

Appendix for “From the Schools to the Streets: Education and Anti-Regime Resistance in the West Bank”

This appendix contains supplemental information for the text of the article. Section A.1 provides more detailed information about the survey design, including the sampling procedures and questionnaire design. Sections A.2 and A.3 show that the paper’s core findings are not due to reverse causality or to the self-selection of more conscientious and efficacious individuals into both higher levels of educational attainment and participation in anti-regime resistance. Section A.4 shows the results of a bounding analysis that assesses the sensitivity of the paper’s findings to missing data on the dependent variable, as well as selective attrition from the sample due to death, imprisonment, or deportation. Section A.5 provides a more direct test of the article’s arguments regarding temporal persistence, and Section A.6 concludes with the additional robustness tests referenced in the article.

A.1 Survey Design

This article draws on an original, large-scale survey of former participants and non-participants in unarmed resistance in the Palestinian Territories. The survey was conducted in sixty-eight localities across the West Bank, including Palestinian cities, towns, villages, and refugee camps. Figure A.1 displays the localities included in the survey, which are marked with red triangles. As seen in the figure, these localities are representative of the West Bank’s three regions: north, center, and south.

Due to access restrictions, the survey did not include localities in the Gaza Strip. East Jerusalem neighborhoods on the Israeli side of the separation barrier were also excluded, due to the well-known problem of high survey refusal rates in these neighborhoods. Despite the exclusion of these areas, the conclusions of this survey are expected to generalize to the entire Palestinian Territories. Because East Jerusalem neighborhoods were only recently cut off from similar neighborhoods sampled on the other side of the barrier (which, in some cases, divided neighborhoods in two), their exclusion should not affect conclusions about participation in anti-regime resistance long before the barrier was built. Similarly, because the West Bank and Gaza Strip were under the same administration during the time period studied and movement was not restricted between them, the determinants of participation in anti-regime resistance in the Gaza Strip should be similar to those identified in the West Bank.

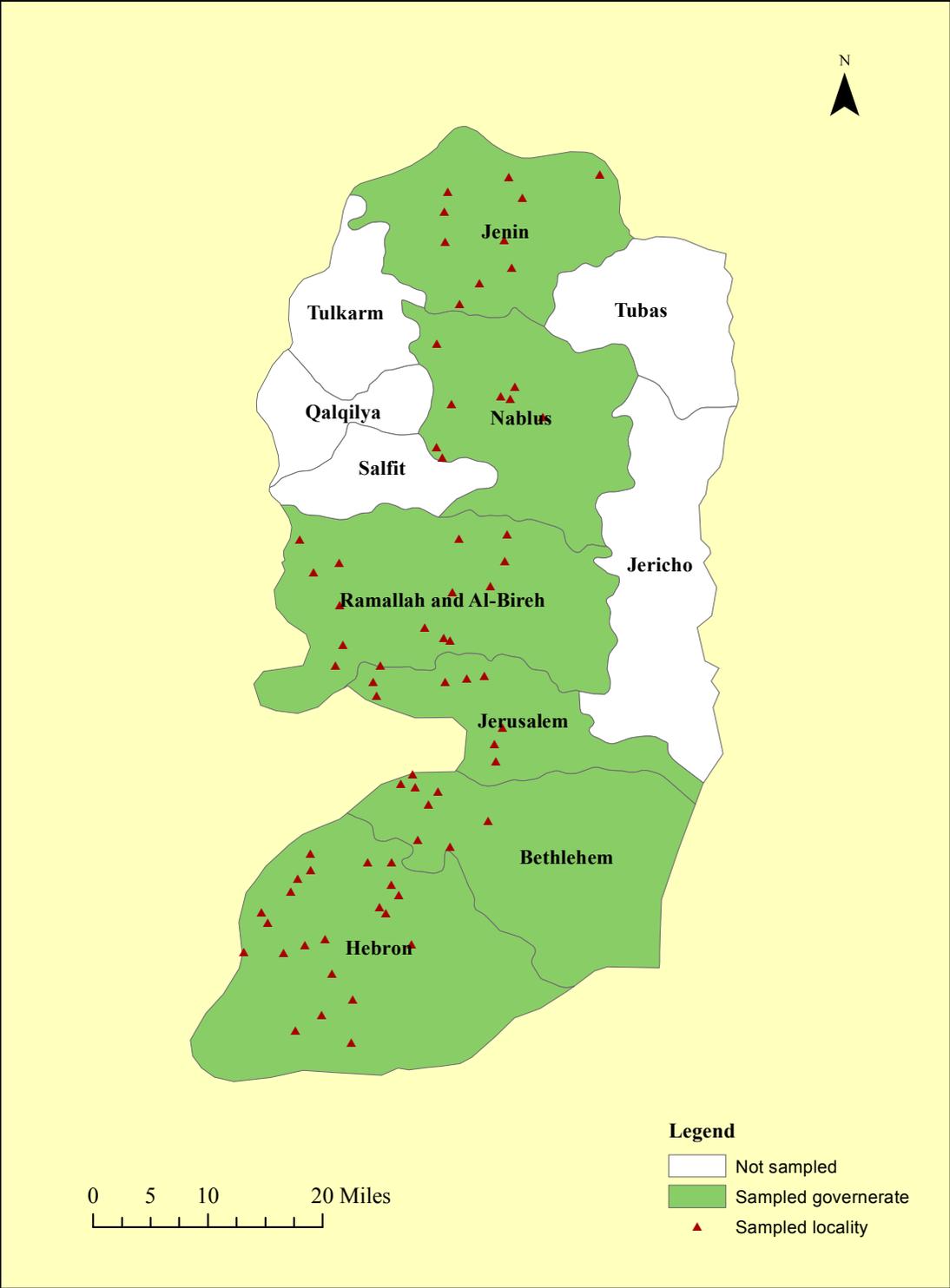
The resulting survey sample includes nearly six hundred and fifty, male, Palestinian participants and non-participants in unarmed resistance. As described below, I also sampled a smaller number of female respondents, as well as family members of sampled respondents who were missing (e.g. due to death, imprisonment, immigration, etc.) These groups were also sampled in order to help assess the sensitivity of the study’s findings to the composition of the survey sample. The response rate was 68%.¹

Sampling Procedure and Sample Characteristics

The West Bank is divided into eleven governorates, which constitute the largest administrative unit in the Palestinian Territories (i.e. analogous to American states). The survey took

¹AAPOR response rate category 2. Since this response rate includes all households of unknown eligibility in the denominator, the true response rate may be higher. The response rate was estimated based on a sub-sample of all household contact attempts.

Figure A.1: Localities Sampled for Survey



place in the six most populous governorates. Thus, while the governorates were not selected randomly, random sampling with probability proportionate to size is likely to have produced a very similar list of governorates. The six governorates selected represent all three geographic regions of the West Bank. The selected governorates are: Bethlehem and Hebron (South), Jerusalem and Ramallah (Center), and Jenin and Nablus (North). The selected governorates are colored in green in Figure A.1.

To ensure a sample that was geographically and socioeconomically representative, randomization was used at every level of sample selection from the locality to the individual respondent. Survey sampling proceeded as follows. Eighty clusters of ten respondents were randomly selected from all localities in the six, most populous West Bank governorates listed above. The expected number of clusters in each locality was proportional to the locality's share of the total population. The clusters selected fell within 64 localities, which formed the primary sampling units (PSUs). An additional four localities were later selected using the same methodology, for a total sample of 68 localities. For a similar methodology, see Humphreys and Weinstein (2008).

Some localities, such as cities and large towns, were too big to be treated as a single enumeration unit, which I sought to limit at no more than 10,000 persons. For localities with a population of over 10,000 persons, the following procedure was adopted. Localities with a population of over 20,000 persons were divided into smaller enumeration units as described below, and cluster(s) were then randomly sampled from within these units. Localities with populations between ten and twenty thousand persons were also divided into smaller enumeration units if the population of each of the resulting units would be closer to 10,000 persons than if the locality were left undivided.

In localities that were too large to be treated as a single enumeration unit, an additional stage of sample selection was undertaken. All such localities were first divided into smaller enumeration units, which were no bigger than 0.75km across their furthest points - the largest geographical area that could reasonably be covered by each team of interviewers (i.e. "enumeration team"). To divide localities into enumeration units, I used a scale ruler to divide census maps of each locality purchased from the Palestinian Central Bureau of Statistics (PCBS). Importantly, while these maps were useful for defining and selecting enumeration units, they were not sufficiently up-to-date to permit sampling of households. Thus, a separate procedure was used to sample households from within each enumeration area (see below).

After dividing each large locality into smaller enumeration units, enumeration units were sampled as follows. In those localities that were assigned one cluster, one enumeration unit was randomly selected from the set of all 0.75k enumeration units. In localities assigned multiple clusters, the locality was first divided into the assigned number of clusters. If the resulting clusters were still too large, an enumeration unit was then randomly selected from each cluster.

Within each enumeration area, households were sampled from a map sampling frame created by the enumeration team. Enumerators drew a map of all residential buildings lying on a randomly chosen axis lying between the geographical center of the enumeration area and its borders. This was achieved as follows. Enumerators began at the geographical center of the locality. For larger localities, this was identified by the PI on maps handed to the enumeration team. For smaller localities (i.e. smaller than 10,000 persons), the enumeration team identified the geographical center by asking local residents. After identifying the geographical center

of the locality, enumerators used a random number table to randomly select one of eight compass directions: north, south, east, west, northeast, northwest, southeast, southwest. After randomly selecting a compass direction, enumerators used a wristband compass provided by the PI to locate this compass direction. Finally, respondents walked along this compass direction and marked each residential building lying on the compass direction as they went. A random number table was then used to select which households to visit based on the number of households included in the sampling frame. This procedure was designed to result in a more representative sample of households than would result from a simple random walk procedure.

The final stage of sample selection involved randomly selecting an individual respondent from each randomly selected household. After verifying that the household was present in the Palestinian Territories during the period covered by the study (1978-1989) and that at least one member of the household satisfied the eligibility requirements for the survey described below, survey enumerators worked with the head of the household to construct an anonymous household roster. The head of the household was asked to think of all members of the household who satisfied the residency and age requirements for participation in the survey. A respondent was then selected from this list using a random number table. If the selected respondent had passed away, was no longer living in the household, or would be away from the household beyond the duration of our fieldwork, the head of household was asked to complete an absentee questionnaire. As in Blattman (2009) and Scacco (2012), this latter step was intended to assess any potential selection bias stemming from the absence of individuals more active in anti-regime resistance due to death, imprisonment or deportation.

As participation in anti-regime resistance was relatively rare, particularly before the first intifadah, a simple, random sample of households and individuals may not have produced a sufficient number of participants to allow for meaningful, causal inference. To ensure that a sufficient number of participants would be included in the sample, eligibility for participation in the survey was restricted to males between the ages of six and thirty-five years old in 1978 (i.e. the first year of the study period).² Despite the unprecedented nature of women's participation in demonstrations within conservative Palestinian society and the considerable attention given to women's participation, female participation rates remained quite low - ten percent compared to the overall participation rate of thirty-five percent by our estimates. Participation in protests and demonstrations also declined with age, becoming much less common after middle age. For these reasons, the survey sample was limited to younger males. In order to assess the sensitivity of the findings to these characteristics of the survey sample, a small sample of women was also surveyed.³

Table A.1 presents key descriptive statistics on the main survey sample of male respondents. As described below, the survey collected data on individuals over the period between 1978 and 1989, resulting in multiple observations for each respondent. The statistics below are thus for respondent-years. As seen in the table, the mean age of respondents during the period from 1978 to 1979 was 26.31 years old. The mean number of years of education was 9.12 years, which is almost exactly equal to preparatory school completion (9 years). Fifty-seven percent

²This resulted in a survey sample that was between the ages of six and forty-six years old during the study period (1978-1989).

³This sample was selected using the same general procedures as the main sample described above. In order to construct the sample, a woman was selected from every tenth, eligible household selected to take part in the survey.

of respondents, or slightly over half of the sample, completed preparatory school, thirty-seven percent completed secondary school, and thirteen percent completed university. Finally, respondents reported participating in anti-regime resistance, the main dependent variable of the study, in 36% of all respondent years. In 1988-89, the peak year of participation in the sample, 43% of respondents reported participating in anti-regime resistance.

Table A.1: Descriptive Statistics

Variable	Mean	Standard Deviation	Median	Min.	Max.	N
Main Dependent Variable						
<i>Participation in Anti-Regime Resistance</i>	0.36	0.48	0	0	1	3074
Main Independent Variables						
Education						
<i>Preparatory</i>	0.57	0.50	1	0	1	3857
<i>Secondary</i>	0.37	0.48	0	0	1	3857
<i>University</i>	0.13	0.33	0	0	1	3857
<i>Education (in years)</i>	9.12	4.38	9	0	23	3751
<i>Education in years (preparatory only)</i>	9.73	0.77	10	9	11	757
<i>Education in years (secondary only)</i>	12.77	1.01	12	12	15	943
<i>Education in years (university)</i>	16.45	1.16	16	16	23	385
Key Control Variables						
<i>Age</i>	26.31	7.94	26	6	45	3857
<i>Wealth/Household Amenities</i>	3.32	2.19	3	0	9	3839
<i>Family Status/Father's Education</i>	0.24	0.43	0	0	1	3587

Table A.2 further compares the survey sample to the Palestinian population of the Occupied Territories in 1978. Historical data on the Palestinian population were obtained from the Israeli Central Bureau of Statistics, which is the only available data source of which I am aware. Table A.2 compares the survey sample to the population on all indicators for which comparable data were available.⁴ As seen in the table, the survey sample closely resembles the population as a whole in terms of its demographic and socioeconomic characteristics. However, the survey sample includes a significantly lower proportion of refugees than the population as a whole. While I expected to find that refugees participated in anti-regime resistance at higher rates than non-refugees, this did not turn out to be the case: refugee status was not significantly associated with participation in anti-regime resistance in any of the analyses I conducted. Thus, the lower proportion of refugees in the survey sample seems unlikely to bias the conclusions of the study regarding the determinants of participation in anti-regime resistance.

⁴The population data are for males as well as females. However, since most Palestinian women did not work outside the home (i.e. were not in the labor force), data on individuals' professions (i.e. employed persons by profession/occupation), unemployment, and monthly income should be similar for men and women.

Table A.2: Survey and CBS Population Proportions

	Survey Sample	West Bank	Palestinian Territories
Household Size			
Household Size: 1	0.01	0.05	0.04
Household Size: 2	0.05	0.08	0.08
Household Size: 3	0.05	0.07	0.07
Household Size: 4	0.09	0.08	0.09
Household Size: 5	0.14	0.10	0.10
Household Size: 6	0.16	0.10	0.10
Household Size: 7+	0.49	0.51	0.51
Profession¹			
Employer or manager	0.02	0.01	0.01
Professional	0.13	0.08	0.08
Office worker	0.02	0.03	0.03
Skilled worker	0.24 - 0.35*	0.26	0.27
Farmer or agricultural worker	0.20	0.28	0.25
Other Statistics			
Unemployed ²	0.03	0.01	0.01
Monthly income ³ (NIS)	900+	2100	2084
Refugee	0.16	0.42	0.56

Notes: Population proportions calculated using the Statistical Abstracts of Israel prepared by the Israeli Central Bureau of Statistics (CBS). CBS figures for the Palestinian Territories exclude East Jerusalem. All survey and population proportions are reported for 1978.

¹Profession data drawn from CBS data on employed persons by occupation. The percentage of skilled workers in our survey data ranges from 0.24-0.35 depending on whether or not semi-skilled workers are also included; CBS did not include a semi-skilled category.

²CBS unemployment rate calculated by dividing the total number of unemployed persons by the total number of persons in the labor force.

³Population monthly income calculated by taking CBS average daily wage in Israeli pounds, converting to new Israeli shekels (NIS) and multiplying by twenty (days). Sample income is the modal income bracket; 900+ was the highest income bracket included in the survey.

Survey Administration, Questionnaire Design, and Data Structure

The survey consisted of a closed-ended questionnaire that was administered to respondents in person by a Palestinian enumerator from their home region. Questions about past participation in anti-regime resistance remain somewhat sensitive in Palestine today. To prevent social desirability bias and protect respondents, all questions regarding participation were self-administered by the respondent. Self-administration is the gold standard for collecting sensitive, individual-level data that cannot be collected using group-level methods like list experiments (Corstange, 2009; Groves et al., 2009). Using techniques adapted from Scacco's innovative study of riot participation (2012), all sensitive questions were contained in a separate questionnaire, which included no other personal information and was linked to the main questionnaire by a random number known to the principal investigator alone. The respondent completed this separate questionnaire by himself while the survey enumerator waited, usually in a separate room, and then placed it into a separate envelope from the main questionnaire that also contained other respondents' questionnaires. If the respondent were illiterate, the survey enumerator read the survey questions, answer choices, and instructions aloud while sitting sufficiently far away to allow the respondent privacy. All answer choices were numbered in such a way to allow illiterate respondents to complete the survey independently in response to the enumerator's instructions. Thus, for all respondents, the enumerator did not view the respondent's answers to sensitive questions and could not link these answers to other characteristics of the respondent recorded in the main survey questionnaire. These steps were carefully explained to all respondents during the informed consent process.

The survey collected data on individual participation in anti-regime resistance during the period from 1978 to 1989, over twenty years before the survey was conducted in 2011. Retrospective surveys such as this one raise important problems of accurate recall, even when they are conducted closer in time to the events they study: research shows that recall considerably worsens as little as one year after the events of interest and subsequently stabilizes. To mitigate these problems of accurate recall and collect reliable, time-sensitive information about individual behavior during conflict, the survey used an event history calendar or life history calendar ("LHC") questionnaire design. Life history calendars have been widely used in sociology, public health, and other fields and, in a direct experimental comparison, they have been shown to yield more complete and accurate reports of retrospective behavior than standard question list surveys (Belli et al. 2001). Yet, to my knowledge, this is the first political science study to use a life history calendar to study past political behavior.

In contrast to a traditional survey questionnaire, an event history calendar takes the form of a two-dimensional grid. The vertical dimension is divided by the variables of interest, for example marital status or income. The horizontal dimension is divided into the time units used in the study. These serve as timing cues that respondents can use to help them recall the timing of life events.⁵ The introduction to the survey also included a variety of "cognitive landmarks" - national and regional events as well as local and personal events filled in before the survey interview - as additional timing cues (Belli 1998, Axinn et al. 1999). Figures A.2 and A.3 depict a sample question from the survey questionnaire in event history format, as well as the introduction to the survey with cognitive landmarks.

⁵For more information on why LHCs help improve recall in retrospective surveys, see Belli (1998).

Figure A.2: Survey question in event history calendar layout

1.1	In year [1978...], were you single, married, widowed, divorced or separated?											
Marital Status	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	
Single	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
Married	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
Widowed	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
Divorced	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/> DK
Separated	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/> RF

Figure A.3: Landmarks domain of survey

Gregorian Year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Islamic Year	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408
Respondent Age											
Regional Events	Camp David Accords signed			Sadat assassinated	Second Israeli invasion of Lebanon	U.S. Marine barracks in Lebanon bombed		Achille Lauro incident			PNC meets in Algiers
National Events										First intifada begins	
Locality Events											
Personal Events											

In this study, the LHC collected data on respondents over six, two-year periods between 1978 and 1989. Data on participation was collected on the six two-year periods from 1979 to 1989, and data on the independent variables was collected on the six two-year periods from 1978 to 1988. This approach allows for lagging the independent variables in the analysis without having to truncate the time period covered by the survey.

The unit of analysis in the resulting dataset is thus the individual-period. For each individual respondent, there are six observations corresponding to six periods: 1978-79, 1980-81, 1982-83, 1984-85, 1986-87 and 1988-89. As described above, data on the independent variables was collected on the first (even) year of each period, and data on the dependent variables was collected on the second (odd) year of each period. The resulting dataset thus includes six observations on approximately 646 respondents for a total of 3876 complete observations.

Table A.3: Ease of Recall in Survey Sample (Coded by Enumerators)

Ease of Recall	Frequency	Proportions
<i>Very Easy</i>	134	0.22
<i>Easy</i>	154	0.25
<i>Neither Easy nor Difficult</i>	137	0.22
<i>Difficult</i>	137	0.22
<i>Very Difficult</i>	53	0.09
Total	615	1.00

Table A.4: Education and Participation in Anti-Regime Resistance (Excluding Respondents with Poor Recall)

Participation	Excl. “Very Difficult” to Remember	Excl. “Difficult” & “Very Difficult” to Remember
Age	0.09*** (0.01)	0.08*** (0.01)
Preparatory	1.08*** (0.18)	1.34*** (0.21)
Secondary	0.13 (0.19)	0.01 (0.22)
University	-0.23 (0.22)	-0.11 (0.24)
Household Amenities	0.17*** (0.04)	0.20*** (0.05)
Father’s Education	-0.68*** (0.18)	-0.91*** (0.21)
Constant	-2.61*** (0.28)	-2.79*** (0.34)
Observations	2541	1931

Logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.5: Education and Participation in Anti-Regime Resistance (with Aggregate Time Periods)

Participation	Baseline Model	Generational Effects Model
Age	0.07*** (0.01)	0.04*** (0.02)
Preparatory	1.08*** (0.20)	0.80*** (0.23)
Secondary	-0.06 (0.23)	0.02 (0.25)
University	-0.02 (0.26)	-0.00 (0.31)
Household Amenities	0.15*** (0.05)	-0.02 (0.05)
Father's Education	-0.57*** (0.21)	-0.52** (0.23)
Constant	-2.18*** (0.30)	-1.98*** (0.38)
Generational Effects	No	Yes
Observations	1447	1447

Logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

A.2 Reverse Causality

This section examines whether reverse causality could be driving the observed relationship between education and participation in anti-regime resistance. To do so, I estimate a model of the first *onset* of participation in anti-regime resistance. This model estimates the effect of education on the likelihood that a non-participant first begins to participate in anti-regime resistance. It excludes all individuals whose participation may have occurred prior to their decision to pursue a given level of education. Specifically, it excludes all individuals who reported participating in anti-regime resistance in the first year covered by the survey (1979).⁶ Since these individuals may have begun participating before 1979, this step ensures that a past history of participation cannot influence subsequent values of education in the analysis. All years after the first year of participation are also dropped, so that participation in one period cannot influence values of education in the next period and, thereby, the future likelihood of participation. Finally, as before, all independent variables are lagged by one year; lagging by three years produces substantively similar results (see below). Thus, the model estimates the effect of education in year t on the likelihood that an individual participates in anti-regime resistance for the first time in year $t+1$. Table A.6 estimates the model below, where y is the onset of participation, \mathbf{X} is the matrix of covariates and β is the vector of coefficients.

$$Pr(y_{i,t+1} = 1) = \text{logit}^{-1}(\mathbf{X}_{i,t}\mathbf{B}) \text{ s.t. } t \{1980, 1980 + 2, \dots, 1988\} \text{ and } y_{i,t=1979} = 0$$

Table A.6 suggests that education affects participation in anti-regime resistance and not vice versa. Among individuals who were non-participants at the outset of the study, preparatory education has a meaningful and statistically significant effect on the likelihood that they will begin to participate. This suggests that participation does not increase opportunities for educational attainment but the other way around. The effect of secondary schooling and university education also remain substantively similar, with university having a negative effect in all specifications.

Table A.7 reestimates the onset model in Table A.6 with all independent variables lagged further (i.e. “double lagged”). Table A.7 addresses the additional concern that, even if participation in one period cannot influence educational attainment in the next, participation within any given year could nonetheless influence decisions about educational attainment in the same year. To address this concern, Table A.7 estimates the onset model with all independent variables lagged by an additional two-year period. Because the structure of the data automatically lags all independent variables by one year, this is equivalent to a three-year lag. To illustrate with an example, this is equivalent to estimating the effect of a non-participant’s characteristics in 1978 on the likelihood that he *begins* to participate in 1981.

Table A.7 shows a similar pattern as before. Preparatory education has the largest consistent effect on the likelihood of participation in anti-regime resistance, with secondary education having a smaller effect and university education having a yet smaller and sometimes negative effect. Preparatory education is no longer statistically significant, perhaps because of the considerable loss of statistical power required to estimate this model. However, the probability of a false positive remains relatively low ($0.16 < p < 0.26$). Thus, it is still unlikely

⁶The first period covered by the survey is also excluded entirely, as including it would estimate the effect of education for non-participants only.

that preparatory education has no effect at all.

Table A.6: Education and the First Onset of Participation

Participation	Baseline Model	Generational Effects Model
Age	-0.03 (0.02)	-0.05 (0.05)
Preparatory	0.74** (0.38)	0.67* (0.38)
Secondary	0.49 (0.36)	0.50 (0.37)
University	-0.54 (0.47)	-0.33 (0.47)
Household Amenities	-0.15* (0.09)	-0.18** (0.08)
Father's Education	-0.26 (0.35)	-0.29 (0.34)
Constant	-3.10*** (0.59)	-2.20* (1.18)
Generational Effects	No	Yes
Observations	1552	1552

Multi-level logit coefficients and standard errors reported (in parentheses).

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.7: Education and the First Onset of Participation (Onset Model with Three-Year Lags)

Participation	Baseline Model	Generational Effects Model
Age	-0.04* (0.02)	0.04 (0.05)
Preparatory	0.45 (0.40)	0.56 (0.40)
Secondary	0.46 (0.42)	0.30 (0.43)
University	-0.17 (0.52)	0.15 (0.53)
Household Amenities	-0.07 (0.09)	-0.12 [†] (0.08)
Father's Education	-0.62 [†] (0.39)	-0.94** (0.43)
Constant	-1.08 (0.95)	0.79 (1.92)
Generational Effects	No	Yes
Observations	1213	1213

Multilevel logit coefficients and standard errors reported (in parentheses)

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

A.3 Personality Traits and Selection into Educational Attainment

This section shows that the observed relationship between education and participation in anti-regime resistance is not driven by the self-selection of more conscientious, socially responsible, and/or dutiful individuals into both higher levels of educational attainment and political participation. Conscientiousness is one of the most important predictors of educational achievement and success, with some studies suggesting its effect rivals that of intelligence (Poropat 2009). Previous research also suggests that conscientiousness and related personality traits may also exert an important influence on political participation. For example, drawing on the wider literature on personality traits in politics, Kam and Palmer propose that “personality traits that manifest during or prior to adolescence (e.g. sense of duty, efficaciousness, and willingness to delay gratification) may also be causal factors that propel both educational attainment and political participation” (2008, pp. 615). Similarly, because anti-regime groups may seek to mobilize more able, skilled and effective recruits (Bueno de Mesquita, 2005), more conscientious and efficacious individuals may also be more likely to be recruited into (and participate in) anti-regime politics.

To account for this possibility, I include a measure of conscientiousness as a control variable in the model. Conscientiousness is measured using a ten-item measure of the Big Five Personality Traits (Gosling et al. 2003); see survey questionnaire for exact wording of survey question (Part I). As expected, conscientiousness is positively correlated with preparatory school completion in our survey data ($r=0.17$). However, it is only weakly correlated with participation in anti-regime resistance ($r=0.08$), and its inclusion in the model does not change our core results as we would expect if self-selection were at work in the manner described above. Thus, the effect of education on participation is not simply due to the selection of more conscientious and efficacious individuals into both education and participation in resistance.

Table A.8: Conscientiousness, Educational Attainment, and Participation

Participation	Baseline Model	Generational Effects Model
Age	0.08*** (0.01)	0.05*** (0.02)
Preparatory	1.03*** (0.17)	0.82*** (0.19)
Secondary	0.07 (0.18)	0.03 (0.21)
University	-0.03 (0.21)	-0.04 (0.25)
Household Amenities	0.21*** (0.04)	-0.00 (0.04)
Father's Education	-0.69*** (0.17)	-0.65*** (0.20)
Conscientiousness	0.05 (0.07)	0.08 (0.08)
Constant	-2.95*** (0.49)	-2.69*** (0.62)
Generational Effects	No	Yes
Observations	2821	2821

Multilevel logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

A.4 Bounding Analysis of Missing and Absentee Data

This section shows that the paper’s findings are robust to addressing possible selection bias stemming from missing data on the dependent variable, as well as from our inability to survey “absentee” respondents. Data on participation is missing for approximately twenty percent of the main survey sample. These data are missing primarily due to failure to complete the entire survey rather than item non-response. However, if respondents’ propensity to complete the survey is associated with their level of education or other aspects of their socioeconomic status, this could potentially bias the findings.⁷

To address this possibility, I conduct a bounding analysis based on Manski’s extreme bounds (Manski 1995). I estimate the effect of education on the likelihood of participation in anti-regime resistance under two extreme assumptions: (1) the missing respondents are all participants (upper bound on participation); and (2) the missing respondents are all non-participants (lower bound on participation). The true effect of education on the likelihood of participation lies between its effect under the lower and upper bounds on participation. Because it is extremely unlikely that the missing respondents would be either all participants or all non-participants, this represents a very difficult test of the robustness of statistical effects to missing data.

Table A.9: Bounding Analysis

Participation	Baseline Model (with Missing Data)	Upper Bound	Lower Bound
Age	0.08*** (0.01)	0.07*** (0.01)	0.08*** (0.01)
Preparatory	1.07*** (0.17)	0.77*** (0.13)	1.12*** (0.16)
Secondary	0.01 (0.18)	-0.07 (0.15)	0.03 (0.17)
University	-0.01 (0.21)	-0.15 (0.17)	0.18 (0.19)
Household Amenities	0.21*** (0.04)	0.18*** (0.03)	0.21*** (0.04)
Father’s Education	-0.66*** (0.17)	-0.30** (0.13)	-0.83*** (0.16)
Constant	-2.63*** (0.27)	-1.62*** (0.20)	-3.11*** (0.28)
Observations	2874	3581	3581

Multi-level logit coefficients and standard errors reported.

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

⁷There is some evidence that socioeconomic status is associated with survey completion rates: while education is weakly correlated with survey completion (r=0.05), there is a moderately strong correlation between wealth and survey completion (r=0.20).

Table A.9 presents the results of the bounding analysis for the baseline model shown in Table 3 (Model (1)). Regardless of the assumed rate of participation among the missing respondents, preparatory education has a positive and statistically significant effect on the likelihood of participation in anti-regime resistance. Likewise, regardless of the assumed rate of participation among the missing respondents, secondary school and university completion do not significantly affect the likelihood of participation in anti-regime resistance. Finally, all other variables in the model also have consistent effects regardless of the assumed rate of participation among the missing respondents.⁸ Overall, these results give us confidence that the observed relationship between education and participation in anti-regime resistance is not due to selection bias introduced by missing data.

To analyze whether the absence of absentees from the main survey sample introduces any bias, I now replicate a simplified version of the bounding analysis above, now including all absentees. The model estimated is the same as that in Table A.9 but includes an alternate measure of socioeconomic status based on the individual's occupation.⁹ This measure is used because questions about household wealth and father's education were not included in the absentee questionnaire.

As seen in Table A.10, the results are very similar to those of the previous bounding analysis, as well as of the original, baseline model. Like the previous results, they show a positive effect of preparatory school completion on participation in anti-regime resistance, which diminishes with the completion of additional levels of education. As such, they give us further confidence that the observed relationship between education and participation in anti-regime resistance is not due to bias stemming from our inability to survey the absentee population.

⁸As in the baseline model, wealth increases the likelihood of participation; however, as in Table 3, this effect disappears with the inclusion of generational effects in the model.

⁹This measure codes individuals as having high socioeconomic status if they work in any one of the following professions: employer or manager, professional, or supervisory office worker.

Table A.10: Bounding Analysis including Absentees

Participation	Baseline Model (with Missing Data)	Upper Bound	Lower Bound
Age	0.10*** (0.01)	0.08*** (0.01)	0.10*** (0.01)
Preparatory	1.11*** (0.15)	0.83*** (0.12)	1.09*** (0.14)
Secondary	0.05 (0.17)	0.12 (0.14)	-0.04 (0.15)
University	0.02 (0.20)	0.04 (0.16)	0.05 (0.17)
SES	-0.56*** (0.19)	-0.51*** (0.14)	-0.43*** (0.16)
Constant	-2.58*** (0.24)	-1.44*** (0.18)	-3.22*** (0.25)
Observations	3074	4301	4301

Logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

A.5 Temporal Persistence

The article’s arguments imply that the impact of education on participation in anti-regime resistance endures over time (as participation, once having begun, is “sticky”). This section provides a more direct test of this hypothesis, which examines how *past* educational attainment affects future participation in anti-regime resistance. This test leverages variation in the survey data between those who were students in a given year and those who had already completed their education by that year (at any level of educational attainment). Specifically, it estimates the effect of education on participation in anti-regime resistance for the latter (i.e. past students) but not the former (i.e. current students). As seen below, the results are very similar to our previous findings. In contrast, if the impact of education did not persist over time, we would expect to find that education has little or no effect among past students. These results suggest that, as the article’s theory implies, education has a durable impact on participation in resistance.

Table A.11: Past Educational Attainment and Participation in Anti-Regime Resistance

Participation	Baseline Model	Generational Effects Model
Age	0.09*** (0.01)	0.06*** (0.02)
Past Preparatory	1.16*** (0.21)	1.04*** (0.23)
Past Secondary	-0.19 (0.22)	-0.31 (0.25)
Past University	-0.27 (0.24)	-0.08 (0.29)
Household Amenities	0.26*** (0.05)	0.04 (0.05)
Father’s Education	-0.60*** (0.21)	-0.74*** (0.25)
Constant	-2.84*** (0.36)	-2.51*** (0.58)
Generational Effects	No	Yes
Observations	2292	2292

Coefficients and standard errors reported (in parentheses)

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

A.6 Other Robustness Checks

Table A.12: Education and Participation in Anti-Regime Resistance (Fixed Effects Model)

Participation	Baseline Model	Generational Effects Model
Age	0.08*** (0.01)	0.05*** (0.02)
Preparatory	1.16*** (0.17)	1.02*** (0.20)
Secondary	0.01 (0.19)	-0.07 (0.22)
University	0.04 (0.22)	-0.01 (0.27)
Household Amenities	0.26*** (0.05)	-0.02 (0.06)
Father's Education	-0.77*** (0.18)	-0.89*** (0.22)
Constant	-2.93*** (0.47)	-2.47*** (0.62)
Generational Effects	No	Yes
Observations	2747	2747

Coefficients and standard errors reported (in parentheses).

All models include locality fixed effects and cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.13: Education and Participation in Anti-Regime Resistance (Polynomial Model)

Participation	Baseline Model	Generational Effects Model
Age	0.09*** (0.01)	0.06*** (0.02)
Education (years)	0.26*** (0.06)	0.20*** (0.07)
Education squared (quadratic)	-0.01*** (0.00)	-0.01* (0.00)
Household Amenities	0.21*** (0.04)	-0.01 (0.04)
Father's Education	-0.66*** (0.18)	-0.62*** (0.20)
Constant	-3.78*** (0.37)	-3.14*** (0.49)
Generational Effects	No	Yes
Observations	2797	2797

Logit coefficients and standard errors reported.

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.14: Prior School Attendance and Participation in Anti-Regime Resistance

Participation	Baseline Model	Generational Effects Model
Age	0.08*** (0.01)	0.05*** (0.02)
Attend preparatory	0.83*** (0.17)	0.71*** (0.19)
Attend secondary	0.36** (0.17)	0.17 (0.19)
Attend university	0.06 (0.17)	0.14 (0.21)
Household Amenities	0.21*** (0.04)	0.00 (0.04)
Father's Education	-0.66*** (0.17)	-0.66*** (0.20)
Constant	-2.83*** (0.28)	-2.40*** (0.40)
Generational Effects	No	Yes
Observations	2874	2874

Logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.15: Education and Participation in Anti-Regime Resistance (Excluding Outliers)

Participation	Baseline Model	Generational Effects Model
Age	0.09*** (0.01)	0.06*** (0.02)
Preparatory	1.11*** (0.17)	0.88*** (0.19)
Secondary	-0.03 (0.18)	-0.06 (0.20)
University	-0.32 (0.23)	-0.33 (0.29)
Household Amenities	0.22*** (0.04)	-0.00 (0.05)
Father's Education	-0.57*** (0.18)	-0.59*** (0.20)
Constant	-2.88*** (0.29)	-2.45*** (0.41)
Generational Effects	No	Yes
Observations	2795	2795

Coefficients and standard errors reported (in parentheses)

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.16: Education and Participation in Anti-Regime Resistance (Linear Models)

Participation	IV: Student Status	IV: Years of Education (Continuous)
Age	0.10*** (0.01)	0.08*** (0.01)
Education	0.51*** (0.18)	0.11*** (0.02)
Household Amenities	0.24*** (0.04)	0.22*** (0.04)
Father's Education	-0.42*** (0.16)	-0.74*** (0.17)
Constant	-2.64*** (0.30)	-3.17*** (0.30)
Observations	2783	2797

Coefficients and standard errors reported (in parentheses)

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Figure A.4: Education and Participation in Anti-Regime Resistance (Locally Weighted Scatterplot)

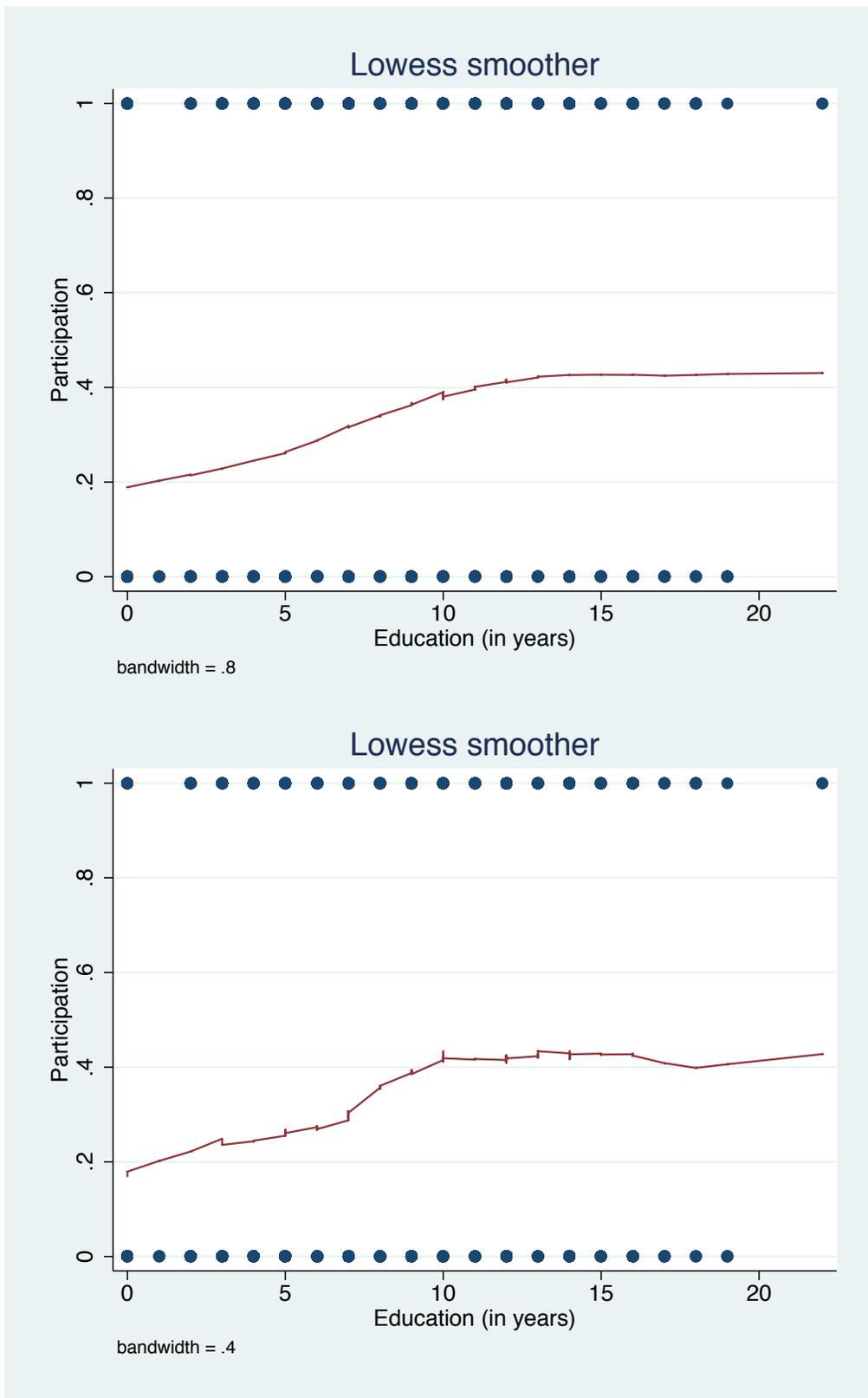


Table A.17: The Effect of Education on Participation in Anti-Regime Resistance (Baseline Model with Additional Controls)

Participation	(1)	(2)	(3)	(4)	(5)	(6)
Age	0.08*** (0.01)	0.07*** (0.01)	0.07*** (0.01)	0.06*** (0.01)	0.06*** (0.01)	0.05*** (0.01)
Preparatory	0.96*** (0.17)	1.11*** (0.17)	1.15*** (0.17)	1.11*** (0.18)	1.11*** (0.19)	1.22*** (0.19)
Secondary	0.07 (0.19)	0.01 (0.18)	0.05 (0.19)	0.27 (0.20)	0.29 (0.20)	0.28 (0.22)
University	-0.07 (0.22)	-0.08 (0.21)	-0.10 (0.22)	-0.11 (0.23)	-0.04 (0.23)	-0.12 (0.24)
Father's Education	-0.74*** (0.18)	-0.67*** (0.17)	-0.81*** (0.18)	-0.87*** (0.19)	-0.81*** (0.19)	-0.81*** (0.20)
Household Amenities (Log)	0.80*** (0.12)					
Household Amenities		0.21*** (0.04)	0.22*** (0.04)	0.19*** (0.04)	0.16*** (0.04)	0.16*** (0.05)
Marital Status		0.22 (0.17)	0.27 (0.17)	0.27 (0.18)	0.30* (0.18)	0.31 (0.19)
Refugee			-0.36* (0.21)	-0.11 (0.51)	-0.27 (0.51)	-0.23 (0.52)
Land Ownership				-0.46 (0.54)	-0.55 (0.55)	-0.57 (0.55)
Exposure to Violence					1.88*** (0.31)	1.82*** (0.33)
Religious Activity						0.28 (0.53)
Constant	-2.75*** (0.29)	-2.49*** (0.28)	-2.53*** (0.29)	-2.19*** (0.30)	-2.01*** (0.30)	-1.89*** (0.31)
Observations	2770	2807	2747	2494	2430	2316

Coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.17 reestimates the baseline model (Model (1) in Table 3), now controlling for six additional, possible confounding variables: the log transformation of wealth (i.e. logged household amenities), biographical availability, refugee status, exposure to violence, religious activity, and land ownership in mandatory Palestine. The results are also robust to adding these control variables to the generational effects model (Model (2) in Table 3).

These new control variables are measured as follows. Biographical availability – i.e. the absence of personal constraints that may increase the costs of participation in social movements, such as full-time employment, marriage, and family responsibilities (McAdam 1986) – is proxied through a binary indicator of marital status that varies over time (*Marital Status*).¹⁰ Refugee status is also measured as a binary variable, which is coded “1” if the respondent is a refugee (registered or unregistered) and “0” otherwise. Exposure to violence is a binary variable coded “1” in each year in which the respondent experienced physical harm, property

¹⁰In addition to these measures, it may also be captured through the inclusion of age and socioeconomic status in the model.

damage, or land confiscation at the hands of Israeli security forces or settlers and “0” in each year where he did not experience these events. Finally, religious activity and land ownership are also measured as binary variables. Religious activity is coded “1” in each year in which the respondent belonged to a religious society or club and “0” in all other years. Land ownership is coded “1” if the respondent’s parents or grandparents were the legal owners of land in British Mandate Palestine (i.e. before 1948) and “0” otherwise.

Table A.18: The Effect of Education on Participation in Anti-Regime Resistance (Simple Model Excluding Father’s Education)

Participation	Baseline Model	Generational Effects Model
Age	0.09*** (0.01)	0.06*** (0.02)
Preparatory	1.05*** (0.15)	0.79*** (0.17)
Secondary	-0.08 (0.17)	-0.08 (0.19)
University	-0.14 (0.20)	-0.10 (0.24)
Household Amenities	0.19*** (0.04)	-0.03 (0.04)
Constant	-2.78*** (0.25)	-2.40*** (0.37)
Generational Effects	No	Yes
Observations	3068	3068

Logit coefficients and standard errors reported

All models include cubic splines.

*p<0.10 **p<0.05 ***p<0.01

Table A.19: The Marginal Effect of Education Conditional on Family Status

	Family Status- High	Family Status - Low
Preparatory Education	0.23*** (0.05)	0.13*** (0.02)
Observations	610	2720

*p<0.10 **p<0.05 ***p<0.01