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PATTERNS OF VEILING AMONG MUSLIM WOMEN

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Abstract

This paper exploits a unique source of data, the Gallup World Poll, and is the first cross-country empirical investigation of veiling patterns in Muslim-majority countries, complementing a rich literature on veiling from other disciplinary perspectives. We find evidence of links between veiling and religiosity, age, education levels, marital status, support for political Islam, and employment status. On the basis of these correlations, we discuss possible reasons for why women veil. These include: to conform to religious beliefs, as a sign of obedience to the patriarchal bargain, to increase their mobility outside the home, to protect against the threat of violence, and to signal their support for political Islam.

JEL Classifications: F2, P2
Keywords: Veiling Patterns, Muslim Countries

ملخص

تستغل هذه الورقة مصدر وحيد للبيانات من مؤسسة غالوب العالمية الإستطلاع، لدراسة أنماط الحجاب في البلدان ذات الأغلبية المسلمة، وهي أول دراسة إحصائية عبر البلاد لتكون إضافة للأدبيات الغنية عن الحجاب من وجهات نظر. نجد أدلة على الصلات بين الحجاب والتدين، العمر، المستوى التعليمي، الحالة الاجتماعية، ودعم الإسلام السياسي، والوضع الوظيفي. وعلى أساس هذه الارتباطات، نناقش الأسباب المحتملة لحجاب النساء. وتشمل هذه: لتتوافق مع المعتقدات الدينية، كدليل على طاعة الصفقة الأبوية، لزيادة قدرتها على التنقل خارج المنزل، للحماية من التهديد بالعنف، وللإشارة إلى دعمهم للإسلام السياسي.

1. Introduction

The paper focuses on one of the more obvious gender distinctions of Muslim societies - that of veiling - and it is, to our knowledge, the first attempt to examine the statistical correlates of veiling among women in Muslim-majority countries.[1] We utilize a unique source of micro-data, the Gallup World Poll, which in its 2010 wave asked the question *"Do you wear headscarf (hijab) in public*?" in 18 countries with large or Muslim-majority populations.[2]

We try to get a better handle on the extent, patterns and implications of veiling, including opportunities to participate in the labor market. We analyze this question in conjunction with a range of demographic and socio-economic variables including, age, education and income, and selected questions on perceptions and values.

We ground this empirical analysis in the existing literature. There are several anthropological studies on veiling, including a number focused on Egypt, such as Macleod (1991) and Zuhur (1992), and on Morocco (Mernissi 1987). A second strand approaches the issue through the work on the Islamization of societies, such as Keppel (2000), and Talhami (1996). Leila Ahmed's recent book summarizes, and to some extent integrates, the various approaches. There is a related and broader literature on patriarchy, a value closely associated with veiling (Joseph 1996, Alexander and Welzel 2011). One point that the literature makes clear is that the recent phenomenon is quite different from an earlier pre-nationalist phase, where the veil was the traditional dress. After independence, the veil slowly receded during the twentieth century under the influence of strong modernizing states, remaining prevalent only among the poor and the highly religious. In some countries, such as Tunisia and Turkey, the veil was actively discouraged and even outlawed.

The more recent wave is a completely new phenomenon, which can be described in three phases. From the 1970s to the late 1990s, the veil was propagated by social activists allied with Islamic political movements (notably Egypt's Muslim Brotherhood) calling for a society less influenced by the West. This movement was initially spread through universities, and then through social and political activism. It has been argued that this was followed by a second phase. During this period the movement broadened and veiling emerged as a response to problems faced by women, such as threats of violence. By the end of the 1990s, the veil had become ubiquitous in many Muslim-majority societies, with women forced to conform to pressures emanating from Islamist groups and movements, as well as from home. Many countries may have passed a threshold where the pressure on individual women to conform may seem insurmountable. We are now entering into a third wave, where the norm in many Muslim-majority societies is to veil, and the individual act of *not* veiling has become a difficult choice (Ahmed, 2011).

Understanding why women veil today is a challenging question as it is probably connected to multiple phenomena. The literature – both qualitative and theoretical – suggests a range of hypotheses about why women veil. We use the data to examine overall patterns and then to try to explore some more specific questions. Our hypotheses are related to three possible reasons that might lead women to veil, which have been described in the anthropological literature: (i) to express religiosity; (ii) to reduce the risk of violence in public spaces; (iii) to reflect a commitment to the values of political Islam; and (iv) to facilitate entry into the labor market.

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[1] Veiling is not exclusive to Muslim culture, for example, Hindu women in India also veil when observing *purdah.*

[2] Afghanistan, Algeria, Bangladesh, Comoros, Egypt, Indonesia, Iraq, Lebanon, Libya, Malaysia, Mauritania, Morocco, Pakistan, Palestine, Somaliland, Tunisia, Turkey and Yemen.

The paper is structured as follows. First we provide the gender context, highlighting some key and persistent disparities, as well as interesting contrasts across Muslim-majority countries. We then use our new source of data to outline broad patterns of veiling overall as well as specific demographic and socio-economic variables. The next four sections investigate the four hypotheses in turn. The final section pulls together some tentative conclusions.

2. The Context: Patterns of Gender Disparities

The patterns of gender disparities in Muslim-majority countries provide important context and motivation for the investigation that follows. Gender stands out as different in much of the Middle East and a number of Islamic societies (Jamal and Langohr 2008, Moghadem 2008, World Bank 2013). In some key respects, the disparities are among the largest in the world, with little change over recent decades – though on other fronts, notably education, gender parity has been achieved in some countries.

Starting with the gaps, perhaps the most striking difference is the rates of labor force participation rates, which are among the lowest in the world and have scarcely risen over the past two decades (Cinar 2001, Moghaddam 2003, World Bank 2014). For our sample of Muslim majority countries, the rate of labor force participation has risen on average by less than one percent – from 37.4 percent in 1990 to 38 percent in 2010 – in contrast to Latin America where the regional female labor force participation rate increased over the same period by more than one-third (from 43 to 58 percent)[3]. In the Middle East and North African region, low and stagnant rates of labor force participation stand in contrast to the rising levels of education, as shown in Figure 1. More educated women in the MENA region tend to have higher rates of participation than non-educated women, but they remain employed at lower rates than educated women in the rest of the world (World Bank 2014).

Fertility rates remain high in a number of countries, including Afghanistan, Mauritania and Yemen. However, this tendency is not universal in Muslim majority countries, and fertility rates are generally on the decline, with Lebanon, Malaysia and Turkey having the lowest rates among this group – averaging around two per woman.[4]

The average age of marriage is low in a number of Muslim majority countries, notably Bangladesh and Afghanistan, where 32 percent and 15 percent of girls are married by age 15, respectively.[5] In Bangladesh, about two in three girls marry before their eighteenth birthday. Early marriage is associated with a range of adverse outcomes, as documented by ICRW (2011), Vogelstein (2013) and others. Girls who marry early have less decision-making power in the marital home, greater likelihood of school drop-out, lower labor force participation and earnings and less control over household assets, while teen mothers face significantly higher morbidity and mortality risks.[6]

At the same time, in most Muslim majority countries there has been a rapid expansion of education over the past three decades. Today, a number of these countries – Algeria, Brunei, Kazakhstan, Kyrgyzstan, Indonesia, Jordan, Oman, Palestine, Qatar, Syria, Tunisia, and Turkey – have officially achieved gender parity in secondary education,[7] and at the tertiary level, several

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[3] Weighted population rates obtained from WDI.

[4] Total fertility rates (births per woman for 2011): Lebanon (1.50), Malaysia (1.99) and Turkey (2.08). World Bank. (n.d.). Fertility rate, total (births per woman from World Bank Indicators.

[5] United Nations Children's Fund. (2013).

[6] UNICEF, 2014; Vogelstein, 2013; Malhotra et al, 2011; UNFPA, 2012; Raj 2010.

[7] United Nations Statistics Division. (n.d.). Millennium Development Goal Indicators (2015).

countries, including Algeria, Indonesia, Jordan, Tunisia and Turkey, have made enormous strides. Indeed Tunisia emerged with a Gender Parity Index in secondary education of 1.62 in 2013, which means that there were 162 girls enrolled in secondary school for every 100 boys. Exceptions include Bangladesh, where the tertiary school gender parity index is 0.69 in 2011 and 0.72 in 2012 and Malaysia, whose secondary school gender parity index fell from 0.97 in 2011 to 0.94 in 2012. Lebanon's primary gender parity index was 0.92 in 2013.[8]

Social norms about gender roles stand out as different in a number of Muslim-majority countries and in MENA countries. This includes attitudes toward women working and political leadership, for example. The prevalence of patriarchal values is also a topic that has been well researched in Muslim majority countries and among Muslim individuals in comparison to the rest of the world, (Norris and Inglehart, 2002, Alexander and Welzel, 2004), in oil-producing countries (Ross 2001), and in Arab countries (Diwan 2015). Recent data from the World Values Survey illustrate that respondents in the MENA region display consistently less equitable attitudes than all regions in the world, but also that women consistently respond more positively than men, indicating some degree of dissatisfaction with prevailing norms (Table 1).

To summarize the patterns, Figure 2 plots an aggregate measure of gender inequality estimated by the UNDP's Human Development Report, against levels of per capita income. The Gender Inequality Index is a multi-dimensional measure that includes health, education and economic opportunities. The value of the index is a measure of the loss in gender equality, and higher values indicate larger gaps. There is a wide range of gender inequality outcomes, from Yemen, Afghanistan and Mauritania at the high end, to Tunisia and Malaysia at the low end. There is clearly a clustering of Muslim-majority countries with large measured gender inequalities, which are also often large relative to per capita income.

In country contexts marked by sharp gender inequalities, what is the role of veiling? As will be apparent in the paper, there are two contradictory forces at play: on the one hand, veiling patterns can reflect social forces that work at subjugating women; but on the other hand, veiling can also be a mechanism that protects women in an unfavorable environment and allows them to increase their agency.

3. Levels and Structure of Veiling around 2010

Using the Gallup World Poll, first we map out some broad patterns of veiling on which Gallup collected data on veiling behavior. On average, Gallup surveys 1000 adults (aged 15 and older) in each country, and about half of the sample are females. In developing countries, Gallup usually uses face-to-face interviews with the selected households. The country sample includes 18 of the 49 Muslim majority countries in the world – for a total of over 900 million people, accounting for about over 70 percent of the total population of Muslim majority countries. We note that the sample does not include Iran, or any of the Gulf countries. Each country in our sample has a majority of Muslims in the population, with the share of Muslims, as reported by Pew Research, ranging from 59.7 percent in Lebanon to 99.9 percent in Morocco. Yet our country sample also varies enormously in some basic respects – including size (with populations ranging from almost 250

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[8] Gender Parity Index: "The ratio of the number of female students enrolled at primary, secondary and tertiary levels of education to the number of male students in each level." United Nations Statistics Division. (n.d.). See: http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=613&crid and http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=614&crid

million in Indonesia to fewer than ¾ million in the Comoros), and income levels, from US$ 680 per capita in Afghanistan to US$10,830 in Turkey.

Table 2 shows the share of Muslim women that say that they wear a veil in public, in each of the country surveyed. There are various modalities of veiling, but unfortunately the Gallup poll does not capture these distinctions.[9] We immediately see how pervasive the veil is, with Table 2 showing that, on average, more than four out of five (82 percent) Muslim women in these countries say that they wear a veil in public. There are large variations across countries. The highest shares are in Egypt, Somaliland, and Pakistan, where the practice is effectively universal among respondents (99 percent), while Tunisia has the smallest share (43 percent) followed at a distance by Indonesia, Lebanon and Turkey (at 60-63%).

Broadly speaking, it is possible to distinguish two groups of countries in our sample, around the mean of the global distribution. The first comprises countries where the national average is below 82%, and where substantial minorities of women do not wear headscarves – there are eight countries in this group: Algeria, Bangladesh, Indonesia, Lebanon, Malaysia, Morocco, Tunisia and Turkey (which are colored blue for ease of reference). In these countries, about 60 percent of women veil on average. The second group where veiling is above 82% contains ten countries where the vast majority – on average 93 percent – of women wear a headscarf, namely Afghanistan, Bangladesh, Comoros, Egypt, Iraq, Libya, Mauritania, Pakistan, Palestine, Somaliland and Yemen.

Differences among countries reflect the idiosyncrasies of history and the many factors that can influence social norms. A comparison between Tunisia and Turkey on the one hand, and Egypt on the other, illustrates this. Bourguiba banned veils in 1981, as they were banned earlier in Turkey under Ataturk. These and other state-led efforts at modernization prohibited the wearing of headscarves by law. The prohibition was not articulated in support of women's rights – indeed, in some instances, police officers harassed women who continued to veil.[10] The ban was lifted after the Tunisian revolution in 2011, and more gradually by the AKP in Turkey, and the subject remains mired in contentious debate. In Egypt, Nasser did not issue bans, but he supported a cultural production that encouraged women to emancipate and un-veil. Sadat supported the re-Islamization of society as a shield against communism – a tradition that continued under Mubarak. In all three countries, the resurgence of religion, and the emergence of political Islam, have supported re-veiling since the 1990s.

In the paper, we will focus on trying to understand the in-country differences among the women that veil and those that don't – rather than differences across countries. To investigate why women veil, we can start by looking at a direct question in which Gallup asks respondents to pick *one* preferred answer out of a long menu of possible reasons. Unfortunately the answers are not very informative, because only one answer was allowed. Nevertheless, we can get a sense of the patterns by grouping the possible answers into several categories: (i) religious beliefs; (ii) better self-perception; (iii) better public perception; and (iv) external pressure.[11] The picture presented in

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[9] There are different types of garments that are included under this appellation, including but not limited to the *shayla,* which is a type of headscarf; the *niqab,* which covers most of face, except for a space around the eyes; and the Afghan *burqa,* which covers the entire body, obscuring the face almost completely.

[10] Perkins, 2012.

[11] Specifically, we group the possible responses as follows: (1) Religious/cultural beliefs: Believe it is a religious obligation, a symbol of Muslim identity, tradition or culture; (2) Better self-perception: likes the way it looks, to be attractive to men, makes me

Table 3 suggests that the predominant reason, overall, is religious, with over four-fifths of respondents citing this as the reason for veiling in both the high and moderate veiling countries. Religiosity can be also be used to justify not wearing a veil, and indeed, this is what 60% of women who do not veil in moderate veiling countries say. The responses on the reasons for not wearing a headscarf are a bit more informative. For example, 44% of women in high veiling countries choose not to veil for "better self-perception" compared to 22% of women in moderate veiling countries.

In this context, we turn to investigate, first with cross-tabulations, and then through more formal regression analysis, how variations in veiling practice relate to a range of demographic and socio-economic variables. It is already apparent in Table 2 that there is much in-country variation, as witnessed by the comparison between the rate of veiling among uneducated women that do not work (average 92%), and highly educated urban women that work (average 65%). The differences between these groups are especially large in the moderate veiling countries – this is exemplified in the case of Turkey, where 97% of uneducated women that do not work are veiled, while only 13% of highly educated urban women that work are. But in a few countries, the pattern is not as sharp. This already suggests that there is no one simple story that will explain all the variation across countries.

Table 4 begins by presenting some descriptive statistics for the sample as a whole for the Muslim women that veil, and distinguishes moderate and high veiling countries as defined above. We focus on several characteristics such as age (above 15), education level (classified in three categories: primary or below, completed secondary, above secondary), marital status, location (urban/rural), labor participation (including out-of-workforce, part timer, business owner, and unemployed), and religiosity. We measure religiosity by interacting responses to a question that asks whether the respondent feels religion is "important to their life," and one on how regularly she attends religious services, in order to generate more variability.

The distribution of women in terms of these characteristics is quite different across the two sub-samples of moderate and high veiling countries. Some of the differences are striking. Among single women, 54% do not veil in moderate veiling countries, compared to only 8% in high veiling countries. But the main difference between the two samples is that there is far less variation in high veiling countries. It appears as if, in these countries, the pressure to follow the veiling norm is so large that women have little choice but to conform – with little regard for their own characteristics. In contrast, in moderate veiling countries, there are marked differences in veiling rates among Muslim women – women who are rural, married, older, poor, less educated, more religious, and who do not work are more likely to veil on average.

We next explore the correlates of veiling in a more formal statistical frame, using regression analysis. The dependent variable is "wearing a headscarf in public," which takes the value of 1 if the respondent veils in public and 0 otherwise. Logit multilevel models are estimated and odds ratios are reported. Simply speaking, values below one imply that the variable is associated with lower likelihood of veiling, whereas values above one are associated with higher likelihood of veiling. Table 5 shows results for all countries and distinguishes, again, between the moderate and high veiling country groups. More detailed country level tables are in the Annex Table A1.

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feel confident; (3) Better public perception: to be respected by men, preserves my dignity, to be seen as an equal; (4) External pressure: to obey husband/father/brother, peer pressure; to avoid harassment.

The results in Table 5 confirm the main findings that emerged from the simple averages above. First, individual characteristics explain much better the veiling decisions in moderate veiling countries, relative to high veiling countries. In high veiling countries, it seems that social norms overtake nearly all the individual characteristics – only marriage status, working status, and urban residence retain some significance – and even the level of religiosity is not connected with veiling. In contrast, in moderate veiling countries, nearly all-individual characteristics are highly significant, suggesting that the choices on veiling are partly made based on these characteristics. These contrasts confirm that it is useful to examine moderate and high veiling countries separately.

Focusing on moderate veiling countries, several strong regularities emerge:

▪ Older age, being married (or widowed), and having children are all associated with a *higher* likelihood of veiling.[12]
▪ Being religious and attending services is associated with more veiling (2.5 times more), as expected. This is consistent with the questions about why women said they veiled, where the vast majority stated religious reasons (Table 2).[13]
▪ Being poorer is associated with more veiling, possibly a sort of cache-misère phenomenon since we are already controlling for religiosity and education.
▪ The effect of education is strong, with more educated women veiling less, presumably due to the emancipative effects of education.
▪ Urban women veil less in moderate veiling countries, while in high veiling countries they veil more, possibly because social norms are stronger in cities.
▪ Working women veil less than women that do not work outside the home.

We also included one country level variable: GDP per capita. It turns out to be highly significant and below one, indicating that as countries get richer overall veiling rates decline – indicating that social norms evolve as national income levels rise. But we note that this result depends on a sample of countries that excludes the rich GCC countries. The effects we measure are quite stable to various specifications, including the use of country fixed effects.

Annex Table A1 presents country level regressions. The results are broadly coherent with those in Table 5 – but the effects tend to be less significant due to the much smaller sample sizes. There are, however, a few contradictions: In Bangladesh, secondary education fosters veiling; while in Indonesia, being in the force does.

We now turn to examine more directly the series of hypotheses laid out in the introduction about more specific behavior that may deviate from the "average" behavior uncovered above, starting with a possible relationship between veiling and violence against women.

4. Veiling as a Mechanism to Reduce the Risk of Violence

It is possible that a woman's appearance may affect the threat of violence – that is, in Muslim majority countries, non-veiled women may be more at risk of assault. Recent survey evidence from Egypt supports this hypothesis: 99 percent of women reported having suffered sexual harassment, and 91.5 percent have experienced unwelcome physical contact; at the same time, 96 percent of the male respondents attributed harassment to such factors as a woman's provocative clothing,

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[12] This corresponds to situations where patriarchal values are stronger (Alexander and Welzel 2011).

[13] It should be noted that the extent of religiosity is much higher among Muslim majority countries than in the rest of the world -- in the recent World Value Survey for example, it can be estimated using various measures that it is about double (Diwan 2015).

enticing make-up application (95 percent), and disregard for cultural traditions (also cited by 95 percent) (UN Women 2013).

In this context, veiling may be used by women as a social mechanism to reduce the threat of gender-based violence. Wagner et al (2012) discuss the function of the veil in public space, in order to avoid attention and to "visually withdraw" from the public space, with "the underlying implication that men need to be protected from women and if women are not covered then they are sinning or inviting sin" (p.530). We might expect that this instrumental use of the veil is especially important among women who have experienced violence.

To test this hypothesis, we utilize responses to three questions that capture individual perceptions about safety and the risk of violence, to see whether this helps to explain the decision to veil. The survey questions are phrased as follows:

- Do you feel safe walking alone at night in the city or area where you live?
- In the city or area where you live, do you have confidence in the local police force?
- Within the past 12 months, have you been assaulted or mugged?

On average, as apparent in Table 6, women in high veiling countries feel safer walking at night, have more confidence in the police, and have been assaulted less often than women in moderate veiling countries and than in the other countries where these questions were asked by Gallup (15 countries in Africa, Central Europe, plus Russia and India). This suggests that veils may play a protective role against violence.

We now proceed to a more formal statistical test of the hypothesis that veiling is used as a mechanism by women to protect themselves against violence. Table 7 shows only the coefficients associated with the violence variables listed above – the dependent variable is the use of a veil. We pooled all countries, and ran separately for moderate and high veiling countries, and for rural and urban locations. The individual variables in the baseline model shown in Table 5 were included in the regression, but are not reported here for reasons of space. We might expect the safety perceptions to be more influential for women that work, since they are bound to go out of the home more often and sometimes at night. We thus also interact variables capturing work outside the home with feeling safe walking alone at night, and with confidence in the police. Below, while we recognize that the results prove association rather than causality, we will also discuss the possible causality effects that could to be at play.

Our results reveal strong empirical support for the hypothesis that women perceive not veiling as potentially dangerous and associated with an increased vulnerability to assault. In particular:

- Women who have been assaulted tend to veil more. For all countries in our sample, having been assaulted almost triples the probability of wearing a headscarf for urban women. In high veiling countries, rural women who have been assaulted are about five times more likely to veil. It is safe to assume that that causality here runs from the aggression in the past, to veiling, as a way to prevent a reoccurrence of violence, especially in high veiling countries.
- Women who are veiled (and work) are more likely to feel safe walking alone at night, especially in rural areas. This effect is much larger in high veiling countries (twelve times more!). Here, causality is likely to run from veiling to a feeling of more safety.
- In urban areas, only women that veil have confidence in the local police. We may speculate that this may be because police behavior is worse with respect to unveiled women.

5. Veiling as a Signal of Support for Political Islam

The second possibility that we explore is that veiling is regarded as a political tool to advance the cause of political Islam. This motivation comes out strongly in the work of Talhami (1996) on Egypt, and by Ahmed (2011) for other countries. We had found a significant statistical relation between piety and veiling in moderate veiling countries. We now try to separate the effects of piety and politics, and add associated controls to our regression analysis in order to capture individual commitment to political Islam (given religiosity).

We use the following questions from the Gallup Poll:

> 1. Sharia is an Arabic word, which means Islam's religious principles. In general, which of these statements comes closest to your own point of view? (i) Sharia must be the only source of legislation; (ii) Sharia must be a source of legislation, but not the only source; (iii) Sharia should not be a source of legislation.
>
> 2. The Role of religious leaders in writing national laws should be: (i) only an advisory role; (ii) A direct role; (iii) No role.

Here, our sample is smaller, as these questions were only asked in Bangladesh, Indonesia, Malaysia and Turkey. But as apparent in Table 8, there is a good amount of variation in the responses to these questions in our sample, with pluralities selecting the middle answer, but with sizable tails.

To what extent does support for political Islam affect the veiling decision? We now add the responses on political Islam to our base regression model to gauge the additional impact of political Islam on the veiling decision, given piety, and the other individual characteristics. Again, the individual variables in the baseline model shown in Table 5 are included. The results are shown in Table 9.

Even after controlling for piety, support for political Islam increases the likelihood of veiling. Support for the role of Sharia increases the probability of veiling among women of all educational levels. The likelihood further increases with the stronger belief that Sharia should be *the only* source of legislation (as opposed to *a* source). This suggests that veiling may be a way for women to portray their political beliefs. We also find that this effect is stronger among more educated women. When the belief that sharia must be the only source or a source of legislation is interacted with secondary and post-secondary levels of education, probabilities of veiling are much larger among girls with secondary education, and the effect is larger for Sharia as the *only* source. When the belief that religious leaders should have a role in writing national laws is interacted with secondary and post-secondary levels of education, probabilities of veiling are again much larger than among less educated girls and the effect is now stronger among the more highly educated girls.

These results suggest that veiling can be a marker of a belief in political Islam, especially among more educated women, and that wearing the veil has been used as a sign of self-expression, rather than reflecting oppression, by more emancipated women – laying the ground for another kind of modernity than that connected with western values.

6. Veiling and Labor Force Participation

It is well established that female labor force participation rates in Arab countries and in Muslim-majority countries tend to be low. Many researchers have tried to explain this gap, but with limited success. There are likely to be both supply and demand factors involved. Supply-side factors are likely to include the overall scarcity of jobs, and especially of the types of jobs which women appear to prefer, such as public sector jobs and jobs in manufacturing (Assaad, 2013). Women in

the Arab region face high levels of wage discrimination, although in some countries, their return to education is higher than for males (Diwan and Tzanatos, 2016). On the demand side, the global comparative literature on the measured determinants of participation decisions – in particular, the role of market wage, education (as it affects wages), marriage, and the size of the household at the individual level (Goldin 2006, Burda et al 2007, 2011, Alesina et al 2007) can at best explain a small part of differences in female labor market participation rates (Jamal and Langohr 2008). There is a large qualitative literature that explores this gap in terms of cultural factors, and in particular, the dominance of patriarchal values (for e.g., Joseph 1996, Mernissi 1987, Cinar 2001, and Moghaddam 2003). Such a phenomenon has been claimed to exist not just in Arab societies, but also in Muslim-majority countries (Fish 2002, Charrad 2009) and oil producing states (Ross 2008).

Here we investigate how cultural factors affects individual labor participation decisions using veiling behavior as one variable describing culture. To begin, we use Gallup micro-data to examine rates of labor force participation across levels of education. We see that, in consistence with the literature, rates are generally higher among the more educated (Table 10a). This is typically attributed to the higher wages received by more educated women. Does the act of veiling hinder or facilitate higher participation? In the first case, veiling may be a barrier overcome by more education, which reduces the influence of local culture on educated women and increases their bargaining power within the household. In the second view, the mechanism could be that veiling while working facilitates the adaptation of patriarchal values to modern needs by acting as a signal of (or a commitment to) individual attachment to these values.

More precisely, the first bargaining hypothesis features in the theoretical literature that examines decisions about women's participation in the labor market as part of the patriarchal bargain within the household, which is influenced by social norms, as well as by individual and household level characteristics (Alesina et al 2007, Kandiyotti 1998, 2005). We hypothesize that the bargaining process within the household is determined in part by the existing social norms, and in part by the characteristics of the household that include the values held by the two spouses – itself determined in part by their respective levels of education. In this scenario, we would expect to see different relationships between veiling and workforce participation for better-educated and less educated women, with the first group working and not veiling at rates above the national average, and the second not working and veiling at above average rates.

In the second, signaling/commitment hypothesis, veiling can be thought of as a mechanism that facilitates women working outside the household in conservative societies. This intuition has been formalized by Carvalho (2014), who argues that veiling helps women enter the labor market by allowing them to credibly commit to maintaining honorable values while working outside the home. In Muslim majority countries, where social norms are adverse to women's work, veiling could thus represent a ticket into the workforce.[14] It could be that Carvahlo's commitment hypothesis helps explain the labor supply of less educated women if they have less bargaining power at home, but that more educated women do not need to incur the cost of veiling (when their preference is not to veil) in order to work. We explore these ideas empirically below.

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[14] On the other hand, exactly why veiling should so credibly tie a woman's hands is unclear. An alternative explanation is that veiling is not so much a restriction of a woman's own behavior, but a defense against unwelcome interactions with men. Our results above on the correlation between veiling and past physical abuse could support this more nuanced interpretation.

Looking at our sample of Muslim women, the proportion of women that work is much higher among non-veiled women (48%) than among veiled women (26%), as shown in Table 10b. This empirical regularity appears to favor the bargaining hypothesis. But this is not necessarily so, as this can be due to a composition effect since we also know that a larger share of non-veiled women is more highly educated and that more educated women tend to be more active in the labor force. While the overall pattern is similar, there is also variation between moderate and high veiling countries, such that differences in labor force participation rates between veiled and unveiled women are larger in moderate veiling countries.

A cross-tabulation of the effect of education and veiling on labor force participation rates reveals that on average, and for moderate veiling countries, average labor force participation among veiled women rises when their education level rises to the secondary level (from 29 to 34%), whereas the rates do not rise among non-veiled women (Table 10c). This seems to support the signaling hypothesis among women with lower levels of education in moderate veiling countries, although not in high veiling countries. On the other hand, participation rates among the tertiary educated do not differ substantially depending on whether they veil or not. For highly educated women, the data thus seems more supportive of the bargaining hypothesis, as these women are more able to both not veil (if they so desire) and participate in the labor market.

We proceed to investigate these relations more systematically using econometric analysis. The dependent variable takes the value of one if the woman is participating in the labor force. We estimate the individual labor supply decision using the range of demographic and socio-economic variables that are typically employed in such models. The unique twist here is that we include veiling as an additional explanatory variable. The regression results are shown in Table 11, and we again separate the moderate and high veiling sub-samples of countries.[15]

It turns out that in both types of countries, and broadly in accordance with the existing literature, female labor force participation:[16]

- Rises with education – women are more likely to work if they have completed four years beyond high school, with the effects much larger in high veiling countries, and even if they have only completed secondary in high veiling countries;
- Rises with age – older women work more in moderate veiling countries;
- Somewhat surprisingly, being married is associated with lower labor supply in moderate veiling countries, but with higher labor participation in high veiling countries.
- Religiosity has no association with labor supply in moderate veiling countries, but is positively associated with religiosity in high veiling countries.

Coming to the relation between working and veiling, we first note that the effect of veiling on participation in the labor force is highly significant in all regressions. The simplest model with no interaction terms shows that veiling is associated with reduced labor supply in both types of countries, and especially so in the moderate veiling countries. This tends to suggest that in these countries where social norms allow for some level of agency, women that chose to veil simultaneously chose to stay at home and outside the labor force — both decisions reflecting a

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[15] We recognize, as did Heckman and Killingsworth in their classic chapter on women's labor supply (1987), that while such regression analyses of a cross section "do not necessarily constitute a behavioral labor supply function, they do shed additional light on labor supply in the limited sense of documenting multivariate associations between labor supply and a number of variables of interest."

[16] Divorced women are more likely to be in the labor force in Algeria, Bangladesh and Morocco.

support for patriarchal values. On the other hand, women that chose to not veil are more likely to choose to work as well. These results therefore lend broad support to the bargaining, and not to the signaling hypothesis.

But as we have seen before, veiling may mean different things for different women. It is thus important to look in more detail at how work and veiling interact at different education levels. To do this, we now interact veiling with education levels. The interactive terms turn out to be highly significant and above one for both secondary and higher levels of education in moderate veiling countries, but not significant in high veiling countries. The key results in moderate veiling countries highlight key differences across education levels:

- It is only for women with low education levels that veiling is associated with low labor force participation.
- Women with secondary education that veil have a higher rate of labor force participation than similar women that do not veil.
- Women with higher education have higher rates of labor force participation whether they veil or not.

Overall then, the data for the moderate veiling countries — where as we saw, rates of labor force participation are higher than in high veiling countries — show support for both the bargaining hypothesis for women with high levels of education, and for the commitment/signaling hypothesis for women with secondary levels of education. In effect, veiling behavior varies depending on the level of education. Better-educated women tend to work and veil or not (depending on their preferences), some medium level educated women tend to veil in order to be able to work, while less educated women tend to veil and not work.

But there is variation across countries, as the Annex Table A2 and A3 show. Among moderate veiling countries, Indonesia stands out as Indonesian women who veil are *more* likely to be in the labor force, whereas the opposite is the case for neighboring Malaysia, for example. Interestingly, unlike other moderate veiling countries, religiosity is significant in Indonesia and is associated with a higher likelihood of working. Being divorced appears to be especially important to labor force participation in Bangladesh and Morocco. While having young children is not significant overall, it is associated with a significant negative effect in Turkey. In high veiling countries, we see some additional significant results. Even secondary completion is associated with much higher likelihoods of working, and the same is true in Comoros. Urban location is significant in Afghanistan and Iraq.

7. Conclusions

To our knowledge, this is the first time an empirical investigation of veiling has been undertaken for a broad cross section of Muslim majority countries. It has exploited a unique source of data: the Gallup World Poll. It complements a rich literature on veiling from other disciplinary perspectives and sheds some new insights into patterns and correlates of veiling. We uncovered some interesting patterns, which provide some sense of the empirical importance of individual characteristics, preferences, and values that drive choices in contrast to more overarching social norms that may have a stronger effect than personal agency on why women veil.

We were able to cast light on some key hypotheses about veiling – including evidence about the links between veiling and economic opportunities, to education and to religious beliefs. We explored possible reasons for why women veil – whether this was something that enabled their

mobility outside the home, a protective mechanism against the threat of violence, and/or mainly a reflection of religious beliefs. Several important findings emerged.

First, veiling is ubiquitous in many Muslim majority countries – indeed in 11 of the 18 countries in our sample rates of veiling exceed 80 percent, and exceed 90 percent in seven countries.[17] However, differences emerged between those countries where a significant minority of women does not veil (which we called moderate veiling countries) and the countries where veiling is near universal, suggesting that beyond a certain threshold, peer pressure to veil may overshadow individual choice. In high veiling countries, only 8% of single Muslim women do not veil compared to 54% in moderate veiling countries. And the average share who do not veil is slightly higher among urban women in the high veiling countries; whereas in moderate veiling countries, not veiling is more common in rural areas.

Our overall cross tabulations and regressions looking at the correlates of veiling highlighted the expected significance of religion. We looked at correlations between veiling and religious beliefs, as well as beliefs in political Islam. As expected, religious adherence is massively correlated with the use of the headscarf overall. But we also found that among educated girls, being in support of political Islam is a good predictor of veiling, which we interpret as a form of active political mobilization. At the same time, we found that better educated women were less likely to veil, which runs somewhat counter to the image of radicalized university students.

The possibility that veils are worn as a possible response to the threat of violence in public places was somewhat supported by the data: women who have been assaulted tend to veil more. The effect was especially strong in urban areas, and in high veiling countries. The fear and experience of violence in public places was associated with higher rates of veiling, especially in high veiling countries – indicating that the relative rarity of not veiling may mean that such women risk feeling vulnerable. The strong correlation between being married and being veiled was suggestive of the power of husbands to influence their wives' decisions and behavior. We explored this further in the context of labor force participation.

Interesting patterns emerged around veiling and women's economic opportunities – a topic of major importance to countries that are seeking ways to boost labor force participation. As well documented in the literature, rates of labor force participation in many Muslim majority countries are low. We found that participation is especially low in countries where veiling is most prevalent – indeed, the crude difference in participation rates between moderate and high veiling countries is large (27 versus 39 percent).

We explored the difficult question of the relation between veiling and labor force participation. Broadly speaking, we found support for both the argument that veiling is a mechanism that facilitates participation in the economy among women with average levels of education, and for the argument that education can strengthen women's bargaining position in the household, allow them to more escape the imposition of the veil if they want to, and pursue outside economic opportunities.

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[17] Egypt, Iraq, Libya, Pakistan, Palestine, Somaliland and Yemen.

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Figure 1: Little Change in Participation despite Rising Education Levels: MENA, 1990-2013
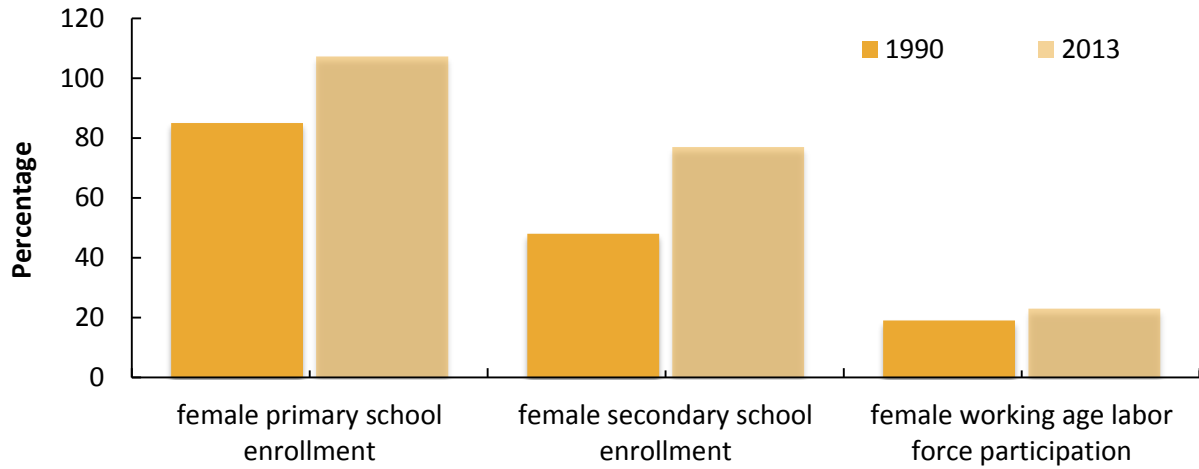
Source: World Development Indicators (2014).

Figure 2: Gender Inequality and Per Capita Income, 2014
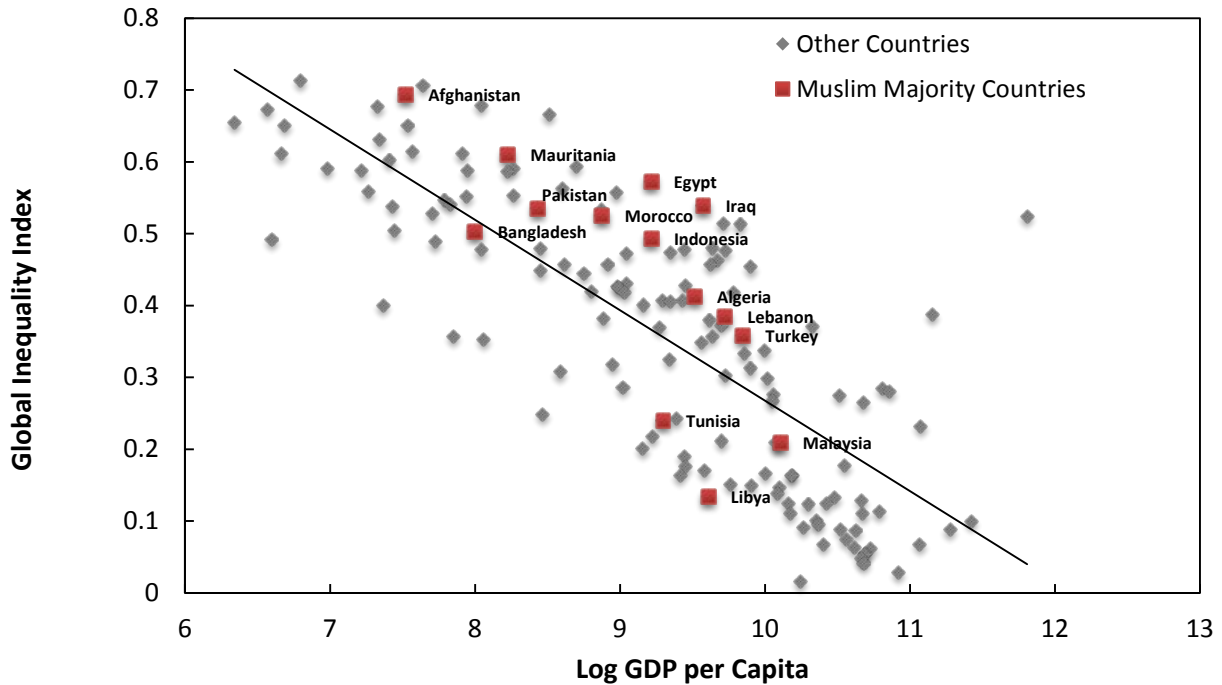
Source: UNDP 2015 HDR Report and WDI (2015).

Table 1: Attitudes toward Gender Inequality, Regional Patterns, 2010-2014

	When jobs are scarce, men should have the priority			A university education is more important for boys			Men make better political leaders than women		
	Female	**Male**	**Total**	**Female**	**Male**	**Total**	**Female**	**Male**	**Total**
World	36	46	41	24	32	28	46	58	52
MENA	68	82	75	34	51	42	74	87	81
EAP	42	48	45	20	25	22	52	59	55
ECA	40	45	42	21	29	25	50	67	58
LA	21	27	24	13	18	16	24	37	31
SA	45	63	55	40	49	45	53	68	62

Note: Figures are share of those that agree with statement (in percentage). MENA: Middle East and North Africa; EAP: East Asia and Pacific; ECA: Europe and Central Asia; LA: Latin America; SA: South Asia.
Source: World Value Survey and authors' computation.

Table 2: Share of Muslim Women That Veil (Percentage)

	Veiling among Muslim women	Muslim share of population	Primary or less & do not work	Urban & educated & work
Afghanistan	89	100	91	100
Algeria	76	100	88	72
Bangladesh	81	88	88	87
Comoros	86	100	87	92
Egypt	91	91	100	97
Indonesia	54	91	68	48
Iraq	91	96	98	88
Lebanon	36	55	81	47
Libya	95	100	99	94
Malaysia	52	62	100	62
Mauritania	89	100	89	81
Morocco	74	100	84	56
Pakistan	99	98	99	100
Palestine	95	99	98	95
Somaliland	99	100	100	100
Tunisia	43	100	86	25
Turkey	61	97	97	13
Yemen	97	100	100	100
Averages				
Moderate veiling	59	87	84	43
High Veiling	93	98	95	93
Overall	78	93	92	65

Source: Authors' estimates using Gallup World Poll, 2010 figures. Notes: Figures are in percentages. Descriptive statistics use weighted data in country. Groups are defined according to the share of women who veil within a country. Group 1 (Moderate): Algeria, Bangladesh, Indonesia, Lebanon, Malaysia, Morocco, Tunisia and Turkey. Group 2 (High): Afghanistan, Comoros, Egypt, Iraq, Libya, Mauritania, Pakistan, Palestine, Somaliland and Yemen. Group averages are not weighted over countries. Sample is restricted to Muslim females.

Table 3: Why Veil? Insights from Gallup Data (Percentage of Muslim women)

	All Countries	**Group 1**	**Group 2**
Reasons for wearing headscarf			
Religious beliefs	83	84	83
Better self-perception	2	2	2
Better public perception	4	4	0.5
External pressure	10	11	10
*Reasons for **not** wearing headscarf*			
Religious beliefs	56	60	43
Better self-perception	27	23	44
Better public perception	9	10	3
External pressure	8	7	10

Note: Figures are in percentage. Descriptive statistics use weighted data and the responses of Muslim women only.
Source: Authors' estimates using Gallup World Poll, 2010 figures.

Table 4: Share of Veiling among Muslim Women by Selected Characteristics

	Moderate Veiling Countries	High Veiling Countries
All	69	94
Rural	74	93
Urban	63	95
Marital Status		
Single	46	92
Married	78	95
Separated/Divorce	65	94
Widowed	91	95
Age		
15-24	50	92
25-49	68	95
50+	93	96
Income quintile		
Poorest	80	95
Poor	72	94
Middle	68	94
Rich	61	94
Richest	55	92
Education		
Complete Primary	78	95
Secondary +	55	94
Secondary +4	43	89
Employment		
Employee	61	93
Entrepreneur	67	91
Unemployed	71	93
Out of workforce	75	95

Note: Figures are in percentage. Sample is restricted to Muslim women.
Source: Gallup World Poll, 2010 figures.

Table 5: The Correlates of Veiling – Base Model

Variables	All Countries	Moderate	High	Moderate	High
Religion important * Attends service		2.464***	0.810	2.441***	0.805
		(0.247)	(0.136)	(0.244)	(0.135)
Age	1.028***	1.041***	1.004	1.046***	1.005
	(0.004)	(0.006)	(0.008)	(0.005)	(0.007)
Married (1 if married)	1.953***	1.543***	1.563**	1.549***	1.612**
	(0.204)	(0.193)	(0.331)	(0.194)	(0.348)
Divorced (=1)	1.652**	1.425	1.625	1.347	1.641
	(0.352)	(0.415)	(0.662)	(0.391)	(0.672)
Widowed (=1)	2.430***	2.159***	1.411	2.209***	1.449
	(0.609)	(0.633)	(0.659)	(0.657)	(0.681)
Participates in labor force	0.479***	0.485***	0.643**	0.482***	0.643**
(1 if works)	(0.037)	(0.047)	(0.113)	(0.047)	(0.111)
Children under 15 (1 if yes)	1.262***	1.275**	0.723	1.300***	0.744
	(0.107)	(0.127)	(0.197)	(0.129)	(0.202)
Complete secondary	0.769***	0.672***	0.802	0.722***	0.818
(relative to none)	(0.064)	(0.071)	(0.142)	(0.076)	(0.150)
Completed Secondary plus 4 years	0.823	0.465***	0.734	0.446***	0.743
(relative to none)	(0.116)	(0.087)	(0.249)	(0.084)	(0.282)
Income: Bottom third				1.695***	1.229
(relative to top)				(0.201)	(0.255)
Income: Second third				1.406***	1.110
(relative to top)				(0.161)	(0.233)
Urban	0.696***	0.826*	1.687***	0.851	1.694***
(relative to rural)	(0.057)	(0.083)	(0.312)	(0.087)	(0.309)
Log GDP capita	0.505***				
	(0.028)				
Observations	6,550	3,286	3,770	3,286	3,770
F-test	51.18	45.22	3.847	42.85	3.905

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. Regressions used weight and strata information. Strata were created using information of location, gender, age groups and income group. The sample is restricted to Muslim females. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Violence against Women (percentage share that respond positively)

	Feel safe walking alone at night	Have confidence in the local police	Have been assaulted or mugged
Moderate Veiling Countries	58.4	73.3	4.4
High Veiling Countries	66.8	78.8	3.5
Africa (8 countries)	64	74	11
Russia and Central Asia (5 countries)	58	59	2
India	53	58	7

Source: Authors' analysis of Gallup, 2010. Note: Responses restricted to Muslim women.

Table 7: Determinants of Veiling and Perceptions of Safety

	All Countries	Rural	Urban	N (all)
All countries				
Have been assaulted or mugged	2.758***	2.377*	3.867**	2466
Feel safe walking alone at night	0.826	0.935	0.663**	2406
In the labor force & safe walking alone at night	1.869**	3.530**	0.893	2406
Confidence in police	0.773*	0.599***	1.136	2344
In the labor force and confidence in police	1.221	0.889	2.107**	2344
Moderate veiling countries				
Have been assaulted or mugged	1.262	0.650	2.160	1617
Feel safe walking alone at night	0.963	1.235	0.772	1592
In the labor force & safe walking alone at night	1.869**	3.53***	0.893	1592
Have confidence in the local police	1.194	0.792	2.366***	1538
In the labor force and confidence in police	1.186	0.482	2.785**	1539
High veiling countries				
Have been assaulted or mugged	3.799**	4.694**	1.075	771
Feel safe walking alone at night	0.761	0.934	0.358	737
In the labor force & safe walking alone at night	11.24***	12.27***	n.a.	737
Have confidence in the local police	0.643	0.602	1.735	734
In the labor force and confidence in police	1.186	0.482	2.785**	734

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 8: Political Islam Descriptive Statistics (percentage that approve)

	Role of religious leaders in writing laws			Sharia should be		
	Direct role	Advisory role	No role	Only source of legislation	A source of legislation	Not a source of legislation
Muslim women	37	48	15	34	43	23
N	577	743	237	506	630	330

Note: Responses only from Bangladesh, Indonesia, Malaysia and Turkey.
Source: Gallup World Poll, 2010.

Table 9: Effects of Commitment to Political Islam on the Probability of Veiling

Sharia: only source of legislation	5.191***	2.427**	Religious leaders advisory role	1.088
	(1.199)	(0.856)		(0.370)
x Secondary		4.308***	x Secondary	4.047***
		(1.976)		(1.709)
x Beyond high school		3.426	x Beyond high school	52.919***
		(3.848)		(65.921)
Sharia: a source of legislation	1.984***	1.158	Religious leaders direct role	1.497
	(0.368)	(0.339)		(0.560)
x Secondary		2.905***	x Secondary	3.058**
		(1.135)		(1.410)
x Beyond high school		2.731	x Beyond high school	18.333**
		(2.111)		(21.629)
Religion important * Attends service	2.204***	2.172***	Religion important * Attends service	1.964***
	(0.354)	(0.354)		(0.304)
Secondary +	0.658**	0.643***	Secondary +	0.519***
	(0.108)	(0.107)		(0.082)
Secondary +4	0.687**	0.292***	Secondary +4	0.279***
	(0.127)	(0.092)		(0.103)
Observations	1,330	1,330	Observations	1,402
F-test	13.84	11.16	F-test	9.885
Prob>F	0	0	Prob>F	0

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. The variables measuring response to the questions on Sharia law and the role of religious leaders are available only for Bangladesh, Indonesia, Malaysia and Turkey. Other effects of age, residence, marital status, and LFP not shown. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 10a: Labor Force Participation Rates by Level of Education

Country	National Average	Completed Primary	Completed Secondary	University
Afghanistan	17	15	35	86
Algeria	21	17	27	55
Bangladesh	9	9	10	0
Comoros	42	40	44	85
Egypt	16	10	15	55
Indonesia	47	49	42	83
Iraq	24	18	26	75
Lebanon	31	16	31	75
Libya	28	19	22	55
Malaysia	37	21	39	66
Mauritania	36	36	34	75
Morocco	34	33	33	78
Pakistan	17	16	25	8
Palestine	14	11	11	63
Somaliland	21	18	24	90
Turkey	20	13	27	51
Yemen	16	14	23	81
All countries	25	21	28	64
Moderate Veiling	29	23	30	59
High Veiling	23	20	26	67

Note: Data for Tunisia was not available for this variable. Means are over countries.
Source: Authors' estimates using the Gallup World Poll, 2010 figures.

Table 10b: Labor Force Participation Rates by Veil/No Veil

	Women that veil			Women that do not veil		
	Moderate	High	All	Moderate	High	All
Share of women that work	32	23	26	52	32	48
Number of observations (total)	2376	4734	7110	1184	296	1480

Source: Authors' calculations using the Gallup World Poll, 2010 figures.

Table 10c: Share of Women That Work Depending on Veiling and Education Characteristics

	Women that veil			Women that do not veil		
Moderate Veiling	Primary or less	Completed secondary	Secondary + 4 years	Primary or less	Completed secondary	Secondary + 4 years
Women that work	29	34	67	53	48	70
Observations (Total)	1360	915	100	373	693	118

	Women that veil			Women that do not veil		
High Veiling	Primary or less	Completed secondary	Secondary + 4 years	Primary or less	Completed secondary	Secondary + 4 years
Women that work	20	23	60	31	27	62
Observations (Total)	2772	1697	257	158	104	30

Source: Authors' calculations using the Gallup World Poll, 2010 figures.

Table 11: Determinants of Female Labor Force Participation

	Moderate Veiling		High Veiling		All Countries	
Veil	0.500***	0.368***	0.651**	0.631**	0.427***	0.363***
	(0.048)	(0.054)	(0.114)	(0.139)	(0.032)	(0.040)
Secondary +	1.122	0.786*	1.234**	1.077	1.187***	0.952
	(0.098)	(0.112)	(0.128)	(0.395)	(0.077)	(0.118)
Secondary + 4 years	3.301***	2.076***	8.163***	14.720***	4.647***	2.758***
	(0.602)	(0.538)	(1.824)	(10.506)	(0.656)	(0.654)
Headscarf x						
Secondary +		1.789***		1.160		1.336**
		(0.325)		(0.435)		(0.191)
Secondary + 4 years		2.273**		0.533		2.120***
		(0.840)		(0.388)		(0.618)
Religion important * Attends service	0.916	0.896	1.559***	1.557***	1.186***	1.176***
	(0.081)	(0.080)	(0.142)	(0.142)	(0.073)	(0.073)
Age	1.018***	1.020***	0.997	0.997	1.008***	1.008***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.003)	(0.003)
Married	0.459***	0.452***	1.356**	1.352**	0.799***	0.795***
	(0.053)	(0.052)	(0.182)	(0.182)	(0.068)	(0.067)
Divorced	1.625	1.627	3.333***	3.332***	2.209***	2.212***
	(0.483)	(0.485)	(0.777)	(0.776)	(0.381)	(0.382)
Widowed	0.481***	0.483***	0.886	0.884	0.679**	0.680**
	(0.110)	(0.112)	(0.243)	(0.242)	(0.116)	(0.117)
Children under 15	1.106	1.093	0.899	0.900	0.851**	0.845**
	(0.101)	(0.100)	(0.128)	(0.129)	(0.061)	(0.061)
Urban	0.979	0.982	0.966	0.965	1.069	1.065
	(0.087)	(0.087)	(0.095)	(0.095)	(0.069)	(0.068)
Constant	0.755*	0.907	0.336***	0.346***	0.676***	0.777*
	(0.125)	(0.162)	(0.089)	(0.103)	(0.083)	(0.110)
Observations	3,286	3,286	3,770	3,770	7,056	7,056
F-test	21.97	18.93	15.00	12.66	36.92	33.02

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. Mauritania and Tunisia are excluded from the sample. *** $p<0.01$, ** $p<0.05$, * $p<0.1$ Authors' estimates using the Gallup World Poll, 2010 figures.

Annex: Description of variables included in the analysis

Use of veil: the question used is "Do you wear headscarf (hijab) in public?" The possible answers are yes (value of 1) or not (value of 0). In the regressions this variable appears as Wearing a headscarf.

Income: We use a continuous variable that measures the annual household income in international dollars.

Age: A continuous variable whose values fall between 15 and 99 years old.

Education: This variable can take three values: 1 when completed elementary education or less (up to 8 years of basic education); 2 for those who completed secondary education or have some education beyond secondary education (9-15 years of education); 3 when completed four years of education beyond high school and/or received a 4-year college degree. There is two ways to include this variable in the regressions: by using the categorical variable as described above, or by including a dummy for each category taking as base the value of 1 (elementary education). In this analysis we think that the use of the former is better since its interpretation is more straightforward.

Marital Status: In the original database this variable can take 6 values: 1. Single/Never been married, 2. Married, 3. Separated, 4. Divorced, 5. Widowed, 8. Domestic Partner. For estimation purposes this variable was recoded and collapsed to just 4 values. 1. Single, 2. Married, 3. Divorced or separated and 4. Widowed. In the regressions we used a dummy for each category taking as base single women (value of 1). Domestic partner is not taken into account in this analysis since, as shown in the descriptive statistics there is almost 0% of the surveyed women in this category.

Employment: This variable was recoded from the original database. The new variables are dummies for 5 categories: 1 if the surveyed is a formal business owner, 2 if she is entrepreneur, excluding formal business owner, 3 if unemployed, 4 if out of the workforce and 5 if employed for an employer (either full of part time). There are no women in the sample in the first category, this is why in the following analysis there only appear dummies for the second, third and fifth category. This means that the base of this variable is being out of the workforce.

Urban/Rural: The original variable has 4 values: 1 if the respondent lives in a rural area or on a farm, 2 if he lives in a small town or village, 3 if he lives in a large city and 6 if he lives in a suburb of a large city. This variable was recoded and a dummy named "rural" was created. This variable takes de value of 1 if the original variable takes the value of 1 and 2 and 0 otherwise.

Religiosity. In order to generate more variability, this variable combines interacting the responses to two questions: (i) How important is religion for you (1-10); and how often do you attend services (1-4).

Annex Table A1: Use of veil – Base Model

Variables	Group 1	Algeria	Bangladesh	Indonesia	Lebanon	Malaysia	Morocco	Tunisia	Turkey	Group 2	Afghanistan	Comoros	Iraq	Mauritania	Palestine
Religion important * Attends service	**2.464*****	1.525	1.510	2.299***	1.029	1.646	2.642***	5.424***	1.743*	**0.810**	1.093	1.622	1.030	0.663	0.372*
	(0.247)	(0.521)	(0.592)	(0.646)	(0.508)	(0.624)	(0.724)	(1.903)	(0.550)	**(0.136)**	(0.430)	(0.478)	(0.798)	(0.264)	(0.216)
Age	**1.041*****	1.064***	1.020	1.043***	1.089***	1.062**	1.071***	1.081***	0.998	**1.004**	0.998	0.999	1.003	1.042*	1.017
	(0.006)	(0.020)	(0.017)	(0.015)	(0.024)	(0.028)	(0.018)	(0.018)	(0.013)	**(0.008)**	(0.016)	(0.011)	(0.035)	(0.022)	(0.035)
Married	**1.543*****	1.938*	2.295	0.832	0.912	0.854	1.746	2.449*	2.802**	**1.563****	0.664	2.138*	1.875	1.220	1.763
	(0.193)	(0.752)	(1.213)	(0.384)	(0.442)	(0.436)	(0.675)	(1.141)	(1.199)	**(0.331)**	(0.276)	(0.845)	(1.373)	(0.656)	(0.951)
Divorced	**1.425**	2.496		1.702	0.551	0.445	0.558	1.334	1.362	**1.625**	0.248	1.755	0.199	4.889*	
	(0.415)	(1.913)		(1.843)	(0.572)	(0.502)	(0.343)	(1.193)	(0.866)	**(0.662)**	(0.304)	(1.070)	(0.304)	(3.997)	
Widowed	**2.159*****	5.601**	0.838	0.898	1.554			4.669	3.343	**1.411**	0.308	2.998		1.625	
	(0.633)	(4.631)	(0.703)	(0.622)	(1.504)			(6.308)	(2.638)	**(0.659)**	(0.332)	(2.138)		(1.534)	
LFP	**0.485*****	0.759	0.483	1.767**	0.592	0.257***	0.890		1.023	**0.643****	0.637	0.843	0.399	0.938	2.152
	(0.047)	(0.295)	(0.259)	(0.440)	(0.279)	(0.099)	(0.259)		(0.380)	**(0.113)**	(0.260)	(0.253)	(0.239)	(0.439)	(1.088)
Children under 15 (yes/no)	**1.275****	1.563	1.216	1.161	1.508	1.267	1.455	0.791	1.526	**0.723**		0.647	0.584	4.974**	1.510
	(0.127)	(0.432)	(0.557)	(0.325)	(0.585)	(0.515)	(0.405)	(0.240)	(0.440)	**(0.197)**		(0.267)	(0.620)	(3.544)	(1.152)
Secondary and some education beyond	**0.672*****	1.109	2.681**	0.827	0.684	0.366	0.654	0.784	0.125***	**0.802**	0.328**	1.154	0.383	0.950	0.791
	(0.071)	(0.403)	(1.237)	(0.238)	(0.313)	(0.333)	(0.191)	(0.260)	(0.037)	**(0.142)**	(0.152)	(0.357)	(0.235)	(0.386)	(0.680)
Completed 4 years beyond high school	**0.465*****	0.407*	0.271	1.578	0.971	0.250	0.317**	0.443	0.050***	**0.734**	0.733	1.504	0.940	1.090	0.143**
	(0.087)	(0.212)	(0.289)	(0.759)	(0.619)	(0.256)	(0.153)	(0.312)	(0.034)	**(0.249)**	(0.787)	(1.680)	(0.969)	(0.916)	(0.116)
Urban	**0.826***	0.566	0.513	0.555**	2.035	0.308***	0.693	1.441	0.779	**1.687*****	2.765	1.711	0.921	0.527	5.436***
	(0.083)	(0.221)	(0.290)	(0.148)	(1.404)	(0.130)	(0.211)	(0.400)	(0.210)	**(0.312)**	(1.758)	(0.580)	(0.622)	(0.219)	(3.044)
Constant	**0.477*****	0.451	1.128	0.206**	0.054***	6.749**	0.204***	0.019***	1.766	**13.963*****	11.874***	3.748**	41.474***	0.719	4.729
	(0.095)	(0.315)	(1.187)	(0.129)	(0.053)	(6.350)	(0.113)	(0.011)	(0.970)	**(4.841)**	(6.635)	(2.199)	(44.535)	(0.632)	(7.345)
Observations	**3,286**	490	441	436	258	291	436	464	409	**3,770**	475	574	326	447	483
F-test	**45.22**	8.393	1.807	4.150	5.328	3.804	7.224	14.62	9.577	**3.847**	1.904	1.143	2.717	2.026	5.072
Prob>F	**0**	0	0.0654	1.84e-05	6.27e-07	0.000164	1.05e-09	0	0	**3.36e-05**	0.0497	0.328	0.00480	0.0296	4.88e-06

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. Base category in education is complete primary or no education. Base category in marital status is being single. Group 1 (share of women veiling below 81): Algeria, Bangladesh, Indonesia, Lebanon, Malaysia, Morocco, Tunisia and Turkey. Group 2: Afghanistan, Comoros, Egypt, Iraq, Libya, Mauritania, Pakistan, Palestine, Somaliland and Yemen. *** p<0.01, ** p<0.05, *p<0.1.

Annex Table A2: Use of Veil – Political Islam Interacted With Education

Variables	(1) Pool	(2) Bangladesh	(3) Indonesia	(4) Turkey	Variables	(1) Pool	(2) Bangladesh	(3) Indonesia	(4) Turkey
Sharia: only source of legislation	2.427**	1.728	2.157	1.588	Religious leaders advisory role	1.088	6.012*	0.972	1.548
	(0.856)	(2.388)	(1.452)	(1.206)		(0.370)	(5.985)	(0.817)	(0.784)
x Secondary	4.308***	4.224	0.505	1.242	x Secondary	4.047***	1.253	2.205	1.256
	(1.976)	(7.332)	(0.526)	(1.336)		(1.709)	(1.732)	(2.534)	(0.821)
x Beyond high school	3.426				x Beyond high school	52.919***			2177289.878***
	(3.848)					(65.921)			(2455075.353)
Sharia: a source of legislation	1.158	0.368	1.408	7.587***	Religious leaders	1.497	3.197	2.357	6.553**
	(0.339)	(0.479)	(0.864)	(5.822)		(0.560)	(3.042)	(2.017)	(5.211)
x Secondary	2.905***	29.825**	0.345	0.290	x Secondary	3.058**	0.910	0.745	0.307
	(1.135)	(50.279)	(0.342)	(0.259)		(1.410)	(1.183)	(0.877)	(0.297)
x Beyond high school	2.731	0.275	0.514	0.255	x Beyond high school	18.333**		0.644	
	(2.111)	(0.323)	(0.853)	(0.388)		(21.629)		(0.406)	
Religion important * Attends service	2.172***	2.231	2.714***	1.780*	Religion important * Attends service	1.964***	1.387	2.501***	1.532
	(0.354)	(1.104)	(0.849)	(0.601)		(0.304)	(0.585)	(0.747)	(0.530)
Age	1.028***	1.021	1.029*	1.012	Age	1.025***	1.031	1.034**	1.000
	(0.008)	(0.018)	(0.017)	(0.015)		(0.009)	(0.021)	(0.015)	(0.018)
Married	1.169	4.088**	1.119	2.096	Married	1.343	3.206**	0.924	2.770**
	(0.275)	(2.470)	(0.507)	(1.058)		(0.295)	(1.834)	(0.433)	(1.373)
Divorced	1.074			0.965	Divorced	1.575		1.221	1.531
	(0.502)			(0.696)		(0.679)		(1.484)	(1.038)
Widowed	1.011	2.166	1.335	1.709	Widowed	1.703	1.748	1.731	2.712
	(0.459)	(2.783)	(0.996)	(1.544)		(0.723)	(2.212)	(1.212)	(2.415)
LFP	0.730*	0.399	1.639*	0.712	LFP	0.712**	0.261**	1.948***	0.896
	(0.125)	(0.259)	(0.449)	(0.300)		(0.115)	(0.170)	(0.491)	(0.361)
Children under 15 (yes/no)	1.289	1.302	1.021	1.683	Children under 15 (yes/no)	1.248	1.517	1.062	1.559
	(0.233)	(0.658)	(0.331)	(0.571)		(0.202)	(0.774)	(0.308)	(0.524)
Secondary and some education beyond	0.643***	0.507	0.547**	0.943	Secondary and some education beyond	0.519***	0.582	0.597*	0.782
	(0.107)	(0.349)	(0.161)	(0.290)		(0.082)	(0.404)	(0.172)	(0.242)
Completed 4 years beyond high school	0.292***	0.557	1.932	0.169***	Completed 4 years beyond high school	0.279***	4.371	0.526	0.143***
	(0.092)	(0.832)	(1.782)	(0.065)		(0.103)	(5.155)	(0.574)	(0.064)
Urban	0.193**		2.580	0.082**	Urban	0.031***			0.000***
	(0.131)		(4.026)	(0.093)		(0.033)			(0.000)
Constant	0.638	0.581	0.199**	0.658	Constant	0.754	0.147	0.187*	1.033
	(0.245)	(0.914)	(0.155)	(0.448)		(0.318)	(0.205)	(0.186)	(0.762)
Observations	1,330	348	364	337	Observations	1,402	350	403	344
F-test	11.16	2.467	2.816	4.976	F-test	9.885	1.549	3.301	297.2

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. Base category in education is complete primary or no education. Base category in marital status is being single. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Annex Table A3: Determinants of Labor Force Participation

Variables	(1) Group 1	(2) Algeria	(3) Bangladesh	(4) Indonesia	(5) Lebanon	(6) Malaysia	(7) Morocco	(8) Turkey	(1) Group 2	(2) Afghanistan	(3) Comoros	(4) Iraq	(5) Pakistan	(6) Palestine	(7) Somaliland	(8) Yemen	(1) All
Veil	0.500***	0.786	0.521	1.794**	0.640	0.286***	1.130	1.073	0.651**	0.646	0.857	0.432		2.258	0.119**		0.427***
	(0.048)	(0.298)	(0.271)	(0.445)	(0.313)	(0.115)	(0.344)	(0.437)	(0.114)	(0.271)	(0.259)	(0.243)		(1.131)	(0.124)		(0.032)
Secondary +	1.122	1.208	0.923	1.042	2.181	1.464	0.698	1.760	1.234**	3.107***	1.812**	0.888	1.132	0.910	1.392	1.132	1.187***
	(0.098)	(0.464)	(0.371)	(0.278)	(1.066)	(0.844)	(0.197)	(0.826)	(0.128)	(1.223)	(0.434)	(0.308)	(0.545)	(0.420)	(0.321)	(0.408)	(0.077)
Secondary + 4 years	3.301***	4.921***		5.284*	19.950***	2.499	7.770***	3.887**	8.163***	40.614***	18.464***	9.071***	0.633	13.492***	32.480***	32.050***	4.647***
	(0.602)	(2.437)		(5.260)	(12.223)	(1.705)	(4.697)	(2.419)	(1.824)	(57.803)	(16.866)	(5.424)	(0.717)	(6.820)	(28.142)	(42.813)	(0.656)
Religion important * Attends service	0.916	1.609	0.944	1.595*	1.620	0.972	0.728	1.157	1.559***	1.411	1.933***	0.969	0.876	0.822	1.542	0.396*	1.186***
	(0.081)	(0.490)	(0.468)	(0.442)	(0.859)	(0.310)	(0.173)	(0.380)	(0.142)	(0.427)	(0.437)	(0.336)	(0.393)	(0.353)	(0.488)	(0.217)	(0.073)
Age	1.018***	0.988	0.965	0.990	1.021	1.002	0.998	0.986	0.997	1.018	0.994	0.990	1.017	0.984	0.971**	0.967	1.008***
	(0.004)	(0.015)	(0.026)	(0.012)	(0.018)	(0.016)	(0.010)	(0.016)	(0.005)	(0.017)	(0.007)	(0.013)	(0.015)	(0.013)	(0.013)	(0.020)	(0.003)
Married	0.459***	0.363***	1.206	1.423	0.804	0.725	0.401***	0.605	1.356**	0.755	6.041***	0.840	0.470	1.412	1.320	0.623	0.799***
	(0.053)	(0.139)	(0.767)	(0.553)	(0.500)	(0.283)	(0.137)	(0.293)	(0.182)	(0.381)	(1.774)	(0.364)	(0.229)	(0.560)	(0.406)	(0.273)	(0.068)
Divorced	1.625	4.982**	19.168***		5.298	2.013	4.279**	1.833	3.333***		5.192***			3.189	1.684	5.290*	2.209***
	(0.483)	(3.208)	(21.651)		(5.947)	(1.751)	(2.645)	(1.217)	(0.777)		(2.150)			(3.839)	(0.911)	(5.011)	(0.381)
Widowed	0.481***	0.621	0.472	3.452**	0.246	0.369	0.471	1.726	0.886	0.037***	2.023	0.270	1.402	1.147	1.397	1.068	0.679**
	(0.110)	(0.464)	(0.671)	(2.022)	(0.260)	(0.438)	(0.259)	(1.595)	(0.243)	(0.047)	(1.043)	(0.224)	(1.264)	(0.909)	(1.011)	(0.958)	(0.116)
Children under 15 (yes/no)	1.106	1.172	1.385	0.778	0.915	0.973	1.099	0.401**	0.899		0.779	0.884	1.687	0.462**	0.826	0.577	0.851**
	(0.101)	(0.334)	(0.722)	(0.198)	(0.394)	(0.305)	(0.253)	(0.144)	(0.128)		(0.221)	(0.407)	(0.888)	(0.162)	(0.296)	(0.247)	(0.061)
Urban	0.979	0.992	3.039**	0.899	0.418	1.430	0.834	1.093	0.966	0.344***	1.033	3.329***	1.219	1.087	1.214	0.590	1.069
	(0.087)	(0.364)	(1.535)	(0.233)	(0.240)	(0.422)	(0.200)	(0.327)	(0.095)	(0.139)	(0.228)	(1.231)	(0.475)	(0.394)	(0.280)	(0.224)	(0.069)
Constant	0.755*	0.448	0.250*	0.529	0.223*	1.296	0.962	0.442	0.336***	0.214**	0.200***	0.457	0.124***	0.143**	2.856	1.154	0.676***
	(0.125)	(0.313)	(0.201)	(0.303)	(0.181)	(1.342)	(0.382)	(0.335)	(0.089)	(0.133)	(0.103)	(0.374)	(0.096)	(0.115)	(3.164)	(0.736)	(0.083)
Observations	3,286	490	443	433	258	309	472	409	3,770	473	574	356	363	514	566	448	7,056
F-test	21.97	5.023	2.544	2.721	4.166	2.357	3.613	3.158	15	3.917	6.168	3.572	1.121	7.115	3.216	2.658	36.92
Prob>F	0	6.34e-07	0.00754	0.00438	3.14e-05	0.0111	0.000126	0.000689	0	0.000177	6.32e-09	0.000310	0.349	1.97e-10	0.000497	0.00529	0

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. Base category in education is complete primary or no education. Base category in marital status is being single. Group 1 (share of women veiling below 81): Algeria, Bangladesh, Indonesia, Lebanon, Malaysia, Morocco, Tunisia and Turkey. Group 2: Afghanistan, Comoros, Egypt, Iraq, Libya, Mauritania, Pakistan, Palestine, Somaliland and Yemen. *** p<0.01, ** p<0.05, *p<0.1.

Table A4: Determinants of Labor Force Participation

Variables	(1) Group 1	(2) Algeria	(3) Bangladesh	(4) Indonesia	(5) Lebanon	(6) Malaysia	(7) Morocco	(8) Turkey	(1) Group 2	(2) Afghanistan	(3) Comoros	(4) Iraq	(5) Pakistan	(6) Palestine	(7) Somaliland	(8) Yemen	(1) All
Veil	0.368***	0.324*	0.279*	1.218	0.445	0.000***	0.740	0.649	0.631**	0.560	0.730	0.369		129,618***	0.074**		0.363***
	(0.054)	(0.210)	(0.182)	(0.412)	(0.401)	(0.000)	(0.263)	(0.407)	(0.139)	(0.254)	(0.269)	(0.405)		(109,313)	(0.089)		(0.040)
Secondary +	0.786*	0.338*	0.149*	0.654	1.399	0.000***	0.238***	1.091	1.077	1.798	1.051	0.627	1.132	35,701***	0.000***	1.132	0.952
	(0.112)	(0.190)	(0.162)	(0.254)	(1.033)	(0.000)	(0.117)	(0.752)	(0.395)	(1.774)	(0.650)	(0.781)	(0.545)	(46,066)	(0.000)	(0.408)	(0.118)
Secondary + 4 years	2.076***	4.602*		2.217	20.44***	0.000***	2055095***	1.932	14.7***	181,900***	880,156***	6378744***	0.633	1261233***	32.508***	32.05***	2.758***
	(0.538)	(3.870)		(3.759)	(20.069)	(0.000)	(832,688)	(1.432)	(10.506)	(198,633)	(959,132)	(8397370)	(0.717)	(1376886)	(28.172)	(42.813)	(0.654)
Headscarf x Secondary +	1.789***	7.18***	8.728*	2.305*	2.140	934,772***	6.204***	1.914	1.160	1.967	1.869	1.460		0.000***	5277771***		1.336**
	(0.325)	(5.138)	(10.218)	(1.092)	(2.010)	(905,291)	(3.688)	(1.462)	(0.435)	(2.043)	(1.216)	(1.878)		(0.000)	(8277919)		(0.191)
Secondary + 4 years	2.273**	0.920		4.776	0.863	48928056***	0.000***	9.715*	0.533	0.000***	0.000***	0.000***		0.000***			2.120***
	(0.840)	(0.991)		(9.932)	(1.048)	(6306184)	(0.000)	(13.094)	(0.388)	(0.000)	(0.000)	(0.000)		(0.000)			(0.618)
Religion important * Attends service	0.896	1.546	0.846	1.538	1.581	0.930	0.678	1.128	1.557***	1.428	1.906***	0.971	0.876	0.826	1.569	0.396*	1.176***
	(0.080)	(0.464)	(0.411)	(0.427)	(0.826)	(0.297)	(0.164)	(0.375)	(0.142)	(0.431)	(0.430)	(0.338)	(0.393)	(0.354)	(0.505)	(0.217)	(0.073)
Age	1.020***	0.994	0.971	0.993	1.024	1.001	0.998	0.986	0.997	1.018	0.995	0.989	1.017	0.984	0.971**	0.967	1.008***
	(0.004)	(0.016)	(0.025)	(0.012)	(0.019)	(0.016)	(0.010)	(0.017)	(0.005)	(0.017)	(0.007)	(0.013)	(0.015)	(0.013)	(0.013)	(0.020)	(0.003)
Married	0.452***	0.393**	1.182	1.381	0.721	0.729	0.423**	0.586	1.352**	0.734	5.888***	0.864	0.470	1.385	1.330	0.623	0.795***
	(0.052)	(0.147)	(0.759)	(0.557)	(0.453)	(0.286)	(0.142)	(0.284)	(0.182)	(0.371)	(1.728)	(0.376)	(0.229)	(0.548)	(0.409)	(0.273)	(0.067)
Divorced	1.627	5.463**	21.092***		4.425	2.185	4.864***	1.875	3.332***		5.049***			3.110	1.688	5.290*	2.212***
	(0.485)	(3.755)	(23.878)		(4.728)	(1.910)	(2.902)	(1.269)	(0.776)		(2.095)			(3.735)	(0.915)	(5.011)	(0.382)
Widowed	0.483***	0.716	0.412	3.213*	0.226	0.419	0.521	1.798	0.884	0.035***	1.972	0.280	1.402	1.135	1.398	1.068	0.680**
	(0.112)	(0.543)	(0.600)	(1.927)	(0.242)	(0.507)	(0.288)	(1.672)	(0.242)	(0.045)	(1.014)	(0.232)	(1.264)	(0.896)	(1.013)	(0.958)	(0.117)
Children under 15	1.093	1.190	1.216	0.774	0.915	0.973	1.033	0.379***	0.900		0.778	0.863	1.687	0.473**	0.823	0.577	0.845**
	(0.100)	(0.347)	(0.623)	(0.198)	(0.381)	(0.308)	(0.240)	(0.138)	(0.129)		(0.223)	(0.396)	(0.888)	(0.166)	(0.295)	(0.247)	(0.061)
Urban	0.982	0.931	2.986**	0.906	0.441	1.445	0.875	1.129	0.965	0.329***	1.024	3.417***	1.219	1.058	1.223	0.590	1.065
	(0.087)	(0.345)	(1.483)	(0.236)	(0.266)	(0.438)	(0.215)	(0.351)	(0.095)	(0.131)	(0.225)	(1.280)	(0.475)	(0.382)	(0.283)	(0.224)	(0.068)
Constant	0.907	0.708	0.405	0.651	0.271	1331040***	1.346	0.702	0.346***	0.251**	0.235***	0.533	0.124***	0.000***	4.448	1.154	0.777*
	(0.162)	(0.494)	(0.345)	(0.386)	(0.220)	(1476808)	(0.571)	(0.619)	(0.103)	(0.166)	(0.129)	(0.646)	(0.096)	(0.000)	(5.474)	(0.736)	(0.110)
Observations	3,286	490	443	433	258	309	472	409	3,770	473	574	356	363	514	566	448	7,056
F-test	18.93	4.469	2.970	2.477	3.345	35.06	259.2	2.910	12.66	19.05	18.49	40.71	1.121	29.86	36.77	2.658	33.02
Prob>F	0	0	0.00128	0.00526	0.000195	0	0	0	0	0	0	0	0.349	0	0	0.00529	0

Notes: Estimations are based on a weighted logit model. Odd ratios are shown. The sample was restricted to Muslim females. Base category in education is complete primary or no education. Base category in marital status is being single. Group 1 (share of women veiling below 81): Algeria, Bangladesh, Indonesia, Lebanon, Malaysia, Morocco, Tunisia and Turkey. Group 2: Afghanistan, Comoros, Egypt, Iraq, Libya, Mauritania, Pakistan, Palestine, Somaliland and Yemen. *** $p<0.01$, ** $p<0.05$, *$p<0.1$.