

# **Educational Attainment and Egalitarian Attitudes Toward Women in the MENA Region: Insights from the Arab Barometer**

**Amy Auletto**

*Michigan State University*

**Taeyeon Kim**

*Michigan State University*

**Rachel Marias**

*Michigan State University*

*Despite increasingly egalitarian attitudes toward women in the Middle East and North Africa, nations in this region continue to rank among the lowest in measures of gender equality. Using survey data, we examine the relationship between educational attainment and support for women. We find that increased educational attainment is predictive of greater support for women's employment and women's participation in post-secondary education. We also find that egalitarian attitudes have increased over time and education continues to remain a strong predictor of these attitudes. We argue for increased investment in education that promotes egalitarian attitudes for both genders in the MENA region.*

## **Introduction**

Despite historically large gender gaps in Middle Eastern and North African countries, citizens of these nations have developed increasingly egalitarian views of women in recent years. Middle Eastern and North African (MENA) countries regularly score low on the Global Gender Gap Index, a composite measure of gender gaps in economic, educational, political, and health outcomes. Gender inequity in MENA countries has attracted attention as women become more involved in multiple venues of society: civic engagement, economic contribution, and political involvement. Women's increased participation in society has prompted research regarding how women are viewed in these countries and how egalitarian attitudes toward women might be strengthened.

Given the evolving status of women in the MENA region, the purpose of this study is to offer evidence that increased educational attainment is a promising strategy for bolstering egalitarian attitudes toward women. In this study, we use survey data from the Arab Barometer to examine the relationship between educational attainment and egalitarian views of women in 12 of 20 countries commonly identified as part of the MENA region: Algeria, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Palestine, Sudan, Tunisia, and Yemen. We also consider how this relationship has changed over time. We find that increased educational attainment is associated with more egalitarian views of women in MENA countries, including support for women participating in the workforce and post-secondary education.

Based on the results of our analysis, we argue that education is one way to create more equitable environments in the MENA region. While prior research has demonstrated the potential benefits of education across a number of measures, our study is unique in that we identify a statistical relationship between education and views of women in the MENA region. Using human capital and social movement theory lenses to view these findings, we call for further investment in education for both men and women as a means to improving the status of women. We know that when women are educated they see direct benefits through increased income levels, they are healthier, delay marriage, have more economic autonomy, and experience less violence in their lives (Results Educational Fund, 2009). However, educating women alone will not change views of women in these countries. Rather, increasing education for both men and women in a way that is culturally sensitive while also addressing differences by gender will change attitudes about women's participation in society as it focuses on all citizens, rather than a single gender.

### **Background**

We draw on five areas of literature when discussing views of women in MENA countries. As a starting point, views of women in MENA nations are grounded in understanding the current status of women in these nations. Strongly held views of women and their status within society are a cornerstone assumption in our study. Views of education as a broad benefit to society comes from a feminist viewpoint where what is good for women is good for all of society (Unterhalter, 2006). Increased levels of education are better for an entire society, not just the women in that society. Finally, the research questions of this paper focus on women's involvement in society through three specific arenas: first, women's involvement in the workforce as potential economic contributors; second, women in political leadership as a form of significant political engagement; and third, post-secondary education as an emancipatory experience that assists in creating egalitarian views of women.

### **Education as a Broad Benefit to Society**

Education is a basic human right that is critically important to developing nations. Increased educational attainment for both men and women has been linked to improved health outcomes, economic growth, and greater levels of democracy and stability specifically in the Arab world (Faour, 2011), as well as worldwide (Center for Global Development, 2006). Furthermore, individuals with greater education levels are exposed to more egalitarian ideas and are more likely to pass these ideas onto their children. This phenomenon has been found across a variety of settings, including in the United States (Bolzendahl & Myers, 2004) and the United Arab Emirates (Matherly, Amin, & Al Nahyan, 2017). Developing nations also experience a number of benefits related specifically to the education of women (King & Hill, 1997; Cin & Walker, 2016). When MENA nations fail to invest in women's education, income levels and economic growth suffer (Dollar & Gatti, 1999). Worldwide, women with more education delay marriage, are more empowered, and have more economic autonomy (Results Educational Fund, 2009). In turn, societies in the MENA region with more empowered women also experience less violence and terrorism (Monshipouri & Karbasioun, 2003) along with other criminal behaviors (Stromquist, 2007). Furthermore, mothers with increased education levels have better health outcomes for themselves and their children (Grossman, 2006; Results Educational Fund, 2009; Stromquist, 2007), and their children are also more likely to attend school (Filmer, 2000; Pilařová & Kandakov, 2017).

Although increased women's education is a worthy goal with many benefits for society as a whole as well as women specifically, we focus the remainder of our review of the literature on the potential relationship between increased education for *all* citizens and egalitarian attitudes toward women. We focus specifically how educational attainment may relate to both men and women's attitudes toward female participation in the labor force, political leadership, and post-secondary education.

### **Women in the Labor Force**

Prior research has demonstrated that educational attainment is a positive predictor of support for women's participation in employment outside of the home. Bolzendahl and Myers (2004) argue that formal education is an effective strategy to expose individuals to egalitarian ideas, such as women's participation in the labor market, and that more educated individuals, in turn, pass these egalitarian ideas to their children. Formal education also generates career interests that lead women to pursue employment they may not have otherwise considered (Bolzendahl & Myers, 2004). While education levels explain to some degree the extent to which individuals support women working outside the home, Gamal (2015) argues that social attitudes in the MENA region also play a significant role. Beliefs that women are primarily responsible for caring for their families and concerns that men may lose their jobs if more women are employed also drive the lack of support for women working outside of the home (Gamal, 2015). Support for women's labor force participation in the MENA region is not necessarily explained by religion, but it is not possible to fully disentangle the role it plays (Price, 2016). Hayo and Caris (2013) found that there is no significant difference in the employment rates of Muslim and non-Muslim women in MENA nations but rather that traditional social attitudes and family environments explain different levels of women's participation in the labor force. Among married couples, research from the U.S. has also identified that education has positive spillover effects on spouses' attitudes toward women's employment. The more educated a married man is, the more likely he is to support women's employment and these attitudes also positively influence his wife's beliefs as well. Similarly, the more educated a married woman is, the more likely she is to support women's employment and her husband's beliefs about women's employment are also positively influenced (Kroska & Elman, 2009). In the MENA region specifically, when men are married to women who continue to work after marriage, they also expressed greater egalitarianism than single men and men whose spouses do not work (Benstead, 2016).

Job sectors in the MENA region also play a role in attitudes toward women's participation in the labor force. Unlike other developing nations, the MENA region has not seen an expansion in job sectors that typically employ females (Verne, 2015). Rates of female participation in the labor market also vary by sector and Haghghat (2012) argues for the importance of examining sectors individually rather than looking at overall rates of employment. Lower aggregate rates of female labor force participation in developing MENA nations can be explained by an overall decline in agriculture and a lack of increase in female participation in the service sector that other developing nations typically experience (Haghghat, 2012).

### **Women in Political Leadership**

Relative to other similarly developed areas of the world, predominantly Muslim nations in the MENA region demonstrate significantly less support for women's participation in political

leadership (Price, 2014). Increased investment in education for both men and women, however, has been argued as one strategy for increasing support for women in political leadership (Basiri, 2016). In a study of 181 countries, Bullough and colleagues (2012) identified that increased spending in public education is a contributing factor to the increasing number of women in political leadership and that this finding held true across the MENA region. Education may work to improve women's participation in political leadership by giving students the opportunity to practice civic skills and offering hands-on experiences with the democratic process (Faour, 2011). There are also additional benefits to investing in organizations that focus on women's education as increased levels of education among women are predictive of higher rates of female political participation in the MENA region (Balioune-Lutz, 2013). Increasing women's participation in political leadership also has spillover effects that positively impact egalitarian attitudes toward women in other realms of society as well. When women are represented in political positions, such as seats in parliament, more citizens indicate support for women holding employment outside of the home (Price, 2016).

### **Women in Post-Secondary Education**

Increased education levels among both men and women have been linked to increased support for women's participation in post-secondary education. When women participate in post-secondary education, they are given the opportunity to experience a community outside of the family, and they develop higher expectations for equity in marriage and employment (Shavarini, 2006). Increasing women's rates of post-secondary enrollment have been shown to increase egalitarian attitudes toward women's participation in the labor force and other realms of society (Price, 2016). In fact, in many MENA nations, women are enrolling in post-secondary education at higher rates than men (Jalbout, 2015). However, women are often not treated equally in universities and can experience issues with future marriage prospects if their education levels exceed those of potential spouses (Shavarini, 2006). Furthermore, women often experience barriers to entering the labor force upon completion of their education (Jalbout, 2015). Despite these barriers, Haghighat (2012) argues that the social status of women, specifically women's standing in society relative to men, has been improving due to increased participation in post-secondary education and that women's positions in society will only continue to improve as the MENA region continues to diversify its job opportunities. Additionally, Chamlou and colleagues (2011) argue that women's participation in post-secondary education has a positive impact on women's labor force participation in MENA nations. By increasing the education levels of all citizens in the MENA region, egalitarian attitudes toward women will increase, thus improving women's abilities to fully access and participate in post-secondary education.

### **Theoretical Framework**

Although gender gaps in the MENA region are still problematic, some researchers have reported positive changes regarding women's rights and their social involvement (Haghighat, 2012; Keddie, 2007). These researchers have noted the important role of education in driving social changes. Thus, education has been instrumental in revising societal views on women's social participation, which in turn, improves societal development as a whole (Dris-Ait-Hamadouche, 2007; Faour, 2011; Kilgore, 1999). With this notion, researchers and nation states have addressed the importance of investment in education (El-baz, 2007). In this section, we utilize human capital theory and social movement theory to explain how education can help

narrow gender gaps. We couch this theoretical stance with the assumption that MENA nations are gendered societies. Specifically, the three forms of societal involvement discussed in this paper are highly gendered environments: an individual's gender identity plays a fundamental role in the hegemonic norms in educational attainment, workforce involvement, and civic participation. Education is an "ideological state apparatus which not only [represents] a key site of social and cultural reproduction" (Dillabough, 2006, p. 3). Education is a key location for learning the meaning of gender, and also learning about equality among people and genders.

### **Human Capital Theory**

Taking an economic perspective, human capital theory explains why education is important to encourage women's participation in the labor force. The foundations of human capital were first described by economist and philosopher Adam Smith in 1776. Smith (1776/1952) said that labor inputs qualitatively include "the acquired and useful abilities of all inhabitants or members of the society" (p.119). These labor inputs are acquired through "education, study, or apprenticeship" (p.119) and come at a high cost (Smith, 1977/1952). Building on this idea, economic research on human capital has mainly examined economic growth and explored workers' productivity and earning relationships. Human capital theory suggests education can increase individuals' future outcomes in labor markets and society's economic growth in general (Labaree, 2010; Schultz, 1961; Tyack, 1976). Research has revealed workers' education levels are associated with their income in labor markets by assuming that, as levels of education increase, labor productivity and income also increase. Investment in schooling has been considered a critical factor in increasing job opportunities and incomes (Becker, 1985; Mincer, 1958).

Aligning with human capital theory, researchers have identified a number of additional benefits to education. For example, Arcidiacono, Bayer, and Hizmo (2008) found that the wages of college graduates were more commensurate with their abilities in comparison to high school graduates. Education can also impact population growth control and quality of life (Becker, 1993). In addition to the effects of education on individuals, researchers have reported that education benefits society in general. McMahon (2010) provided empirical evidence to support the benefits of education, such as increasing the level of democratization and average life expectancy. This shows that as more people are educated, societies experience additional benefits.

Human capital theory provides evidence that education plays a critical role in improving the quality of individual life and developing society in general, especially focusing on economic perspective. Thus, it is possible to say investment in education can increase women's participation in labor markets and decrease income inequality by gender in MENA nations. Moreover, increasing educational attainment may support positive views of women's social and political participation by generating more egalitarian values in its society as a whole.

In the context of MENA where gender gaps are high, human capital theory provides possible explanations for a link between educational attainment and egalitarian views toward women. As gender inequality in the labor market is high, research has specifically focused on national economic growth by increasing educational attainment for women, relying on human capital theory (e.g., World Bank, 2004). According to human capital theory, holding a higher education

degree provides qualified skills and With the increase in economic status resulting from greater educational attainment, individuals may recognize the importance of schooling and social participation for women. For example, focusing on women's perceptions of feminism in Bahrain, Kuwait, and the United Arab Emirates, Findlow (2013) found that while male-dominant social structures limited women's activism and freedom, higher education provides women with opportunities to learn radical ideas, make public demands, and express themselves. Among men in MENA societies, it can be assumed that those with greater educational attainment are more likely to agree with women's participation in the society. Qualitative data suggest that men are reluctant to have spouses with greater levels of education than themselves in the MENA region (Findlow, 2013). Thus, as human capital theory implies, educational attainment plays a critical role in individuals' perceptions of women in the society as well as participation in the labor force in the MENA region.

### **Social Movement Theory**

To explain social changes in predominantly Islamic countries, many researchers have adopted social movement theories (e.g., Bayat, 2005; Tuğal, 2009). Social movement theories focus on what drives social movement, and the mechanisms by which social change is achieved. Models of resource mobilization and political process are popular in social movement theories. In the 1990s, theories of New Social Movements developed by distinguishing their approaches from those of the old social movement theories. While old social movement theories situated economy and institutional politics in the center, new social movement theories emphasized civil society (Scott, 1990; Tuğal, 2009).

Resource mobilization models began to emerge in the late 1960s (see Gamson, 1975; Jenkins & Perrow, 1977; McCarthy & Zald, 1977; Oberschall, 1973), and these models viewed social movements as organized activities to achieve already defined movement goals. This approach focused on resource utilization, including organizational venues, external support, and elite sponsorship to increase mobilization (Tuğal, 2009). A resource mobilization approach is useful to reveal active and rational sides of social movements, but this model neglected the importance of the public by focusing on elites, and did not clearly define what can be counted as resources (Zald, 1992). To complement the resource mobilization model, the political process model focuses on state power (see McAdam, 1982; Tilly, 1978). Social movements here can be defined as "an organized, sustained, self-conscious challenge to existing authorities" (Tilly, 1984, p. 304), and therefore, the cognitive emancipation and the process of consciousness are valued in the social movement processes. These changes can be achieved by structural changes of the state and availability of resources. The political process model views socioeconomic status, the level of political opportunities, organizational capacity, collective solidarity, and social control as critical to achieving successful social movements. Unlike these two approaches, the new social movement theories highlight the importance of lifeworld [1] and individuals' life experiences in social changes (e.g., Habermas, 1987; Mellucci, 1996). The new social movements aim to change value systems, lifestyles, attitudes, cultural symbols, and protect lifeworld rather than political or economic integration. Networks and grassroots communities are also important organizations to achieve these goals (Scott, 1990). This approach suggests that social changes can be led by the movements that focus on cultural and social aspects (Cohen, 1985).

Researchers have applied social movement theories to analyze social changes in the Arab region. While the literature has provided different cases, researchers have agreed on using integrated frameworks in analyzing social movements in Arab or Islamic nations because these regions have complex dynamics of social changes. For example, unlike other Western countries, their state power is a strong driver, and at the same time, religion has a strong power in shaping collective norms and value systems (Bayat, 2005; Tuğal, 2009). Given this, education can play a critical role in realizing social changes through movements. From the view of old social movement theories, which focus on structural changes in politics and economy, reforming educational systems and institutions can be one way to lead changes (El-baz, 2007). From the view of new social movement theories, which focus on everyday life and value systems, education can help emancipate learners and integrate individual meaning and collective identities (Kilgore, 1999). Therefore, education can be a significant mediating factor in making social changes in MENA countries.

### **Approach**

Using survey data from the Arab Barometer, we identify the extent to which educational attainment predicts individuals' attitudes toward women in MENA nations and we also look at trends in this relationship over time. First, we describe the Arab Barometer and the specific variables we include in our analyses. Next, we offer several descriptive analyses and explain our analytic approach. Finally, we present the findings from our analyses. The following research questions inform these methods:

- 1) What is the relationship between educational attainment and individuals' attitudes toward women?
- 2) How have attitudes toward women and their relationship to educational attainment changed over time?

### **Arab Barometer**

We utilized data from the Arab Barometer, a publicly available data set that was established in 2005 by the University of Michigan, Princeton University, and other universities and research centers in the MENA region [2]. While definitions can vary, the MENA region is generally considered to include 20 countries, spanning from Morocco to Iran (World Bank, 2014). A 2011 World Bank Report describes the MENA region as an area of rapid urbanization with pockets of very dense population and high economic activity. Due to uneven rapid growth across the region, there are substantial disparities in development and employment rates.

The Arab Barometer survey was designed to produce data “on the politically-relevant attitudes of ordinary citizens” in MENA nations (Arab Barometer, 2005). All surveys were conducted in-person using a complex national probability sample design with stratification and clustering. Surveys were independently conducted within each country by a national institution, such as a research center or university. The specific sampling design varies by country based on unique district or province boundaries. Survey data was collected in three waves: 2006-2008, 2010-2011, and 2012-2014. In each wave of data collection, seven to thirteen countries in the region participated.

We utilized the most recent wave of data to answer our first research question pertaining to the relationship between educational attainment and attitudes toward women. In our first set of analyses, we used all 12 countries in the data set: Algeria, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Palestine, Sudan, Tunisia, and Yemen. We used the first wave of data, 2006-08, in conjunction with a portion of the most recent wave of data to answer our second research question pertaining to changes in attitudes and their relationship to educational attainment over time. This set of analyses focused on six nations that participated in both waves of data collection: Algeria, Jordan, Lebanon, Morocco, Palestine, and Yemen. Each country surveyed a nationally representative sample of approximately 1,200 adult citizens over the age of 18. These countries share a number of common characteristics: Arabic is the official language, Islam is the dominant religion, and the population is fairly young (Assaad & Roudi-Fahimi, 2017). However, it is important to note that the populations of these nations are not homogenous. For example, there is a large Christian minority in Lebanon and varying dialects are spoken across countries. There is also substantial variation in per capita incomes, with Sudan on the lower extreme at \$4,730 and Algeria on the upper end of the spectrum at \$15,075 (World Bank, 2016).

### **Variables**

Our analyses focused on three survey items that measure participants' attitudes toward women's equal participation in society. These questions measured the extent to which citizens believe women can work outside the home, women's ability to participate in political leadership, and the importance of university education for women relative to men. We considered each outcome individually due to the unique attitudes each question assessed. Cronbach's alpha was 0.42, so these items could not be used to generate a composite measure. We verified that these three outcomes needed to be considered individually by also calculating Cronbach's alpha for various subgroups by gender, education, level, and country. We found that these values generally fell between about 0.35 and 0.45, indicating that the variation was not being driven by a particular subgroup of our sample. As we were interested in whether or not individuals supported women's equal participation in outside employment, higher education, and political leadership, we conflated survey responses regarding each of these forms of participation from a four-point scale to a binary measure of supporting or not supporting women, where egalitarian responses received a "1," and non-egalitarian responses received a "0." We felt that although an individual may waver between strong agreement and agreement with a woman's right to participate in society (or similarly between strong disagreement and disagreement), he or she is not likely to waver between agreement and disagreement. To ensure this was the appropriate decision, we ran a series of comparison tests between individuals who selected "strongly agree" and "agree" (and similarly, those who selected "disagree" and "strongly disagree"). We compared these groups based upon educational attainment and found that, while a handful of these comparisons were significantly different, there were no substantive differences among those who indicated some level of agreement (or disagreement). At most, educational attainment rates fell within approximately four percentage points of each other. Additionally, binary outcomes allowed for easier interpretation of findings.

Our main independent variables of interest were the attainment of a high school diploma and a bachelor's degree. Other independent variables used in our analyses included: age, gender, religion, employment status, student status, income stability, and marital status. These

demographics were selected due to their potential impact on attitudes toward women’s equal participation in society. We controlled for these characteristics to isolate the relationship between educational attainment and egalitarian attitudes.

### Descriptive Statistics

In Table 1, we provide descriptive statistics for education attainment and other demographics by country for all participants included in our analyses. All countries participating in 2012-14 were used to answer our first research question and our second research question was answered using the six countries in 2006-08 that also participated in 2012-14. While there was a fair amount of variation between countries, about half were women, most identified as Muslim, and a majority of participants were married. About half of participants held a high school diploma and approximately one in five participants held a bachelor’s degree. Although the average participant age was about 38, this variable was positively skewed (0.647), with younger participants representing a substantial portion of the sample. This mirrors larger trends in the area, as the youth in the MENA region currently represent a substantial portion of the population (Assaad & Roudi-Fahimi, 2017).

Table 1

*Observable characteristics of Arab Barometer participants, 2006-2008 and 2012-14.*

	Country	N	Age	Female	Muslim	Employed or Student	Income Stable	Married	High School Diploma or Greater	Bachelor's Degree or Greater
2006-08	Algeria	1300	34.0 (13.7)	0.46 (0.50)	1.00 (0.00)	0.72 (0.44)	--	0.39 (0.49)	0.78 (0.42)	0.45 (0.50)
	Jordan	1143	36.7 (13.8)	0.51 (0.50)	0.98 (0.12)	0.43 (0.49)	--	0.69 (0.46)	0.58 (0.49)	0.15 (0.36)
	Lebanon	1195	38.9 (13.5)	0.42 (0.49)	0.43 (0.50)	0.82 (0.39)	--	0.62 (0.49)	0.66 (0.47)	0.33 (0.47)
	Morocco	1277	37.6 (14.8)	0.53 (0.50)	1.00 (0.00)	0.52 (0.50)	--	0.52 (0.50)	0.19 (0.39)	0.09 (0.29)
	Palestine	1270	37.4 (13.7)	0.52 (0.50)	0.98 (0.15)	0.40 (0.49)	--	0.77 (0.42)	0.54 (0.50)	0.13 (0.34)
	Yemen	717	32.6 (9.9)	0.50 (0.50)	1.00 (0.00)	0.65 (0.48)	--	0.67 (0.47)	0.71 (0.46)	0.30 (0.46)
	<b>All Countries</b>	<b>6902</b>	<b>36.2 (13.4) 18-99</b>	<b>0.49 (0.50) 0-1</b>	<b>0.89 (0.31) 0-1</b>	<b>0.59 (0.49) 0-1</b>	--	<b>0.60 (0.49) 0-1</b>	<b>0.57 (0.50) 0-1</b>	<b>0.24 (0.43) 0-1</b>
2012-14	Algeria*	1220	38.3 (15.0)	0.50 (0.50)	1.00 (0.00)	0.53 (0.50)	0.46 (0.50)	0.50 (0.50)	0.36 (0.48)	0.11 (0.31)
	Egypt	1196	39.2 (13.3)	0.50 (0.50)	0.94 (0.23)	0.52 (0.50)	0.28 (0.45)	0.71 (0.45)	0.58 (0.49)	0.20 (0.40)
	Iraq	1215	35.5 (13.1)	0.50 (0.50)	1.00 (0.04)	0.51 (0.50)	0.44 (0.50)	0.65 (0.48)	0.37 (0.48)	0.13 (0.33)
	Jordan*	1795	38.1 (13.7)	0.50 (0.50)	0.99 (0.07)	0.47 (0.50)	0.30 (0.46)	0.70 (0.46)	0.63 (0.48)	0.16 (0.37)
	Kuwait	1021	36.8 (10.6)	0.49 (0.50)	1.00 (0.50)	0.70 (0.46)	0.81 (0.39)	0.74 (0.44)	0.61 (0.49)	0.24 (0.43)
	Lebanon*	1200	41.0 (15.4)	0.50 (0.50)	0.61 (0.49)	0.73 (0.45)	0.39 (0.49)	0.60 (0.49)	0.52 (0.50)	0.23 (0.42)
	Libya	1247	38.1 (13.7)	0.50 (0.50)	0.99 (0.10)	0.65 (0.48)	0.53 (0.50)	0.59 (0.49)	0.72 (0.45)	0.33 (0.47)

Morocco*	1116	35.2 (13.0)	0.50 (0.50)	1.00 (0.03)	0.44 (0.50)	0.37 (0.48)	0.51 (0.50)	0.28 (0.45)	0.09 (0.30)
Palestine*	1200	38.1 (13.7)	0.50 (0.50)	0.97 (0.16)	0.51 (0.50)	0.34 (0.47)	0.74 (0.44)	0.66 (0.47)	0.24 (0.43)
Sudan	1200	33.7 (12.2)	0.50 (0.50)	1.00 (0.04)	0.55 (0.50)	0.27 (0.45)	0.58 (0.49)	0.38 (0.49)	0.11 (0.32)
Tunisia	1119	43.6 (15.8)	0.50 (0.50)	1.00 (0.00)	0.38 (0.49)	0.29 (0.45)	0.68 (0.47)	0.42 (0.49)	0.16 (0.36)
Yemen*	1200	35.5 (13.0)	0.50 (0.50)	1.00 (0.04)	0.52 (0.50)	0.36 (0.48)	0.62 (0.49)	0.34 (0.47)	0.10 (0.30)
<b>All Countries</b>	<b>14809</b>	<b>37.8 (13.9)</b>	<b>0.50 (0.50)</b>	<b>0.96 (0.20)</b>	<b>0.54 (0.50)</b>	<b>0.40 (0.49)</b>	<b>0.64 (0.48)</b>	<b>0.50 (0.50)</b>	<b>0.18 (0.38)</b>
		<b>18-89</b>	<b>0-1</b>						

\* These countries are included in analyses for both research questions 1 and 2.

Note. Income stability data was not collected in 2006-08. Aside from N (number of participants), all values are formatted as mean (standard deviation). Min-max is included below the mean (standard deviation) for each variable for "All Countries."

Exact ages for Morocco were not collected in 2006-08. Estimates were generated based on a 1-7 scale where 1 = 18-24, 2 = 25-34, and so on. Morocco is not included in the mean for Age in All Countries.

Table 2 summarizes our outcomes of interest in our first research question by country and education level. Each value can be interpreted as the portion of individuals holding an attitude of support toward women. While there was variation by country and education level, there tended to be fairly high support for women working outside the home and attending university, with levels of support ranging from 75 to 90%. Egalitarian attitudes toward women in political leadership were substantially lower. On average, only about 35% of individuals disagreed that men are better at political leadership than women. Because of the substantial variation between countries in these outcomes, we also conducted a series of analysis of variance tests to determine if these differences were statistically significant. Across a majority of countries, we found significant differences in levels of support for women.

Table 2

*Attitudes toward women by education level and country, 2012-14.*

Country	"A married woman can work outside the home." (Agreement)			"In general, men are better at political leadership than women." (Disagreement)			"University education is more important for males than females." (Disagreement)		
	Less Than High School	High School Diploma or Greater	Bachelor's Degree or Greater	Less Than High School	High School Diploma or Greater	Bachelor's Degree or Greater	Less Than High School	High School Diploma or Greater	Bachelor's Degree or Greater
Algeria	0.84	0.93	0.99	0.30	0.44	0.46	0.94	0.98	0.98
Egypt	0.81	0.86	0.91	0.33	0.32	0.33	0.76	0.79	0.77
Iraq	0.77	0.84	0.81	0.26	0.32	0.28	0.73	0.80	0.80
Jordan	0.79	0.86	0.91	0.25	0.28	0.32	0.73	0.78	0.80
Kuwait	0.87	0.92	0.92	0.51	0.38	0.36	0.60	0.71	0.69
Lebanon	0.88	0.93	0.93	0.59	0.63	0.65	0.88	0.87	0.93
Libya	0.80	0.85	0.86	0.26	0.23	0.23	0.78	0.75	0.77
Morocco	0.73	0.80	0.83	0.53	0.59	0.68	0.68	0.82	0.91
Palestine	0.77	0.87	0.90	0.33	0.28	0.28	0.78	0.80	0.82
Sudan	0.82	0.87	0.91	0.20	0.27	0.28	0.66	0.76	0.80

*Educational Attainment and Egalitarian Attitudes*

Tunisia	0.81	0.88	0.94	0.43	0.43	0.43	0.83	0.85	0.86
Yemen	0.73	0.81	0.89	0.29	0.25	0.23	0.60	0.70	0.78
<b>Overall</b>	<b>0.80</b>	<b>0.87</b>	<b>0.90</b>	<b>0.35</b>	<b>0.35</b>	<b>0.36</b>	<b>0.75</b>	<b>0.80</b>	<b>0.81</b>

**Analysis: Educational Attainment and Attitudes Toward Women**

To answer our first research question, pertaining to the relationship between educational attainment and attitudes toward women, we first conducted a series of two-sample tests of proportions to identify significant differences by education level in the proportion of citizens reporting egalitarian attitudes toward women. Because we hypothesized that greater levels of education predict more egalitarian attitudes, we compared individuals with and without high school diplomas in order to determine whether education might be predictive of support for women. Table 3 contains the results of these tests of proportions. In all countries, support for women working outside the home was significantly higher for individuals with a high school diploma. With regard to political participation, six of twelve countries had significant differences by education level, but in three of these countries, those with more education were surprisingly less supportive of women and overall, both groups of individuals supported women in political leadership at a rate of 35%. In regards to university education for women, seven of twelve countries had significant differences in education and the overall difference across all countries was significant as well. In general, those with high school diplomas had significantly higher rates of support for women attending university.

Table 3

*Comparison of support for women by education level and country, 2012-14.*

Country	"A married woman can work outside the home." (Agreement)			"In general, men are better at political leadership than women." (Disagreement)			"University education is more important for males than females." (Disagreement)		
	Less Than High School Diploma	High School Diploma or Greater	p-value	Less Than High School Diploma	High School Diploma or Greater	p-value	Less Than High School Diploma	High School Diploma or Greater	p-value
Algeria	0.84 (0.01)	0.93 (0.01)	<.01	0.30 (0.02)	0.44 (0.02)	<.01	0.94 (0.01)	0.98 (0.01)	<.01
Egypt	0.81 (0.02)	0.86 (0.01)	<.05	0.33 (0.02)	0.32 (0.02)	--	0.76 (0.02)	0.79 (0.02)	--
Iraq	0.77 (0.02)	0.84 (0.02)	<.01	0.26 (0.02)	0.32 (0.02)	<.05	0.73 (0.02)	0.80 (0.02)	<.05
Jordan	0.79 (0.02)	0.86 (0.01)	<.01	0.25 (0.02)	0.28 (0.01)	--	0.73 (0.02)	0.78 (0.01)	<.05
Kuwait	0.87 (0.02)	0.92 (0.01)	<.01	0.51 (0.03)	0.38 (0.02)	<.01	0.60 (0.02)	0.72 (0.02)	<.01
Lebanon	0.88 (0.01)	0.93 (0.01)	<.01	0.59 (0.02)	0.63 (0.02)	--	0.88 (0.01)	0.87 (0.01)	--
Libya	0.80 (0.02)	0.85 (0.01)	<.10	0.26 (0.02)	0.23 (0.01)	--	0.78 (0.02)	0.75 (0.01)	--

Morocco	0.73 (0.02)	0.80 (0.02)	<.05	0.53 (0.02)	0.59 (0.03)	--	0.68 (0.02)	0.82 (0.02)	<.01
Palestine	0.77 (0.02)	0.87 (0.01)	<.01	0.33 (0.02)	0.28 (0.02)	<.10	0.78 (0.02)	0.80 (0.01)	--
Sudan	0.82 (0.01)	0.87 (0.02)	<.05	0.20 (0.01)	0.27 (0.02)	<.01	0.66 (0.02)	0.76 (0.02)	<.01
Tunisia	0.81 (0.01)	0.88 (0.01)	<.01	0.43 (0.02)	0.43 (0.02)	--	0.83 (0.01)	0.85 (0.02)	--
Yemen	0.73 (0.02)	0.81 (0.02)	<.01	0.29 (0.02)	0.25 (0.02)	<.10	0.60 (0.02)	0.70 (0.02)	<.01
<b>Overall</b>	<b>0.80 (0.00)</b>	<b>0.87 (0.00)</b>	<b>&lt;.01</b>	<b>0.35 (0.01)</b>	<b>0.35 (0.01)</b>	<b>--</b>	<b>0.75 (0.01)</b>	<b>0.80 (0.00)</b>	<b>&lt;.01</b>

Note. Comparisons were conducted using two sample tests of proportions within countries by education level.

Observing this potential relationship between education and attitudes toward women as well as the significant variation between countries, we estimated a logistic regression model with country fixed effects in order to determine the likelihood of an individual supporting women based on educational attainment. We estimated the following model:

$$\text{SUPPORT}_i = \beta_0 + \beta_1 \text{EDUCATION}_i + \beta_2 \text{DEMOGRAPHICS} + \mu_j + \varepsilon_i$$

We estimated a total of six models, where SUPPORT is a binary outcome representing whether individual *i* in country *j* supports women in the labor market, political leadership, and higher education. EDUCATION<sub>*i*</sub> represents the level of educational attainment that person *i* in country *j* has attained. We estimate separate models for high school diploma and bachelor's degree.  $\beta_0$  is the constant term. DEMOGRAPHICS represents a vector of individual characteristics, including age, gender, religion, employment or student status, income stability, and marital status. Country fixed effects are represented by  $\mu_j$  and  $\varepsilon_i$  is the error term. Our estimates used robust standard errors clustered by country.

### Findings: Educational Attainment and Attitudes Toward Women

Table 4 contains the findings of our first research question, with all coefficients displayed as odds ratio estimates. We found that increased educational attainment is a statistically significant predictor of support for women in the labor force and university education. For example, an individual with a high school diploma was 1.772 times as likely as someone who did not complete high school to support women working outside of the home. Having a bachelor's degree versus not completing high school predicts that individual would be 1.929 times more likely to support women in the workforce. Similarly, individuals with high school diplomas and bachelor's degrees were 1.418 and 1.380 times more likely, respectively, to support women attending university. For political leadership, we did not find that educational attainment increases one's odds of supporting women. While the coefficients were slightly above 1 (1.074 for high school diploma and 1.087 for bachelor's degree), these odds ratio estimates were not statistically significant. Across all models, we found that female participants have significantly higher odds of supporting women's equal participation in society. In the case of participating in

the labor force and political leadership, individuals who identified with a religion other than Islam were more likely to support women. Finally, income stability predicted higher odds of egalitarian attitudes in several models. Overall, these findings demonstrate that higher levels of education are a strong predictor of egalitarian attitudes toward women's participation in society.

Table 4

*Odds ratio estimates for educational attainment as a predictor of support for women with robust standard errors clustered by country and country fixed effects, 2012-14.*

	"A married woman can work outside the home." (Agreement)		"In general, men are better at political leadership than women." (Disagreement)		"University education is more important for males than females." (Disagreement)	
High School Diploma or Greater	1.772 (0.068)***		1.074 (0.097)		1.418 (0.098)***	
Bachelor's Degree or Greater		1.929 (0.246)***		1.087 (0.091)		1.380 (0.131)***
Age	1.000 (0.005)	1.000 (0.005)	0.996 (0.003)	0.996 (0.003)	1.003 (0.003)	1.001 (0.003)
Female	2.809 (0.393)***	2.828 (0.388)***	1.984 (0.236)***	1.987 (0.241)***	1.975 (0.244)***	1.992 (0.242)***
Non-Muslim	1.467 (0.138)***	1.483 (0.141)**	2.300 (0.388)***	2.305 (0.384)***	0.888 (0.113)	0.896 (0.114)
Employed or Student	1.035 (0.093)	1.126 (0.082)	1.061 (0.060)	1.069 (0.070)	1.095 (0.091)	1.164 (0.077)**
Income Stable	1.224 (0.050)***	1.226 (0.054)***	1.048 (0.050)	1.046 (0.052)	1.108 (0.081)	1.114 (0.081)**
Married	1.081 (0.083)	1.065 (0.082)	1.033 (0.055)	1.031 (0.055)	1.007 (0.051)	0.999 (0.052)
N	14706	14706	14539	14539	14578	14578
Constant	1.443 (0.300)*	1.727 (0.333)***	0.282 (0.048)***	0.289 (0.044)***	0.908 (0.145)	1.017 (0.166)

Note. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

### Analysis: Trends in Support for Women and Educational Attainment Over Time

Finding a strong relationship between educational attainment and attitudes toward women's participation the workforce and university education, we next sought to identify trends in these attitudes over time and to determine whether this relationship is a new or longstanding phenomenon. To do this, we completed additional analyses of the six nations appearing both in the 2006-08 and 2012-14 waves of data: Algeria, Jordan, Lebanon, Morocco, Palestine, and Yemen. Displayed in Figure 1, we calculated the mean level of support for women in both 2006-08 and 2012-14. Across all three outcomes, the portion of individuals with egalitarian attitudes toward women increased. Disagreement that men are better at political leadership increased from 27.2 to 38.0%; disagreement that university is more important for men than women increased from 72.9 to 78.9%; and agreement that women can work outside the home increased from 78.5 to 82.7%.

Observing this increase across all measures, we estimated a series of logistic regression models for this subset of six countries in both 2006-08 and 2012-14 to determine how the relationship between educational attainment and attitudes toward women changed over time. Our second set of analyses followed a similar model as our first set. In this set, however, we only analyzed

the six countries in both waves of data and income stability was dropped as a covariate because it did not appear in the 2006-08 survey. We estimated a total of 12 models, looking at our three outcomes of interest during both waves of data, and considering both high school diploma and bachelor's degree attainment. As with our first analyses, we included country fixed effects and clustered robust standard errors by country to account for the variance across settings.

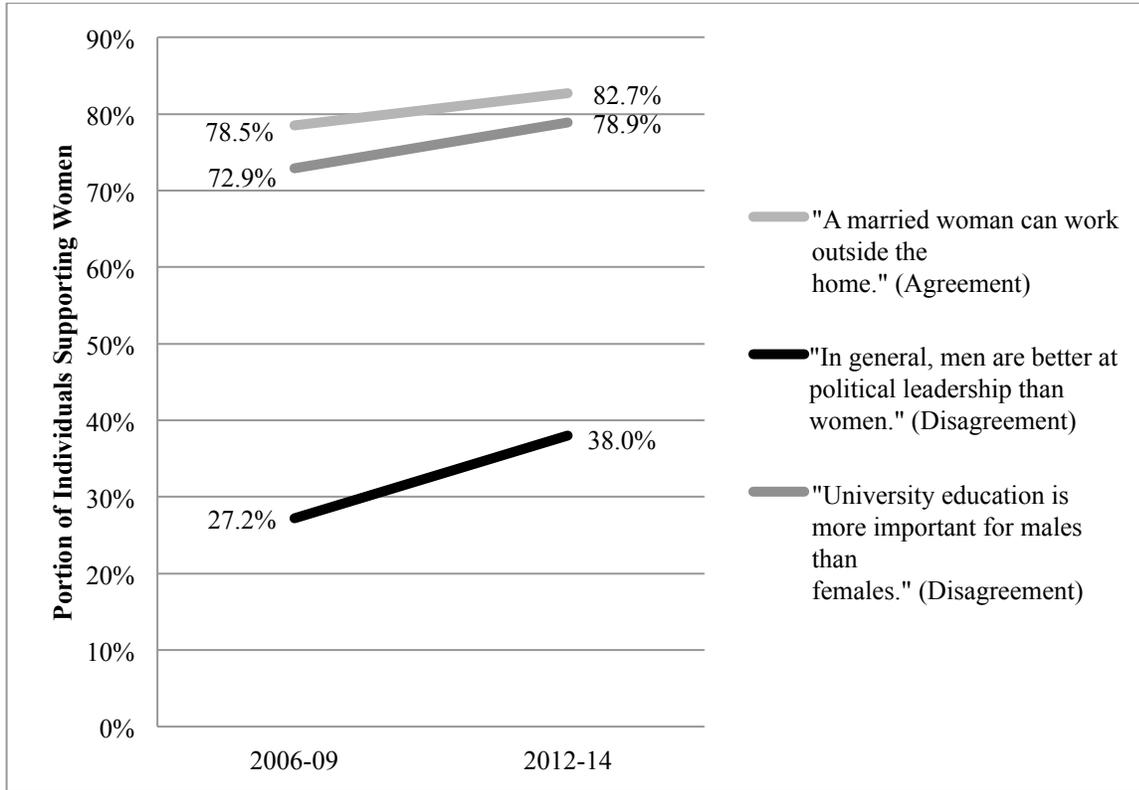


Figure 1. Support for women's participation in the labor market, political positions, and university education over time in six MENA nations.

### Findings: Trends in Support for Women and Educational Attainment Over Time

The findings of our second research question can be found in Table 5. All coefficients displayed are odds ratio estimates. In nearly every model, we found that educational attainment predicts an increase in one's likelihood of supporting women's equal participation in society. Not only was educational attainment nearly universally significant, but the likelihood of increased education predicting more positive attitudes toward women increased over time in a number of instances as well. For example, individuals with bachelor's degrees were 1.865 times more likely to agree women can work outside the home in 2006-08 and these odds increased to 2.456 in 2012-14. Similarly, the odds of bachelor's degree holders disagreeing that university education was more important for men than women increased from 1.585 to 1.783 in this same period of time. As with our first analyses, women had higher odds of holding egalitarian attitudes in all models and in a majority of our analyses, individuals practicing a religion other than Islam were also more likely to hold egalitarian attitudes. Overall, these findings provide further evidence that the relationship between education and support of women is not new and has, in some cases, been strengthening over the past decade.

*Educational Attainment and Egalitarian Attitudes*

Table 5

*Odds ratio estimates for educational attainment as a predictor of support for women with robust standard errors clustered by country and country fixed effects in six MENA nations, 2006-09 and 2012-14.*

	2006-08	2012-14	2006-08	2012-14
<b>"A married woman can work outside the home." (Agreement)</b>				
High School Diploma or Greater	<b>2.260</b> <b>(0.329)***</b>	<b>1.920</b> <b>(0.116)***</b>		
Bachelor's Degree or Greater			<b>1.865</b> <b>(0.429)***</b>	<b>2.456</b> <b>(0.331)***</b>
Age	1.020 (0.025)	0.970 (0.071)	0.973 (0.023)	0.939 (0.069)
Female	<b>2.787</b> <b>(0.274)***</b>	<b>3.239</b> <b>(0.461)***</b>	<b>2.735</b> <b>(0.279)***</b>	<b>3.271</b> <b>(0.479)***</b>
Non-Muslim	<b>2.522</b> <b>(0.188)***</b>	<b>1.558</b> <b>(0.196)***</b>	<b>2.718</b> <b>(0.183)***</b>	<b>1.608</b> <b>(0.203)***</b>
Employed or Student	1.062 (0.136)	1.013 (0.097)	1.130 (0.150)	1.089 (0.066)
Married	1.076 (0.121)	1.001 (0.096)	1.055 (0.120)	0.967 (0.085)
N	6871	7684	6871	7684
Constant	<b>1.828</b> <b>(0.501)**</b>	<b>1.618</b> <b>(0.313)*</b>	<b>2.647</b> <b>(0.678)***</b>	<b>1.960</b> <b>(0.383)***</b>
<b>"In general, men are better at political leadership than women." (Disagreement)</b>				
High School Diploma or Greater	1.128 (0.112)	<b>1.167</b> <b>(0.103)*</b>		
Bachelor's Degree or Greater			<b>1.321</b> <b>(0.196)*</b>	<b>1.295</b> <b>(0.142)**</b>
Age	1.004 (0.031)	0.967 (0.039)	1.004 (0.034)	0.959 (0.042)
Female	<b>1.742</b> <b>(0.265)***</b>	<b>2.185</b> <b>(0.369)***</b>	<b>1.744</b> <b>(0.261)***</b>	<b>2.188</b> <b>(0.377)***</b>
Non-Muslim	<b>2.299</b> <b>(0.207)***</b>	<b>2.224</b> <b>(0.399)***</b>	<b>2.302</b> <b>(0.192)***</b>	<b>2.253</b> <b>(0.390)***</b>
Employed or Student	1.227 (0.162)	1.037 (0.081)	1.205 (0.161)	1.039 (0.095)
Married	0.995 (0.079)	0.998 (0.060)	1.006 (0.079)	0.990 (0.059)
N	6871	7600	6871	7600
Constant	<b>0.314</b> <b>(0.067)***</b>	<b>0.256</b> <b>(0.039)***</b>	<b>0.312</b> <b>(0.058)***</b>	<b>0.270</b> <b>(0.039)***</b>
<b>"University education is more important for males than females." (Disagreement)</b>				
High School Diploma or Greater	<b>1.581</b> <b>(0.219)***</b>	<b>1.478</b> <b>(0.169)***</b>		
Bachelor's Degree or Greater			<b>1.585</b> <b>(0.269)***</b>	<b>1.783</b> <b>(0.321)***</b>
Age	1.021 (0.023)	1.028 (0.055)	0.995 (0.018)	1.007 (0.058)

	<b>1.961</b>	<b>2.082</b>	<b>1.958</b>	<b>2.097</b>
Female	<b>(0.295)***</b>	<b>(0.323)***</b>	<b>(0.282)***</b>	<b>(0.328)***</b>
	<b>2.471</b>	0.942	<b>2.563</b>	0.961
Non-Muslim	<b>(0.087)***</b>	(0.192)	<b>(0.099)***</b>	(0.189)
Employed or	1.062	1.119	1.086	<b>1.156</b>
Student	(0.075)	(0.087)	(0.085)	<b>(0.084)**</b>
	0.995	1.016	0.991	0.997
Married	(0.067)	(0.056)	(0.068)	(0.070)
N	6871	7635	6871	7635
	<b>2.829</b>	0.923	<b>3.417</b>	1.039
Constant	<b>(0.470)***</b>	(0.182)	<b>(0.457)***</b>	(0.218)

Note. \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

## Discussion

Overall, we find strong relationships between levels of education and egalitarian views of women. Leaning on education as a way to continue to improve views of women is a particularly powerful tool due to the nature of changes in views of women over time as predicted by levels of education. This relationship indicates that views of women are not fixed and influencing young people's view of women will in time have an effect on a society's shared cultural viewpoint. This follows the theoretical understanding of social movement theory that focuses on changes in attitudes: young people's views toward women can be changed with time and focused attention on the role of education.

Increased access to education may be an explanation for changing views of women and provides a venue to continue influencing views of women in MENA countries. Educating young people in MENA countries is a developmental imperative when taken within the context of egalitarian views of women (Roudi-Fahini & Moghadam, 2003). However, simply increasing access to education is not adequate; using curriculum and teaching styles that value women's contributions to society is crucial to change views of women. This feminist focus on curriculum that directly addresses women's contributions is key to changing value systems and attitudes toward women. When an entire educational system values women through positive representations of them in the curriculum, extended exposure to this message may further develop the increasingly egalitarian views of women in MENA countries. We stress that it is not just increasing access to education, but also the content of educational experiences that will influence students as they mature. Feminist theory highlights the importance of the content of educational experiences, not just the existence of women in the classroom (Dillabough, 2006).

While curriculum that values women is one way to improve views of women in MENA countries, teaching problem-solving skills, cooperation, and critical thinking are helpful in building democracy and citizenship (Akkair, 2004). These skills are linked to continued social, economic, and political reforms aimed at democratizing the region. Investments in education that focused on these skills build on this paper's findings that increased levels of education are indicative of positive views of women's involvement in society. These skills' association with economic, political, and social reforms aligns with our analysis of increasingly positive views of women's involvement in work outside of the home, political leadership, and the importance of university education, respectively. The intersection of these three forms of societal involvement highlights the contributions of women through a human capital framework. Women are untapped economic, political, and social inputs when they are not viewed as equal contributors

in those environments. By raising the views of women in these fields, they become contributors to these respective fields.

In addition to investment in the content of education, educational investments need to be for all students. We found that women generally have more egalitarian views of women compared to men. Additionally, those whose partners had egalitarian views of women would be more likely to hold similar views. Therefore, it is imperative that educational reforms, while promoting positive images of women, are targeted toward both men and women (Unterhalter, 2006). This is a central idea of new Social Movement Theories that focus on changing everyday life and value systems (Kilgore, 1999). Focusing on a single gender will not democratize views of women as effectively as educating both genders. These content-sensitive investments should be implemented quickly to take advantage of the large population of young people in Arab countries in this region (Faour, 2011). Educating students when they are young with a curriculum that promotes egalitarian views of women promotes these ideas at an early age. As students age, the society's overall views of women will become more egalitarian (El-baz, 2007).

Based on the findings of this paper, we call for continued education investment in MENA countries. However, investments in infrastructure and education supports, such as buildings and computers, are not sufficient if the goal of these education investments is to create lasting egalitarian views. Investing in education as soon as possible will support the findings that views of women are becoming more egalitarian with time. Teaching the large population of young people in MENA countries egalitarian views of women will be seen in future measures of views of women. These investments in education should focus on teaching all students, not just women or men and focus on building skills associated with democracy as well as teaching how women contribute to society in multiple arenas.

### **Conclusion**

In this study, we explored the role of education in shaping egalitarian values in the MENA region. Overall, we found that while there are statistically significant relationships between educational attainment and egalitarian views of women in the MENA region, these relationships are not significant across all countries and do not necessarily point to the conclusion that post-secondary education leads to stronger support of women than a high school diploma does. Despite non-significant relationships between education and support of women across some countries, we have no reason to believe that more education is harmful to developing egalitarian views of women.

Future research should explore the mechanisms that produce these findings: why is education correlated with egalitarian views of women, but inconsistently across national contexts? Although further education beyond high school did not consistently predict increased support of women, completing high school was consistently a predictor of significantly more support for women relative to no high school diploma. Future research should address the mechanism through which increased levels of education affect views of women. What specifically happens in institutions of secondary and post-secondary education that affects views of women? Are there additional contextual factors at play? We also found that the number of people who hold egalitarian views of women has increased with time. Further research should look to address potential explanations for this change in viewpoint. This study found evidence that increased

educational attainment is predictive of more egalitarian views of women in the MENA region and future research should explore contextual and time-specific mechanisms that led to these egalitarian views.

*Amy Auletto is a PhD student in Educational Policy at Michigan State University. Her current research focuses on the role that new teacher induction plays in encouraging persistence in the teaching profession and improving students' access to effective teachers. She is also interested in gender equality in international education settings.*

*Rachel Marias is a PhD student in Educational Policy at Michigan State University. Her research focuses on organizational identity and change in interdisciplinary programming and majors. She also studies college persistence with the aid of growth mindset and belonging. She currently lives in California.*

*Taeyeon Kim is a PhD student in K-12 Educational Administration at Michigan State University. Her research focuses on leadership development and school governance under education accountability policies. She is also interested in comparative research with an emphasis on the interactions between global changes and local education policies.*

**Contact:** Amy Auletto, [aulettoa@msu.edu](mailto:aulettoa@msu.edu)

### Notes

[1] According to Jürgen Habermas (1987), social arena is composed of the *lifeworld* and the *system*. The *lifeworld* is the closely related to our social and personal life, which is based on the shared meaning and values that lead to actions. In contrast, the *system* is related to interactions with the institutional authority, in which money and power are essential drivers for our action.

[2] More information about this data can be found at [www.arabbarometer.org](http://www.arabbarometer.org).

### References

Akkair, A. (2004). Education in the Middle East and North Africa: The current situation and future challenges. *International Education Journal*, 5(2), 144–153.

Arab Barometer. (2005). Retrieved from <http://www.arabbarometer.org/>.

Arcidiacono, P., Bayer, P., & Hizmo, A. (2008). *Beyond signaling and human capital: Education and the revelation of Ability*. National Bureau of Economic Research Working Paper.

Assaad, R. & Roudi-Fahimi, F. (2017). *Youth in the Middle East and North Africa: Demographic opportunity or challenge?* Washington, D.C.: Population Reference Bureau. Retrieved from <http://www.prb.org/pdf07/youthinMENA.pdf>

Baliamoune-Lutz, M. (2013). *The effectiveness of foreign aid to women's equality organizations in the MENA: Does aid promote women's political participation?* (No. 2013/074). WIDER Working Paper.

- Basiri, M. (2016). Defining the role of women in the future of political leadership in the Middle East. *Slovak Journal of Political Science*, 16(2), 134-145.
- Bayat, A. (2005). Islamism and social movement theory. *Third World Quarterly*, 26(6), 891–908.
- Becker, G. S. (1985). Human capital, effort, and the sexual division of labor. *Journal of Labor Economics*, 3(1), S33-S58.
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). Chicago: University of Chicago Press.
- Benstead, L.J. (2016). [Empowering women after the Arab Spring](#). In M. Shalaby & Moghadam, V. *Comparative Feminist Studies* (119-146). Palgrave Macmillan US.
- Bolzendahl, C.I. & Myers, D.J. (2004). Feminist attitudes and support for gender equality: Opinion change in women and men, 1974–1998. *Social Forces*, 83(2), 759–790.
- Bullough, A., Kroeck, K.G., Newburry, W., Kunda, S.K., & Lowe, K.B. (2012). Women's political leadership participation around the world: An institutional analysis. *The Leadership Quarterly*, 23, 298-411.
- Center for Global Development. (2006). *Education and the developing world: Why is education essential for development?* Retrieved from [http://www.cgdev.org/files/2844\\_file\\_EDUCATON1.pdf](http://www.cgdev.org/files/2844_file_EDUCATON1.pdf)
- Chamlou, N., Muzi, S., & Ahmed, H. (2011). Understanding the determinants of female labor force participation in the Middle East and North Africa region: The role of education and social norms in Amman. AlmaLaurea Inter-University Consortium Working Paper No. 31.
- Cin, F. M., & Walker, M. (2016). Reconsidering girls' education in Turkey from a capabilities and feminist perspective. *International Journal of Educational Development*, 49, 134– 143.
- Cohen, J. L. (1985). Strategy or identity: new theoretical paradigms and contemporary social movements. *Social Research*, 52, 663-716.
- Dillabough, J. (2006). Education feminism (s)', gender theory and social thought: Illuminating moments and critical impasses. *The Sage handbook of gender and education*, 47-62.
- Dollar, D., & Gatti, R. (1999). *Gender inequality, income, and growth: Are good times good for women? (Vol. 1)*. Washington, DC: Development Research Group, The World Bank.
- Dris-Aït-Hamadouche, L. (2007). Women in the Maghreb: Civil society's actors or political instruments? *Middle East Policy*, XIV(4), 115–133.

- El-baz, A. F. (2007). Reform in Arab countries: The role of education. *The Journal of Education*, 188(3), 41–49.
- Findlow, S. (2013). Higher education and feminism in the Arab Gulf. *British Journal of Sociology of Education*, 34(1), 112-131.
- Faour, M. (2011). *The importance of education in the Arab world*. Carnegie Middle East Center. Retrieved from <http://carnegie-mec.org/2011/12/01/importance-of-education-in-arab-world-pub-46067>.
- Filmer, D. (2000). The structure of social disparities in education: Gender and wealth. *World Bank Report*. Retrieved from <http://documents.worldbank.org/curated/en/617031468739532221/pdf/multi-page.pdf>.
- Gamal, M.E. (2015). The gender gap runs deeper than religion or education. *Forum: Newsletter of the Economic Forum*, 22(2), 4-5.
- Gamson, W. A. (1975). *The strategy of social protest*. Homewood, Ill: Dorsey.
- Grossman, M. (2006). "Education and Nonmarket Outcomes" *Handbook of Economics of Education*, Elsevier, Amsterdam, Vol. 1: 577-633.
- Habermas, J. (1987). *The theory of communicative action*. Cambridge: MIT Press.
- Haghighat, E. (2012). Debunking the assumed connection between educational attainment, reduced fertility and mortality, labor force inclusion and political participation for women in the Middle East. *Middle East Critique*, 21(3), 309-332.
- Hayo, B. & Caris, T. (2013). Female labour force participation in the MENA region: The role of identity. *Review of Middle East Economics and Finance*, 9(3), 271-292.
- Jalbout, M. (2015). *Unlocking the potential of educated Arab women*. Washington, D.C.: Brookings Institution.
- Jenkins, J. C. & Perrow, C. (1977). Insurgency of the powerless: Farm workers' movements, 1946-1972. *American Sociological Review*, 51, 812-829.
- Keddie, N. R. (2007). *Women in the Middle East: Past and present*. Princeton University Press.
- Kilgore, D. W. (1999). Understanding learning in social movements: A theory of collective learning. *International Journal of Lifelong Education*, 18(3), 191–202.
- King, E. M., & Hill, M. A. (Eds.). (1997). *Women's education in developing countries: Barriers, benefits, and policies*. World Bank Publications.

- Kroska, A. & Elman, C. (2009). Change in attitudes about employed mothers: Exposure, interest, and gender ideology discrepancies. *Social Science Research*, 38, 366–382.
- Labaree, D. (2010). "From Citizens to Consumers," In *Someone Has to Fail: The Zero-Sum Game of Public Schooling*. Cambridge, MA: Harvard University Press.
- Matherly, L. L., Amin, N., & Al Nahyan, S. S. K. (2017). The impact of generation and socioeconomic status on the value of higher education in the UAE: A longitudinal study. *International Journal of Educational Development*, 55(April), 1–10.
- McAdam, D. (1982). *Political process and the development of black insurgency, 1930-1970*. Chicago: University of Chicago Press.
- McCarthy, J. D., & Zald, M. N. (1977). Resource mobilization and social movements: A partial theory. *American Journal of Sociology*, 82(6), 1212-1241.
- McMahon, W. W. (2010). The external benefits of education. In Brewer, D. & McEwan, P. (Eds.), *Economics of Education* (pp. 68-78). Elsevier Ltd, San Diego.
- Melucci, A. (1996). *Challenging codes: Collective action in the information age*. Cambridge: New York: Cambridge University Press.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *The Journal of Political Economy*, 66, 281-302.
- Monshipouri, M., & Karbasioun, K. (2003). Shaping cultural politics in the Muslim world: Women's empowerment as an alternative to militarism, terror, and war. *International Politics*, 40(3), 341-364.
- Oberschall, A. (1973). *Social conflict and social movements*. Prentice hall.
- Pilařová, T., & Kandakov, A. (2017). The impact of remittances on school attendance: The evidence from the Republic of Moldova. *International Journal of Educational Development*, 55(April), 11–16.
- Price, A. (2016). How national structures shape attitudes toward women's right to employment in the Middle East. *International Journal of Comparative Sociology*, 56(6), 408-432.
- Price, A.M. (2014). Differential support for women in higher education and politics cross-nationally. *Comparative Sociology*, 13(3), 346–382.
- Results Educational Fund. (2009). *Why is education for all so important?* Washington, D.C.  
Retrieved from  
[https://www.results.org/images/uploads/files/why\\_education\\_matters\\_11\\_04\\_09.pdf](https://www.results.org/images/uploads/files/why_education_matters_11_04_09.pdf)

- Roudi-Fahimi, F. & Moghadam, V.M. (2003). *Empowering women, developing society: Female education in the Middle East and North Africa*. Washington, D.C.: Population Reference Bureau. Retrieved from <http://www.prb.org/pdf/EmpoweringWomeninMENA.pdf>
- Schultz, T. W. (1961). Investment in human capital. *The American economic review*, 1-17.
- Scott, A. (1990). *Ideology and the new social movements*. London: Unwin Hyman.
- Shavarini, M. K. (2006) Wearing the veil to college: The paradox of higher education in the lives of Iranian women. *International Journal of Middle East Studies*, 38(2), 189– 211.
- Smith, A. (1952). An inquiry into the nature and causes of the wealth of nations. In R.M. Hutchins & M. J. Ádler (Eds.), *Great books of the western world: Vol. 39. Adam Smith*. Chicago: Encyclopaedia Britannica. (Original work published 1776)
- Stromquist, N.P. (2007). Gender equity education globally. In S.S. Klein & B. Richardson (Eds.), *Handbook for achieving gender equity through education (2nd ed.)* (pp. 33-42). New York, NY: Routledge.
- Tilly, C. (1978). *From mobilization to revolution*. Reading, Mass: Addison-Wesley.
- Tilly, C. (1984). Social movements and national politics. In Bright C. & Harding S. (Eds.), *State making and social movements: Essays in history and theory* (pp. 297–317). Ann Arbor: University of Michigan Press.
- Tuğal, C. (2009). Transforming everyday life: Islamism and social movement theory. *Theory and Society*, 38, 423-458. <http://doi.org/10.1007/s11186-009-9091-7>
- Tyack, D. (1976). Ways of seeing: An essay on the history of compulsory schooling. *Harvard Educational Review*, 46(3), 355-389.
- Unterhalter, E. (2006). Gender, education and development. C. Skelton, B. Francis, & I. Smulyan (Eds.), *The Sage handbook of gender and education*, 93-108.
- Verme, P. (2015). Economic development and female labor participation in the Middle East and North Africa: a test of the U-shape hypothesis. *Journal of Labor & Development*, 4(3), 1-21.
- World Bank. (2004). *Gender and development in the Middle East and North Africa : Women in the public sphere*. Washington: World Bank Publications. doi:10.1596/0-8213-5676-3.
- World Bank. (2011). *Poor places, thriving people: How the middle east and north africa can rise above spatial disparities*. Washington, D.C: World Bank.

World Bank. (2014). *Middle East and North Africa*. Retrieved from <http://www.worldbank.org/en/region/mena/overview>

World Bank. (2016). *GDP per capita, PPP (current international \$)*. Retrieved from <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?view=chart>

Zald, M. N. (1992). Looking backward to look forward: Reflection on the past and future of the resource mobilization research program. In Morris, A. D. & Mueller, C. M. (Eds.), *Frontiers in Social Movement Theory* (pp.326-348). New Haven and London: Yale University.