DOES RELIGION INFLUENCE EDUCATIONAL ATTAINMENT?

Michael A. Kortt*. Southern Cross University, Queensland, Australia*

Joseph Drew*. University of Technology, Sydney, New South Wales, Australia and Tokyo Metropolitan University, Tokyo, Japan*

Michael Kortt and **Joseph Drew** are members of the *Society for the Study of Religion*.

Replication Statement

The data used in the project was sourced from release 14 of the Household, Income and Labour Dynamics in Australia (HILDA) Survey. Researchers can apply for access to the data at: http://melbourneinstitute.unimelb.edu.au/hilda/for-data-users. The STATA code, which can be used to replicate the analysis presented in this paper, can be obtained from the corresponding author.

Correspondence:

Michael Kortt
Associate Professor
School of Business and Tourism
Southern Cross University
Gold Coast Campus
Locked Bag 4
Coolangatta QLD 4255
AUSTRALIA

p: 61-7-5589-3212
e: michael.kortt@scu.edu.au

1 December 2017

DOES RELIGION INFLUENCE EDUCATIONAL ATTAINMENT?

ABSTRACT

There is a relatively large literature on the association between educational attainment and religious affiliation which is dominated by studies from the United States. This work, however, has largely escaped the attention of Australian researchers, where the religious and cultural tapestry differs markedly from America. To examine these associations we estimated a series of econometric models using data drawn from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. We find strong support for the contention that religion does have statistically significant effects on educational attainment even when controls are implemented for variables associated with the quantity–quality hypothesis, immigration hypotheses, and diaspora hypothesis, which are often used to explain these associations. Moreover, our stratification by generational cohort helps to explain some of the mixed evidence which has emerged on this topic over recent years. We conclude by outlining the implications of our findings for public policy and suggestions for how an Australian research agenda might be developed.

Keywords: attainment; education; religion; policy.

INTRODUCTION

There is a relatively large body of scholarly work – of predominantly American origin – that has demonstrated differences in educational attainment according to religious affiliation (e.g., Lehrer 1999; Beyerlein 2004). In particular, clear differences in attainment have been demonstrated for Catholic, Protestant, and Jewish affiliations (generally in increasing order of attainment) – although more recent work controlling for racial group, gender, and generational change have produced mixed results (e.g., Lehrer 2004; Mukhopadhyay 2011; Norton and Tomal 2009). Scholars have generally been content to outline the determinants of educational attainment (with reference to religiously dictated factors), debate the saliency of control variables, discuss the concordance of econometric estimates with explanatory hypotheses, and propose lines for future research. It thus seems that the emphasis to date, not unreasonably, has been on understanding the mechanisms that link religion and educational attainment – presumably to satisfy academic curiosity (Beyerlein 2004).

Somewhat surprisingly there is no comparable body of work located in the context of Australia. Thus, the principal aim of this paper is to address this gap in the literature. It is important to do so because the religious and cultural tapestry of Australia is very different to that of America. For instance, over a third of the resident population in Australia were born overseas (compared with 12.9 percent in the United States), and only 52 percent of Australia's resident population profess a Christian affiliation compared to around 70.6 percent of Americans (Pew Research Center 2017; Australian Bureau of Statistics 2016).

A second aim of this work is to investigate what the associations between religious affiliation and educational attainment in Australia might suggest for public policy development (an applied

science approach to complement the pure science in our empirical analyses). Verily, academic curiosity is an important motivation for many scholarly endeavours; however, the potential to use scientific knowledge to promote the public good is also a very appealing prospect.

One possible public policy application relates to taxpayer funding of schools. For example, over 20 percent of Australia's student population are educated in Catholic schools and there is currently a heated debate around the level of federal funding for same (Beech 2017). Clearly, not all students in religious schools follow the faith of the school authority; however, affiliates are likely to be at least concentrated in schools run by the particular religious authority. If we can understand the nature of the association between education and religious affiliation then a case could be made for programs developed and delivered through these religious schools to mitigate relatively poor attainment (should it exist).

Yet another public policy implication is suggested if one considers the educational attainment literature relating to the relatively poor performance of women from patriarchal religions (Norton and Tomal 2009). If the Australian literature were to confirm these findings then it might suggest programs targeted at women to facilitate further education, such as childcare arrangements and public campaigns on the benefits of educational attainment (especially if religious affiliates are concentrated in religious authority schools). Moreover, if there were empirical evidence that certain religions had reversed relatively poor attainment over generational cohorts, then it might be the case that further study could identify the mechanisms which were responsible for achieving the reversal, which could be adapted to ameliorate existing gender education inequality in other religions. Another area of public policy relevance which might be indicated from a broad Australian religion and educational attainment research agenda is in the area of

pedagogical practice. If we were to find statistically significant differences in attainment levels for religious affiliates this might lead – with further research – to the identification of religious practices that could be adapted to pedagogical practice. For instance, introspection, intergenerational peer mentoring, self-discipline and shunning of alcohol and drugs may be characteristics of religious practice that could point to important ways for advancing pedagogical practice (Erickson and Phillips 2012).

This paper seeks to take the first strides towards an Australian research agenda into the association between religion and education which may yield, in time, important insights for Australian public policy. The balance of this journal article is organised as follows. First we review the salient hypotheses used to explain the association between educational attainment and religious affiliation. Next, we briefly outline the empirical strategy we employed, before going on to outline the results from our econometric estimations with reference to the aforementioned hypotheses. We conclude with a discussion of the public policy implications arising from our findings, along with our thoughts on how the Australian research agenda might develop in order to exert the greatest influence on important public policy debates.

THEORIES AND EVIDENCE ON RELIGION AND EDUCATIONAL ATTAINMENT

Education is an investment in human capital that is important for status and capacity judgements (Beyer 2005; Keysa and Kosmin 1995), as a vehicle for passing on socio-economic advantage (Cobb-Clark and Nguyen 2012; Teese 2000) and as an intermediary body for passing on values (Darnell and Sherkat 1997). At least three important models and hypotheses have been advanced which have an indirect effect on the association between religious affiliation and educational

attainment and these have generally been used to explain away prima facie associations. We believe that our data set will allow us to control for variables associated with these hypotheses and thus better identify whether it is religion, or an indirect effect of religion, which explains any associations. We briefly review each of the indirect effect hypotheses with a view to outlining how we might introduce controls to determine whether it is these indirect effects, or something else, that best explains any associations determined in our ensuing empirical analyses.

Indirect Effects

The first indirect effect which has been used to explain prima facie associations between religion and educational attainment is the quantity–quality fertility hypothesis (e.g., Lehrer 1999; Norton and Tomal 2009; Sander 1992). This model predicts that the number of children in a family is inversely related to the amount of investment in education. Thus, in a small family each child might expect to receive greater attention from parents (such as more help completing homework or more time reading books) and greater capital investment (proportionally more funds are available for private education, tutors, and the like). It has been noted in the literature that Jewish women tend to have relatively low rates of fertility, which stand in stark contrast to the high fertility rates of Catholics, some other Christian denominations (notably the Church of Latter-day Saints and Jehovah's Witnesses) and some world religions (for instance, Islam) (Keysa and Kosmin 1995; Norton and Tomal 2009; Sander 1992). Related to this is the idea that broken families – particularly single-parent families – have less time and money to invest in the education of their progeny. This is important, because rates of divorce vary by religious affiliation. It is also contended that a mother's participation in the labour market, particularly in her child's early years, affects the educational attainment of her progeny – however, the

relationship is not entirely clear because although mothers' participation has a negative effect on time available to spend with children in attaining skills important for later educational success, it also increases the financial resources available to invest in education (see, e.g., Ermisch and Francesconi 2013 who provide evidence that a mother's labour-market participation in the first five years of her child's life does have a negative influence on the child's educational attainment). Mothers' participation rates in the labour force is thought to be particularly low for patriarchal religions (Norton and Tomal 2009). Table 1 details some of the relevant statistics relating to the quantity–quality fertility hypothesis and it does seem that there are some large differences between religious groups. However, rather than assuming that the quantity–quality hypothesis explains prima facie associations between religion and educational attainment, it would seem better that we test whether this explanation is salient (by conducting a subsequent empirical estimation that controls for number of siblings, mother's employment status, and whether or not the family is intact).

The second important idea relating to educational investment is what we might term the immigration hypothesis. This hypothesis explains high levels of educational attainment amongst recent migrants in terms of immigration policies which give preference to professionals and skilled workers (e.g., Beyer 2005). Given that certain cultures are associated with high numbers of adherents to particular religions, an association between world religions and educational attainment may present as a secondary effect of immigration selection bias. For instance, Australia has given preference to skilled workers in its immigration policies since the mid-1990s, and this has attracted large numbers of professionals from the sub-continent where Sikhism, Islam, Buddhism, and Hinduism are the most prevalent religions (Cobb-Clark and Nguyen 2012). However, rather than assuming that the immigration hypothesis explains putative

associations between religion and educational attainment, we should be able to introduce controls for whether individual respondents were born overseas – and thus determine the salience of this hypothesis.

The third indirect effect on educational investment is the diaspora hypothesis. Diaspora is a term derived from Greek, literally meaning scattering or dispersion. Generally when one hears the term, one immediately associates it with the various waves of Jewish exile; however, we believe that the hypothesis may also be relevant to other episodes of forced migration (such as the Islamic Rohingya refugees from Myanmar). The basis of the diaspora hyphothesis is that religious and cultural groups which have experienced forced exile prefer to invest in human capital because it cannot be seized by political or military opponents, is easy to transport, and is readily converted into income. The diaspora hypothesis has been employed principally to explain why "Jews have a penchant for education and a willingness to sacrifice to ensure their children's education" – the idea being that regular commemoration of exile events in Judaism facilitates operation of the diaspora hypothesis (Mueller 1980:149). Unfortunately, we cannot introduce any controls to isolate the diaspora hypothesis as a relevant explanation for Jewish attainment, but we can introduce a control to identify whether the respondent was a refugee, and thus test the salience of the diaspora hypothesis for more recent exile events.

If associations between religious affiliation and educational attainment persist after introducing controls relevant to the quantity–quality, immigration and recent diaspora explanations, then this would seem to suggest that there is something about religion that has a more direct effect on educational attainment.

Direct Effects

A good deal of the literature has made note of the possibility of direct effects from religious affiliation. For instance, many scholars have contended that Catholicism has a deleterious effect on educational attainment owing to its 'other-worldly' focus, parochialism and emphasis on obedience to authority (Darnell and Sherkat 1997; Rodden 2013). It has also been claimed that many Protestant groups reject scientific method, humanist philosophy and materialism and that this might also impart a negative effect on educational attainment (Mukhopadhyay 2011; Darnell and Sherkat 1997). By way of contrast, the Jews have been noted as a community conducive to intellectualism (Mueller 1980) – where regular study is made of philosophically sophisticated materials (for instance, Moses Maimonides' (1956) 12th century work. The guide for the perplexed, and the Talmud). In addition, it has been claimed that patriarchal religions – such as Islam, and some Christian denominations (e.g., the Church of Latter-day Saints) – emphasise the role of women for child-bearing and child-rearing and that this will depress educational attainment amongst female members of these cohorts.

It is, however, important to be mindful of significant reforms which have occurred within the religious orders as these may point to differences in educational attainment over time. For instance, the early literature regarding educational attainment by Catholics now needs to be considered with respect to the Vatican II reforms (ending in 1965) which ushered in a period of greater engagement with the secular world, including the secular scholarly community (Rodden 2013). In a similar vein, important reforms to the Anglican liturgy culminating in An Australian prayer book were approved by the General Synod in 1977 and published in 1978 (Anglican Church of Australia 2017). Reforms also occurred in some denominations of Judaism, most

notably the rise of liberalism associated with Australia's first female rabbi in 1981, and issuing of same-sex marriage guidelines in 1997.

However, it is not just the outlook of religions which might give rise to differences in educational attainment, but also the skill-set imparted through religious observance. For instance, religious practice discourages certain behaviours (such as illicit drug consumption and, in some cases, the consumption of alcohol) known to have a detrimental effect on intellectual development (Erickson and Phillips 2012). There is also an element of self-discipline and introspection associated with prayer which might be expected to support scholarly development (Erickson and Phillips 2012). Moreover, religions which involve the regular gathering of adherents may also set up conditions for intergenerational mentoring and public speaking which have been shown to have a positive influence on educational attainment (Erickson and Phillips 2012). Other important aspects of religious observance have attracted relatively less attention in the scholarly literature – these include the intellectual value of regular study (particularly where the materials studied are of a philosophically sophisticated nature), the expectation of tithing (which reduces the capital available for investment into education), and the greater likelihood that children will attend religious-affiliated schools where standards of education may differ from the public sector. If indirect effects are ruled out as explanations for the association between religion and educational attainment, then we are left with the intriguing possibility that some of these direct effects could be 'adapted' to enhance the educational attainment of those professing no religion.

Existing Literature

Most of the present literature has been in the context of the United States and focused on the varying attainments of Catholics, Protestants and Jews (e.g., Darnell and Sherkat 1997; Lehrer 2006; Mueller 1980). Existing work has consistently provided evidence of higher educational attainment by Jews, ceteris paribus (e.g., Beyerlein 2004; Lehrer 1999). By way of contrast, the attainment of Catholic and Protestant groups has provided mixed evidence and recent work has tended to show that previously identified gaps (in which Protestants outperformed Catholics) have closed or reversed (Beyerlein 2004). It has been asserted that a good deal of the prima facie gap occurred due to the inadvisable lumping of all Protestant groups into a single cohort (Lehrer 1999). However, as we note, important reforms – such as Vatican II – can also explain why the gap has not persisted over time and it would therefore seem important to investigate changes in attainment over time for a generational cohorts (Sander 1992). Some scholarly work has concluded that there is no gender effect (Mueller 1980), while other work has provided strong arguments for a gender effect – particularly where world religions of a patriarchal nature are included in the analysis (Keysar and Kosmin 1995). This conflicting evidence suggests that it may be important to test the significance of gender and, if it proves significant, to conduct separate analysis stratified by gender. As we have already noted, there is a large gap in the literature regarding the association between religion and educational attainment in the context of Australia, and this paper seeks to address same.

Australia has a very different cultural and religious landscape to America and it would thus not be appropriate to import religious classifications directly. For one thing, we do not have the Black, White, Hispanic trichotomy that dominates much of the American literature, nor a distinct

history of racial segregation (e.g., Keister 2011; Lehrer, 2006). Moreover, a number of the American denominations – Moonies, Quakers, and Amish – are not present in any significant numbers. In addition, the proportion of the population who are affiliates for the various denominations in Australia are quite different to America; in this regard the 2016 Australian census is instructive and must be taken into consideration when determining appropriate Australian religious classifications (Table 2). The majority of Australian residents do not profess faith in any religion (30.1%), while the single largest religious cohort in Australia comprises individuals who state an affiliation with the Catholic Church (approximately 22.6%: Australian Bureau of Statistics 2016), followed by affiliates of the Anglican Church (13.3%: Australian Bureau of Statistics 2016; known as Episcopalians in America). In view of the relative importance of these three cohorts – particularly in the education sector where the Catholics and Anglicans separately run private school systems that are close rivals in importance to the public system – we elected to analyse the association of each on educational attainment separately. This leaves us with a relatively small group (around 15%) of mainly protestant Christian churches to consider for further stratification.

The distinction which best represents the religious practice of this remnant of Christian churches in Australia is whether they are members of the National Council of Churches (CoC) – around 9.1% of the population when Catholics and Anglicans are excluded – or not (non-CoC membership is generally due to the church's prima facie incompatible beliefs, and parochialism) – approximately 6.5% of Australians. In America these two categories would probably be referred to as mainline (CoC) and conservative (non-CoC) churches. The big difference we have made is to exclude the Anglicans from the 'mainline' strata in view of the relative size and prominence in the education sector that would otherwise conflate the ensuing analysis. Notably,

it is the non-CoC churches which have largely been hypothesised to be associated with lower educational attainment in American studies (explained according to their other-worldly focus, rejection of scientific reasoning and spurning of humanist philosophy). Moreover, our more disaggregated classification seems to conform to Keister's (2011:358) observation that "precise breakdowns of religious affiliation are now more important." However, due to the relatively small proportion of Australians affiliated with other world religions, we elected to analyse this group as a single category, with the exception of Judaism (which was treated as a separate cohort in response to the large body of literature, emanating from the United States, on educational attainment for this group).

DATA AND EMPIRICAL STRATEGY

The data used in this study were derived from the HILDA Survey, which is Australia's first nationally representative household panel (Wooden and Watson 2007). HILDA commenced in 2001 (Wave 1) and was based on a large national probability sample of Australian households with a major emphasis on families, income, employment, and subjective well-being. Wave 1 consisted of 7,696 households and 13,696 individuals. Households were selected using a multi-stage sampling strategy and a 66 per cent response rate was obtained. Within each household, information was collected from each household member aged 15 and over, using face-to-face and self-assessed questionnaires. In Wave 1, 92 per cent of adults provided an interview and, in each subsequent wave, the previous wave on wave response rates were between 87 and 95 per cent. Over time, changes in the composition of Australian households in addition to a top-up sample in Wave 11 have increased the number of survey participants. Thus, additional people who join original households are included in the HILDA survey.

Four waves of HILDA had data available on religion and educational attainment – specifically the 2004, 2007, 2010, and 2014 surveys. However, it would not be entirely accurate to think of this as a panel of data owing to the fact that educational attainment often remains static after an individual's education goals have been achieved. For example, a person who answered that they had a bachelor degree in 2004 – when this was the highest level that the individual aspired to – would also answer that their highest level of attainment in 2007, 2010, and 2014 was precisely the same. Indeed fewer than 7% of respondents had changing levels of educational attainment over the four waves. Thus, the sample is better thought of as pooled data predicated on 2014 respondents over the age of 25 years (to allow sufficient time to reach the highest level of attainment – a doctorate), supplemented by individuals in the 2010, 2007, and 2004 waves who did not appear in the 2014 survey (because we employ variables based on year of birth, expanding the pool does not introduce bias). In sum, our sample is based on a pool of 15,234 respondents which includes 80% from 2014, 2% from 2010, 1% from 2007 and 17% from 2004. Moreover, to eliminate potential shared variance where respondents live in the same household, our summary statistics and regression results were population weighted. Our summary statistics are reported in Table 3.

The dependent variable in our regression analysis is the number of years of education. We coded years of education as the highest year of completed schooling if the respondent had no post-school qualification (less than 8 years of schooling was coded as 8 years). Post-school qualifications are coded into years as follows: (i) masters/doctorate = 17 years; (ii) graduate diploma/certificate = 16 years; (iii) bachelor degree = 15 years; (iv) diploma = 12 years; and (v) certificate = 12 years. This was necessary because HILDA data only provides details of the type of educational attainment, rather than the number of years and is indicative of the kind of

compromises that empirical work in this field often has to make (e.g., Beyerlein 2004; Cobb-Clark and Nguyen 2012).

Religious affiliation was classified into the following seven categories: (i) no religion, (ii) Catholic, (iii) Anglican, (iv) Judaism, (v) Council of Churches (comprising Greek Orthodox, Orthodox, Churches of Christ, Lutheran, Uniting Church, and Salvation Army), (vi) non-Council of Churches (comprising Jehovah's Witnesses, Brethren, Seventh-day Adventist, Pentecostal, Mormons, Other Christian, Presbyterian/Reformed, Oriental Christian, Other Protestant, and Baptist), and (vi) non-Christian (comprising Buddhism, Islam, and Hinduism). In the subsequent regression analysis, 'no religion' was selected as the excluded reference group.

Following the reporting of our summary statistics, a series of regression modes were estimated to examine the association between religious affiliation and educational attainment. Our most extensive regression model is specified below:

$$E_i = \alpha + \beta \mathbf{R} + \gamma \mathbf{X} + \lambda \mathbf{H} + \varepsilon_i \quad (1)$$

In equation (1), E_i is the respondents' level of educational attainment, R is the respondents' religious affiliation, X is a vector of control variables (age, gender, geographical location, father's education, mother's education, father's employment status when the respondent was 14, plus an indicator for year), H is a vector of control variables related to the indirect hypotheses (whether the family was intact when the respondent was aged 14, number of siblings, employment status of the mother when the respondent was 14, whether the respondent was a refugee, and whether the respondent was born overseas), and ε_i is an independent and identically

distributed error term. All results are estimated using ordinary least squares (OLS) and ordered logistic (OLOGIT) regression.

Our empirical strategy was divided into three main parts. First we conducted an OLS regression to determine whether there was an association between educational attainment and religion, controlling for variables generally found in the literature (e.g., Lehrer 2006), but excluding variables related to the indirect hypotheses discussed earlier. An OLS regression was conducted in the first instance because it is relatively easy to interpret although a case can be made that an OLOGIT regression might be more appropriate in view of the fact that educational attainment often (but not necessarily) follows a natural ordering where the distance between adjacent levels of attainment are not constant (e.g., high school, undergraduate, post-graduate). Therefore to ensure that our results were robust we followed up each OLS regression model with an OLOGIT regression of the precise same specification. This empirical strategy is consistent with the literature (e.g., Lehrer 2004).

Second, we expanded our original OLS specification to include an additional block of variables to account for the quantity–quality hypothesis (whether the family was intact when the respondent was aged 14, number of siblings, employment status of the mother when the respondent was 14), immigration hypothesis (whether the respondent was born overseas), and the diaspora hypothesis (whether the respondent was a refugee). Once again an OLOGIT regression was conducted with precisely the same specification to give further assurance regarding the robustness of the OLS regression.

Finally, once we had conducted the estimation to determine whether the associations were robust in the presence of variables to control for indirect effects, our third task was to determine

whether the putative associations have been consistent over generational cohorts. To do so, we ran a series of estimations employing our full specification regression model – excluding age and gender – stratified by gender and generational cohort. The former stratification was made in view of the fact that gender was found to be statistically significant in the earlier estimations and is consistent with theory (e.g., Norton and Tomal 2009), while Chow tests were conducted to confirm statistically significant differences in coefficients between generational cohorts by way of validation of the latter stratification.

Four generational cohorts were employed, categorised by the respondent's year of birth: (i) Silent Generation (born in 1945 and before); (ii) Baby Boomers (born between 1946 and 1964); (iii) Generation X (born between 1965 and 1976); or (iv) Generation Y (born between 1977 and 1995).[1] The use of generational cohorts is consistent with the idea that the experiences of persons growing up in particular economic, technological, political and social climates does have an impact on life chances (including, most importantly for us, access to education), core values and life expectations (Vincent 2005; Evandrou and Falkingham 2000; Keister 2011). Indeed Keister (2011:361) notes that "membership in a birth cohort or generation … are integral parts of the attainment process". Moreover, it is argued that these same cohorts recognise themselves and are recognised by others as a common identity and that continuing relationships within the cohort shape behaviour through life (Vincent 2005). We concede that there is always room to debate the precise boundaries for a cohort. Yet most people would recognise that the climate faced by Generation Y persons in Australia – particularly rapid advances in technology, in a period

[1] Generation Y is truncated very slightly to allow sufficient time for respondents to have reached the highest level of education – for the 2014 wave only those born on or before 1989 are included; for the 2010 wave this is effectively truncated to 1985 and so forth.

dominated by the social democratic Labor governments of Hawke and Keating, with universal access to higher education and religious liberalisation for some Christian denominations – is very different to the climate faced by the Baby Boomers – who were born prior to Vatican II and the Anglican liberalisation reforms (late 1970s) and grew up in a time of limited secondary and tertiary education opportunities, in a period dominated by conservative political parties (notably the Menzies era 1949–1966), and with no computer technology. Thus by using generational cohorts we are able to disentangle the potentially confounding effects of changing political, social, economic and technological climates on educational attainment (although we will not be able to empirically differentiate age from generation).

RESULTS

Table 4 provides an overview of our dependent variable stratified by (i) religious affiliation and gender, and (ii) gender and generational cohort. For men, educational attainment is highest among non-Christians (followed closely by Jews) and lowest among CoC (with other Christian categories of religion only marginally higher). For women, educational attainment is highest among non-Christians (followed by Jews) and lowest among Anglicans (with Catholics considerably higher). Notably, there appear to be quite large differences in the educational attainment patterns for men and women. However, prima facie differences may prove misleading – especially if determinants of educational attainment are not distributed evenly among religious affiliates (as Table 4 suggests they are not). Therefore it is important to conduct regression analyses which control for known determinants.

In Table 5, we report our OLS regression on the association between religious affiliation and educational attainment for our respondents (Model 1). Notably, the regression points to religious affiliation as being a statistically significant determinant in the Australian context. The American literature sometimes explains away the association between religious affiliation and educational attainment according to three indirect effects – namely the quantity–quality hypothesis, the immigration hypothesis, and the diaspora hypothesis (e.g., Lehrer 1999, 2006). Fortunately, our Australian data allows us to control for variables related to these indirect effects, and we introduce these controls in Model 2 (Table 5).

The variables for indirect effects largely had the coefficients that we might expect. For instance, the quantity–quality variables produced few surprises – having an intact family and fewer siblings were associated with higher educational attainment, although mother's employment status had a negative (but statistically insignificant) association. The effect of immigration selection bias was reflected in the born overseas variable which had a relatively large and statistically significant association. Refugee status, however, was associated with a negative and statistically significant coefficient, which seems to suggest that modern exile events may not produce a diaspora effect. It is important to note that this latter result cannot lead us to any conclusions regarding the saliency of the religious commemorations of historic exile events – thus the diaspora effect may remain an important explanation for the educational attainment of Jews. Notably, gender continues to be a statistically significant negative determinant of educational attainment for women, even after introducing the aforementioned additional controls. However, these results are in aggregate and one needs to be cognisant that the average attainment for women has increased across the generations (Table 4).

However, the main result from Model 2 in Table 5 is the finding that religion remains robust in the face of controls for indirect effects, although the coefficients do change slightly. This would seem to suggest that religion has a direct effect on educational attainment. Moreover, in all instances, being a Christian is negatively associated with educational attainment (although it is not statistically significant for Catholics) when considered with reference to the no-religion group. By way of contrast, being Jewish, or non-Christian is associated with relatively higher attainment in a statistically significant sense. These results are confirmed in our OLOGIT regressions presented in Table 6, both in terms of level of statistical significance (except for CoC which is only significant at the 5 percent level) and direction of the coefficient. Confirmatory results of this nature are generally taken to provide additional assurance of the OLS results (e.g., Lehrer 2004).

However, finding statistically significant associations for the entire respondent group doesn't tell us much about the dynamics of the association between religious affiliation and educational attainments across time (although the presence of a negative and statistically significant coefficient for age hints at the possibility that associations attenuate over time). This would seem important to tease out in view of the fact that we know that generational cohort is likely to have a large bearing on culture and religious attitudes as well as opportunities for educational attainment (Keister 2011). It is also important for us to understand the dynamics of religious affiliation and educational attainment if we are going to be in a position to suggest public policy implications. Table 7 presents our OLS regressions (Panels A and B) and OLOGIT regressions (Panels C and D) stratified by gender and cohort. The results are presented separately by gender in view of our earlier finding of a statistically significant associations for gender and our knowledge of liberalisation in some patriarchal religions (e.g., Rodden 2013). We also present

our results according to widely accepted generational cohort classifications which had statistically significant differences in coefficients when we ran Chow tests (Evandrou and Falkingham 2000).

What emerges from Table 7 is a series of different stories to reflect the different experiences of persons growing up in particular economic, technological, political and social climates. Thus, for men belonging to the Silent Generation, being a Christian (of any denomination) had a large statistically significant negative association with educational attainment. However, these negative associations are attenuated in later generations and become positive for most Christians (except for non-CoC) by Generation Y. Indeed, Generation Y Catholic males had statistically significant higher educational attainment with reference to the no-religion group in a turn-around from earlier generations. This marked shift in attainment seems to have lagged a little behind the Vatican II reforms of the mid 1960s (which are ordinarily invoked to explain changes in Catholic attainment). If this were the sole cause of the about-turn, then we might have expected to see stronger evidence for Generation X males. It would therefore seem that other later events – for instance, the election of the reformist and popular Pope Saint John Paul II, or the establishment of Catholic universities in Australia in 1989 (Notre Dame) and 1991 (Australian Catholic University) – might have also contributed to the shift. By way of contrast, Anglican males recorded statistically significant positive associations relative to the no-religion group a generation earlier (Generation X); this may be explained by an era of liberalisation ushered in when the Australian Prayer Book was approved by the General Synod in 1977 (published in 1978), followed by the ordination of women as priests in 1992 (Scarfe 2014). It would seem that Generation X males were the first generation to experience a liberalised Anglican church throughout their formative years. CoC male attainment has slowly attenuated over the

generations and now has a positive coefficient with respect to the no-religion group, although it is not statistically significant. However, non-CoC Christians, who tend to hold to very conservative teachings, still have a negative association with educational attainment – and it may well be that their oft-cited otherworldly focus and rejection of both scientific reasoning and humanist philosophies explains why this group continues to lag behind the no-religion reference group.

For the non-Christian religions, statistically significant positive associations have emerged from Generation Y onwards for Jewish males and Generation X onwards for the remnant non-Christian males. In both cases, growth in the numbers of adherents has come about mainly as a result of high levels of immigration, rather than proselytising (Australian Bureau of Statistics 2011). Therefore, because we control for whether the respondent was born overseas, the strong positive associations seem to suggest an echo effect whereby immigrants have passed on their preferences for education to the next generation (otherwise stated, we have controlled for the immigration hypothesis but have no controls available for determining whether respondents were children of immigrants – an "immigration echo" hypothesis of a sort – and this must therefore remain a potential indirect effect). The statistical significance and sign of the coefficients are confirmed in the OLOGIT results (Panel C, Table 7).

For women, the association between religious affiliation and educational attainment, relative to non-religious women, appears quite different to the evidence we found for the male peer group in most cases (the exception being Catholic women who largely mirror the dynamics relative to the non-religious reference group that we described for males). For instance, Anglican and non-CoC women had negative statistically significant associations for both the Baby Boomer and Silent

Generations and continue to have negative coefficients for all other generations. The non-CoC result can probably be explained in the same way as we did for males – that is, the otherworldly focus and rejection of scientific reasoning and humanist philosophy leads these female religious adherents to pursue education less vigorously than their non-religious peers. However, the Anglican result appears rather puzzling, especially in view of the liberalisation experience by this denomination – we can only surmise that the degree of liberalisation experienced by Anglican women over these generations was somehow relatively less profound than that experienced by their non-religious peers (notably educational attainment for women has improved markedly over the generations presumably in response to changes in the political, cultural, and economic climate particularly with respect to gender equity). CoC Christian women had similar patterns of statistically significant negative coefficients for older generations, but record a positive coefficient for Generation Y (although it is not statistically significant).

In contrast, Jewish women are recorded to have statistically significant positive associations, relative to non-religious women, a generation earlier than their male peers and there is reason to believe that this association may have persisted into Generation Y in the OLOGIT regression only (Panel D, Table 7). However we remind readers that this result needs to be interpreted with some caution owing to the sample size. Other non-Christian religious affiliates also precede their male peers by a generation in achieving a positive association relative to (female) non-religious persons; however, the statistical significance does not persist into Generation Y. Earlier we noted that growth in the non-Christian cohort may be mostly due to immigration (which we control for) and the progeny of immigrants (which we could not control for). Australia has had a marked change in the composition of non-Christian immigrants over recent decades, with greater numbers coming from the middle-east and subcontinent where patriarchal religions are strong

(Parliamentary Library 2010; Australian Bureau of Statistics 2017). This has resulted in the composition of non-Christians being shifted towards patriarchal religions – for instance, just 8.6% of Generation X non-Christian women were Muslim, but by Generation Y the proportion had increased to 52.2% – and it seems that it is this shift in composition that explains the lower coefficient and lack of statistical significance for Generation Y (unfortunately the sample size was too small to allow further religious stratification).

Taken as a whole the generational cohort analyses suggest that the association between religion and educational attainment is not fixed, but rather changes over time. These changes may be the result of either: (i) internal reforms to a religion or religious denomination, such as Vatican II in the case of Catholics or a program of liberalisation (for Anglicans); (ii) a change in the social, economic, political, and technological climate (as appears to have occurred with all generations experiencing progressively higher levels of attainment other time); (iii) the establishment of new religious higher education institutions (such as the Catholic universities); or (iv) a combination of these aforementioned events. This finding of a dynamic association between educational attainment and religion is important as it suggests a possible reason for previously conflicting findings in the American literature. Moreover, the recognition that current associations can change over time may point us to some possible public policy implications.

PUBLIC POLICY IMPLICATIONS AND FUTURE RESEARCH

Our results address a significant gap in the educational attainment and religion literature – particularly the absence of Australian research – and are therefore important in their own right. However, they also seem to suggest some public policy implications. If we had not stratified our

regressions by general cohort, our results in Tables 5 and 6 may well have been taken to suggest the need for targeted programs to increase the educational attainment for all Christian affiliates, as these respondents prima facie lag in educational attainment behind non-religious respondents. However, our regressions stratified by generation suggest that the educational attainment deficit for Catholics now has largely been reversed. Yet, possible deficits may persist for Anglicans (women only), and non-Council of Churches in Generation Y, although they are not statistically significant (recall also that an age constraint exists for Generation Y). This may suggest that programs and funding could be justifiably directed to schools that have a large concentration of affiliates (for instance, the Seventh-day Adventist Schools or the prominent Anglican school sector), to redress the apparent educational attainment deficit. Of course, further research would be needed to identify the precise group of affiliates within our rather heterogeneous non-CoC category, whether affiliates tend to attend schools run by said denomination, and the nature of the impediments (towards which programs should be targeted to mitigate).

We also speculated, in response to the American literature, that public policy interventions to address gender inequality in educational attainment may be warranted for patriarchal religions. However, our evidence does not provide direct support for this proposition (although there is reason to believe that patriarchal religions may be weighing down attainment for women in Generation Y relative to females in the no-religion reference group). What our results do demonstrate, however, is that attainment deficits in patriarchal religions can be reversed – most notably in the cohort of Catholic and Jewish women. In both cases the deficit seems to have been largely redressed as a result of liberalism driven by internal reforms (although the establishment of Catholic Higher Education Institutions may also have been important). Further study should examine the mechanism in greater detail with a view to identifying the components of reforms

from the other religions which might be adapted and employed to address any gender inequity in attainment demonstrated in more targeted studies of patriarchal religions.

There is also the possibility that we may, in time, and with further research, be able to identify the direct effects of religion that could be incorporated into education and pedagogy with a view to improving attainment. Looking across the generations there appears to be something about Jewish affiliates (in particular, but also Catholics and non-Christian religions) which leads to higher educational attainment. Clearly further research is required to identify the precise factors – however, it is not unreasonable to speculate that religious schools where affiliates are likely to be concentrated may partly explain the results (notably teachers at these schools often follow the faith of the administering authority), as might the role of ritual (particularly rituals that recognise admission into the community – Confirmation for Catholics and Bar/Bat Mitzvah for Jews) and discipline (exemplified in Catholic Lent or Jewish Yom Kippur). Moreover, as we note from the literature: introspection, self-discipline, shunning of illicit drugs and promiscuity, and opportunities for inter-generational mentoring may all be part of the explanation for higher attainment and these factors should be investigated in future research (notably Judaism and Catholicism accept consumption of alcohol indicating that this may not be quite as salient a factor as the literature has hitherto suggested).

There is also a need to conduct further research that examines the association between educational achievement and religion – for it is quite clear that attainment alone may not have the sort of implications for the economy that have long fascinated scholars. For instance, a first class honours degree may not have the same implications for future earnings and productivity as a 'third class' grade, nor is an undergraduate degree with a grade point average of 3.5 (on the

seven-point scale employed in Australia) likely to lead to the same outcomes as a University Medal. In other words, the number of years of educational (attainment) is important, perhaps critical, for the economy and the life attainment of individuals – but the level of attainment (what we refer to as achievement) can often be just as important, if not more so (especially when one considers trade-offs). In similar vein, a broader research agenda that examines the association between wages, wealth and religion will help to explain how matters such as educational attainment and achievement are translated in the real economy and give us a better understanding of the saliency of religion.

In summary, we conclude that an Australian research agenda promises to be most fruitful – not just from the perspective of satisfying academic curiosity, but also in helping to develop beneficial public policy interventions – and we commend same to our peers.

ACKNOWLEDGMENTS

This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either the DSS or the Melbourne Institute.

REFERENCES

Anglican Church of Australia. 2017. How do Australian Anglicans worship? https://www.anglican.org.au/anglican-church-in-australia (accessed 6 June 2017).

Australian Bureau of Statistics. 2011. Australian standard classification of religious groups. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2016. 2016 Census data reveals "no religion" is rising fast. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. 2017. Snapshot of Australia. Canberra: Australian Bureau of Statistics.

Beech, Alexandra. 2017. Gonski 2.0: Education Minister hits back at Catholic sector's 'exaggeration' over school funding. ABC News. http://www.abc.net.au/news/2017-05-03/minister-hits-back-at-catholic-sector-school-funding-outcry/8492890 (accessed 3 May 2017).

Beyer, Peter. 2005. Religious identity and educational attainment among recent immigrants to Canada: Gender, age and 2nd generation. *Journal of International Migration and Integration* 6(2):177–99.

Beyerlein, Kraig. 2004. Specifying the impact of conservative Protestantism on educational attainment. *Journal for the Scientific Study of Religion* 43(4):505–18.

Cobb-Clark, Deborah and Trong-Ha Nguyen. 2012. Educational attainment across generations: The role of immigration background. *Economic Record* 88(283):554–75.

Darnell, Alfred and Darren E. Sherkat. 1997. The Impact of Protestant fundamentalism on educational attainment. *American Sociological Review* 62(2):306–15.

Erickson, Lance D. and James W. Phillips. 2012. The effect of religious-based mentoring on educational attainment: More than just a spiritual high? *Journal for the Scientific Study of Religion* 51(3):568–87.

Ermisch, John and Marco Francesconi. 2013. The effect of parental employment on child schooling. *Journal of Applied Econometrics* 28:796–822.

Evandrou, M. and Falkingham, J. 2000. Looking back to look forward: Lessons from four birth cohorts for ageing in the 21st century. *Population Trends* Spring: 27–36.

Keister, Lisa. 2011. Religion and attainment. *Sociological Focus* 44(4):354–83.

Keysa, Ariela and Barry A. Kosmin. 1995. The impact of religious identification on differences in educational attainment among American women in 1990. *Journal for the Scientific Study of Religion* 34(1):49–62.

Lehrer, Evelyn L. 1999. Religion as a determinant of educational attainment: An economic perspective. *Social Science Research* 28(4):358–79.

Lehrer, Evelyn L. 2004. Religiosity as a determinant of educational attainment: The case of conservative Protestant women in the United States. *Review of Economics of the Household* 2(2):203–19.

Lehrer, Evelyn L. 2006. Religion and high-school graduation: A comparative analysis of patterns for white and black young women. *Review of Economics of the Household* 4(3):277–93.

Maimonides, Moses. 1956. *The guide for the perplexed*. New York: Dover.

Mueller, Charles M. 1980. Evidence on the relationship between religion and educational attainment. *Sociology of Education* 53(3):140–52.

Mukhopadhyay, Sankar. 2011. Religion, religiosity and education attainment of immigrants to the USA. *Review of Economics of the Household* 9(4):539–53.

Norton, Seth W and Annette Tomal. 2009. Religion and female educational attainment. *Journal of Money Credit and Banking* 41(5):961–85.

Parliamentary Library, Parliament of Australia. 2010. Migration to Australia since federation: a guide to the statistics. Canberra: Parliament of Australia.

Pew Research Center. 2017. Religions. Washington D.C.

Rodden, John. 2013. Less "Catholic", more "catholic"? American Catholic universities since Vatican II. *Society* 50(1):21–27.

Sander, William. 1992. The effects of ethnicity and religion on educational attainment. *Economics of Education Review* 11(2):119–35.

Scarfe, Janet. 2014. Changed rules, changing culture? The ordination of women. *St Mark's Review* 228:51–58.

Teese, Richard. 2000. Academic success and social power. Melbourne: Melbourne University Press.

Vincent, John. 2005. Understanding generations: Political economy and culture in an ageing society. *British Journal of Sociology* 56(4):579–99.

Wooden, Mark and Nicole Watson. 2007. The HILDA Survey and its contribution to economic and social research (so far). *Economic Record* 83(261): 208–31.

Table 1: Quantity–Quality Fertility Data

Religious affiliation	Divorce rate	No children	Proportion of one-child families	Proportion of two-child families	Proportion of three-child families	Proportion of families with more than four children
No religion	6.0%	30%	13%	29%	16%	12%
Jews	7.2%	21%	13%	38%	18%	9%
Catholics	6.7%	21%	12%	30%	19%	18%
Anglican	6.5%	16%	12%	36%	21%	15%
Council of Churches	6.7%	14%	12%	34%	24%	16%
Non-Council of Church	6.4%	20%	10%	28%	23%	19%
Non-Christians	5.1%	26%	25%	28%	9%	11%

Source: HILDA Survey.

Table 2: Religious Affiliation in Australia, 2016 Census

National Council of Churches affiliates	Other Christian denominations	Other world religions
Catholic 22.6%	Presbyterian and Reformed 2.3%	Buddhism 2.5%
Anglican 13.3%	Baptist 1.5%	Islam 2.2%
Uniting Church 5.0%	Pentecostal 1.1%	Hinduism 1.3%
Eastern Orthodox 2.6%	Jehovah's Witnesses 0.4%	Judaism 0.5%
Lutheran 1.2%	Seventh-day Adventists 0.3%	Sikhism 0.3%
Salvation Army 0.3%	Latter-day Saints 0.3%	

Source: Australian Bureau of Statistics 2016.

Table 3: Variable Definitions and Means

Variable	Definition	Men	Women
Education	Number of years of education	12.40	12.22
Father's education			
None/Primary*	None or primary school only	0.141	0.157
Year 10 or below	Some secondary school but no more than year 10	0.301	0.297
Year 11	Year 11 or equivalent (e.g., 5th form, Leaving Certificate)	0.052	0.052
Year 12	Year 12 or equivalent (e.g., 6th form, Matriculation)	0.218	0.222
Missing	Missing	0.288	0.272
Mother's education			
None/Primary*	None or primary school only	0.131	0.144
Year 10 or below	Some secondary school but no more than year 10	0.303	0.332
Year 11	Year 11 or equivalent (e.g., 5th form, Leaving Certificate)	0.069	0.071
Year 12	Year 12 or equivalent (e.g., 6th form, Matriculation)	0.212	0.202
Missing	Missing	0.284	0.250
Father's employment			
Dad employed*	Father was in paid employment when you were 14	0.887	0.891
Dad not employed	Father was unemployed when you were 14	0.027	0.036
Dad deceased	Father was deceased when you were 14	0.037	0.031
Dad absent	Father was absent when you were 14	0.019	0.022
Missing	Missing values	0.031	0.020
Respondent characteristics			
Age	Age in years	50.64	50.92
Gender	1 = female; 0 = otherwise	0.474	0.526
Urban	1 = metropolitan; 0 = otherwise	0.646	0.649
Year			
2004*	Wave 4	0.179	0.167
2007	Wave 7	0.022	0.024
2010	Wave 10	0.012	0.014
2014	Wave 14	0.787	0.795
Cohort			
Gen Y	Respondent was born between 1977 and 1995	0.214	0.216
Gen X	Respondent was born between 1965 and 1976	0.241	0.246
Baby Boomers	Respondent was born between 1946 and 1964	0.343	0.332
Silent Generation	Respondent was born in 1945 and before	0.202	0.206
Religion			
No religion*	No religion	25.09	21.17
Jews	Jews	0.26	0.31
Catholics	Catholics	15.56	19.96
Anglicans	Anglicans	13.15	16.05
Council of Churches	Greek Orthodox, Orthodox; Churches of Christ; Lutheran; Uniting Church; Salvation Army	6.75	9.59
Non-Council of Churches	Jehovah's Witnesses; Brethren; Seventh-day Adventist; Pentecostal; Latter Day Saints (Mormons); Other Christian; Presbyterian/Reformed; Oriental Christian; Other Protestant; Baptist	6.76	7.81
Non-Christian	Buddhism; Islam; Hinduism	4.62	5.26

Table 3: Variable Definitions and Means (cont.)

Indirect controls			
Family intact	1 = If living with both your own mother and father around the time you were 14 years old; 0 = otherwise	0.812	0.811
Siblings			
Zero*	Respondent has no siblings	0.035	0.033
One	Respondent has one sibling	0.183	0.175
Two	Respondent has two siblings	0.204	0.206
Three	Respondent has three siblings	0.146	0.144
Four or more	Respondent has four or more siblings	0.208	0.234
Missing	Missing values	0.224	0.208
Mother's employment			
Mum employed*	Mother was in paid employment when you were 14	0.469	0.483
Mum not employed	Mother was unemployed when you were 14	0.475	0.476
Mum deceased	Mother was deceased when you were 14	0.015	0.015
Mum absent	Mother was absent when you were 14	0.006	0.005
Mum missing	Missing values	0.037	0.021
Refugee status			
Yes	Yes	0.162	0.156
No*	No	0.024	0.019
Not asked	Not asked	0.814	0.825
Born overseas	1 = born overseas; 0 = otherwise	0.318	0.304

*Reference category

Table 4: Educational Attainment for Men and Women by Religious Affiliation and Cohort

Mean years of schooling	Men	Women
No religion	12.61	12.68
Jews	14.13	13.09
Catholics	12.28	12.26
Anglican	11.92	11.55
Council of Churches	11.88	11.68
Non-Council of Churches	12.13	11.86
Non-Christians	14.16	13.76
Mean years of schooling	**Men**	**Women**
Generation Y	13.07	13.38
Generation X	12.79	12.90
Baby Boomers	12.40	12.08
Silent Generation	11.24	10.43

Source: HILDA Survey.

Table 5: The Effects of Religious Affiliation on Years of Schooling (OLS Regressions)

	Model 1			Model 2		
Father's education	**β**		**SE**	**β**		**SE**
Year 10 or below	0.366	**	0.091	0.355	**	0.093
Year 11	0.748	**	0.126	0.703	**	0.126
Year 12	1.134	**	0.101	1.049	**	0.103
Missing	-0.239	*	0.106	-0.224	*	0.107
Mother's education						
Year 10 or below	0.167		0.091	0.166		0.093
Year 11	0.766	**	0.113	0.732	**	0.114
Year 12	0.700	**	0.103	0.632	**	0.105
Missing	-0.093		0.112	-0.044		0.112
Family characteristics						
Dad not employed	-0.294	*	0.124	-0.154		0.119
Dad deceased	-0.218		0.133	0.162		0.138
Dad absent	-0.675	**	0.138	-0.199		0.146
Dad missing	-0.353	*	0.146	-0.151		0.143
Respondent characteristics						
Age	-0.028	**	0.001	-0.028	**	0.002
Gender	-0.171	**	0.044	-0.161	**	0.043
Urban	0.605	**	0.041	0.530	**	0.040
Year						
2007	-0.653	**	0.213	-0.603	**	0.199
2010	-0.504	**	0.193	-0.432	*	0.187
2014	-0.153		0.087	-0.294	**	0.104
Religious affiliation						
Jews	1.040	**	0.287	0.981	**	0.278
Catholics	-0.044		0.061	-0.037		0.059
Anglicans	-0.267	**	0.060	-0.285	**	0.059
Council of Churches	-0.159	*	0.070	-0.197	**	0.069
Non-Council of Churches	-0.244	**	0.084	-0.265	**	0.082
Non-Christians	0.867	**	0.126	0.631	**	0.127
Indirect controls						
Family intact				0.461	**	0.067
One sibling				-0.099		0.124
Two siblings				-0.183		0.120
Three siblings				-0.294	*	0.127
Four or more siblings				-0.550	**	0.121
Sibling don't know				-0.551	**	0.136
Mum not employed				-0.083		0.045
Mum deceased				-0.283		0.238
Mum absent				-0.722	**	0.236
Mum missing				-0.243		0.142
Refugee – Yes				-0.444	**	0.146
Refugee – Not asked				0.163		0.110
Born overseas				0.532	**	0.104
Constant	13.102	**	0.145	13.012	**	0.226
Observations	15,234			15,234		
R-squared	0.246			0.264		

** $p < 0.01$, * $p < 0.05$

Table 6: The Effects of Religious Affiliation on Years of Schooling (OLOGIT Regressions)

	Model 1			Model 2		
Father's education	**β**		**SE**	**β**		**SE**
Year 10 or below	0.336	**	0.085	0.333	**	0.086
Year 11	0.642	**	0.113	0.614	**	0.114
Year 12	0.967	**	0.092	0.898	**	0.095
Missing	-0.183		0.100	-0.181		0.103
Mother's education						
Year 10 or below	0.165	*	0.084	0.176	*	0.087
Year 11	0.678	**	0.102	0.662	**	0.103
Year 12	0.593	**	0.094	0.544	**	0.097
Missing	-0.091		0.106	-0.041		0.108
Family characteristics						
Dad not employed	-0.288	*	0.113	-0.169		0.111
Dad deceased	-0.206		0.125	0.108		0.131
Dad absent	-0.662	**	0.120	-0.265	*	0.128
Dad missing	-0.304	*	0.119	-0.145		0.122
Respondent characteristics						
Age	-0.028	**	0.001	-0.029	**	0.001
Gender	-0.241	**	0.039	-0.234	**	0.040
Urban	0.509	**	0.037	0.447	**	0.037
Year						
2007	-0.526	**	0.181	-0.479	**	0.176
2010	-0.402	*	0.170	-0.345	*	0.167
2014	-0.045		0.082	-0.166		0.098
Religious affiliation						
Jews	0.807	**	0.231	0.739	**	0.231
Catholics	-0.034		0.053	-0.029		0.053
Anglicans	-0.238	**	0.053	-0.253	**	0.054
Council of Churches	-0.121		0.063	-0.149	*	0.063
Non-Council of Churches	-0.215	**	0.076	-0.246	**	0.075
Non-Christians	0.754	**	0.116	0.520	**	0.119
Indirect controls						
Family intact				0.392	**	0.061
One sibling				-0.139		0.118
Two siblings				-0.209		0.115
Three siblings				-0.297	*	0.120
Four or more siblings				-0.513	**	0.116
Sibling don't know				-0.520	**	0.130
Mum not employed				-0.075		0.041
Mum deceased				-0.265		0.210
Mum absent				-0.644	**	0.219
Mum missing				-0.243	*	0.122
Refugee – Yes				-0.343	*	0.135
Refugee – Not asked				0.071		0.100
Born overseas				0.477	**	0.093
Observations	15,234			15,234		

** $p < 0.01$, * $p < 0.05$

Table 7: The Effects of Religious Affiliation on Years of Schooling by Cohort (OLS and OLOGIT)

	Generation Y		Generation X		Baby Boomers		Silent Generation	
Panel A: Men (OLS)	**β**	**SE**	**β**	**SE**	**B**	**SE**	**β**	**SE**
Jews	1.638**	0.521	0.970	0.710	0.554	0.441	1.226	0.634
Catholics	0.509*	0.233	-0.122	0.133	-0.173	0.123	-0.954**	0.196
Anglicans	0.056	0.205	0.318*	0.153	-0.479**	0.123	-0.934**	0.186
Council of Churches	0.090	0.291	-0.372	0.213	-0.181	0.147	-0.753**	0.222
Non-Council of Churches	-0.349	0.268	-0.148	0.204	0.018	0.157	-0.992**	0.217
Non-Christians	1.043**	0.306	0.661*	0.284	0.516	0.315	0.579	0.445
Observations	1,547		1,686		2,547		1,439	
R-squared	0.294		0.228		0.167		0.198	
	Generation Y		Generation X		Baby Boomers		Silent Generation	
Panel B: Women (OLS)	**β**	**SE**	**β**	**SE**	**B**	**SE**	**β**	**SE**
Jews	1.657	0.862	1.389**	0.385	0.822	0.473	-1.126	0.671
Catholics	0.276*	0.141	0.178	0.137	-0.090	0.143	-0.908**	0.203
Anglicans	-0.042	0.174	-0.175	0.184	-0.773**	0.131	-0.761**	0.198
Council of Churches	0.175	0.214	-0.025	0.189	-0.466**	0.163	-0.744**	0.216
Non-Council of Churches	-0.130	0.223	-0.095	0.230	-0.416*	0.176	-0.941**	0.241
Non-Christians	0.358	0.273	0.640*	0.287	0.701**	0.261	0.574	0.626
Observations	1,730		1,884		2,746		1,655	
R-squared	0.258		0.206		0.157		0.198	
	Generation Y		Generation X		Baby Boomers		Silent Generation	
Panel C: Men (OLOGIT)	**β**	**SE**	**β**	**SE**	**β**	**SE**	**β**	**SE**
Jews	1.168*	0.481	0.867	0.638	0.238	0.319	0.782	0.474
Catholics	0.526*	0.254	-0.129	0.140	-0.123	0.117	-0.806**	0.171
Anglicans	0.021	0.233	0.355*	0.160	-0.417**	0.119	-0.800**	0.161
Council of Churches	0.112	0.294	-0.299	0.231	-0.097	0.140	-0.725**	0.192
Non-Council of Churches	-0.370	0.293	-0.094	0.198	0.030	0.146	-0.868**	0.190
Non-Christians	0.950**	0.325	0.597*	0.296	0.445	0.311	0.434	0.368
Observations	1,547		1,686		2,547		1,439	
	Generation Y		Generation X		Baby Boomers		Silent Generation	
Panel D: Women (OLOGIT)	**β**	**SE**	**β**	**SE**	**β**	**SE**	**β**	**SE**
Jews	2.371*	1.068	0.875*	0.408	0.402	0.330	-0.466	0.612
Catholics	0.293	0.151	0.164	0.123	-0.041	0.117	-0.796**	0.182
Anglicans	-0.045	0.195	-0.170	0.175	-0.653**	0.111	-0.606**	0.175
Council of Churches	0.171	0.212	0.047	0.166	-0.379**	0.139	-0.604**	0.196
Non-Council of Churches	-0.073	0.236	-0.162	0.228	-0.336*	0.154	-0.794**	0.219
Non-Christians	0.387	0.289	0.673*	0.300	0.587**	0.201	0.282	0.497
Observations	1,730		1,884		2,746		1,655	

** $p < 0.01$, * $p < 0.05$. All of the control variables – apart from age and gender – in Model 2 (Tables 5 and 6) are included in these regressions.