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**GRIEVANCES OR SKILLS? THE EFFECT  
OF EDUCATION ON YOUTH ATTITUDES  
AND POLITICAL PARTICIPATION  
IN EGYPT AND TUNISIA**

**Miquel Pellicer, Ragui Assaad,  
Caroline Krafft and Colette Salemi**

**Working Paper No. 1103**

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## Abstract

There are two prominent accounts of the 2011 Arab Uprisings and the role of education in youth mobilization. The first argument focuses on grievances: this hypothesis rests on a link between educational attainment and youth job aspirations that the labor market has not been able to fulfill. These unfulfilled aspirations fuel grievances and, hence, protest. The other argument focuses on mobilization costs. The central hypothesis is that education provides the skills, knowledge and/or contacts that facilitate political participation. This paper assesses and attempts to disentangle these two accounts by examining the effect of education on measures of grievance, political knowledge, and political participation using rich youth surveys from Egypt and Tunisia. In order to partially deal with the endogeneity of education, we control for parental education and sibling fixed effects. We find a strong and robust correlation of education with political knowledge and political participation, but not with grievances.

**JEL Classification:** I2, F5

**Keywords:** Grievances; Education; Youth; Political Participation; Egypt; Tunisia

## ملخص

هناك روايتان بارزتان عن الثورات العربية لعام 2011 ودور التعليم في تعبئة الشباب. وتركز الحجة الأولى على المظالم: تستند هذه الفرضية إلى الصلة بين التحصيل العلمي وتطلعات الشباب الوظيفية التي لم يتمكن سوق العمل من تحقيقها. هذه التطلعات التي لم تتحقق تغذي المظالم، وبالتالي الاحتجاج. وتركز الحجة الأخرى على تكاليف التعبئة. الفرضية المركزية هي أن التعليم يوفر المهارات والمعرفة و / أو الاتصالات التي تسهل المشاركة السياسية. وتقيم هذه الورقة محاولة فصل هاتين الحجبتين من خلال دراسة تأثير التعليم على تدابير التظلم والمعارف السياسية والمشاركة السياسية باستخدام دراسات استقصائية غنية للشباب من مصر وتونس. من أجل التعامل جزئياً مع تجانس التعليم، نتحكم في التعليم الأبوي والأخوة الأثار الثابتة. نجد علاقة قوية بين التعليم مع المعرفة السياسية والمشاركة السياسية، ولكن ليس هناك علاقة مع المظالم.

## 1. Introduction

The political mobilization of youth in the Middle East and North Africa (MENA) has received considerable academic attention in recent years. A common narrative has emerged from the literature that emphasizes the role of political and economic grievances in fueling individual protest activity (Costello, Jenkins, & Aly, 2015; Homan & Jamal, 2012; Lesch, 2014; Shaq, Mason, Seybolt, & DeLuca, 2014). However, social movement theorists have generally dismissed grievance-based theories of uprisings (Della Porta & Diani, 1999; Gurney & Tierney, 1982; McCarthy & Zald, 1987; Smith & Fetner, 2010). Critics point out that according to the grievance narrative, the more politically and economically marginalized would be more active in political mobilization activities. This supposition does not hold up to empirical investigation, as numerous studies found that “very few of the most deprived groups actually engaged in protest” (Smith & Fetner, 2010). But even though scholars of social movements have come to perceive grievances as a necessary but not sufficient condition for protest (McCarthy & Zald, 1987), the grievance-dominated narrative of the Arab Spring persists.

Our study aims to evaluate what we refer to as the “grievance theory” in the context of the Arab Spring in comparison to alternative explanations of what factors led to youth mobilization. To do so, we explore the well-documented link between education and political participation. It has become well accepted in the sociology and political science literature that a positive relationship exists between educational attainment and involvement in civic and political activities (Campante & Chor, 2012a). This relationship holds for both regular political channels such as voting and unconventional channels such as protest (Burden, 2009; Gallego, 2010; Glaeser, Ponzetto, & Shleifer, 2007; Hillygus, 2005; Milligan, Moretti, & Oreopoulos, 2004; Sondheimer & Green, 2010; Verba, Nie, & Kim, 1978). Studies of the Arab Spring in Egypt and Tunisia correspond to the findings in the literature: the more educated a young person was, the more likely they were to engage in revolutionary activities (Beissinger, Jamal, & Mazur, 2012; Sieverding & Ramadan, 2015).

A grievance-based explanation of the Arab Spring would need to show that the more educated are more likely to be aggrieved, which would explain their higher rates of participation in protests. There were various economic reasons for grievances among the educated on the eve of the 2011 revolutionary movements. Low returns to investments in education (Krafft, 2013; Nugent & Saleh, 2009; Salehi-Isfahani, Tunali, & Assaad, 2009; Rizk, 2016) and high unemployment and underemployment among this population (Dhillon, Dyer, & Yousef, 2009) translated into unfulfilled labor market aspirations and interruptions to key life transitions such as marriage and family formation. Yet the idea that these grievances were more severe than those experienced by uneducated youth living in or near poverty demands evaluation.

An alternative hypothesis that accounts for the education and participation link is the “democratic values theory”. Initially formulated by modernization theorists (Lipset, 1959), the main argument is that education instills democratic and pluralistic values such as support for free speech and equal opportunity (Dee, 2004; Milligan et al., 2004) and that these values fuel citizen demands for political reform. However, this hypothesis does not hold up in the context of the MENA region as strongly as it does elsewhere. Diwan Diwan2016c finds that “educated Arabs are much less emancipated by their education on political and social values compared to their global peers”. Although many Arab Spring activists advocated for democracy, Diwan’s findings suggest that formal schooling had little to do with the adoption of these ideals. Hence the democratic values theory proves insufficient for understanding the mobilization patterns of youth in the Arab Spring and is not tested in this work.

A final explanation, which we do investigate, is what we refer to as the “skill theory”. This framework is derived from the structural approach to social movement theory, which emphasizes the capacity of participants to engage in protest-related activities (Smith & Fetner,

2010). A foundational concept in this thread of social movement theory is the idea of mobilizing structures, understood as “those collective vehicles, informal as well as formal, through which people mobilize and engage in collective action” (McAdam, McCarthy, & Zald, 1996). By organizing the resources of participants (such as time), mobilizing structures serve to translate social grievances into demonstrations, sit-ins, marches, etc.

The seminal contributors to the mobilizing structures approach were heavily informed by social movements in developed countries during the mid-twentieth century (McCarthy & Zald, 1987). In this context, they examined highly formalized and increasingly professionalized social movement organizations. Such formal apparatuses were limited on the eve of the Arab Spring. Instead, online networks, including group and individual accounts on social media platforms, provided a mobilizing structure that served to convert youth resources and dissatisfaction into collective action (Breuer, 2016; Howard & Parks, 2012; Lynch, 2011; Tufekci & Wilson, 2012). Considering the concentration of mobilizing structures online, we should expect disproportionate social engagement in these resources. Access requires a computer, communication and literacy skills that the more educated may possess but the less educated may not. Thus, we would expect greater turnout to protests among educated youth on the basis of skills.

In an alternative interpretation of the link between education, skills, and protest, Campante and Chor (campante2014people, see also campante2012arab, campante2012schooling) argue that economic conditions affect an individual’s tradeoff between working and protesting. For youth facing low rewards to education in the labor market, the opportunity cost of engaging in political activism instead of working is low, which helps mobilize disaffected youth into the streets. When a young person’s human capital is not well rewarded by the market, they choose to apply their skills to revolution-based activities. Thus, Campante and Chor provide another channel through which skills may be the primary factor in translating grievances into collective action and protest.

Despite the relevance of the “skill” and “grievance” theories and the events they seek to explain, empirical evidence supporting or negating them as drivers of the Arab Spring is limited. This paper seeks to assess and disentangle the two hypotheses by analyzing the effects of education on youth grievances, political knowledge and political participation in Egypt and Tunisia. In order to do so, we analyze two rich data sets focusing on youth in these countries: the 2009 and 2014 Survey of Young People in Egypt (SYPE) and the 2012 World Bank Tunisia Urban and Rural Youth Surveys. We focus on youth between 21 and 29 years old.

Quantitative analysis that tests both theories has a practical relevance that goes beyond a purely academic interest in the 2011 Arab uprisings. If the “grievance theory” is valid, the political mobilization of highly educated individuals gives particular urgency to addressing the origins of such grievances in the labor market or the education sector. However, if the “skill theory” is correct, political activism by highly educated individuals need not be such a clear-cut signal of underlying social problems. Individuals with lower education may be holding important grievances that they are unable to articulate politically. These grievances thus remain latent and possibly unaddressed. Of course, these theories are also not mutually exclusive, as education may simultaneously generate grievances *and* impart skills for mobilization.

We operationalize grievances using questions on life satisfaction, happiness, and trust in the state (satisfaction with the country, for the case of Egypt). In order to assess the “skill” theory, we focus on questions regarding political knowledge. Finally, for political participation, we consider voting in elections in both Tunisia and Egypt, as well as participation in the 2011 uprising for the case of Egypt. Voting behavior is not necessarily the way grievances will manifest, but alternative measures were not available for Tunisia.

Raw correlations between education and these indicators are informative but cannot be interpreted causally. The theories we seek to assess attribute a causal effect to education; however, data limitations prevent us from undertaking a genuinely causal approach such as making use of policy changes to instrument for education (see (Pekkarinen & Pellicer, 2013) and (Pellicer, 2016) for studies using such methodologies for Tunisia). Nevertheless, we try to address one of the most important potential sources of bias - family background - by controlling for parental education and by performing sibling fixed effects analyses.

We find strong correlations between education and political information as well as political participation variables. Moreover, most of these correlations do not appear to be driven by family background, since the coefficients are not very sensitive to the introduction of parental education or sibling fixed effects. This provides support for the “skill” theory. In contrast, we find little evidence supporting the link between education and grievances. Youth with high educational attainment generally tend to be happier, more satisfied with their lives and more satisfied with the status of their country compared to less educated youth, although these effects tend to disappear once we control for family background. Moreover, when adding grievance and political knowledge variables to a model including education, the coefficient on education decreases, particularly with political knowledge, suggesting that part of the effect of education is via political knowledge rather than grievances.

We perform some robustness tests on the basic result that education appears unrelated to grievances. We consider the possibility that the education-grievances relationship is non-linear. Evidence in (Assaad & Krafft, 2015) suggests that secondary school graduates, most of whom pursued the vocational track, have lost the most over time in terms of public sector employment opportunities, which were for the most part replaced by poor job prospects in the informal economy (Assaad, 2014). However, even when focusing exclusively on secondary school graduates, we find no evidence that this group displays the highest grievances. We also conduct the analysis for older males in our sample (those between 26 and 29 years old). These are arguably the ones most likely to suffer from education-related grievances, given that they are almost certain to have finished studying and encountered the challenging labor market environment. We find no evidence that the educated among them are less satisfied. Ultimately, our results are in line with current conventional wisdom attributing more explanatory power to opportunity-based accounts of violence and protest than to “grievance-based” accounts (see for instance (Collier & Hoeffler, 2004) and Fearon and Laitin (2003)).

The paper is organized as follows. Section 2 describes the data and the empirical approach. Section 3 presents the results and section 4 provides some concluding remarks.

## **2. Data and Empirical Approach**

### **2.1 Data**

We use the 2012 World Bank Tunisia Household Surveys on Youth in Urban and Rural Areas (THSYUA and THSYRA) and the 2009 and 2014 Survey of Young People in Egypt (SYPE). The THSYUA and THSYRA were actually administered separately and some items in the questionnaire differ between the two. Except for one question on political knowledge, we choose variables present in both surveys. Both surveys contain a household module with socioeconomic information and a special youth module to be answered by individuals from 15 to 29 years old with detailed questions on attitudes. In the THSYUA 4,214 households and 3,936 youth were sampled, while in the THSYRA 1,400 households and 1,396 youth were sampled.

The SYPE was first fielded in 2009, prior to Egypt’s 2011 revolution. The 2009 round included 15,029 youth aged 10-29 (Population Council, 2011). The post-revolution second round was fielded in 2013/14 and successfully tracked 72% of the 2009 sample, a total 10,916 youth

(Roushdy & Sieverding, 2015). Sample weights, which reflected the sampling strategy in 2009, were updated in 2014 to account for attrition. In both the 2009 and 2014 rounds, household data were collected, as well as information from individual youth. In the youth questionnaires, there are detailed modules about educational experiences, political participation, and opinions. In the 2013/14 round, there are specific questions relating to the revolution.

## **2.2 Variables**

We restrict our attention to concepts that can be captured by the surveys in the two settings in a reasonably homogeneous way. The data appendix provides a full account of all variables, including the original survey questions and their possible responses, as well as our coding of the relevant variables. To capture the concept of grievances, we use life satisfaction, happiness and attitudes towards the state. Of the three variables, happiness is possibly the least clearly related to grievances. We keep it because it is the only one present in the 2009 SYPE data set.

The questions on life satisfaction and attitudes towards the state in the Egyptian survey are somewhat unusual. For the 2014 SYPE, these questions are part of a module on community values and are asked explicitly in reference to the major political events in Egypt in recent years. Specifically, the three questions ask about life satisfaction before the 25th January revolution, from January 25th, 2011 to June 30th, 2013 (when former president Mohammed Morsi was ousted), and since June 30th, 2013. Three further questions cover the same periods, but ask about satisfaction with the state of the country instead of life satisfaction. Because these questions target such specific political situations, we believe that they can be misleading as measures of general satisfaction. This is particularly so given that we seek to test theories that deal with socioeconomic grievances, and not exclusively political ones. We thus simply take as measure for satisfaction the average of the satisfaction variables in the three periods, whether it be referring to life satisfaction or satisfaction with the country. In contrast, in the Tunisian survey, questions about life satisfaction and attitudes towards the state are more standard. The life satisfaction question simply asks the extent to which one is satisfied with one's life. The question on attitudes towards the state is part of a battery of questions asking about trust in various institutions, one of which is the state.

For political knowledge, we use two indicators: one on self reported knowledge of politics, and another on "objective" political knowledge. The latter asks a question of political knowledge (voting age in Tunisia, and the name of the governor of the respondent's governorate in Egypt) and codes whether the answer is correct or not.

Finally, for political participation, we use questions on voting and, for Egypt, on participation in protest events or related activities connected with the revolution. On voting, questions are slightly different across surveys. The Tunisia surveys ask about voting for the 2011 Constituent Assembly elections. For the 2014 SYPE, there are questions on voting in different elections. We use the one we consider most comparable to the Tunisian one, the parliamentary election rounds of 2011/2012. For 2009, the situation is obviously very different and so is the question, which is about having ever voted previously.

It is particularly fortunate that for Egypt there is information on participation in the January 25th revolution. There are questions on participation in different types of activities, such as participation in party meetings, or providing support for protesters. We create a participation variable equal to one if the respondents participated in any of these activities (except for participation in security-related night watches, which can be considered a non-political activity). The SYPE 2014 also asks respondents about whether family and friends participated in the revolution. This is potentially a superior variable to reports of own participation in a political context that was increasingly characterized by repression and a criminalization of protest activity. We therefore complement variables on respondent participation with measures of the participation of friends as well as respondent support for the revolution.

Our main explanatory variable is education. We consider levels of education and define three categories: less than secondary, secondary, and university. If a respondent had completed at least one year at a level, but not necessarily completed the entirety of the level, they were incorporated into that category. The secondary category includes vocational secondary, general secondary and lower secondary (typically years of education 6 to 9) in the two countries. The university category includes any post-secondary education. We restrict our sample to those over 21 years old to make sure that individuals would have already enrolled in higher education if they were going to do so.

### ***2.3 Descriptive statistics***

Table ?? provides the summary statistics of our samples. The results appear sensible, picking up well-known differences between Egypt and Tunisia, such as the slightly greater youth educational attainment in Tunisia (Krafft and Alawode, 2016), or later ages at marriage and more nuclear households (Assaad, Ghazouani, and Krafft, 2016, Salem, 2015) leading to a higher incidence of being the son or daughter of the household head in Tunisia. It is important to note that the outcome variables are not strictly comparable across countries, for the exact question asked in each country differs. Another important point to note is the high number of missing values in the parental education variables of the Tunisian sample. This reflects, partly, the fact that in this survey parental education is not available when parents do not live in the same household as their children, but also a relatively high prevalence of genuine missing values. The table also makes clear the aforementioned discrepancy between respondents in Egypt in 2014 reporting that they have actively participated in the revolution and those that say that their close friends and family did.

### ***2.4 Empirical approach***

Our main empirical approach is straightforward. We use a simple linear probability model and estimate it using OLS with standard errors robust to heteroskedasticity. In the basic specifications, we control for sex, a full set of age dummies, governorate dummies, birth order dummies and a rural/urban indicator. When attempting to control for family background, we use two approaches. First we control for parental education. Second, we restrict the sample to households with more than one child over 21 with different education levels and perform a regression with sibling fixed effects on this sample.

These two approaches can generate sample selection problems. Because education can causally affect decisions to leave the parental household, parental presence in the household is endogenous. Controlling for variables related to respondents remaining in their parental household might therefore yield results that are difficult to interpret. The age at which individuals typically leave their household also varies across countries and by background. Among recent generations in Egypt, female median age at marriage has been around 21 and male median age at marriage around 26. In Tunisia, the female median age has tended to be 27 and the male median age around 32 (Krafft & Assaad, 2016). Additionally, more educated individuals tend to marry later in both countries (Assaad, Ghazouani, & Krafft, 2016; Salem, 2015). These patterns affect who remains in their natal households. As an example, suppose that proceeding to university causes young women to delay marriage and leave the household. Then, analyzing households with women over 21 and with different education can be problematic. Comparing women with low and high education will be misleading, as the former will be a selected sample in that they remained in their natal household despite not continuing their education.

In our case, this is a problem particularly for Tunisia, where parental and sibling information is restricted to those living in the household at the time of the interview. In Egypt, in contrast, parental education was asked to all youth in 2014, regardless of whether the parents live in the same household or not. Sibling fixed effects still require both siblings to be present in the same

household, but even then the problem is alleviated by the panel component of the survey: 21 to 29 year-olds in 2014 were 5 years younger in 2009, and many siblings can be matched as long as they lived together in 2009 and were still observed in the 2014 round.

In light of these selection problems, we proceed as follows: (1) we show the basic results with the full sample and with no controls for family background, (2) we show the results with the restricted sample, but still without controlling for family characteristics, and (3) we provide the results with both the restricted sample and the controls for family background. A comparison between (1) and (2) illustrates the potentially problematic sample selection issue, whereas a comparison between (2) and (3) illustrates the result of actually controlling for family background.

### **3. Results**

#### ***3.1 Basic results***

Table ?? shows the basic regression results, without controlling for family background, for Tunisia in 2012, and for Egypt in 2014 and 2009. Each column corresponds to a different outcome variable. The table displays only the coefficients for education, with the omitted category being primary or no formal education. All regressions control for the basic characteristics mentioned above, such as age, gender, etc.

The first panel of the table deals with political participation. The two theories we are considering both imply that education should be positively related to political participation, particularly participation in the 2011 uprisings. The table shows that more educated individuals are indeed more likely to be politically active. Education is positively related to voting in Egypt in both 2014 and 2009 and in Tunisia. Moreover, for Egypt, education appears clearly correlated with participation in the revolution, according to virtually all of the indicators we use.

The second section of the table addresses the potential “grievances” channel. According to the grievance theory, education ought to be linked with *less* happiness, lower life satisfaction and more negative attitudes towards the country. This is not, however, what we observe in the table. Results are often not statistically significant but generally seem to go in the opposite direction than hypothesized, with more educated individuals displaying fewer grievances. The only exception is satisfaction with (trust in) the state in Tunisia, which seems highest for individuals with the lowest levels of education. Overall, individuals with more education do not appear to be less happy or less satisfied with their lives.

Results on the “skill” theory are much more clear-cut and robust. Individuals with more education consistently appear to display higher levels of political knowledge, and this applies both to self-reported levels of knowledge as well as objective knowledge. This also holds true for Egypt in both 2014 and 2009 and for Tunisia.

#### ***3.2 Potential bias from family background***

The previous correlations could simply be driven by family background, if children of higher socio-economic status parents obtain more education, display higher political involvement and political knowledge, and report higher life satisfaction than those with lower socio-economic status parents. In this section, we address this issue by controlling for family background, first by controlling for parental education and then by including sibling fixed effects.

Tables ??, ??, and ??, show the results of this exercise. Given that controlling for parental background results in a smaller, and therefore possibly selected, sample, we disentangle the effect of the sample selection and that of the actual controls by including the results with the selected sample but without the family background controls. For Tunisia, this applies to both the parental education model and the sibling fixed effects model, whereas. For Egypt, the

sample selection issue arises only for the sibling fixed effects model because information on parental education is available for everyone.

Table ?? considers political participation. For Egypt, results are remarkably robust. Neither controlling for parental education, nor restricting the sample to those with siblings with different education, nor actually controlling for sibling fixed effects in that sample substantially alters the coefficients, although results sometimes become insignificant. This applies for voting as well as for our different indicators of participation in the 2011 revolution. For 2009, results for voting eventually become insignificant when considering the sample of siblings, but this is because of a decline in precision due to the loss of sample size rather than a reduction in the coefficient size. For Tunisia, results are slightly less robust. Whereas the coefficient remains essentially unchanged after controlling for parental education, it eventually becomes small and loses significance once sibling fixed effects are included. In summary, whereas we can confidently conclude that the role of education for political participation in Egypt is not due to confounding by family background, conclusions regarding participation in voting in Tunisia are less robust.

Table ?? considers grievances. In this case, coefficients generally become small and statistically insignificant once we control for family background, and this applies to both Tunisia and Egypt. Controlling for parental education does not affect coefficient estimates, but sibling fixed effects do. In most cases this is a result of restricting the sample rather than including the sibling fixed effects themselves. In any case, it appears quite clearly that there is no regular pattern between education and grievances that can be discerned from the data. Certainly, this evidence supports our overall conclusion that the data does not support the grievance theory.

Finally, table ?? considers political knowledge. In this case, results remain quite strong even after controlling for family background. As in the case of political participation, results are particularly robust when it comes to Egypt, where for both objective and self-assessed knowledge, and for both 2014 and 2009, coefficients remain large and statistically significant despite controlling for family background. For Tunisia, again results are slightly less robust. Whereas for objective political knowledge coefficients remain strong even with family background controls, those for subjective knowledge drop to zero when sibling fixed effects are included. However, the table shows that this is the result of the sample selection process rather than the inclusion of the sibling fixed effects as such. Although, once more, the degree of confidence in the Tunisian results is lower, it appears that overall political knowledge is not driven by family background confounders.

These results imply that the associations between education and the various outcome variables obtained above are not driven primarily by family background. The conclusions on grievances also remain unchanged: it appears that education does not lead to less satisfaction even when family background is taken into account. Of course, we still cannot claim that our results are causal. It could well be that other biases induced by personal attributes such as ability, ambition or motivation underlie the associations we observe. Nevertheless, we believe our analysis is an important step forward in that it rules out one of the most important potential confounders.

### ***3.3 Path analysis***

Our initial hypotheses state that education affects political participation, either through grievances or through the skills/knowledge pathways. Estimating the effect of education on each of these outcomes is a transparent way of testing the model: if the grievance (skills) theory is true, we ought to observe a positive relation between education and grievances (skills), and a positive relation with political participation. Failure to observe any of this puts the theory seriously in question.

This approach is, however, incomplete. Estimating each effect separately cannot address the question of whether education leads to political participation *because* of its effects on grievances or skills. A more satisfactory way of testing this would be to specify a structural model with all these variables. However, in order to estimate such model convincingly, valid instruments for all relevant endogenous variables would be needed. Using invalid instruments leads to bias that can be larger than that of OLS. Since instruments for the different endogenous variables are not available, we choose not to pursue this avenue.

A less comprehensive but also less demanding approach to test our hypotheses is to focus on particular causal pathways and use simple sequential regressions to examine whether coefficients of interest change as other variables are added into the model in accordance with the hypothesis. In particular, we regress voting and participation for the revolution, first on education (and controls) alone, and then separately add measures of grievance and of skills to the model. The idea is that if education affects political participation via grievances (or skills), the addition of a grievance (skill) measure ought to reduce the coefficient of education. Indeed, at the limit, if all the effect of education on political participation occurred via grievances (or skills), we would expect no correlation between education and political participation, once we control for grievances (or skills). Again, such an approach would ideally utilize exogenous variation in the variables of interest, which is not available to us. Hence, we take such an approach as a heuristic exercise that, while not ideal, can nevertheless provide useful additional insights. Our regressions are estimated by simple OLS, using the same controls as before, including parental education. To obtain single measures of grievance and political knowledge, respectively, we perform a principle component analysis on our multiple measures of each of these two concepts. The variable we finally take as a proxy for each of the concepts is then simply the first component of the principal component analysis. For the grievance measure we reverse the sign of the component so that the variable captures grievance instead of satisfaction.

Table ?? shows the results of the exercise. The table includes analyses for four outcome variables: voting in Tunisia, voting in Egypt, and participation in the revolution in Egypt. For each outcome, the first column shows the coefficients for education alone, the second and third columns add our index for grievances and political knowledge, respectively, and the fourth column adds both grievances and political knowledge. The main insight from the table is that the coefficient for education drops very little when we add the grievances proxy variable to the model, but shrinks considerably when we add the knowledge proxy. The pattern is particularly marked for Egypt. This is consistent with the results above, suggesting that part of the effect of education on political participation occurs via political knowledge and not via grievances. However, it is worth stressing that the coefficient for education remains fairly large even after adding the knowledge variable to the models. This could be because education affects participation via other skills and resources, or because our proxies for knowledge only measure knowledge imperfectly.

One of the key mechanisms through which we expect education to link to mobilization is social media skills. Additional analyses of the data (not shown) suggest such a relationship. In Egypt and Tunisia, we find that for young people (ages 21-29), educational attainment and internet use are positively linked, and in Egypt, more educated youth were more likely to see social media as an “important” resource for staying informed about the January 25th Revolution. The findings suggest that educated youth with certain skill advantages had greater access to mobilizing structures as compared to their less educated counterparts.

Another result from table ?? worth mentioning is that the grievance variable has a negative (albeit small) coefficient in all regressions. That is, individuals with more grievances are *less* likely to participate politically, controlling for education. This, again, reinforces the overall

message that grievances do not appear to be primary drivers of political participation in this context.

### **3.4 A further look at grievances**

The above results suggest that there is no clear monotonic relation between education and grievances. However, there are three reasons why these results may fail to capture the possible role of grievances in political participation, especially protest activity. First, the relation between education and grievances may be non-monotonic. Second, grievances may be concentrated in particular demographic groups (for example, the older males in our subsample, which are likely to have finished studying and have already faced a challenging the labor market environment) and this may be diluted when considering the whole population of youth. Third, grievances may have subsided after the respective revolutions, the period when most of the data was collected.

We consider first the possibility that the relationship between education and grievances is more complex than a simple monotonic relation. In particular, it may be that those with the most education have not been the ones suffering the most from the retrenchment of public sector jobs and are thus not the ones holding the strongest grievances. The coarse definition of education used above may obscure this pattern. In fact, there are reasons to believe that, at least for the case of Egypt, those with the highest grievances could be secondary school graduates (most of whom would have pursued the vocational track). This education group appears to have lost the most, as they formerly had guaranteed access to public sector jobs but no longer do (Assaad, 1997; Assaad & Krafft, 2015). This is also the group for whom returns to education have dropped the most and are currently close to zero (Krafft, 2013). The situation is not so clear for Tunisia, where public sector employment guarantees did not exist.

In order to address this potential non-linearity, we re-examine the grievance-related outcomes using as the explanatory variable a more refined measure of education, which breaks down secondary schooling into lower secondary school (which never had public sector job guarantee), vocational secondary, and general secondary tracks. We run the same analyses as before for both Egypt and Tunisia even if for Tunisia no specific pattern is anticipated.

The results of the exercise are shown in Table ???. The omitted category is again primary or no formal education. Again, the table does not display a very clear pattern. In particular, the coefficients for vocational secondary are generally positive, even if mostly statistically insignificant, contrary to the idea that this group holds the highest grievances. If at all, the table suggests that individuals with the highest education levels, general secondary and with university studies tend to be happier, more satisfied with life and with their country, although the effects become small and statistically insignificant when considering sibling fixed effects. The only exception is trust in the state in Tunisia, where the individuals with the least education tend to have the highest levels, as we saw earlier.

All in all, it does not appear that the lack of a correlation between education and grievances comes from ignoring the potentially non-linear nature of the relationship. Of course, this does not mean that more educated individuals, or those specifically with vocational secondary education are not the ones that have lost the most in terms of public sector employment opportunities. However, this does not appear to translate directly into satisfaction or attitudes towards the state, and this puts into question the relevance of the grievance hypothesis for political mobilization.

Second, we consider whether grievances may be concentrated in specific demographic groups. To this end, we rerun the analysis for males over 25. In our data, the sample of male siblings over 25 with different educational attainment is very small, so we perform the analysis with parental education controls, but without sibling fixed effects. Table ??? shows the results. Again,

we do not observe any clear pattern of higher dissatisfaction for those with more education. Generally coefficients are small and those that appear as statistically significant tend to be positive. It appears that even among older male youth, education does not seem to be associated with grievances.

The third potential concern, the fact that most results refer to post-2011 data, cannot be addressed fully. The only piece of evidence in this regard is the information on happiness in the 2009 Egypt survey. Results for this survey appear generally as inconclusive as the others, although in some instances education coefficients do appear negative and sizable (although never statistically significant). Overall, even when focusing on 2009, the grievance hypothesis does not seem to garner significant support in our analysis.

#### **4. Concluding Remarks**

In this analysis, we investigated two alternative theories linking youth political activism to education. The “skill theory” suggests that education provides useful skills for political mobilization because of a greater ability among the educated to perceive political problems, to transform grievances into action and to receive and transmit political knowledge to peers. The “grievance theory” suggests that education confers aspirations that are unfulfilled and the resulting frustration and sense of grievance drive youth to political action. We attempted to distinguish among these two theories in the context of the recent political mobilizations in Egypt and Tunisia by examining the link between education and several political outcomes, while controlling for both observable and unobservable family background characteristics. To assess the grievance pathway, we use as measures of life satisfaction, happiness and trust in the state, or satisfaction with the state of the country, as outcomes. To assess the skills pathway, we use both objective and subjective indicators of political knowledge. Finally, we examine the direct effect of education on political participation, which could be the result of either pathway, by using a number of outcomes such as voting, participation in the revolution (by respondent and by respondent’s family or friends) and support of the revolution. Unfortunately, the revolution-related outcomes are only available for Egypt and not Tunisia.

Our results support the link between education and political participation. Education is positively associated with voting in Tunisia and in both waves of the SYPE survey in Egypt. What seemed to matter in terms of voting behavior in Tunisia was having attending some type of higher education, with secondary education having no statistically significant effect. We acknowledge that voting may not be a quality proxy of political action, as voting has lower costs and requires less human capital than other forms of political activity (Verba and Nie 1972, Campante and Chor 2014). Education is also strongly associated with support for the revolution in Egypt, and higher education appears to be strongly associated with either one’s own self-reported participation or that of family and friends (which we take as a strong proxy for one’s own participation in a repressive political context where respondents might fear reporting their own participation).

We attempt to account for potential confounders by including controls for parental education as well as sibling fixed effects. Even then, the association between education and political participation remains robust. In the case of Tunisia, the inclusion of parental education controls involves restricting the sample to youth 21-29 still living with their parents, which cuts down the sample by slightly more than half; this could result in sample selection bias. Nonetheless, the positive association between higher education and voting persists in Tunisia after the sample restriction and the inclusion of the parental education variables. The inclusion of sibling fixed effects results in a further restriction to the sample to households with two siblings in the 21-29 age group. This results in a sample of just 428 youths, a mere 15 percent of the original sample. The effect of education on voting in Tunisia disappears and becomes insignificant when such a sample is used.

In the case of Egypt, we do not need to restrict the sample to include controls for parental education because such information is available for all youth in the SYPE survey, irrespective of whether they still live with their parents. When parental education controls are included, the association between education and voting, as well as the correlation between education and support for the revolution is virtually unchanged. Similarly, the association between university education and respondent's personal, family, and friend participation in the revolution is also unchanged. The inclusion of sibling fixed effects does require a restriction of the sample in Egypt as well, but because of the panel nature of the survey, it is sufficient to have the pair of siblings living together in the same household in the early round of the survey (2009) to identify them as siblings in the later round (2014). Even with the inclusion of sibling fixed effects, the strong association between education and voting in Egypt remains robust in 2014, but nearly disappears in 2009. On the other hand, the association between education and other forms of political participation in Egypt (i.e. participation in the revolution and support for the revolution) virtually disappears when sibling fixed effects are used.

In our attempt to distinguish between the two alternative pathways through which education can affect political participation, our results point toward the skill rather than the grievance hypothesis. In fact, we find that education, especially higher education, is positively associated with the life satisfaction and happiness outcomes in both Egypt and Tunisia, casting doubt on the hypothesis that the more educated harbor greater levels of grievances. These results are robust to the inclusion of parental education controls in both settings and in both years in Egypt. However, they are not robust when the sample is restricted to households with two siblings in the 21-29 age range, which is likely reflection of the limited sample size rather than the inclusion of the sibling fixed effects. The results on the trust in the state (in the case of Tunisia) and the satisfaction with the state of the country (in the case of Egypt) are more mixed. In Tunisia, education, and in particular secondary education, appears to have a negative effect on "trusting the state": the results are robust, if not a bit stronger, with the inclusion of parental education controls. This lends some limited support to the grievance explanation. In Egypt, on the other hand, satisfaction with the state of the country, which is only measured in 2014, is positively associated with attaining higher education. Again, this result is robust to the inclusion of parental education controls, but not to the inclusion of sibling fixed effects.

Support for the skill pathway is provided by the strong association between education and both objective and subjective political knowledge in Egypt, even with the inclusion of parental education controls or sibling fixed effects. The results for Tunisia are less robust. Although the results excluding the family background controls show strong association between education and political knowledge in Tunisia, when parental education variables are included in the model, the association with objective knowledge becomes statistically insignificant. When sibling fixed effects are included, the Tunisian results are statistically insignificant, potentially because of the sample restriction involved rather than the inclusion of the fixed effects.

Arguing that educated youth are at least as satisfied with life as their less educated counterparts is not tantamount to saying that low and decreasing economic returns to education in the Arab World should be ignored. In fact, according to Campante and Chor (2014), it is the low economic returns to education that lower the cost of political participation on the part of educated youth, allowing them to channel more time and effort toward political mobilization. Furthermore, our results do not say anything about whether grievances among educated young people, who demonstrably have a greater capacity to mobilize than their less educated counterparts, have increased over time and are thus playing a bigger role in political mobilization.

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## Data Appendix

	Tunisia	Egypt 2014	Egypt 2009
<b>Vote</b>	Did you elect in the Constituent Assembly elections? 1. Yes 2. No 3. Underage	5505) Did you vote in the November 2011 January 2012 parliamentary elections round 1? Yes (1) No (2)	459) Did you vote in any election in the past? Yes (1) No (2) 460) Will you vote/register and vote at the next election? Yes (1) No (2)
Code	1 = 1	1 = 1	1 = 1
<b>Participate revolution</b>		5405) Think about the period since the start of the January 25th revolution. Which of the following activities did you take part in? A. Participated in party meetings or activities Yes (1) No (2) B. Donated money to a political party or organization Yes (1) No (2) C. Contacted politicians Yes (1) No (2) D. Collecting signatures/Signed petitions Yes (1) No (2) E. The Population Council-Egypt office 10 E. Participate in night watches to protect your neighborhood. Yes (1) No (2) F. Provided support to protesters Yes (1) No (2) G. Participated in any kind of protest demonstration. Yes (1) No (2) G.1 Where? H. Joined a strike Yes (1) No (2) I. Used violent forms of action Yes (1) No (2) J. Elections campaigns Yes (1) No (2)	
Code		1 = Yes to any except E	
<b>Support revolution</b>		5422) Did you support the January 25th revolution? (1) Yes (2) No	
Code		1=1	
<b>Satisfaction life</b>	To what extent are you satisfied with your life 1. Not satisfied at all 2. Satisfied to some extent 3. Neutral 4. Satisfied enough 5. Very satisfied 6. Not applicable	5305) With 1 as being worst possible and 10 as being best possible, A. How do you feel about your life before January 25th revolution, B. How do you feel about your life from January 25th 2011 to June 30th 2013, C. How do you feel about your life after June 30th 2013	
Code	1 to 5	1 = average (A, B, C)	
<b>Happiness</b>	Generally do you consider yourself 1. unhappy at all 2. happy to some extent 3. happy enough 4. very happy	605) Do you feel unhappy? Yes (1) No (2)	605) Do you feel unhappy? Yes (1) No (2)
Code	1 to 4	1 = 2	1 = 2
<b>Satisfaction country</b>	To what extent you trust in the following institutions? State A. No trust B. Low trust C. Good Trust D. High Trust	5305) With 1 as being worst possible and 10 as being best possible, A. How do you feel about the state of the country before January 25th revolution, B. How do you feel about the state of the country from January 25th 2011 to June 30th 2013, C. How do you feel about the state of the country after June 30th 2013	
Code	1 to 4	average (A, B, C)	
<b>Knowledge subjective</b>	How can you describe your knowledge about the following? Politics 1. I don't know 2. Limited knowledge 3. Good knowledge 4. Very good knowledge	5416) To what extent do you agree with the following statements? I feel like I have a pretty good understanding of the important political issues which confront our society 1. Strongly agree, 2. Agree, 3. Neither agree nor disagree, 4. Disagree, 5. Strongly Disagree	
Code	1 to 4	1 to 5	
<b>Knowledge objective</b>	What is the minimum age for voting in election?	461) Do you know the name of the governor of your governorate? Name: _____ Correct (1) Wrong (2)	461) Do you know the name of the governor of your governorate? Name: _____ Correct (1) Wrong (2)
Code	1 = 18	1 = 1	1 = 1

**Table 2: Summary Statistics**

	Tunisia		Egypt 2014		Egypt 2009	
	N	Mean	N	Mean	N	Mean
<b>Demographics</b>						
Age	3199	25.03	4832	24.84	4277	24.74
Female	3199	0.52	4832	0.53	4277	0.58
SonDaughter	3199	0.76	4832	0.51	4277	0.45
<b>Background</b>						
Mother Less than Secondary	1777	0.77	4825	0.8	4267	0.88
Mother Secondary	1777	0.2	4825	0.16	4267	0.09
Mother University	1777	0.03	4825	0.05	4267	0.03
Father Less than Secondary	1816	0.59	4831	0.69	4272	0.78
Father Secondary	1816	0.33	4831	0.22	4272	0.16
Father University	1816	0.08	4831	0.09	4272	0.06
<b>Education</b>						
Less than Secondary	2899	0.17	4831	0.21	4277	0.36
Secondary	2921	0.5	4831	0.51	4277	0.46
University	2921	0.33	4831	0.28	4277	0.19
<b>Grievances</b>						
Life Satisfaction	2820	3.2	4820	4.69		
Happiness	2804	2.77	4823	0.9	4275	0.78
Trust/Satisf Country	2809	2.24	4820	4.55		
<b>Knowledge</b>						
Subjective Knowledge	2824	1.93	4820	2.96		
Objective Knowledge	1835	0.72	4814	0.1	4271	0.23
<b>Participation</b>						
Vote	2807	0.54	4814	0.56	4271	0.19
Participated in Revolution			4820	0.03		
Friends Participated in Revolution			4810	0.21		
Support Revolution			4820	0.77		

Mean of variables used in the analysis for the different subsamples used as well as full sample.

**Table 3: Basic Relationship between Education and Outcomes, Ages 21-29**

	Participation			Grievances			Knowledge		
	1	2	3	4	5	6	7	8	9
<b>Tunisia 2012</b>									
Secondary	0.037 (0.028)				0.159 (0.062)***	0.16 (0.05)***	-0.106 (0.053)**	0.233 (0.036)***	0.095 (0.038)**
University	0.155 (0.029)***				0.364 (0.064)***	0.285 (0.052)***	-0.062 (0.056)	0.528 (0.04)***	0.165 (0.039)***
<b>Egypt 2014</b>									
Secondary	0.177 (0.019)***	0.005 (0.004)	-0.027 (0.014)*	0.054 (0.017)***	0.088 (0.054)	0.019 (0.012)	0.045 (0.058)	0.276 (0.037)***	0.031 (0.008)***
University	0.332 (0.021)***	0.037 (0.007)***	0.049 (0.017)***	0.09 (0.018)***	0.143 (0.061)**	0.033 (0.014)**	0.034 (0.065)	0.683 (0.044)***	0.136 (0.012)***
<b>Egypt 2009</b>									
Secondary	0.073 (0.013)***					0.035 (0.015)**			0.124 (0.012)***
University	0.164 (0.019)***					0.059 (0.019)***			0.31 (0.018)***
Outcome	Vote	Partic Revolution	Friends Part Rev	Support Rev	Life Satisf	Happiness	Satisf Country	Knowledge Subj	Knowledge Obj

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \*. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.

**Table 4: Participation, with Family Background Controls**

	Tunisia 2012			Egypt 2014					Egypt 2009				
	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Note</b>													
Secondary	0.037 (0.028)	0.045 (0.046)	0.031 (0.046)	0.056 (0.076)	-0.032 (-0.091)	0.177 (0.019)***	0.168 (0.019)***	0.168 (0.05)***	0.153 (0.046)***	0.073 (0.013)***	0.073 (0.013)***	-0.004 (0.059)	-0.003 (0.065)
University	0.155 (0.029)***	0.135 (0.047)***	0.11 (0.048)**	0.118 (0.08)	0.003 (0.105)	0.332 (0.021)***	0.313 (0.023)***	0.344 (0.052)***	0.349 (0.056)***	0.164 (0.019)***	0.162 (0.021)***	0.121 (0.07)*	0.117 (0.075)
<b>Partic Revolution</b>													
Secondary						0.005 (0.004)	0.005 (0.005)	-0.005 (0.013)	-0.007 (0.015)				
University						0.037 (0.007)***	0.03 (0.008)***	0.031 (0.018)*	0.028 (0.02)				
<b>Friends Part Rev</b>													
Secondary						-0.027 (0.014)*	-0.027 (0.014)*	-0.019 (0.04)	-0.029 (0.033)				
University						0.049 (0.017)***	0.05 (0.019)***	0.04 (0.044)	0.029 (0.041)				
<b>Support Rev</b>													
Secondary						0.054 (0.017)***	0.049 (0.017)***	-0.006 (0.043)	-0.021 (0.037)				
University						0.09 (0.018)***	0.077 (0.021)***	0.065 (0.044)	0.034 (0.045)				
N	2899	1370	1370	428	428	4819	4813	690	690	4277	4265	314	314
Age range	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29
Parental Education Sample	no	yes	yes	no	no	nc	yes	no	no	no	yes	no	no
Parental Education Control	no	no	yes	no	no	nc	yes	no	no	no	yes	no	no
Siblings FE Sample	no	no	no	yes	yes	nc	no	yes	yes	no	no	yes	yes
Siblings FE Control	no	no	no	no	yes	nc	no	no	yes	no	no	no	yes

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \*. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.

**Table 5: Grievances, with Family Background Controls**

	Tunisia 2012			Egypt 2014				Egypt 2009					
	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Life Satisf</b>													
Secondary	0.159 (0.062)***	0.145 (0.106)	0.142 (0.108)	0.024 (0.14)	-0.152 (0.164)	0.088 (0.054)	0.077 (0.055)	-0.053 (0.15)	-0.163 (0.114)				
University	0.364 (0.064)***	0.467 (0.107)***	0.436 (0.11)***	0.141 (0.152)	-0.087 (0.176)	0.143 (0.061)**	0.115 (0.07)	0.056 (0.161)	-0.162 (0.145)				
<b>Happiness</b>													
Secondary	0.16 (0.05)***	0.185 (0.088)**	0.17 (0.088)*	-0.182 (0.112)	-0.192 (0.126)	0.019 (0.012)	0.021 (0.012)*	0.032 (0.03)	0.043 (0.028)	0.035 (0.015)**	0.036 (0.015)**	-0.021 (0.067)	-0.052 (0.073)
University	0.285 (0.052)***	0.349 (0.089)***	0.299 (0.092)***	-0.097 (0.126)	-0.194 (0.135)	0.033 (0.014)**	0.034 (0.015)**	0.002 (0.033)	0.033 (0.038)	0.059 (0.019)***	0.058 (0.021)***	-0.014 (0.074)	-0.045 (0.092)
<b>Satisf Country</b>													
Secondary	-0.106 (0.053)**	-0.142 (0.082)*	-0.13 (0.082)	0.057 (0.158)	0.006 (0.179)	0.045 (0.058)	0.035 (0.059)	-0.12 (0.16)	-0.067 (0.129)				
University	-0.062 (0.056)	-0.087 (0.086)	-0.085 (0.087)	0.025 (0.16)	0.032 (0.192)	0.034 (0.065)	-0.008 (0.073)	-0.002 (0.167)	-0.05 (0.158)				
N	2685	1281	1281	387	387	4819	4813	690	690	4277	4265	314	314
Age range	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29
Parental Education Sample	no	yes	yes	no	no	no	yes	no	no	no	yes	no	no
Parental Education Control	no	no	yes	no	no	no	yes	no	no	no	no	no	no
Siblings FE Sample	no	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
Siblings FE Control	no	no	no	no	yes	no	no	no	yes	no	no	no	yes

Robust standard errors in parenthesis. Signif. codes: 0.01 '\*\*\*' 0.05 '\*\*' 0.1 '\*'. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.

**Table 6: Knowledge, with Family Background Controls**

	Tunisia 2012			Egypt 2014			Egypt 2009						
	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Knowledge Subj</b>													
Secondary	0.233 (0.036)***	0.362 (0.056)***	0.346 (0.056)***	0.149 (0.121)	0.06 (0.14)	0.276 (0.037)***	0.257 (0.038)***	0.29 (0.104)***	0.25 (0.092)***				
University	0.528 (0.04)***	0.638 (0.06)***	0.588 (0.061)***	0.252 (0.129)*	0.002 (0.159)	0.683 (0.044)***	0.652 (0.048)***	0.648 (0.112)***	0.533 (0.11)***				
<b>Knowledge Obj</b>													
Secondary	0.095 (0.038)**	0.021 (0.072)	0.012 (0.074)	0.023 (0.077)	-0.026 (0.081)	0.031 (0.008)***	0.03 (0.009)***	0.054 (0.023)**	0.057 (0.03)*	0.124 (0.012)***	0.111 (0.012)***	0.119 (0.049)**	0.109 (0.051)**
University	0.165 (0.039)***	0.071 (0.072)	0.046 (0.076)	0.128 (0.08)	0.101 (0.093)	0.136 (0.012)***	0.124 (0.014)***	0.128 (0.029)***	0.111 (0.037)***	0.31 (0.018)***	0.266 (0.021)***	0.227 (0.063)***	0.216 (0.065)***
N	1716	674	674	381	381	4813	4807	690	690	4271	4262	313	313
Age range	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29
Parental Education Sample	no	yes	yes	no	no	no	yes	no	no	no	yes	no	no
Parental Education Control	no	no	no	no	no	no	yes	no	no	no	yes	no	no
Siblings FE Sample	no	no	no	yes	yes	no	no	yes	yes	no	no	yes	no
Siblings FE Control	no	no	no	no	yes	no	no	no	yes	no	no	no	yes

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \*. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.

**Table 7: Path Analysis**

	<i>Dependent variable:</i>											
	Vote Tunisia			Vote Egypt			Partic Revolution			Partic Revolution		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Secondary Education	0.031 (0.046)	0.028 (0.046)	0.050 (0.085)	0.055 (0.085)	0.168*** (0.019)	0.167*** (0.019)	0.153*** (0.019)	0.153*** (0.019)	0.005 (0.005)	0.004 (0.005)	0.001 (0.005)	0.001 (0.005)
University Education	0.110** (0.048)	0.100** (0.048)	0.094 (0.090)	0.099 (0.090)	0.313*** (0.023)	0.312*** (0.023)	0.269*** (0.024)	0.268*** (0.024)	0.030*** (0.008)	0.030*** (0.008)	0.018** (0.008)	0.018** (0.008)
Grievance Index		-0.020* (0.012)		0.006 (0.021)		-0.020*** (0.005)		-0.019*** (0.005)		-0.004* (0.002)		-0.003* (0.002)
Political Knowledge Index			0.075*** (0.021)	0.076*** (0.021)			0.061*** (0.007)	0.060*** (0.007)			0.016*** (0.003)	0.016*** (0.003)

*Note:*

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \* .  
 All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies.  
 The omitted variable for education is primary or none.

**Table 8: Grievances, Detailed Education Levels, With Family Background Controls**

	Tunisia 2012			Egypt 2014				Egypt 2009					
	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Life Satisf</b>													
Secondary Preparatory	0.044 (0.072)	-0.022 (0.126)	-0.02 (0.127)	-0.131 (0.171)	-0.243 (0.194)	-0.042 (0.087)	-0.049 (0.087)	-0.357 (0.235)	-0.343 (0.2)*				
Secondary General	0.237 (0.067)***	0.237 (0.115)**	0.24 (0.117)**	0.062 (0.149)	-0.075 (0.171)	0.093 (0.138)	0.088 (0.138)	0.075 (0.307)	0.13 (0.253)				
Secondary Vocational	0.203 (0.098)**	0.237 (0.139)*	0.217 (0.142)	0.265 (0.198)	-0.024 (0.233)	0.125 (0.056)**	0.116 (0.057)**	0.043 (0.16)	-0.072 (0.132)				
University	0.367 (0.064)***	0.477 (0.107)***	0.451 (0.11)***	0.157 (0.152)	-0.04 (0.179)	0.149 (0.061)**	0.127 (0.07)*	0.082 (0.161)	-0.071 (0.156)				
<b>Happiness</b>													
Secondary Preparatory	0.093 (0.059)	0.089 (0.104)	0.088 (0.104)	-0.365 (0.14)***	-0.287 (0.158)*	-0.014 (0.02)	-0.012 (0.02)	0.015 (0.049)	0.014 (0.05)	0.061 (0.025)**	0.031 (0.112)	0.007 (0.149)	
Secondary General	0.199 (0.055)***	0.235 (0.094)**	0.213 (0.095)**	-0.138 (0.117)	-0.117 (0.135)	-0.025 (0.033)	-0.022 (0.033)	0.023 (0.076)	0.061 (0.104)	0.114 (0.042)***	-0.012 (0.167)	-0.076 (0.203)	
Secondary Vocational	0.222 (0.075)***	0.247 (0.114)**	0.233 (0.115)**	0.119 (0.184)	0.005 (0.214)	0.031 (0.012)**	0.034 (0.013)***	0.042 (0.03)	0.057 (0.035)	0.053 (0.017)***	-0.045 (0.087)	-0.088 (0.096)	
University	0.286 (0.052)***	0.354 (0.089)***	0.307 (0.092)***	-0.079 (0.126)	-0.139 (0.138)	0.034 (0.014)**	0.037 (0.015)**	0.005 (0.033)	0.044 (0.041)	0.068 (0.02)***	0.066 (0.022)***	-0.05 (0.089)	-0.089 (0.105)
<b>Satisf Country</b>													
Secondary Preparatory	-0.184 (0.062)***	-0.195 (0.097)**	-0.188 (0.097)*	-0.013 (0.198)	0.044 (0.21)	-0.085 (0.09)	-0.094 (0.09)	-0.185 (0.243)	-0.082 (0.216)				
Secondary General	-0.074 (0.057)	-0.154 (0.089)*	-0.13 (0.089)	0.079 (0.17)	-0.029 (0.207)	0.084 (0.142)	0.078 (0.143)	-0.185 (0.363)	0.008 (0.328)				
Secondary Vocational	0.024 (0.088)	0.037 (0.125)	0.033 (0.124)	0.138 (0.25)	-0.023 (0.284)	0.071 (0.06)	0.063 (0.061)	-0.069 (0.17)	-0.069 (0.152)				
University	-0.059 (0.056)	-0.08 (0.086)	-0.076 (0.087)	0.03 (0.161)	0.015 (0.201)	0.035 (0.065)	-0.001 (0.073)	0.011 (0.167)	-0.044 (0.174)				
N	2685	1281	1281	387	387	4819	4813	690	690	4257	4245	312	312
Age range	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29	21-29
Parental Education Sample	no	yes	yes	no	no	no	yes	no	no	no	yes	no	no
Parental Education Control	no	no	yes	no	no	no	yes	no	no	no	yes	no	no
Siblings FE Sample	no	no	no	yes	yes	no	no	yes	yes	no	no	yes	yes
Siblings FE Control	no	no	no	no	yes	no	no	no	yes	no	no	yes	yes

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \*. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.

**Table 9: Grievances, Males over 25, with Parental Education Control**

	Tunisia 2012			Egypt 2014			Egypt 2009	
	1	2	3	4	5	6	7	
<b>Life Satisf</b>								
Secondary	0.203 (0.128)	-0.163 (0.208)	-0.126 (0.214)	0.004 (0.131)	0.011 (0.132)			
University	0.483 (0.139)***	0.197 (0.208)	0.211 (0.22)	-0.021 (0.141)	-0.023 (0.165)			
<b>Happiness</b>								
Secondary	0.188 (0.101)*	0.165 (0.174)	0.169 (0.178)	0.03 (0.026)	0.034 (0.027)	-0.007 (0.036)	-0.01 (0.037)	
University	0.401 (0.114)***	0.373 (0.181)**	0.358 (0.198)*	0.051 (0.029)*	0.072 (0.031)**	-0.007 (0.043)	-0.04 (0.049)	
<b>Satisf Country</b>								
Secondary	-0.141 (0.107)	-0.04 (0.161)	-0.028 (0.158)	0.026 (0.144)	0.046 (0.146)			
University	-0.165 (0.12)	0.111 (0.171)	0.158 (0.182)	-0.041 (0.149)	-0.031 (0.17)			
N	567	269	269	882	881	668	665	
Age range	26-29	26-29	26-29	26-29	26-29	26-29	26-29	
Parental Education Sample	no	yes	yes	no	yes	no	yes	
Parental Education Control	no	no	yes	no	yes	no	yes	
Siblings FE Sample	no	no	no	no	no	no	no	
Siblings FE Control	no	no	no	no	no	no	no	

Robust standard errors in parenthesis. Signif. codes: 0.01 \*\*\* 0.05 \*\* 0.1 \*. All regressions control for gender, age dummies, birth order dummies, an indicator for urban, and governorate dummies. The omitted variable for education is primary or none.