of the notation is as previously explained. The regression in the second stage incorporates all the controls from the first stage, making the identification of the coefficient for predicted schooling solely reliant on the exclusion of the interaction term from the regression in this second stage. Provided that the ratio of primary school teachers to children (*Teacher<sub>pc</sub>*) only impacts religiosity through its effect on schooling, the 2SLS models estimate should reflect the causal impact of schooling on religiosity.

Our estimations use the linear 2SLS model proposed by Angrist (1991) and Angrist (2001). For binary outcomes and instrumental variables, linear models predict marginal treatment effects more robustly and accurately than non-linear models, regardless of whether the dependent variable is binary or continuous (Angrist & Pischke, 2009). Considering that standard errors may be correlated for individuals with the same birth year, region, or both, we cluster standard errors by region of residence and year of birth (Pischke and von Wachter, 2008; Brunello, Fabbri and Fort, 2013; Agüero and Bharadwaj, 2014; Grépin and Bharadwaj, 2015).

### 3.3 Heterogeneity

Heterogeneity of effects is explored according to a number of background characteristics. We focus on pre-determined characteristics to avoid considering outcomes affected by education. First, we split the sample by gender to see whether our analysis confirms past findings. Second, we examine whether the results differ according to the strength of religiosity in the student's province prior to the roll-out of the reform. We do this by splitting the sample at the median of the distribution of province-level votes for the Islamist political party, the Welfare Party, in the 1995 general election.<sup>6</sup> Provinces with voting percentages above the national median (i.e. 22.2 % of the vote) are considered to exhibit stronger religiosity sentiment. Third, we split the sample according to the provincial income based on the per capita 1996 Gross Domestic Product. Following Taşöz Düşündere (2019), we classify provinces into low middle income and high middle income that year). Fourth, we categorize provinces according to Kurdish population density, identifying provinces with significant Kurdish minorities and those without.<sup>7</sup>

# 4 Analysis

### 4.1 Descriptive statistics

Panel A of Table 1 presents the descriptive statistics by gender and treatment status. For all educational outcomes, men have higher attainments than women. The pre-reform proportion of those completing an 8-year education is 45 % and 72 % for women and men, respectively. This rises post-reform to 74 % for women and 90 % for men. Smaller increases are observed for the other two education variables. As for religiosity, women seem more devoted than men for each of the religiosity variables. For both genders, the differences in religiosity between the treatment and control groups seem marginal.

Panel B shows the descriptive statistics for the main subgroups considered in the heterogeneity analysis. Unsurprisingly, well-off regions have significantly higher educational levels than poorer regions. Smaller differences can also be observed between less and more religious regions. Also in line with expectations, provinces below the median level of income display higher levels of religiosity for both men and women than provinces with above-median incomes. Provinces with greater support for political Islam show higher average levels of religiosity. Finally, particularly

<sup>&</sup>lt;sup>6</sup> The election results for the 79 provinces in 1995 were obtained from <u>http://www.secim-sonuclari.com/1995</u>.

<sup>&</sup>lt;sup>7</sup> Determining the exact percentage of people belonging to the Kurdish minority can be complex due to such factors as the policies of local authorities and the historical context of the region. In areas with a history of inter-ethnic conflict, people may be reluctant to express their ethnic identities. Similarly, the authorities may undercount their presence (by considering all Turkish citizens to be ethnic Turks), which would further complicate our efforts to obtain accurate demographic data. Therefore, we classify provinces as having a significant Kurdish identity based on the historical presence of Kurdish political movements and their electoral performance. The provinces included in this study as having a significant Kurdish presence are Diyarbakır, Mardin, Şırnak, Van, Batman, Hakkari, Siirt, Tunceli, Ağrı, Bitlis, Muş, and Iğdır. Note that although Kurds are a minority in Türkiye as a whole, they are generally believed to be the majority or dominant ethnicity in the aforementioned provinces.

glaring differences appear when considering the presence of the Kurdish minority, i.e. Kurdishdominated regions show substantially lower educational attainment than Turkish-dominated regions (especially for girls). The Kurdish areas also seem more religious, but these differences are less dramatic.

When comparing the control and treatment groups, it is apparent that the dichotomies discussed in the previous paragraph were only slightly diminished by the reform of compulsory education.

		Females		Males				
	Con	ıtrol	Treat	Treatment		trol	Treatment	
	(81-85	cohort)	(87-91)	(87-91 cohort)		cohort)	(87-91 cohort)	
A. Full Sample	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
JHS graduate	12609	0.452	10859	0.743	8263	0.719	7260	0.910
SHS graduate	12609	0.345	10859	0.470	8263	0.551	7260	0.625
University graduate	12609	0.174	10859	0.236	8263	0.279	7260	0.274
Religiosity index	12609	0.571	10859	0.579	8263	0.518	7260	0.510
Importance to those around me	12609	0.501	10859	0.506	8263	0.434	7260	0.430
Care about beliefs of others	12609	0.423	10859	0.434	8263	0.396	7260	0.390
Interested in religion	12609	0.789	10859	0.796	8263	0.725	7260	0.710

#### Table 1a. Descriptive statistics: education and religiosity (full sample)

*Source*: Turkish Household Life Satisfaction Survey (2013 wave). JHS and SHS stand for junior and senior high school, respectively.

B. Regional Sub-samples         Obs.         Mean         Obs.         Mean         Obs.         Mean         Obs.         Mean           Power Regions         7576         0.275         6921         0.204         4470         0.627         4137         0.892           INS graduate         7576         0.129         6921         0.203         4470         0.627         4137         0.252           University graduate         7576         0.325         6921         0.666         44470         0.637         4137         0.431           Religious bicief of others important         7576         0.452         6921         0.456         4470         0.413         4137         0.419           Interested in religion         7576         0.452         6921         0.456         4470         0.746         4137         0.733           HS graduate         5033         0.554         9338         0.579         3793         0.746         3123         0.501           HS graduate         5033         0.547         3938         0.579         3793         0.375         3123         0.301           Religiosity index         5033         0.547         3938         0.575         3793	I		5	) ( )		,			
Poorer Regions         7576         0.375         6921         0.656         4470         0.693         4137         0.892           JHS graduate         7576         0.279         6921         0.203         4470         0.267         4137         0.596           University graduate         7576         0.375         6921         0.656         4470         0.673         4137         0.532           Religious belief of othese around me         7576         0.325         6921         0.515         4470         0.4456         4137         0.449           Religious belief of othese important         7576         0.328         6921         0.815         4470         0.415         4137         0.419           Ricrestel in religion         7576         0.323         0.554         3938         0.879         3793         0.574         3123         0.407           Starganduate         5033         0.534         3938         0.579         3793         0.574         3123         0.471           Inviewsity graduate         5033         0.530         3793         0.494         3123         0.471           Inportance to these around me         5033         0.543         3938         0.376         37	B. Regional Sub-samples	Obs.	Mean	Obs.	Mean	Obs.	Mean	Obs.	Mean
Proofer Kegions         75.76         0.375         692.1         0.6359         447.0         0.692         4137         0.596           SHS graduate         7576         0.129         6921         0.203         4470         0.652         4137         0.596           SHS graduate         7576         0.375         6921         0.655         4470         0.653         4137         0.382           Religiosity index         7576         0.435         6921         0.456         4470         0.446         4137         0.449           Religious belief of others important         7576         0.456         6921         0.456         4470         0.416         4137         0.449           Interested in religion         7576         0.435         6921         0.835         4470         0.413         4137         0.430           IHS graduate         5033         0.554         3938         0.879         3793         0.746         3123         0.940           SHS graduate         5033         0.534         3938         0.535         3793         0.473         3123         0.433           Iniversity graduate         6097         0.416         5529         0.709         4078			0.275	(001	0.656	4470	0.602	4107	0.000
JHS graduate       75/6       0.2/9       6921       0.394       44/0       0.267       4137       0.265         University graduate       7576       0.375       6921       0.656       4470       0.693       4137       0.265         University graduate       7576       0.637       6921       0.656       4470       0.453       4137       0.454         Religious brief of others important       7576       0.525       6921       0.515       4470       0.413       4137       0.430         Religious brief of others important       7576       0.526       6921       0.855       4470       0.474       4137       0.733         Richer Regions	Poorer Regions	7576	0.375	6921	0.656	4470	0.693	4137	0.892
SHS graduate         75/6         0.129         6921         0.203         44/0         0.267         4137         0.2892           Religiosity index         7576         0.603         6921         0.662         4470         0.537         0.4137         0.4892           Religiosity index         7576         0.456         6921         0.515         4470         0.413         4137         0.449           Religious belief of others important         7576         0.456         6921         0.456         4470         0.413         4137         0.419           Interested in religion         7576         0.426         6921         0.835         4470         0.413         4137         0.470           IHS graduate         5033         0.457         3793         0.746         3123         0.940           SHS graduate         5033         0.437         3938         0.535         3793         0.449         3123         0.403           Religious belief of others important         5033         0.4307         3938         0.375         3123         0.433           Religiousity index         6097         0.416         5529         0.709         4078         0.548         3613         0.544	JHS graduate	7576	0.279	6921	0.394	4470	0.529	4137	0.596
University graduate 75.6 0.0375 6921 0.0586 4470 0.0537 4137 0.534 Importance to those around me 7576 0.0525 6921 0.515 4470 0.453 4137 0.419 Interested in religion 7576 0.355 6921 0.515 4470 0.454 4170 0.413 4137 0.733 Richer Regions France 7576 0.3556 6921 0.835 4470 0.413 4137 0.733 Richer Regions 7576 0.358 6921 0.835 4470 0.416 4137 0.733 Richer Regions 7576 0.358 6921 0.835 4470 0.416 4137 0.733 Richer Regions 7576 0.358 6921 0.835 4470 0.746 4137 0.733 Richer Regions 7576 0.320 3938 0.879 3793 0.574 3123 0.671 University graduate 5033 0.437 3938 0.573 3793 0.574 3123 0.671 University graduate 5033 0.437 3938 0.535 3793 0.404 3123 0.407 Importance to those around me 5033 0.4367 3938 0.476 3793 0.444 3123 0.403 Religiosity index 5033 0.4467 3938 0.476 3793 0.407 3123 0.403 Religious belief of others important 5033 0.476 3938 0.476 3793 0.407 3123 0.433 Religious belief of others important 5033 0.476 5938 0.741 3793 0.700 3123 0.458 Religiosity index 6097 0.416 5529 0.709 4078 0.707 3613 0.908 SHS graduate 6097 0.512 5529 0.436 4078 0.574 3613 0.548 Importance to those around me 6097 0.533 5529 0.618 4078 0.548 3613 0.548 Care about beliefs of others 6097 0.416 5529 0.477 4078 0.468 3613 0.458 Care about beliefs of others 6097 0.413 5529 0.477 4078 0.468 3613 0.458 Care about beliefs of others 6097 0.470 5529 0.477 4078 0.468 3613 0.458 Care about beliefs of others 6097 0.470 5529 0.477 4078 0.468 3613 0.458 Care about beliefs of others 612 0.447 5330 0.475 4185 0.754 3647 0.220 SHS graduate 6512 0.497 5330 0.552 4185 0.374 3647 0.220 SHS graduate 6512 0.497 5330 0.455 4185 0.354 3647 0.420 SHS graduate 6512 0.467 5330 0.552 4185 0.374 3647 0.282 Religiosity index 6512 0.467 5330 0.455 4185 0.354 3647 0.466 Iniversity graduate 6512 0.467 5330 0.455 4185 0.354 3647 0.460 SHS graduate 1850 0.168 2034 0.236 925 0.465 1020 0.4810 SHS graduate 1850 0.168 2034 0.236 925 0.471 1020 0.491 Religiosity index 1850 0.540 2034 0.552 925 0.471 1020 0.491 Religiosity index 1850 0.540 2034 0.552 925 0.471 1020 0.491 Religi	SHS graduate	7576	0.129	6921	0.203	4470	0.267	4137	0.265
Religiously index         75/6         0.603         6921         0.602         44/0         0.537         0.4137         0.348           Religious belief of others important         7576         0.828         6921         0.456         4470         0.413         1.37         0.449           Religious belief of others important         7576         0.828         6921         0.835         4470         0.746         4137         0.743           Riker Regions         His graduate         5033         0.554         3938         0.879         3793         0.746         3123         0.940           SHS graduate         5033         0.534         3938         0.535         3793         0.474         3123         0.401           Iniprostruce to those around me         5033         0.534         3938         0.390         3793         0.375         3123         0.403           Religions belief of others important         5033         0.745         3938         0.390         3793         0.375         3123         0.301           Religious belief of others important         5033         0.730         3123         0.674          0.773         3613         0.908         SHS graduate         6097         0.416 <td>University graduate</td> <td>7576</td> <td>0.375</td> <td>6921</td> <td>0.656</td> <td>4470</td> <td>0.693</td> <td>4137</td> <td>0.892</td>	University graduate	7576	0.375	6921	0.656	4470	0.693	4137	0.892
Importance to those around me         75/6         0.525         6921         0.515         4470         0.436         4137         0.4139           Interested in religion         7576         0.456         6921         0.456         4470         0.413         4137         0.4139           IHS graduate         5033         0.437         3938         0.579         3793         0.574         3123         0.611           University graduate         5033         0.5347         3938         0.290         3793         0.574         3123         0.401           Religiosity index         5033         0.534         4938         0.535         3793         0.496         3123         0.403           Religious beile of others important         5033         0.745         3938         0.390         3793         0.370         3123         0.674           Interested in religion         5033         0.745         3938         0.701         3123         0.631           Interested in religion         5033         0.745         3938         0.741         3793         0.700         313         0.700           Stag anduate         6097         0.512         5529         0.718         4478         0.556	Religiosity index	7576	0.603	6921	0.602	4470	0.537	4137	0.534
Religious belief of others important         7576         0.426         6921         0.435         4470         0.714         1137         0.733           Richer Regions         His graduate         5033         0.554         3938         0.879         3793         0.746         3123         0.940           SHS graduate         5033         0.437         3938         0.579         3793         0.746         3123         0.671           University graduate         5033         0.437         3938         0.329         3793         0.407         3123         0.407           Religious belief of others important         5033         0.437         3938         0.376         3123         0.407           Religious belief of others important         5033         0.474         3938         0.370         3793         0.477         3123         0.674           More Religions Regions	Importance to those around me	7576	0.525	6921	0.515	4470	0.456	4137	0.449
Interested in religion         75/6         0.828         6921         0.835         4470         0.746         4137         0.733           Richer Regions	Religious belief of others important	7576	0.456	6921	0.456	4470	0.413	4137	0.419
Richer Regions           JHS graduate         5033         0.554         3938         0.879         3793         0.746         3123         0.940           SHS graduate         5033         0.437         3938         0.590         3793         0.276         3123         0.301           Religiosity index         5033         0.534         3938         0.535         3793         0.494         3123         0.403           Religious belief of others important         5033         0.447         3938         0.390         3793         0.404         3123         0.433           Interested in religion         5033         0.745         3938         0.741         3793         0.700         3123         0.435           IHS graduate         6097         0.416         5529         0.709         4078         0.707         3613         0.281           Religiosity index         6097         0.611         5529         0.218         4078         0.556         3613         0.548           Importance to those around me         6097         0.471         5529         0.474         4078         0.468         3613         0.424           Interested in religion         6097         0.470	Interested in religion	7576	0.828	6921	0.835	4470	0.746	4137	0.733
IHS graduate         5033         0.554         3938         0.879         3793         0.746         3123         0.940           SHS graduate         5033         0.437         3938         0.579         3793         0.574         3123         0.671           Religiosity index         5033         0.230         3938         0.375         3123         0.404           Importance to those around me         5033         0.467         3938         0.376         3793         0.494         3123         0.403           Religious belief of others important         5033         0.474         3793         0.404         3123         0.403           Religious Begions	Richer Regions								
SHS graduate       5033       0.437       3938       0.579       3793       0.574       3123       0.671         University graduate       5033       0.230       3938       0.290       3793       0.296       3123       0.301         Religiosity index       5033       0.534       3938       0.476       3793       0.494       3123       0.477         Importance to those around me       5033       0.390       3938       0.376       3793       0.370       3123       0.435         Interested in religion       5033       0.745       3938       0.741       3793       0.700       3123       0.674         More Religions Regions	JHS graduate	5033	0.554	3938	0.879	3793	0.746	3123	0.940
University graduate         5033         0.230         9938         0.290         3793         0.296         3123         0.311           Religiosity index         5033         0.534         3938         0.535         3793         0.407         3123         0.477           Importance to those around me         5033         0.467         3938         0.390         3793         0.407         3123         0.403           Interested in religion         5033         0.475         3938         0.390         3793         0.707         3123         0.674           More Religious Regions	SHS graduate	5033	0.437	3938	0.579	3793	0.574	3123	0.671
Religiosity index         5033         0.534         9938         0.535         3793         0.494         3123         0.470           Importance to those around me         5033         0.467         3938         0.476         3793         0.477         3123         0.403           Religious belief of others important         5033         0.745         3938         0.741         3793         0.700         3123         0.674           More Religious Regions         JHS         graduate         6097         0.416         5529         0.704         4078         0.548         3613         0.634           University graduate         6097         0.152         5529         0.218         4078         0.556         3613         0.548           Migorith relifs of others         6097         0.512         5529         0.416         4078         0.556         3613         0.458           Care about beliefs of others         6097         0.470         5529         0.477         4078         0.430         3613         0.424           Interested in religion         6097         0.830         5529         0.477         4078         0.430         3613         0.424           Interested in religion         65	University graduate	5033	0.230	3938	0.290	3793	0.296	3123	0.301
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Religiosity index	5033	0.534	3938	0.535	3793	0.494	3123	0.477
Religious belief of others important         5033         0.390         3938         0.390         3793         0.375         3123         0.353           Interested in religion         5033         0.745         3938         0.741         3793         0.700         3123         0.674           More Religious Regions	Importance to those around me	5033	0.467	3938	0.476	3793	0.407	3123	0.403
Interested in religion         5033         0.745         3938         0.741         3793         0.700         3123         0.674           More Religious Regions         JHS graduate         6097         0.416         5529         0.709         4078         0.707         3613         0.908           SHS graduate         6097         0.152         5529         0.436         4078         0.548         3013         0.634           University graduate         6097         0.611         5529         0.618         4078         0.556         3613         0.548           Importance to those around me         6097         0.611         5529         0.618         4078         0.448         3613         0.458           Care about beliefs of others         6097         0.470         5529         0.477         4078         0.468         3613         0.762           Less Religious Regions         J         J         Interested in religion         6512         0.470         5529         0.477         4185         0.472         3647         0.920           SHS graduate         6512         0.485         5330         0.775         4185         0.573         3647         0.282           Big graduate<	Religious belief of others important	5033	0.390	3938	0.390	3793	0.375	3123	0.353
More Religious Regions           JHS graduate         6097         0.416         5529         0.709         4078         0.707         3613         0.908           SHS graduate         6097         0.152         5529         0.218         4078         0.548         3613         0.634           University graduate         6097         0.152         5529         0.218         4078         0.291         3613         0.281           Religiosity index         6097         0.513         5529         0.539         4078         0.468         3613         0.448           Care about beliefs of others         6097         0.470         5529         0.477         4078         0.430         3613         0.424           Interested in religion         6097         0.830         552         0.839         4078         0.755         3617         0.626           University graduate         6512         0.485         5330         0.775         4185         0.734         3647         0.920           SHS graduate         6512         0.318         5330         0.530         4185         0.472         3647         0.4282           Religious lip index         6512         0.363         5330<	Interested in religion	5033	0.745	3938	0.741	3793	0.700	3123	0.674
Jone Regions         0.709         4078         0.707         3613         0.908           SHS graduate         6097         0.312         5529         0.709         4078         0.707         3613         0.634           University graduate         6097         0.512         5529         0.218         4078         0.291         3613         0.281           Importance to those around me         6097         0.611         5529         0.618         4078         0.468         3613         0.548           Importance to those around me         6097         0.470         5529         0.477         0.430         3613         0.424           Interested in religion         6097         0.480         5330         0.775         4185         0.769         3613         0.424           Interested in religion         6512         0.485         5330         0.775         4185         0.734         3647         0.920           SHS graduate         6512         0.191         5330         0.255         4185         0.472         3647         0.282           Religiosity index         6512         0.467         5330         0.378         4185         0.354         3647         0.398 <t< td=""><td>More Policious Pagions</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	More Policious Pagions								
Bris graduate       0097       0.416       5.229       0.436       4078       0.707       5013       0.504         SHS graduate       6097       0.152       5529       0.218       4078       0.548       3613       0.634         University graduate       6097       0.611       5529       0.618       4078       0.556       3613       0.548         Importance to those around me       6097       0.470       5529       0.477       4078       0.468       3613       0.424         Interested in religion       6097       0.480       5529       0.839       4078       0.769       3613       0.762         Less Religious Regions         JHS graduate       6512       0.485       5330       0.775       4185       0.734       3647       0.226         University graduate       6512       0.191       5330       0.255       4185       0.272       3647       0.467         Importance to those around me       6512       0.546       5330       0.375       4185       0.374       3647       0.398         Religious belief of others important       6512       0.546       5330       0.375       4185       0.372       3647	IUS graduate	6007	0.416	5520	0.700	4078	0 707	2612	0.000
ShTs graduate       6097       0.312       3329       0.4078       0.348       3013       0.034         Religiosity index       6097       0.611       5529       0.218       4078       0.256       3613       0.281         Religiosity index       6097       0.611       5529       0.618       4078       0.468       3613       0.424         Importance to those around me       6097       0.470       5529       0.477       4078       0.430       3613       0.424         Interested in religion       6097       0.485       5330       0.477       4078       0.479       3613       0.424         Interested in religion       6097       0.830       529       0.439       4078       0.769       3613       0.424         Interested in religion       6512       0.485       5330       0.775       4185       0.724       3647       0.920         SHS graduate       6512       0.491       5330       0.255       4185       0.472       3647       0.626         University graduate       6512       0.467       5330       0.530       4185       0.472       3647       0.398         Religious belief of others important       6512 <td< td=""><td>SUS graduate</td><td>6007</td><td>0.410</td><td>5529</td><td>0.709</td><td>4078</td><td>0.707</td><td>2612</td><td>0.908</td></td<>	SUS graduate	6007	0.410	5529	0.709	4078	0.707	2612	0.908
University graduate         0097         0.122         5329         0.218         4078         0.291         5013         0.281           Importance to those around me         6097         0.613         5529         0.618         4078         0.548         3613         0.548           Importance to those around me         6097         0.470         5529         0.477         4078         0.468         3613         0.424           Interested in religion         6097         0.830         5529         0.839         4078         0.769         3613         0.762           Less Religious Regions           JHS graduate         6512         0.485         5330         0.775         4185         0.734         3647         0.920           SHS graduate         6512         0.191         5330         0.495         4185         0.272         3647         0.282           Religiosity index         6512         0.467         5330         0.456         4185         0.374         3647         0.398           Religious belief of others important         6512         0.745         3330         0.375         4185         0.672         3647         0.353           Interested in religion	SHS graduate	6097	0.512	5529	0.450	4078	0.348	2015	0.034
Religiously matex         6097         0.611         5329         0.613         4078         0.536         5013         0.5348           Importance to those around me         6097         0.470         5529         0.539         4078         0.468         3613         0.454           Interested in religion         6097         0.830         5529         0.839         4078         0.468         3613         0.424           Interested in religion         6097         0.830         5529         0.839         4078         0.769         3613         0.762           Less Religious Regions           0.775         4185         0.734         3647         0.920           Straduate         6512         0.191         5330         0.255         4185         0.575         3647         0.282           Religiosity index         6512         0.467         5330         0.456         4185         0.354         3647         0.383           Importance to those around me         6512         0.467         5330         0.378         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330         0.378         4185 <t< td=""><td>Deligionity graduate</td><td>6097</td><td>0.152</td><td>5529 5520</td><td>0.218</td><td>4078</td><td>0.291</td><td>3013</td><td>0.281</td></t<>	Deligionity graduate	6097	0.152	5529 5520	0.218	4078	0.291	3013	0.281
Importance to those around me         6097         0.533         5329         0.477         0.478         0.4468         5313         0.438           Interested in religion         6097         0.830         5529         0.477         4078         0.430         3613         0.424           Interested in religion         6097         0.830         5529         0.477         4078         0.769         3613         0.762           Less Religious Regions         Iths graduate         6512         0.485         5330         0.775         4185         0.734         3647         0.920           StHS graduate         6512         0.378         5330         0.495         4185         0.555         3647         0.626           University graduate         6512         0.536         5330         0.550         4185         0.324         0.467           Importance to those around me         6512         0.536         5330         0.456         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330         0.755         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330	Kenglosity index	6097	0.011	5529	0.018	4078	0.550	3013	0.548
Care about belies of others         6097         0.470         5529         0.477         4078         0.430         5613         0.424           Interested in religion         6097         0.830         5529         0.839         4078         0.769         3613         0.762           Less Religious Regions	Importance to those around me	6097	0.555	5529	0.539	4078	0.408	3013	0.458
Interested in religion         6097         0.830         5329         0.839         4078         0.769         3613         0.762           Less Religious Regions         JHS graduate         6512         0.485         5330         0.775         4185         0.734         3647         0.920           SHS graduate         6512         0.378         5330         0.495         4185         0.555         3647         0.626           University graduate         6512         0.536         5330         0.530         4185         0.472         3647         0.282           Religiosity index         6512         0.467         5330         0.456         4185         0.388         3647         0.398           Religious belief of others important         6512         0.467         5330         0.456         4185         0.383         3647         0.365           Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.363           Interested in religion         6512         0.754         5330         0.755         4185         0.625         1020         0.378           HS graduate         1850         0.168         2034	Late about beliefs of others	6097	0.470	5529 5520	0.477	4078	0.430	3013	0.424
Less Religious RegionsJHS graduate $6512$ $0.485$ $5330$ $0.775$ $4185$ $0.734$ $3647$ $0.920$ SHS graduate $6512$ $0.378$ $5330$ $0.495$ $4185$ $0.555$ $3647$ $0.626$ University graduate $6512$ $0.191$ $5330$ $0.255$ $4185$ $0.272$ $3647$ $0.282$ Religiosity index $6512$ $0.536$ $5330$ $0.456$ $4185$ $0.388$ $3647$ $0.398$ Religious belief of others important $6512$ $0.467$ $5330$ $0.456$ $4185$ $0.388$ $3647$ $0.353$ Interested in religion $6512$ $0.754$ $5330$ $0.755$ $4185$ $0.672$ $3647$ $0.650$ Kurdish-dominated RegionsHIS graduate $1850$ $0.229$ $2034$ $0.398$ $925$ $0.625$ $1020$ $0.810$ SHS graduate $1850$ $0.168$ $2034$ $0.236$ $925$ $0.465$ $1020$ $0.490$ University graduate $1850$ $0.669$ $2034$ $0.132$ $925$ $0.471$ $1020$ $0.491$ Interested in religion $1850$ $0.573$ $2034$ $0.552$ $925$ $0.471$ $1020$ $0.491$ Interested in religion $1850$ $0.540$ $2034$ $0.537$ $925$ $0.471$ $1020$ $0.491$ Interested in religion $1850$ $0.540$ $2034$ $0.537$ $925$ $0.471$ $1020$ $0.491$ <td>Interested in religion</td> <td>0097</td> <td>0.830</td> <td>5529</td> <td>0.839</td> <td>4078</td> <td>0.769</td> <td>3013</td> <td>0.762</td>	Interested in religion	0097	0.830	5529	0.839	4078	0.769	3013	0.762
JHS graduate $6512$ $0.485$ $5330$ $0.775$ $4185$ $0.734$ $3647$ $0.920$ SHS graduate $6512$ $0.378$ $5330$ $0.495$ $4185$ $0.555$ $3647$ $0.626$ University graduate $6512$ $0.191$ $5330$ $0.255$ $4185$ $0.272$ $3647$ $0.282$ Religiosity index $6512$ $0.467$ $5330$ $0.456$ $4185$ $0.388$ $3647$ $0.282$ Religious belief of others important $6512$ $0.467$ $5330$ $0.456$ $4185$ $0.388$ $3647$ $0.398$ Religious belief of others important $6512$ $0.467$ $5330$ $0.755$ $4185$ $0.354$ $3647$ $0.393$ Interested in religion $6512$ $0.754$ $5330$ $0.755$ $4185$ $0.672$ $3647$ $0.650$ Kurdish-dominated RegionsIHS graduate $1850$ $0.229$ $2034$ $0.398$ $925$ $0.625$ $1020$ $0.810$ SHS graduate $1850$ $0.669$ $2034$ $0.236$ $925$ $0.465$ $1020$ $0.490$ University graduate $1850$ $0.573$ $2034$ $0.552$ $925$ $0.471$ $1020$ $0.491$ Religious belief of others important $1850$ $0.540$ $2034$ $0.552$ $925$ $0.471$ $1020$ $0.491$ Interested in religion $10759$ $0.487$ $8825$ $0.516$ $7338$ $0.731$ $6240$ $0.930$ IHS graduate $10759$ </td <td>Less Religious Regions</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Less Religious Regions								
SHS graduate       6512       0.378       5330       0.495       4185       0.555       3647       0.626         University graduate       6512       0.191       5330       0.255       4185       0.272       3647       0.282         Religiosity index       6512       0.536       5330       0.530       4185       0.472       3647       0.398         Religious belief of others important       6512       0.467       5330       0.476       4185       0.374       3647       0.398         Interested in religion       6512       0.754       5330       0.775       4185       0.672       3647       0.650         Kurdish-dominated Regions	JHS graduate	6512	0.485	5330	0.775	4185	0.734	3647	0.920
University graduate         6512         0.191         5330         0.255         4185         0.272         3647         0.282           Religiosity index         6512         0.536         5330         0.530         4185         0.472         3647         0.467           Importance to those around me         6512         0.467         5330         0.456         4185         0.388         3647         0.398           Religious belief of others important         6512         0.754         5330         0.378         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.650           Kurdish-dominated Regions         Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.650           SHS graduate         1850         0.229         2034         0.398         925         0.625         1020         0.810           SHS graduate         1850         0.669         2034         0.132         925         0.455         1020         0.426           Religiosity index         1850         0.573         <	SHS graduate	6512	0.378	5330	0.495	4185	0.555	3647	0.626
Religiosity index       6512       0.536       5330       0.530       4185       0.472       3647       0.467         Importance to those around me       6512       0.467       5330       0.456       4185       0.388       3647       0.398         Religious belief of others important       6512       0.383       5330       0.378       4185       0.354       3647       0.353         Interested in religion       6512       0.754       5330       0.755       4185       0.672       3647       0.650         Kurdish-dominated Regions       Itts       graduate       1850       0.229       2034       0.398       925       0.625       1020       0.810         SHS graduate       1850       0.168       2034       0.236       925       0.465       1020       0.490         University graduate       1850       0.085       2034       0.132       925       0.258       1020       0.226         Religiosity index       1850       0.573       2034       0.552       925       0.471       1020       0.491         Religious belief of others important       1850       0.540       2034       0.537       925       0.473       1020       0.467	University graduate	6512	0.191	5330	0.255	4185	0.272	3647	0.282
Importance to those around me         6512         0.467         5330         0.456         4185         0.388         3647         0.398           Religious belief of others important         6512         0.383         5330         0.378         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.650           Kurdish-dominated Regions	Religiosity index	6512	0.536	5330	0.530	4185	0.472	3647	0.467
Religious belief of others important         6512         0.383         5330         0.378         4185         0.354         3647         0.353           Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.650           Kurdish-dominated Regions	Importance to those around me	6512	0.467	5330	0.456	4185	0.388	3647	0.398
Interested in religion         6512         0.754         5330         0.755         4185         0.672         3647         0.650           Kurdish-dominated Regions         JHS graduate         1850         0.229         2034         0.398         925         0.665         1020         0.810           SHS graduate         1850         0.168         2034         0.236         925         0.465         1020         0.490           University graduate         1850         0.085         2034         0.132         925         0.258         1020         0.226           Religiosity index         1850         0.669         2034         0.666         925         0.349         1020         0.590           Importance to those around me         1850         0.573         2034         0.552         925         0.471         1020         0.491           Religious belief of others important         1850         0.540         2034         0.537         925         0.473         1020         0.467           Interested in religion         1850         0.894         2034         0.909         925         0.796         1020         0.813           JHS graduate         10759         0.487         8825 </td <td>Religious belief of others important</td> <td>6512</td> <td>0.383</td> <td>5330</td> <td>0.378</td> <td>4185</td> <td>0.354</td> <td>3647</td> <td>0.353</td>	Religious belief of others important	6512	0.383	5330	0.378	4185	0.354	3647	0.353
Kurdish-dominated Regions           JHS graduate         1850         0.229         2034         0.398         925         0.625         1020         0.810           SHS graduate         1850         0.229         2034         0.398         925         0.625         1020         0.810           SHS graduate         1850         0.168         2034         0.236         925         0.465         1020         0.490           University graduate         1850         0.085         2034         0.132         925         0.258         1020         0.226           Religiosity index         1850         0.669         2034         0.666         925         0.349         1020         0.590           Importance to those around me         1850         0.573         2034         0.552         925         0.471         1020         0.491           Religious belief of others important         1850         0.540         2034         0.537         925         0.473         1020         0.467           Interested in religion         1850         0.894         2034         0.909         925         0.796         1020         0.813           JHS graduate         10759         0.487 <t< td=""><td>Interested in religion</td><td>6512</td><td>0.754</td><td>5330</td><td>0.755</td><td>4185</td><td>0.672</td><td>3647</td><td>0.650</td></t<>	Interested in religion	6512	0.754	5330	0.755	4185	0.672	3647	0.650
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University graduate18500.08520340.1329250.25810200.226Religiosity index18500.66920340.6669250.34910200.590Importance to those around me18500.57320340.5529250.47110200.491Religious belief of others important18500.54020340.5379250.47310200.467Interested in religion18500.89420340.9099250.79610200.813Turkish-dominated RegionsTurkish-dominated RegionsJHS graduate107590.48788250.81873380.73162400.930SHS graduate107590.37488250.51673380.56262400.652University graduate107590.18588250.25973380.28462400.290Religiosity index107590.55888250.55773380.50862400.495Importance to those around me107590.48988250.48973380.42562400.495Importance to those around me107590.41088250.40773380.38562400.418Religious belief of others important107590.41088250.40773380.38562400.376Interested in religion107590.41088250.40773380.385<	SHS graduate	1850	0.168	2034	0.236	925	0.465	1020	0.490
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Interested in religion18500.89420340.9099250.79610200.813Turkish-dominated RegionsJHS graduate107590.48788250.81873380.73162400.930SHS graduate107590.37488250.51673380.56262400.652University graduate107590.18588250.25973380.28462400.290Religiosity index107590.55888250.55773380.50862400.495Importance to those around me107590.48988250.48973380.42562400.418Religious belief of others important107590.41088250.40773380.38562400.376Interested in religion107590.77788250.77573380.71462400.689	Religious belief of others important	1850	0.540	2034	0.537	925	0.473	1020	0.467
Turkish-dominated RegionsJHS graduate107590.48788250.81873380.73162400.930SHS graduate107590.37488250.51673380.56262400.652University graduate107590.18588250.25973380.28462400.290Religiosity index107590.55888250.55773380.50862400.495Importance to those around me107590.48988250.48973380.42562400.418Religious belief of others important107590.41088250.40773380.38562400.376Interested in religion107590.77788250.77573380.71462400.689	Interested in religion	1850	0.894	2034	0.909	925	0.796	1020	0.813
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Religiosity index107590.55888250.55773380.50862400.495Importance to those around me107590.48988250.48973380.42562400.418Religious belief of others important107590.41088250.40773380.38562400.376Interested in religion107590.77788250.77573380.71462400.689	University graduate	10759	0.185	8825	0.259	7338	0.284	6240	0.290
Importance to those around me107590.48988250.48973380.42562400.418Religious belief of others important107590.41088250.40773380.38562400.376Interested in religion107590.77788250.77573380.71462400.689	Religiosity index	10759	0 558	8825	0.557	7338	0 508	6240	0.495
Religious belief of others important107590.41088250.40773380.38562400.416Interested in religion107590.77788250.77573380.71462400.689	Importance to those around me	10759	0.489	8825	0.489	7338	0.425	6240	0.418
Interested in religion $10759$ $0.777$ $8825$ $0.775$ $7338$ $0.714$ $6240$ $0.689$	Religious belief of others important	10759	0.410	8825	0.407	7338	0.385	6240	0.376
	Interested in religion	10759	0.777	8825	0.775	7338	0.714	6240	0.689

#### Table 1b. Descriptive statistics: education and religiosity (regional breakdowns)

Source: Turkish Household Life Satisfaction Survey (2013 wave). JHS and SHS stand for junior and senior high school, respectively.

### 4.2 Results

The results of the first stage estimations by gender are given in Table 2. The instrument has a strong positive and statistically significant effect on the junior high school completion rates (JHSG) for women born in or after 1987. The F-statistic is 40.7 indicating instrument validity and allowing robust estimation (Staiger & Stock, 1997). The results indicate also an increase in the probability of senior high school graduation (SHSG) for the treated but the instrument does not appear sufficiently strong, with the F-statistic being only 4.9. We find no effect of the reform on university education for females. this is not surprising, as the reform did not affect education beyond the junior high school. On the other hand, the estimated effects of the reform on males are insignificant (or only moderately significant for the senior high school). Overall, the change in the law had little effect on male education but seemed to significantly affect female JHS completion. Therefore, we continue the analysis by focusing on females and causally evaluate the effect of women's education on religiosity.

		Females			Males						
	JHSG	SHSG	UG	JHSG	SHSG	UG					
Treated*Teacher	6.001***	2.577**	0.588	0.995	2.172*	1.293					
	(0.941)	(1.159)	(0.933)	(0.782)	(1.134)	(0.909)					
F-statistic	40.67	4.94	0.4	1.62	3.66	2.02					
Observations	23,468	23,468	23,468	15,523	15,523	15,523					

 Table 2. Effect of schooling reform on educational attainment (first stage)

**Notes:** Robust standard errors clustered at the region of residence by birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

According to the OLS regressions in Table 3, the completion of 8 years of compulsory education decreases the women's religious orientation for all four variables used in the study. The IV estimates for the most part confirm these findings, but suggest an even larger impact of education on religiosity. Specifically, we find that the reform reduced the probability that respondents consider the religious belief of those around them important by 42 percentage points, while a drop of 32 percentage points was estimated for the probability of the respondent being interested in

religion. The religiosity index was reduced by 0.37 units, implying a 65 % drop in religiosity (the mean religiosity index in Table 1 is 0.57).<sup>8</sup>

	· ·		<b>3</b> /	
	Religiosity in-	Important to	Care about beliefs of	Interested in reli-
	dex	those around me	others	gion
OLS				
JHSG	-0.110***	-0.111***	-0.111***	-0.109***
	(0.009)	(0.012)	(0.010)	(0.008)
IV				
JHSG	-0.365**	-0.360	-0.420**	-0.315**
	(0.154)	(0.228)	(0.175)	(0.158)
Observations	23,468	23,468	23,468	23,468

**Table 3.** Effect of schooling reform on religiosity for females (second stage)

**Notes:** Robust standard errors clustered at the region of residence by-birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

### 4.3 Robustness checks

As previously explained, those born in 1986 were dropped from the main estimations. To examine how the results change when this year is included, we repeat the estimations while including it first in the treatment group and then in the control group. Tables 4 and 5 present the results of the first and second-stage regressions suggesting that our findings are robust to these alterations.

<sup>&</sup>lt;sup>8</sup> Note that our results suggest that exposure to schooling reduced religiosity, while the descriptive statistics in Table 1 suggest that religiosity remained similar in the women exposed to the schooling reform and those who were unaffected (we are grateful to an anonymous referee for pointing this out). This is because the IV estimates are the conditional Local Average Treatment Effects (conditional LATEs), i.e. they show the effect on religiosity conditional on the control variables for compliers (those who changed their intended educational attainment as a result of the reform). The descriptive statistics are the unconditional Average Treatment Effects (unconditional ATEs). Additional education may have affected religiosity directly, or indirectly through its effect on some of the covariates.

	1986 in treatment group	1986 in control group
Treated*Teacher	4.875***	5.656***
	(1.031)	(0.861)
F-statistic	22.35	43.18
Observations	25,873	25,873

**Table 4.** The effect of the reform on completing Junior High School (JHS) for females when 1986 birth cohort is included in the sample (first stage)

**Notes:** Robust standard errors clustered at the region of residence by-birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

 Table 5. The effect of education on religiosity (second stage) for females when 1986 birth cohort is included in the sample

	Religiosity in- dex	Important to those around me	Care about beliefs of others	Interested in religion
1986 in treatment group				
JHSG	-0.432**	-0.425	-0.376*	-0.496**
	(0.179)	(0.259)	(0.193)	(0.210)
1986 in control group				
JHSG	-0.362**	-0.354	-0.390**	-0.342**
	(0.154)	(0.226)	(0.177)	(0.146)
Observations	25,873	25,873	25,873	25,873

**Notes:** Robust standard errors clustered at the region of residence by-birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

Further, we examine the robustness of the first-stage results by birth cohort. We expand Eq. (1) such that, instead of collapsing cohorts to a binary treatment, we interact the policy intensity variable with birth cohort dummies and estimate the effect of the reform on educational attainment separately for each cohort.

$$S_{ipc} = \beta_0 + \beta_1 \sum_{i=1}^{10} (Teacher_{pc} * Cohort_{ic}) + \beta_2 Teacher_{pc} + \beta_3 (Genrol96_p * Treated_i) + \mu_p + \theta_c + \varepsilon_{ipc}$$
(3)

where  $Cohort_{ic}$  denotes different cohort dummies. Results are presented in Table 6. In line with our previous findings, the effect of the reform is non-significant for all cohorts before the reform took place, while it turns highly significant and positive for birth years 1987 onwards.

1982	1.736
	(2.178)
1983	-1.436
	(1.920)
1984	-1.224
	(2.109)
1985	0.573
	(2.298)
1986	-0.210
	(2.315)
1987	6.607***
	(2.154)
1988	6.743***
	(2.410)
1989	5.265**
	(2.482)
1990	5.308**
	(2.487)
1991	5.105**
	(2.099)
Observations	23,468

**Notes**: 1981 birth year is the reference category. Robust standard errors clustered at the region of residence bybirth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and teacher ratio by province and year.

**Table 7.** Effect of schooling reform on female education and religiosity when restricting window of birth cohorts to 1982-1990

	First Stage De- pendent Variable	First Stage De- endent Variable Second Stage Dependent Variable					
Variable	JHSG	Varia- ble	Religiosity index	Important to those around me	Care about be- liefs of others	Interested in religion	
Treated*Teacher	5.604***	JHSG	-0.320*	-0.221	-0.346*	-0.394**	
	(1.067)		(0.183)	(0.263)	(0.201)	(0.198)	
F-statistic	27.56						
Observations	18,694		18,694	18,694	18,694	18,694	

**Notes:** Robust standard errors clustered at the region of residence by-birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

As a final robustness check, we examine a narrower window of birth years, keeping only those born between 1982 and 1990 in the sample. This brings control and treatment groups closer to each other in terms of age. Individuals born between 1982 and 1985 form the control group with the rest of the treatment group. The caveat here is that the reduction in the number of observations implies larger standard errors. Table 7 suggests that the narrower birth year window does not significantly alter the reform's effect on education or religiosity when compared to the main results.

### 4.4 Counterfactual tests

To test whether the findings are driven by unobserved time trends, we perform a temporal counterfactual test, whereby individuals born between 1980 and 1982 are denoted as the control group and those born between 1983 and 1985 are denoted as treated. Given that neither of these groups was actually affected by the education reform, we would expect no statistically significant effects either on educational attainment or on religiosity. Table 8 presents the result for the first and second-stage regressions. All coefficients are statistically insignificant and the F-statistic is close to zero, suggesting the absence of effects on outcomes and low explanatory power for the instrument.

	First stage de- pendent varia- ble	Second stage dependent variables						
Variable	JHSG	Varia- ble	Religiosity index	Important to those around me	Care about be- liefs of others	Interested in religion		
Treated*Teacher	-0.071 (1.022)	JHSG	2.555 (39.191)	10.755 (154.057)	-15.143 (213.210)	12.054 (172.684)		
F-statistic Observations	0.00		23,468	23,468	23,468	23,468		

Table 8. The effect of the reform on female education and religiosity in a temporal counterfactual test

**Notes:** Robust standard errors clustered at the region of residence by birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

### 4.5 Heterogeneity

In this section, we present the results of a nuanced analysis of the impact of educational outcomes on religiosity, particularly with respect to gender. Table 9 presents the results of splitting the provinces according to vote percentage for the *Welfare Party* in the 1995 election. Although educational outcomes improve across the board, it is apparent that the magnitude of this improvement is more pronounced in provinces with stronger religiosity. This suggests that the reform might have been particularly instrumental in bridging the educational gap for females in religious regions. This finding has significant implications for gender equality. It indicates that reforms targeting education can potentially counteract deeply entrenched cultural and religious norms that might otherwise hinder female educational attainment. It also resonates with the idea that providing education in regions with stronger religious sentiments can be a strategic move towards achieving gender equality.

	First stage de- pendent variable	Second stage dependent variable				
Variable	JHSG	Varia- ble	Religiosity index	Important to others around me	Care about be- liefs of others	Interested in religion
Below median Wel	<i>fare Party</i> vote					
Treated*Teacher	6.177***	JHSG	-0.262	0.048	-0.495**	-0.338
	(1.345)		(0.211)	(0.273)	(0.221)	(0.271)
F-statistic	21.08					
Observations	11,308		11,308	11,308	11,308	11,308
Above median We	<i>lfare Party</i> vote					
Treated*Teacher	9.876***	JHSG	-0.341**	-0.482**	-0.470**	-0.072
	(1.645)		(0.141)	(0.226)	(0.217)	(0.105)
F-statistic	36.02					
Observations	11,626		11,626	11,626	11,626	11,626

**Table 9.** Effect of education on religiosity (i.e. second stage) for females by share of votes for the Welfare Party.

**Notes:** Robust standard errors clustered at the region of residence by birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

Table 10 presents results according to provincial income per person. We find that for provinces with higher GDP per capita, the reform had no effect on educational attainment. This means that the instrument is too weak to allow us to make any inference about the relationship between education and religiosity in such regions. On the contrary, the reform increased education, which lowered religiosity in poorer provinces.

	First stage			Second stage						
Variable	JHSG	Varia- ble	Religiosity index	Important to those around me	Care about be- liefs of others	Interested in religion				
Low middle income										
Treated*Teacher	6.016***	JHSG	-0.476**	-0.336	-0.580**	-0.511*				
	(1.138)		(0.241)	(0.360)	(0.264)	(0.265)				
F stat	27.95									
Observations	14,497		14,497	14,497	14,497	14,497				
High middle income										
Treated*Teacher	-0.511	JHSG	4.074	4.281	5.200	2.740				
	(1.488)		(11.891)	(12.284)	(15.056)	(8.687)				
F stat	0.12									
Observations	8,971		8,971	8,971	8,971	8,971				

Table 10. The effect of education on religiosity (i.e. second stage) for females by provincial per capita income classification

**Notes:** Robust standard errors clustered at the region of residence by birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrollment rate in 1996, gross enrollment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

As a final element of our heterogeneity analysis, we explore the impact of education reform on religiosity by comparing regions with a significant Kurdish presence (see Table 11). The instrument is insignificant in the Kurdish areas, but remains significant for the rest of Türkiye. Given that the instrument is weak in areas with a significant Kurdish presence, we are unable to make any meaningful inferences about the effect of education on religiosity there.

First Stage			Second stage			
Variable	JHSG	Variable	Religiosity index	Religious be- lief important	Other's reli- gious belief important	Interested in religion
Provinces without significant Kurdish presence						
Treated*Teacher	4.873***	JHSG	-0.404**	-0.402	-0.454**	-0.356*
	(1.060)		(0.200)	(0.300)	(0.226)	(0.207)
F stat	21.13					
Observations	19,584		19,584	19,584	19,584	19,584
Provinces with significant Kurdish presence						
Treated*Teacher	-3.796	JHSG	-0.454	-0.653	0.447	-1.155
	(5.470)		(1.421)	(1.949)	(1.756)	(1.920)
F stat	0.48					
Observations	3,884		3,884	3,884	3,884	3,884

**Table 11.** The effect of education on religiosity (i.e. second stage) for females by provincial share of Kurdish population

**Notes:** Robust standard errors clustered at the region of residence by-birth year are reported in parenthesis. Significance levels: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All regressions control for fixed effects of birth year, the interaction of treatment variable and gross enrolment rate in 1996, gross enrolment rates, fixed effects of 26 regions of residence, the instrument (the interaction of treatment and Teacher ratio by province and year), and Teacher ratio by province and year.

# 5 Conclusions

This paper investigated the effect of education on religiosity in Türkiye after the 1997 Compulsory Education Reform that increased the duration of compulsory education from 5 to 8 years. Our paper extends the existing literature by focusing on the heterogeneity of the policy effect and identifies the channels through which such an effect might work. Further, we offer a methodological extension of the past work by incorporating differential policy intensity in the identification strategy. Using the reform as a source of exogenous variation in schooling, we obtain causal estimates of the effect of education on religiosity.

Overall, we find the reform had a significant impact on female education and religiosity, but had no similar influence on outcomes for males. Specifically, the reform increased the probability that young girls would complete 8 years of schooling and report lower religiosity later in life. The effect of the reform was limited to increasing junior high school completion rates. There appears to be little spillover to higher educational attainment, suggesting that those who complete more than 8 years of education would aspire to higher education levels regardless of the compulsory education law.

The lack of an effect on males potentially implies an imbalance in the experience of young males and females within households. The reform was successful in closing the gender gap in

educational attainment, and through increased female education potentially alter their roles in society. In the absence of the reform, males would still attain roughly the same level of education. In contrast, the reform raised the completion rates for females as their barriers to education were mainly cultural. Exploring heterogeneity of the effect further, we find that the effects are not homogenous across all females. Rather, they are present mainly for females from strongly religious or relatively poor backgrounds. Whether intentional or not, the reform affected these sub-groups that would be disadvantaged otherwise and potentially affords them opportunities to overcome labor-market barriers and close the inequality gap.

Our results partially agree with those of Cesur and Mocan (2018), who also examine the Turkish education reform and find evidence of effects mainly for females currently residing in urban areas (as opposed to the conditions experienced at the time of the reform), which could be an endogenous choice and an outcome of the reform. Looking at the wider literature, a decline in religiosity due to increased education is a common finding in studies controlling for confounding factors. Although generalization across countries is tempting, the lack of heterogeneity in analyses and different contexts make comparisons challenging (Hungerman, 2014; Mocan and Pogorelova, 2014; Becker et al., 2017; Masura, and Yudhistira, 2020). Indeed, correlational studies yield mixed evidence suggesting endogeneity may bias such results (Arias-Vazquez, 2012; Dilmaghani, 2019; Gruber, 2005).

Finally, our religiosity outcome measures are subjective and self-reported, making it risky even to draw inferences even on the wider religiosity of Turkish society. This is important as our causal estimate is the local average treatment effects relevant for educational reform compilers and not average individuals (Imbens and Angrist, 1994). Hence, while the Turkish educational reform seemed to have an effect on those most in need, one should be cautious about generalizing these findings to other contexts or outcomes.

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