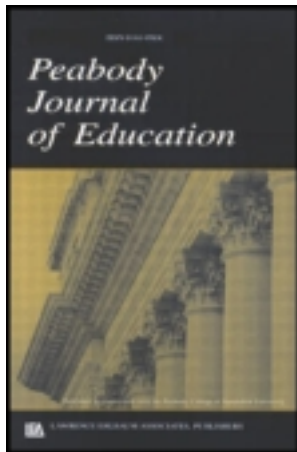


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Are Student Protests in Arab States Caused by Economic and Political Grievances? Empirical Evidence from the 2006–07 *Arab Barometer*

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We investigate the nature of protests by students (age 18 and older) in Algeria, Jordan, Morocco, and Yemen by using subsamples of students from nationally representative and acclaimed public opinion data (the 2006–07 *Arab Barometer*). We find between 22.1% (Jordan) and 54.7% (Yemen) participated in either the signing of petitions, or marching in street protests, or both between the years 2003–07. To explain student protest participation, we draw from the political economy literature to test four grievance-based hypotheses that link protest to student perceptions on the performance of the economy, personal family socioeconomic status, political exclusion, and preference for democracy. Ordered probit regression analyses indicate that students protest for different reasons in the four countries. We find statistical evidence that student protests are associated with grievances about the economy (Algeria and Morocco) and lack of democracy (Algeria only). Joint hypothesis tests reveal that the four grievances jointly matter in Algeria, Morocco, and Yemen but not Jordan.

INTRODUCTION

Postsecondary students have threatened or even toppled regimes around the world (Altbach, 1989). Prominent examples from the 20th century include student protests in Spain against Dictator Franco's rule (1939–1975), in the United States against the Vietnam War (1960s), in China's Tiananmen Square against the Communist Party's reform efforts (1989), and in South Korea's march toward democracy (1970–1992). In 2010–2011, protests by students and others in several countries in the Middle East and North Africa, collectively referred to as the "Arab Spring," transformed the political, economic, and social landscape on a scale that has not been witnessed since the fall of communism (Ottaway & Hamzawy, 2011).

In this study, we investigate the reasons for protests by secondary and postsecondary students (age 18 and older) in four states that experienced the Arab Spring: Algeria, Jordan, Morocco, and

This article has been possible because of the support and encouragement of Stephen Heyneman. We are also very grateful to Daniel Berkowitz and Art Goldsmith for lengthy conversations and detailed comments on older drafts. For helpful discussions, we thank David Baker, Jishnu Das, Steven Finkel, Luke Condra, Sera Linardi, and seminar participants at the College of Education, Pennsylvania State University, and the University of Pittsburgh's Globalization Seminar, School of Education, and Ford Center for Human Security.

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Yemen. We draw from the recent political economy literature arguing that protest participation occurs because of economic and political grievances. Using subsamples of students from nationally representative public opinion data, we test four grievance-based hypotheses that link student protest participation to their perceptions on the performance of the economy, personal family economic condition, political exclusion, and preference for democracy.

Unlike previous research on student protest participation in developing regions, we have access to highly regarded data: the 2006–07 *Arab Barometer*. The American Political Science Association recognized the *Arab Barometer* team by awarding them the 2010 Lijphart/Przeworski/Verba Dataset Award for Best Dataset in the field of Comparative Politics. Because the data collection preceded the Arab Spring, we can address the origins of one of the least expected and most effective student protest movements in recent history.

We make several contributions to the student protest literature (for a review, see Knutsen, 2007). First, our study examines student protests in the 2000s, whereas much of the existing research has documented protest during the period from 1960 to 1990. Second, we contribute to the scarce empirical literature on student protests. Third, our study is comparative, rather than focusing on a single country. Finally, most studies have explored institutional or student characteristics that influence participation in a specific campus protest. In contrast, we combine the student protest literature with the broader political economy literature to examine the broader political and economic determinants of protest behavior.¹

CONTEXTUAL BACKGROUND

Economic Indicators and Political Regimes

Several observers have argued that weak economies have been responsible for protests and other forms of unrest in Arab states (Council on Foreign Relations, 2011, p. 136). We begin our investigation, therefore, with an overview of the four countries' economies and systems of government.² Comparing the 1991–2000 and 2001–08 periods, economic growth rates improved for Algeria (1.7–4%), Jordan (5.2–7%), and Morocco (2.6–5.1%) but weakened for Yemen (5.6–3.9%). In terms of PPP-adjusted income, Algeria (\$6,160) and Jordan (\$4,629) are upper middle income, whereas Morocco (\$3,507) and Yemen (\$2,428) are lower middle income. Morocco has the lowest poverty rate (9%), followed by Jordan (19%), Algeria (22.6%), and the region's highest rate in Yemen (41.8%). These figures, however, do not reflect the economic volatility that arose partly because of the transition from primarily state-supported economies to market-based economies.

¹In particular, our study contributes to the limited microlevel research on political behavior in developing countries (Berman, Callen, Felter, & Shapiro, 2011; Jamal & Tessler, 2008). In a review of the literature, Knutsen (2007) only listed studies from India and Latin America. Most of the recent research is found in the sociological and political science literature but does not focus specifically on student involvement.

²Figures are for 2008 unless otherwise noted. PPP Converted GDP Per Capita (Laspeyres), derived from growth rates of c, g, i, at 2005 constant prices. Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 7.0, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, May 2011. Site: data.worldbank.org.

Politically, Algeria is a semipresidential republic where Abdelaziz Bouteflika came into power during emergency rule in 1999. Jordan is a constitutional monarchy that was previously ruled by King Hussein (1952–1999) and is now under the reign of his son, King Abdallah (1999–present). Morocco is a constitutional monarchy with bicameralism where King Mohammed VI (1999–present) succeeded to the throne after the death of his father, King Hassan II (1961–1999).³ Yemen is a republic where Ali Abdullah Saleh (the president of North Yemen) assumed the presidency of the newly unified North Yemen and South Yemen in 1990. The 2011 Economist Intelligence Unit’s Democracy Index rankings reveal some differences, with Jordan (rank 118) and Morocco (rank 119) considered more democratic than Algeria (130) and Yemen (150). During the Arab Spring, regime change occurred in Yemen (Economist Intelligence Unit, 2011).⁴

Higher Education and Protests in Algeria, Jordan, Morocco, and Yemen

The literature on student protests indicates that factors within an education system matter when explaining protest participation (Munson, 2010; Zhao, 2009). The *Arab Barometer* does not include data on characteristics of educational institutions and thus does not allow us to statistically test their effect in this context. Nonetheless, the anecdotal evidence that follows is consistent with the literature.⁵

In general, higher education systems in the Middle East and North Africa face significant challenges (Heyneman, 1997; World Bank, 2008). The 2010 regional gross enrollment rate average was 24%. Research indicates that there is a “reluctance to change and innovate, poor organizational frameworks, traditional management systems, financial dependence on governments, and lack of autonomy and academic freedom for universities” (Sawahel, 2012). For a population of 400 million people in the region, there are just 470 universities and institutions currently serving 9 million students, with only one in five enrolled in scientific programs (Sawahel, 2012). Furthermore, persisting colonial legacies, particularly in North African countries, are at the root of problems with access, language of instruction, curriculum, and academic freedom (Teferra & Altbach, 2004).

Gross enrollment rates (GER) for the four countries indicate varying degrees of access to higher education. In Algeria, the GER grew from 14% in the 1990s to 31% in 2010 (UNESCO Institute for Statistics [UIS], 2011a). Education accounts for 20.3% of government expenditures, with 22% of that going to higher education, including grants for 85% of Algerian students (UIS, 2011a; European Commission, 2010a). As enrollment rises, Algeria is focusing on increasing public funding with plans to “spend US\$1.48 billion on higher education and science over the next five years and to double research spending to 1% of gross domestic product” (Racelma, 2012). Despite the growing education sector, students across the country have protested against

³Bicameralism is a feature of a mixed government that includes the practice of having two legislative or parliamentary chambers compromise bills.

⁴In terms of population size, Jordan has the smallest population (6.1 million) followed by Yemen (22.2 million), Morocco (30.9 million), and Algeria (33.8 million). A distinguishing characteristic of the populations is the youth bulge: the median age ranges from 17.9 years (Yemen) to 26.5 years (Jordan).

⁵Because the *Arab Barometer* subsample of students includes only those who are of age 18 and older, we focus on providing a background of the higher education systems.

changes in higher education policy affecting the student experience and employment prospects. In 1998, Algerian student unions at universities were involved in strikes against changes in university policy, followed by protests in 2000 in the city of Tizi Ouzou by students contesting deteriorated physical conditions on university campuses (Madani, 2000). In 2011, students in Algiers protested higher education policy they believed devalued university diplomas (“Algerian Students Revolt,” 2011).

Jordan’s GER increased from 22% in the 1990s to 38% by 2010 data (UIS, 2011b). Education accounts for 20.6% of government expenditures, with 23% of that going to higher education (UIS, 2011b). Higher education in Jordan is fee-based with limited financial support for students (European Commission, 2010b). Currently, Jordan is promoting the development of its community colleges to meet the needs of its growing youth population and address its shortage of workers with midlevel vocational skills. Nevertheless, Jordanian students protested in 2000 against higher education policy allowing the government to appoint members of university student councils (“Jordan’s Students Protest,” 2000).

In Morocco there was very little growth in the GER, from 10% in the 1990s to 13% in 2009 (UIS, 2011c). Public higher education in Morocco is paid for by the government, which spends 25.7% of its budget on education, with 15% of that going to higher education (UIS, 2011c). There is, however, a mismatch between acquired skills and labor market needs, leading to protest by jobless graduates. Students have also protested against university administrative decisions, as was the case in 1984 when students in northern Morocco participated in violent protests against increased school and final examination fees and more stringent admissions standards (Randal, 1984).

Data and information on higher education in Yemen is somewhat limited. There was a fourfold increase in enrollments in the 1990s; although expansion has continued, accounting for population growth, GER has remained stagnant at 10% as of 2010 (UIS, 2011d; World Bank, 2011). The public system is fully state funded, with education accounting for 16% of government expenditures; the higher education allocation was not reported (UIS, 2011d). Financial allocations have not been able to keep pace with expansion, which has led to increased student–staff ratios (24:1 to 41:1) and deterioration of educational facilities and resources (World Bank, 2011). Although students in Yemen protested raises in school fees in 1999 (“Students Injured in Yemen Clash,” 1999), protests in Yemen and Jordan have been less prevalent than in Morocco and Algeria.

In summary, student protests in the four states have been attributed to factors associated with higher education institutions (e.g., fees and quality). There is also evidence that students have taken to the streets to express economic and political grievances. In the remainder of this study, we focus on conceptual and empirical inquiry into the economic and political grievances of students and their resulting participation in protests.

CONCEPTUAL BACKGROUND AND HYPOTHESES

To understand the concept of protest, it is useful to distinguish it from other possible political outcomes. Broadly, political outcomes can be categorized into three sets: attitudes, expertise, and engagement (Emler & Frazer, 1999). Political attitudes include tolerance–intolerance, partisanship, and attitude stability (regarding political identity). Political expertise consists of relevant skills (organization, listening, speaking, writing, and collective decision making), propositional

knowledge (such as knowledge of the constitution, policy, ideology, current affairs, and history), interest in politics, understanding of power and authority, and sense of political efficacy. The final category of political engagement includes participation in activities such as voting, contacting, campaigning, and protesting.⁶

Given that our data are on individuals and not groups, we develop theories that address why individual students participate in protest activities. In this section, we draw from the recent political economy literature on grievance-based explanations of protest participation. In addition, we provide a link between grievance-based theories and prevailing social movements and social reproduction-based theories of student protest participation.

Economic Grievance

Research has suggested economic grievance can lead to protest participation through mechanisms of frustration with macroeconomic policies and personal economic conditions. Dalton, Van Sickle, and Weldon (2010) demonstrated the importance of macrolevel economic influences on protest participation among the general public, particularly in developing countries, where “personal dissatisfaction may represent severe economic deprivation or the struggles to survive” (p. 57). Muller, Dietz, and Finkel (1991) studied protest participation among university students in Peru and found that relative deprivation of socioeconomic status was a strong predictor for participation. Almeida (2007) used newspaper content analysis to examine student protest participation in Latin America as the region experienced the structural adjustment policies of the 1990s. He found the highest levels of participation among the working and middle classes and concluded, “At the core of this new motivational structure were perceived threats to economic benefits” (p. 124). Anecdotal evidence from the four states also suggests that students protest because of macroeconomic issues such as austerity measures. For example, protest among unemployed students has been common in Morocco, including the 1984 protests and the 2008 student protests that shut down the port at Sidi Ifni in response to job shortages for graduating students (“Poor Quality Education Threatens Stability,” 2008). We state the hypothesis that relates grievance about the performance of the economy and student protest as follows:

H1: Students protest against their government when they associate their own economic hardship with the government’s macroeconomic policies.

A competing argument is that macroeconomic policies and the overall condition of the economy do not drive people to protest; instead, people protest when they personally are not doing well. “The correlation between low per capita incomes and higher propensities for internal war is one of the most robust empirical relationships in the literature,” although there is no consensus on the mechanisms that connect income and conflict (Blattman & Miguel, 2010, p. 4). We refine the finding of a connection between conflict and low per capita income (a country-level variable) by

⁶Protest participation does not necessarily imply benevolent, selfless, or socially conscious behavior; rather, it may be that protest participants are mainly concerned with improvements in their own outcomes. It is not possible to decipher from the data or the anecdotal country evidence the true individual motives behind protest participation. In our study, it is unclear if respondents are mainly concerned with improving their own labor market and family status, or broader labor market and family status.

investigating the relationship between individual participation in protest and economic wellbeing at the student family level.

H2: Students protest against their government when they believe their families' economic situations are poor.

Political Grievance

Political grievance is another prominent and intuitively appealing explanation for opposition to the government. It is the perception that one is excluded from, or has limited access to, political power (Lake & Rothchild, 1996; Levy & Thompson, 2010; Lijphart, 1977). A great deal of student protest in Algeria since the 1980s has been focused on Algerian government policy on the adoption of Berber as an official language and treatment of the northern region of Kabylia (Magistad, 1987). Limited ability to influence decisions about the distribution of public goods and patronage benefits is thought to incite feelings of grievance (Blattman & Miguel, 2010; Langer, 2005; Reynal-Querol, 2002; Scacco, 2008). Muller et al. (1991) argued that dissatisfaction with the "current provision of public or collective goods" was a strong predictor of protest participation, based on West German panel data in the 1980s. Among the purported reasons for the Arab Spring was "frustration with closed, corrupt, and unresponsive political systems" (Goldstone, 2011, p. 8). We expect students who protest to feel they have inadequate access to authority figures or too little influence on government policies. These arguments about the effect of political grievance in the form of political exclusion can be expressed by the following hypothesis:

H3: Students protest against their government when they are aggrieved due to political exclusion.

The popular narrative of the Arab Spring asserts that the people took action because they wanted democracy (Gause, 2011). General frustration with political exclusion is not considered an adequate explanation for protest participation, according to this view, because people are not seeking better access within the prevailing system; they want democracy. Gause (2011) argued that for many years Arabs have not passively accepted authoritarian rule and have voted enthusiastically when given real electoral choices. If protest participation is linked to a desire for democracy, we expect student respondents to speak favorably about democracy as a governing process for their country. The resulting hypothesis linking political grievance about the lack of democracy and student protest is as follows:

H4: Students protest against their government when they want democracy in their country.

DATA AND MEASUREMENT

The data for Algeria, Jordan, Morocco, and Yemen come from the 2006–07 *Arab Barometer* project, which is a collection of nationally representative public opinion surveys. The surveys were collected in the 2006–2008 period. The contents of the *Arab Barometer* are similar to public opinion surveys such as the *World Values Surveys*, and the regional *Asian Barometer*, *Afro-Barometer*, and *Latinobarómetro*. According to its key investigators, the *Arab Barometer* project was motivated by the belief that the political attitudes and values of ordinary men and

women is important for scientific inquiry and the dispelling the myths and stereotypes that hinder mutual understanding and cooperation (Tessler & Jamal, 2006). The key investigators of the *Arab Barometer* project were based at the University of Michigan and Princeton University and joined by country team leaders and steering committee members from universities and research centers from each of the participating countries.⁷

The original 2006–07 *Arab Barometer* contains samples of adults of age 18 and older. We restrict our analysis to subsamples of individuals who identified themselves as “student.” Regarding education, the *Arab Barometer* asked all respondents, “Level of education?” with seven options: illiterate, elementary, primary, secondary, college diploma–2 years, BA, MA, or higher. However, this question is unclear about a respondent’s current or completed level of education; for example, if a student responds “BA,” we do not know if she is currently pursuing a BA or has already completed her BA. Given this ambiguity, we do not explore differences in student protest participation across educational levels.

We define protest participation as signing a petition, attending a demonstration or protest march, or both at least once during the preceding 3 years. In reporting protest activities for the past 3 years, respondents were given options of “once,” “more than once,” and “never.” We combined the “once” and “more than once” categories because of the relatively small share of responses in the “once” category. Table 1 matches our hypotheses with the specific questions we use from the *Arab Barometer* survey to measure the outcome, explanatory, and control variables.

The outcome variable $PROTEST=0$ if the student had not participated in any form of protest in the past 3 years. $PROTEST=1$ if the student had signed a petition only once or more than once. $PROTEST=2$ if the student had attended a demonstration or protest march (the student may or may not have also signed a petition) in the past 3 years. A higher value of the $PROTEST$ variable reflects the riskiness of the protest activity. In other words, we consider not protesting to be the least risky activity, and marching in a demonstration riskier than signing a petition because protesters are more vulnerable to attacks from the authoritarian regime’s security forces. $PROTEST$ is therefore an ordinal variable such that the data are mutually exclusive (i.e., there is just one outcome value for each student), the order of the rank is meaningful (i.e., a higher score reflects the riskiness of protest), and the scale values are not equally distant (i.e., $PROTEST=2$ does not imply that marching is twice as risky as signing a petition). Given the ordered, discrete, and quantitative nature of $PROTEST$, we use an ordered probit regression model (Long & Freese, 2006).

The explanatory variables correspond to our four hypotheses. To measure perception of macroeconomic policies, we use a survey question that asks about the respondents’ expectation for the country’s economic condition in 3 to 5 years. Our proxy for the student’s personal economic situation is a question that asks the respondent to rate his or her family’s current economic condition. Political exclusion is measured with a question that asks respondents to agree or disagree that government officials seriously consider citizen’s opinions. To measure the desire

⁷The data are publicly available from the official *Arab Barometer* website (<http://www.arabbarometer.org>). The quote was also obtained from this page (last accessed on October 15, 2012). Three countries from the 2006–07 *Arab Barometer* are excluded in this study: Lebanon, Kuwait, and the Occupied Palestinian Territories (OPT). Lebanon is excluded because it is already a democracy. Kuwait is unusually wealthy and has not taken efforts to remove its rulers. OPT was not trying to bring down an authority. International news organizations such as the BBC have also not included Lebanon, Kuwait, and OPT as countries experiencing protests (<http://www.bbc.co.uk/news/world-12482293>)

TABLE 1
Arab Barometer Questions Used to Measure Outcome, Explanatory, and Other Control Variables

Outcome variable:	
Protest participation	“Here is a list of actions that people sometimes take as citizens. For each of these please tell me whether you, personally, have ever done each of these things in the past three years.” Among the statements that were read was: “Attend a demonstration or protest march.” (0 = <i>never</i> , 1 = <i>once</i> , 2 = <i>more than once</i>)
Explanatory variables:	
Economic grievance	H1: Students protest against their government when they associate their own economic hardship with the government’s macro-economic policies. <i>Arab Barometer</i> question: “What do you think will be the state of [country name]’s economic condition a few years (3–5 years) from now?” (1 = <i>much better</i> , 2 = <i>a little better</i> , 3 = <i>about the same</i> , 4 = <i>a little worse</i> , 5 = <i>much worse</i>) H2: Students protest against their government when they believe their family’s economic situation is poor. <i>Arab Barometer</i> question: How would you rate the economic condition of your family today? (1 = <i>very good</i> , 2 = <i>good</i> , 3 = <i>bad</i> , 4 = <i>very bad</i>)
Political grievance	H3: Students protest against their government when they are aggrieved due to political exclusion. <i>Arab Barometer</i> question: Do you agree/disagree with the following statements: 3. Government officials seriously consider citizens’ opinions? (1 = <i>strongly agree</i> , 2 = <i>agree</i> , 3 = <i>disagree</i> , 4 = <i>strongly disagree</i>) H4: Students protest against their government when they want democracy in their country. <i>Arab Barometer</i> question: Tell me what you think about a democratic political system that includes public freedom, equal political and civil rights, balance of power, accountability and transparency (1 = <i>very bad</i> , 2 = <i>bad</i> , 3 = <i>good</i> , 4 = <i>very good</i>)
Control variables:	
Female	0 = <i>male</i> , 1 = <i>female</i>
Age	Exact age
Higher education	0 = <i>secondary education or below</i> , 1 = <i>higher education</i>

for democracy, we use a question from the *Arab Barometer* that asks the student’s opinion about a democratic political system.

We include a number of control variables that are typically included in empirical studies of protest participation. A gender dummy variable is included because of the large body of comparative literature that indicates that men and women participate politically in different ways (Inglehart & Norris, 2003). The age variable permits us to explore whether protest participation is related to age. We further include a dummy variable to distinguish higher education students versus secondary education students. Ideally, we would have liked to also control for characteristics of the educational institutions being attended, such as extent of support provided by the state,

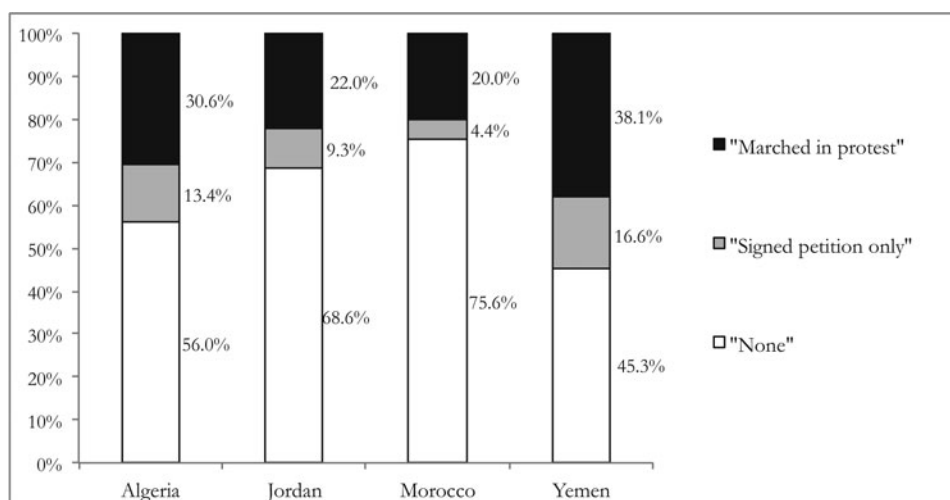


FIGURE 1 Student protest activity by country, 2004–2007. *Source:* Authors' computations based on the *Arab Barometer* 2006–07 subsample of secondary and postsecondary students (age 18 and older). The sub-samples sizes (n) for each country are as follows: Algeria ($n = 191$), Jordan ($n = 100$), Morocco ($n = 72$), and Yemen ($n = 117$).

reputation, number of political organizations, and so on. Because the *Arab Barometer* does not contain such information, there is the possibility that our regression coefficients will suffer from omitted variable bias.

RESULTS

Descriptive Statistics

Figure 1 presents the protest activities of students (age 18 and older) in the four Arab states during the 2004–07 period. There are three key findings from Figure 1. First, protest participation was common during the years preceding the Arab Spring of 2010–11 in Algeria (44.0%) and Yemen (54.7%); in contrast, protest participation was relatively unusual, although not rare, in Jordan (22.1%) and Morocco (24.4%). Second, student protest participation rates correspond to the extent of historic political unrest and recent leadership described in earlier sections. Third, the riskier form of protesting (i.e., marching in a demonstration) was approximately 1.5 to 2 times as common as the less risky form of protest (i.e., signing a petition). To put these figures in perspective, the protest participation rates for the combined samples of students and nonstudents are slightly higher (Seybolt & Shafiq, 2012): Algeria (45.0%), Morocco (33.9%), and Yemen (58.5%); this implies that students had lower protest participation rates than nonstudents in all four Arab states.

Table 2 presents the summary statistics of the outcome and explanatory variables for the student subsamples in each Arab state. The outcome variable means are consistent with Figure 1: Protest participation scores (ranging from 0 to 2) are highest in Yemen and considerably lower

TABLE 2
Summary Statistics of Student Characteristics in Arab States, 2004–2007

	Algeria <i>M (SD)</i>	Jordan <i>M (SD)</i>	Morocco <i>M (SD)</i>	Yemen <i>M (SD)</i>
Outcome variable:				
Protest participation	.728 (.870)	.460 (.784)	.458 (.821)	1.017 (.900)
Explanatory variables:				
Economic grievance: Economy	2.681 (.766)	2.250 (.757)	2.653 (.906)	2.889 (.908)
Economic grievance: Family status	2.377 (.640)	2.200 (.791)	2.194 (.573)	1.940 (.620)
Political grievance: Government responsive	2.953 (1.012)	2.570 (.844)	3.014 (.796)	2.658 (1.027)
Political grievance: Prefer democracy	3.215 (.908)	3.410 (.621)	3.597 (.597)	3.128 (.979)
Control variables:				
Female	.445 (.498)	.400 (.492)	.541 (.502)	.658 (.476)
Age	22.6 (2.9)	21.4 (3.8)	1.13 (.33)	22.6 (3.3)
Higher education	.665 (.473)	.170 (.377)	.417 (.497)	.419 (.495)
<i>N</i>	191	100	72	117

Note. The outcome variables is *PROTEST* (=0 have not protested in last 3 years; =1 if signed a petition in last 3 years; =2 if marched in a protest in last 3 years). Age is reported as a series of intervals, not years. *Source:* Authors' calculations based on student subsamples of 2006–07 *Arab Barometer*.

in Jordan and Morocco. The mean scores for the grievance variables (ranging from 1 to 4) reveal several patterns. In all four states, the preference for democracy is the main form of grievance. Political grievance about government responsiveness received the next highest grievance score in Algeria, Jordan, and Morocco. In contrast, economic grievance about family status is associated with the lowest grievance scores in all four Arab states. The overall results in Table 2 suggest that, on average, student grievances in Algeria, Jordan, Morocco, and Yemen have more to do with politics than economics.

The control variable statistics in Table 2 reveal several patterns about the student populations in the four Arab states. The female indicator variable shows considerable variation in student gender composition across the four states: relatively smaller shares of female than male students in Algeria and Jordan, a slightly larger share of female than male students in Morocco, and a far larger share of female than male students in Yemen. As mentioned earlier, the *Arab Barometer* asked students about “level of education” without clarification on the completed or current level of education. It is therefore unsurprising to see considerable noise in the responses on higher education shares—ranging from 66.5% in Algeria to 17.0% in Jordan. Another reason for the differences in higher education shares could be because Jordan has younger respondents (who have not yet enrolled or completed higher education); this conjecture is supported by the fact that the mean for the age variable is lowest for Jordan in Table 2.

TABLE 3
Ordered Probit Regressions Results of Student Protest Participation in Arab States, 2004–2007

	Algeria Coefficient (SE)	Jordan Coefficient (SE)	Morocco Coefficient (SE)	Yemen Coefficient (SE)
Economic grievance: Economy	.315** (.125)	.049 (.201)	.432** (.226)	-.134 (.137)
Economic grievance: Family status	-.129 (.147)	-.027 (.186)	-1.372** (.529)	-.063 (.206)
Political grievance: Government responsive	-.150* (.087)	-.031 (.172)	.479* (.273)	-.324** (.117)
Political grievance: Prefer democracy	.175* (.098)	.249 (.227)	-.232 (.292)	-.123 (.128)
Control variables:				
Female	-.339* (.183)	.064 (.284)	-.338 (.381)	-1.498** (.282)
Age	.019 (.034)	-.029 (.040)	.879* (.526)	.009 (.044)
Higher education	-.033 (.208)	.048 (.407)	.250 (.395)	.357 (.264)
/Cut 1	1.047 (.930)	.819 (1.160)	.579 (1.843)	-2.761 (1.293)
/Cut 2	1.539 (.932)	1.157 (1.163)	.762 (1.812)	-2.136 (1.285)
Pseudo R^2	.040	.012	.214	.150
N	191	100	72	117
Wald test: Grievance coefficients jointly = 0				
χ^2	10.39	1.27	10.65	8.76
p	.034	.866	.031	.067

Note. The outcome variables is *PROTEST* (=0 have not protested in last 3 years; =1 if signed a petition in last 3 years; =2 if marched in a protest in last 3 years). Robust standard errors in parentheses. Source: Authors' calculations based on student subsamples of *Arab Barometer*.

** Statistically significant at .05 level. *Significant at .10 level.

Ordered Probit Regression Results

The coefficients in Table 3 should be interpreted as follows. A positive and statistically significant coefficient provides support for a hypothesis. In contrast, a negative and statistically significant coefficient indicates that a hypothesis is rejected for the country in question. A statistically insignificant coefficient suggests that there is insufficient statistical evidence in support of the hypothesis, holding all other characteristics constant. Furthermore, the coefficients reveal student propensities to participate in a riskier form of protest (as discussed earlier, not protesting is least risky, petition signing is medium risk, and marching in a protest is high risk).

Column 1 in Table 3 presents the ordered probit regression results for Algeria. There is statistical support for the economic grievance hypotheses. However, the results indicate that economic grievance about the family status is unrelated to protest participation, holding other factors constant. The findings for political grievances are also mixed. Feelings of political exclusion are negatively related to protest participation, holding other characteristics constant; we therefore reject the hypothesis that political exclusion is associated with student protest. Preference for democracy, however, is associated with a higher likelihood of protest participation among students, holding other grievances and factors constant. The overall results for Algerian student protestors are consistent with the narrative that protestors in Algeria have been motivated by macroeconomic concerns and democratic reform.

Column 2 in Table 3 shows the ordered probit regression results for Jordan. Curiously, there is no statistical evidence in support of any of the grievance hypotheses. In other words, there is no evidence that economic grievances (about the economy and family status) or political grievances (about exclusion and preference for democracy) are related to student protest participation in Jordan. These findings are unexpected because protests in Jordan have traditionally coincided with economic downturns and calls for greater democracy.

Column 3 in Table 3 presents the ordered probit regression results for Morocco. The results suggest that macroeconomic grievance is associated with higher student protest participation, holding other grievances and characteristics constant. Surprisingly, grievance regarding family economic status is negatively associated with student protest participation. Thus, we reject the economic grievance hypothesis that students protest against their government when they believe their family's economic situation is poor. This inverse relationship between low family economic condition and student protest may be attributable to poor Moroccans feeling demoralized about contributing to political change. Turning to political grievance explanations, there is evidence that students participate in protest when they feel politically excluded. Preference for democracy in Morocco, however, is not statistically associated with student protest participation.

Last, column 4 in Table 3 presents the ordered probit regression results for Yemen. There is no statistical support for the economic grievance hypotheses that students protest against their government when they believe their economy or personal economic situation is poor. Contrary to the political grievance hypothesis on political exclusion, we find that students who feel politically excluded are less likely to participate in protests; we therefore reject the hypothesis on grievance of political exclusion and protest participation in Yemen. A likely explanation for this result is that politically excluded students feel disenfranchised and helpless in bringing about political change. There is also no statistical support for the hypotheses that students in Yemen participate in protests against their government because they prefer a democracy.

So far, our results have indicated that some but not all grievances are statistically associated with protest participation. But are all four economic and political grievances jointly associated with protest participation? To address this question, we conduct a test of the complex hypotheses that involves all the grievance factors set simultaneously equal to zero. According to the Wald test results shown at the bottom of Table 3, the hypothesis that the effects of all the grievance variables simultaneously equal to zero can be rejected at the .05 level of statistical significance for Algeria and Morocco. For Yemen, the joint hypothesis is rejected at the .10 level of significance. However, we cannot reject the hypothesis for Jordan, which suggests that broad economic and political grievances are not associated with student protests in Jordan. In short, we find that a combination

of the four economic and political grievances is associated with student protest participation in Algeria, Morocco, and Yemen but not in Jordan.

Regarding the control variables, there is no evidence of a gender gap in protest participation in Algeria, Jordan, and Morocco; in Yemen, however, female students are less likely to protest, holding other factors constant. The lack of gender difference is consistent with emerging literature on the significant advances in women's roles in the public sphere (Inglehart, 2003). There is also no statistical difference in the protest participation rates of secondary and higher education students, holding other characteristics constant. This suggests that secondary students develop political views and behaviors prior to enrolling in higher education. As future research, it is worth investigating the development of politicization in secondary schools in the four Arab states.

Although not included in this article, we conducted a series of regressions to assess the robustness of our findings. For example, we collapsed students who signed petitions and those who marched in one group, such that $PROTEST=0$ if a student did not protest and $PROTEST=1$ if a student either signed a petition, or marched, or both. The findings from the resulting binomial regression models are consistent with the ordered probit regression results presented in this article.

DISCUSSION

These results suggest the need for additional research. We encourage scholars to assess our findings using future rounds of the *Arab Barometer*. Methodologically, there is broad scope for quantitative, qualitative, and case study research that address the effects of both educational institutions and broader economic and political grievances on Arab student protest participation.

We also encourage the adoption of alternative conceptual frameworks for understanding student protest in Arab states. Scholars have often used social movement theoretical frameworks to analyze student protest. The bulk of the literature on social movements examines the emergence and maintenance of movements from two primary perspectives: resource mobilization and political process. Resource mobilization approaches to social movement analysis focus primarily on the role of access to resources in movement emergence. Scholars in this area are interested in understanding the ways in which groups utilize available resources—often by leveraging contacts with elite groups—and they argue that resources are the key component in movement success and maintenance (Jenkins & Parrow, 1977; McCarthy & Zald, 1977, 2002). In contrast, the political process model, pioneered by Charles Tilly and Doug McAdam, argues that the emergence and maintenance of social movements (such as protests) depends on access to resources and the appropriate political and social contexts (McAdam & Tarrow, 2011; Meyer, 2004; Tilly & Wood, 2009). Accordingly, a social movement conceptual framework would focus on the macrolevel processes and organizations involved in student protests rather than on the microlevel individual determinants that we investigate in this article.⁸

⁸A number of different approaches to the analysis of social movements have developed out of these two perspectives. Some scholars examine the role of culture in social movements (Polletta, 2008; Rochon, 1998; Zhao, 2010), granting more agency to cultural contexts in movement emergence and maintenance. Social-psychological perspectives examine group behavior, emotional manipulation, and collective identity in movements (Hirsch, 1990; Jasper, 2011; Klandermans, 2005; Melucci, 1995; Snow & Oliver, 1995). Others study the role of structural determinants in movement mobilization

Educational stratification theory is another alternative conceptual framework for future research on student protests in Arab states. With roots in the classical Marxist thesis on working-class participation in revolutionary social movements, the conflict tradition of educational stratification emphasizes an adversarial relationship between classes, where upper classes strive to preserve their privilege. Termed “opportunity hoarding” (Wright, 2008), exclusionary practices on the part of upper classes manipulate the value of human capital by restricting lower class access to education. Wright emphasized the relationship between “the advantages of one group and the disadvantages of another,” as opposed to the mobilizing power of human capital at the individual level (p. 339). Because university students from richer and financially stable families attend prestigious educational institutions with higher quality education and better social networks and go on to enjoy high status in society (Apple, 1978; Bourdieu, 1973), students from richer families do not want to disrupt the status quo by protesting against the regime. In contrast, students from poorer families tend to attend lesser quality educational institutions and are relegated to low social status after graduation; thus, low-status students are dissatisfied and more likely to protest. An inquiry focused on educational stratification conceptual framework would require data on the quality and reputation of the educational institutions attended by student respondents to the *Arab Barometer*.

CONCLUSION

Using data from the 2006–07 *Arab Barometer*, we analyzed student protest participation between 2003–07 in Algeria, Jordan, Morocco, and Yemen. We found protests were common during the years preceding the Arab Spring and that the riskier form of protesting (marching in a demonstration) was approximately 1.5 to 2 times as common as the less risky form of protest (signing a petition), despite the dangers of voicing dissent in authoritarian regimes.

We proposed grievance explanations of why students protested. In particular, we hypothesized that student protest is determined by attitudes on the performance of the economy, personal family economic status, political exclusion, and preference for democracy. Using an ordered probit model, we found that student protest participation is statistically associated with grievances about the economy (Algeria and Morocco) and lack of democracy (Algeria only). In joint hypothesis tests, however, we detected support for the four grievance-based explanations for Algeria, Morocco, and Yemen but not for Jordan.

There are two main conclusions to be drawn from our study. First, different motivations for student protest are dominant in different countries. Scholars, particularly those who do comparative statistical studies, tend to look for a single explanation that holds across multiple countries, but our empirical analysis indicates that a more nuanced understanding of student political behavior might be appropriate. The second conclusion, based on the lack of statistical evidence on individual hypotheses, is that broader economic and political factors may have had a limited effect on student protests during the 2003–07 period in Algeria, Morocco, Yemen, and especially Jordan. It is possible, however, that student grievances increased during the Arab

and continuation; for example, organizations (Ganz, 2000; McAdam, 1983), networks (Diani, 2004; Snow, Zurcher, & Eklund-Olson, 1980), coalitions (Staggenborg, 1986; von Bülow, 2011), or repression (Alimi, 2009; Almeida, 2003).

Spring as the larger population of nonstudents organized mass protests that expressed economic and political grievances.

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