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Nandita N. Balakrishnan April 10, 2014

The Internet: Changing the Way We Think about Women's Rights?

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Abstract

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The introduction of the Internet has revolutionized the way that people access information and communicate with one another, but has it revolutionized the way people formulate their political attitudes? Information and communication networks of all sorts are now just a click away for many people around the globe, and for many, the Internet is becoming the main source of information through both formal and informal sources. Therefore, there is a potential for public opinion about political issues to be affected by increased access to the Internet. In particular, I explore how information access via the Internet has affected public opinion on women's rights and gender empowerment because previous scholarship shows that public opinion on women's rights is an important factor in the implementation of women's rights policy in an area. The Internet is a relatively new phenomenon, so scholarship on the Internet's effect on women's rights and public opinion is limited. Drawing from data from the Pew Global Attitudes Projects dataset from Springs 2007, 2010, and 2012, I constructed models analyzing this relationship between Internet access and attitudes towards women's rights. My models include both ordinal logistical models as well as simulations, which extracted subsamples from within the sampled population. In addition, I conducted a qualitative case study comparing the relationship between Internet penetration and gender norms and attitudes in Saudi Arabia and the United Arab Emirates. My results imply that access to the Internet leads to a positive shift in attitudes towards women's rights.

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Figures and Tables

Introduction

Globalization has begun to revolutionize how people, groups, and even states interact with one another. As people become more closely connected with one another, so too, are their behaviors and attitudes. Globalization is the growing political, economic, and social interaction and interdependence between various actors in the international system. These interactions are heavily influenced by the flow of ideas between actors. Many political issues are now being shaped by globalization. It is, therefore, perhaps undeniable that globalization has made an impact on the realization of human rights. One possible effect is the changing of attitudes towards human rights. The bringing together of different sets of people through various information and communication mediums has increased knowledge of the conditions of women and their rights worldwide, and this increased interconnectedness has the potential to change attitudes towards women and their rights (Marber 2004; Hertel, Scruggs, and Heidkamp. 2009; Sreberny 2005; Youngs 2012; Elamin & Omair 2010).

One facet of globalization, known broadly as social globalization, relates to how people interact with one another on a personal and social level. Innovations in information and communication technology (ICT) have been especially useful in facilitating social globalization. In the past two decades, the Internet has become a prominent medium for ICT, and as access to the Internet worldwide has increased, the flow and exchange of ideas has become faster, more dramatic, and more widespread. It allows for more sophisticated methods of information access and communication and is slowly becoming a primary medium for information access and communication (van der Weide 2012; Nisbet, Stoycheff, and Pearce 2012). One can look at the instance of the Joseph Kony video that took Facebook by storm or stories about protest organization from the Arab Spring to see the potential the Internet and social media have as political game-changers; ICT can affect how people think about and engage with political issues.

The Internet is particularly important for the sphere of women's rights (van der Weide 2012). According to Sreberny (2005), many women's rights groups were among the first to heavily utilize the Internet as a way to connect with other women's groups as well as with women in developing countries. This increased connection has allowed the expansion of the message and scope of women's rights. It is true that the reality of women's rights has come a long way. Women's movements and legislation such as the United Nation's Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) have helped make progress worldwide, but there are still many more necessary changes needed. One of the foundations for women's rights is society's attitudes toward or support for women's rights. This concept of attitudes towards women's rights is often measured through public opinion. It is in public opinion towards women's rights that the Internet can potentially have major effects (Sreberny 2005; van der Weide 2012; Burns and Gallagher 2010).

Why is public opinion an important component of gender rights issues? The most clear and recent example can be seen in the form of the Delhi Rape Case of December 2012. A young woman was brutally gang-raped by four men while returning home from a movie with a male friend and died soon afterward. Two aspects that were of particular importance in this case were the media firestorm that emerged and the subsequent heavy criticism of Indian politicians and police. Many of these public officials in turn implied that negative attitudes among the public towards women and women's behavior led to such atrocities. For example, some officials publicly stated that the young woman was partially to blame for the rape because she was out at night with her male friend. Others argued that she did not do enough to fight off her attackers (Lahiri, Sugden, and Agarwal 2013; Daniel and Battacharya 2013).

If one were to think more broadly, it appears that low opinions of women and their empowerment can result in an inability for women to exercise their rights or feel empowered. Women might feel they do not have the internal or external efficacy to change their situations and demand more opportunities and rights. From a more optimistic perspective, however, it appears this relationship could work in the alternate way (van der Weide 2012). Hertel, Scruggs, and Heidkamp (2009) showed that the more support there is for a human right, the more willing people are to act in a way that protects, supports, and expands upon that right. Thinking more specifically, if there are more positive attitudes toward women and their rights, then communities will be more accepting of women's rights and act in support of them. This acceptance will lead to more legislation protecting women's rights, as well as better implementation of that legislation (Costain and Majstorovic 1994; Prakash 2012). Examples of positive attitudes towards women's rights can include support for the right to equal pay, the right to vote, and the right to receive a primary education.

Gender empowerment, a similar but distinct concept, refers to women's abilities to actually exercise available rights and perhaps expand upon those rights. It also includes the normative ideas of women's role in society. In order for there to be an environment that allows women to exercise their rights and become political leaders, there needs to be support for that empowerment. The ability to become leaders is a necessary component for women's empowerment because it gives women full access to all opportunities within their field and expands their decision-making capabilities. Examples of support for gender empowerment can include support for women to work outside of the home, support for a woman as candidates for public office, and support for women to choose their own spouses (Hertel, Scruggs and Heidkamp 2009; Costain and Majstorovic 1994; Burns and Gallagher 2010). This research

attempts to consider the Internet as a solution to this challenge: how can there be positive shifts in attitudes towards women's rights and gender empowerment in order to create a more accepting environment for the later realization for these rights?

Research Question

For the purpose of my analysis of public opinion on women's rights and gender empowerment, I will focus on the effects of social globalization. In particular, I will isolate and examine the influence of the access to information through the gateway of the Internet by answering the following questions:

1. *Does access to information via the Internet affect public opinion towards women's rights?*
2. *Does access to information via the Internet affect public opinion toward gender empowerment?*

Previous research has looked at the role that the Internet and other media sources have on public opinion as well as how public opinion affects women rights; however, there appears to be a gap in the scholarship in regards to the relationship between ICT, public opinion, and women's rights (Hoffman et al. 2007; Burns and Gallagher 2010). First, the relationship between public opinion and gender is a relatively untouched area of scholarship. Gender attitudes are not uncommon in political science studies especially those studies that examine the gender gap in political representation and enfranchisement; however, they are often used as control variables to study those particular phenomena. Attitudes related to gender are rarely seen as explanatory variables, and there is also limited research that has touched upon what affects gender attitudes as a dependent variable. The few studies conducted looking at the determinants of gender attitudes have focused mainly on a myriad of socioeconomic factors such as age, gender, income,

employment status, and education with limited attention to information effects (Thornton, Alwin, and Camburn 1983; Meyer, Rizzo, and Ali 2005; Bolzendahl and Myers 2004; Carter, Corra, and Carter 2009; Shu and Zhu 2012; Davis and Greenstein 2009). A few other studies have looked at the political factors such as female representation in politics and legislative action that might shift attitudes (Burns and Gallagher 2010; Costain and Majstorovic 1994; Bergh 2009). There is also a small amount of scholarship on how the Internet affects the empowerment of women (Sreberny 2005; van der Weide 2012; Prakash 2012; Youngs 2012). The Internet is still a relatively new innovation for ICT, which can explain the lack of research thus far (van der Weide 2012). In particular, there is little written on the relationship between the Internet and public opinion. However, there is research that has looked at how social and media factors as separate entities affect public opinion on political issues (Hoffman, et al 2007; Manganaro and Alozie 2011). Through my research, I will attempt to bring together and connect these disparate areas of scholarship. If my hypotheses are supported, the Internet can be further utilized as tool of development because of its role as an information and communication medium.

The Formulation of Public Opinion

Before understanding how public opinion can be changed by access to the Internet, it is important to understand how public opinion and political attitudes are formulated. There are many factors that shape individual preferences on an issue in terms of support for an issue and the long-term strength of that support. In particular, attitudes on political issues are heavily influenced by societal norms and political values. These values and norms relate to an idea known as predispositions. Predispositions refer to a person or group's initial inclination toward an issue. Certain demographic factors, including gender, age, and education can help explain how some people are more generally predisposed to gender egalitarianism, and these factors

appear to have a similar effect worldwide (Hoffman et al. 2007; Burns and Gallagher 2010; Bolzendahl and Myers 2004; Carter, Corra, and Carter 2009; Shu and Zhu 2012; Davis and Greenstein 2009). Similarly, the political and social environment with which one is accustomed can also shape predispositions on rights issues. For example, regime type, level of the ethnic fragmentation, and presence of female politicians within the national political system can influence views on gender egalitarianism (Heaven 1999; Manganaro and Alozie 2011; Galligan and Knight 2011; Bergh 2009).

This study contributes to the broader literature on public opinion by focusing on access to information. Does increased availability of information people obtain impact their opinion on gender rights? What a person believes about an issue is heavily dependent on what they know. More information allows people to have a comprehensive view of an issue, which could affect or even change how they feel about an issue. Information can be accessed in two primary ways. First, there is media access, which relates to formal information sources. Formal information sources are often defined to include local newspapers, metro newspapers, and local radio and television news, which are considered recognizable and credible information sources (Manganaro and Alozie 2011; Nisbet, Stoycheff, and Pearce 2012). However, information can also be accessed through informal sources, known as social filters. Social filters refer to how people utilize one another as information sources. Information can be spread through social interactions, communication networks, and civil society groups. How often people engage in discussions on political issues can influence their overall support for political issues (Hoffman, et al 2007, Manganaro and Alozie 2011; Hill and Hughes 1999).

Public opinion is multifaceted and highly nuanced, which makes it difficult to ascertain precisely what factors influence its formulation of public opinion and its shift over time.

However, studies show that predispositions are generally most influential in the initial formulation of public opinion (Burns and Gallagher 2010; Hoffman et al. 2007). However, in the long-term, information access through both media and social filters will play more of a role in influencing attitude changes on political issues (Skoric and Park 2013). This idea has been found to be especially true of political issues that relate to gender (Hoffman et al. 2007; Manganaro and Alozie 2011).

An individual might be predisposed to certain gender values based on a number of demographic and political factors, but these attitudes can shift through life experiences and other factors. Changes in gender attitudes have occurred since the 1960s, in part because of an increased presence of women's rights movements (Thornton, Alwin, and Camburn 1983). In particular, Bolzendahl and Myers (2004) refer to the idea that information access affects attitudes on women's rights as an "exposure-based explanation." They describe this effect as how "individuals develop and change their understanding of women's place in society and their attitudes toward feminist issues when they encounter ideas and situations that resonate with feminist ideals." Information access especially regarding pro-feminist ideas is a means of education and socialization which in turn helps promote more positive attitudes of women's rights and their roles in society (Bolzendahl and Myers 2004, 761-762). My research looks at how information access through the Internet, whether that be from formal media sources or from communication networks, shifts attitudes related to women's rights and gender empowerment. I make the assumption that people do have at least some predisposition for some level of support but that over time that attitude can be shifted or strengthened. My next section will clarify how predispositions and information access relate specifically to public opinion on gender rights.

Response Variable: Public Opinion on Women's Rights and Gender Empowerment

Predispositions as related to Gender, Age, and Education

Several demographic factors are thought to shape many people's inclinations toward women's rights and gender empowerment. In particular, gender, age, and education level are often cited as the most significant demographic factors that affect gender egalitarianism. Worldwide, men are often less predisposed to support women's rights than women (Thornton, Alwin, and Camburn 1983; Gibbons, Hamby, and Dennis 1997; Carter Corra, and Carter 2009; Elamin & Omair 2010). This notion is due to a political psychology term known as Social Dominance Orientation (SDO). SDO is a belief that there is a natural hierarchical structure in society, and this structure gives men the political, economic, and social privileges and power in society. This power predisposes men to either consciously or unconsciously attempt to continuously protect those privileges (Heaven 1999). Along the same lines, women are predisposed to believe that society creates an inequality in the world that unfairly and actively discriminates against them. Burns and Gallagher (2010) refer to this notion as "structural critique." Structural critique can help explain why women are more likely to support their own rights; as a group, they need to combat the privilege that men are trying to protect (Heaven 1999; Burns and Gallagher 2010; Carter, Corra, and Carter 2009; Gibbons, Hamby, and Dennis 1997).

Age is another demographic factor that affects support for women's rights, but unlike gender, studies disagree on exactly what effect "generational replacement" has on support for women's rights and gender empowerment. Conventional wisdom has stated that younger generations have benefited more from gender egalitarianism because the last few decades have seen gender equality becoming more of a norm in many parts of the world. Therefore, previous scholarship argued that younger people would be more predisposed to gender egalitarianism than

older generations (Thornton, Alwin and Camburn 1983; Carter, Corra, and Carter 2009; Davis and Greenstein 2009: Shu and Zhu 2012). Recent scholarship, however, has argued that the issue of age is a little more nuanced than that assertion (Pampel 2011; Galligan and Knight 2011). In fact, some scholarship argues that as one is more accustomed to gender egalitarianism, one is less likely to support it or take action to achieve it. When something is a norm, it is often taken for granted. For example, Galligan and Knight (2011) find that older women were more supportive of women's rights than younger women because the older women lived through the women's movements of the 1970s and saw the struggles that women faced before and after that activism. Those life experiences that the younger women lacked predisposed the older women to be more supportive (Pampel 2011; Galligan and Knight 2011).

Education level, employment status, and income level can also influence attitudes towards women's rights and gender empowerment through the notion of socio-economic status. These factors often work in tandem because increased education is generally correlated with increased income and full-time work opportunities (Thornton, Alwin, and Camburn 1983; Bolzendahl and Myers 2004; Davis and Greenstein 2009). However, the effect education has on support for women's rights and gender empowerment can be complex at times. In some cases, education could have diluted positive effects or even negative effects on gender attitudes. These abnormal effects have been attributed not to the effect of education itself but from an understanding of who has the education. Educational access is not equal everywhere, so one needs to consider who exactly has access to the highest levels of education. In many societies, those who have the most education and income are men, who by Social Dominance Ordinance, will protect these privileges in society (Manganaro and Alozie 2011; Pampel 2011).

Predispositions as Related to Ethnicity and Religion

When conducting a cross-national analysis of women's rights issues, it is important to keep in mind that there are differences of ethnicity and religion between countries and even within a country. Researchers must proceed with caution on this topic because it is easy to erroneously attribute gender equality issues solely to religion or cultural identities. Some might believe that certain religious doctrines or cultural norms actively advocate against women's rights and empowerment (Ross 2008; Elamin and Omair 2010). It is true that religious fundamentalism has often found to be associated with more traditional gender role attitudes, but it is difficult to ascertain the exact role religion and ethnicity play in political attitude formulation and shifts over time (Thornton, Alwin, and Camburn 1983; Bolzendahl and Myers 2004; Carter, Corra, and Carter 2009). It is, therefore, important to differentiate ethnicity and religion by themselves and ethnic and religious fragmentations and fundamentalism.

Ethnic and religious fragmentations are two factors that Galligan and Knight (2011) also investigate further in the context of Ireland. They examine why very few women held public office in both Northern Ireland and the Republic of Ireland, which from a developmental standpoint, the authors find puzzling even after the long history of religious conflict. Ireland has a fairly large number of women's rights laws, but even given that, there is a still a lack of female politicians. They question how varying factors including religious conservatism affected support for female politicians. They find that in Ireland, religion is difficult to classify as an identity in itself. Religion and ethnic fragmentation are so deeply integrated within specific parties in Ireland that their analysis did not find either factor independently affecting public opinion towards female politicians. Instead, it was party identification that affected these opinions, and ethnic and religious fragmentations played an influencing role in party identification. The effect

party identification, and therefore, ideological predispositions, have on public opinion on women's rights and gender empowerment will be discussed in more detail in the next section. What becomes clear from all these studies is that multiple overlapping identities play a role in public opinion formulation and change, and these identities must be taken into account when analyzing the positive shifts in support for women's rights (Ross 2008; Manganaro and Alozie 2011; Galligan and Knight 2011).

Political Factors

In addition to demographic factors, previous scholarship has focused on how political factors affect support for women's rights and gender empowerment. First, level of development is an important factor in regards to both attitudes towards women's rights and gender empowerment as well as information access. More developed societies generally have better access for females to education, which has allowed for more female participation in the professional and political realm. Fertility rates and child mortality tend to be lower in more developed countries, which can allow women to focus more on their own academic and professional development. In such countries, there are many more dual-income households, which have been associated with more positive attitudes towards women's rights (Elamin & Omair 2010; Shu and Zhu 2012; Carter, Corra, and Carter 2009).

Second, studies show that party identification, especially for women, strengthens support for attitudes towards women's rights (Heaven 1999; Bolzendahl and Myers 2004). In particular, women with more liberal ideologies are found to have a high level of support for gender egalitarianism and will act more in support of gender rights. Similarly, men with more conservative ideologies have been found to be among the least likely to support gender equality (Heaven 1999). Party affiliation can expand women's sense of efficacy in the system and gives

them the incentive to increase their support for their rights (Heaven 1999, Galligan and Knight 2011, Manganaro and Alozie 2011; Bergh 2009)

Likewise, the presence of women in political office can also influence support for women's rights and gender empowerment; however, this relationship is difficult to analyze in terms of a cause-and-effect relationship. The more female politicians there are in office, the more likely people are to support female candidates because they are no longer such an anomaly (Costain and Majstorovic 1994). However, there is evidence that this relationship could be endogenous. The more support for female politicians there are, the more likely they will be voted into office. Once in office, women politicians can use legislative action to influence public opinion on women's rights even further; however, in some cases, the extent to which this relationship is endogenous is related to type of voting district (Bergh 2009).

In single-member districts, the relationship appears unidirectional where public opinion leads to representation; however, in multi-member districts, the endogeneity of the relationship between public opinion and representation seems more apparent. Bergh attributes this difference to the notion that "if political parties nominate female candidates in large numbers [in multi-member districts], some are likely to get elected irrespective of the attitudes of voters" (Bergh 2009, 56). This finding has been attributed to the notion there is less risk involved in nominating female candidates for parties in multi-member districts than in single member districts. When a party only has one candidate they can put forward rather than a list of candidates, they must take voter attitudes and preferences much more into account. In a single member district, it would be difficult to even suggest a female candidate without a least a minimum level of voter support. If voters have low opinions on female candidates, then putting a female candidate forth as the single candidate would result in lost representation by that party. In this case, the relationship can

only go in one direction because positive voter opinion is needed in order for female candidates to be in office. Through a candidate list in multi-member districts, political elites have more ability to put female candidates on the ballot even if voter opinion seems low initially. In this instance, even with low voter attitudes, a female candidate has better odds of winning office than a female candidate in single-member districts, and slowly over time this increased representation can affect public opinion in those multi-member areas (Bergh 2009)

Explanatory Variable: Information Access

Informal Information Sources: Social Filters

The demographic and political factors mentioned earlier affect the predispositions that people have in regards to their opinions on rights issues. These predispositions affect the initial formulations of opinions, but what influences the long-term shifts and strength of these opinions? It is in this area that information access plays an important role. Information access comes both from informal sources and formal sources, but once people are exposed to information about pro-feminist ideas and conditions of women worldwide, they can receive a comprehensive view of gender egalitarianism. Bolzendahl and Myers (2004), as well as Davis and Greenstein (2009) argue that the more exposure to information and variety of ideas about especially about gender egalitarianism an individual has, the more likely they are to "develop more egalitarian beliefs" (Davis and Greenstein 2009, 92). Social filters relate to how people interact with one another in order to gain information, and these are informal information sources (Hoffman, et al 2007). These interactions can be structured and organized as in the context of civil society organizations, but they can also be informal, as when a few friends meet up for coffee and share information. These informal information networks can induce situations, in which people may face feminist or antifeminist ideals and ideas, and this is a fact of which women's organizations

and their grass root efforts are taking advantage (Bolzendahl and Myers 2004; Sreberny 2005; van der Weide 2012).

Information and Communication Technology has also become an important medium for social interaction in both the formal and informal sense. The Internet, in particular, is a rather important social filter because with the advent of social media, many people are using the Internet as a key mode of interpersonal communication. This communication transcends traditional local communication networks and allows people to communicate and interact with others around the world through a variety of forums.

The Internet is a relatively new phenomenon; so many studies that examine the relationship between information sources and public opinion predate the explosion of widespread Internet use. However, these studies can still be helpful in examining the effect that social movements and women's organizations, which depend on interpersonal communication, have on public opinion on women's rights. Before Internet use, women's organizations and social movements had to make use of slow and less reliable mediums including mail, poor phone connections and isolated local branches of the organization to disseminate information to the masses; however, they still had the ability to cause a change in attitudes. The Internet could magnify this effect (Sreberny 2005; van der Weide and Pande 2012; Prakash 2012). Women's organizations are taking huge advantage of these communication and social networks via the Internet by undertaking more grassroots campaigns that utilize the Internet (Sreberny 2005; Prakash 2012). Through innovations in ICT, these organizations now have the ability to reach out even further to others who are interested in these issues. The Internet has become a way of overcoming the collective action problem of organization because various local branches of women's organizations have easy access to the information that other branches possess. This

information then makes it easier for organizations to coordinate and mobilize quickly even when they are geographically quite distant from one another. The deeper connections between branches allow organizations to spread the message more widely to actively change the environment around women's rights. Once the organizations and their messages have penetrated other social networks associations, they can result in more positive opinions on women's rights because of stable and repeated interaction. Once stable social networks are created, they tend to last. This means they continue to influence public opinion over time by spreading to other networks (Hill and Hughes 1999; Skoric and Park 2013; Manganaro and Alozie 2011).

Social networks allow for the continued exchange of ideas and information, and this area is a place where the Internet plays an important role (Sreberny 2005; van der Weide and Pande 2012). Hill and Hughes (1999) call the Internet a medium for "conversation or debate" (Hill and Hughes 1999, 101). However, social networks are only one sort of information access. Formal sources of information are also important in the context of the Internet, and these effects are known as media effects (Hoffman et. al 2007; Costain and Majstorovic 1994; Sreberny 2005; Meyer, Rizzo, and Ali 2005).

Formal Information Sources: The Media Effects

Even prior to media access via the Internet, scholarship has shown that formal media could affect public opinion because it "heightened the level of public awareness" of civil rights issues and injustices (Costain and Majstorovic 1994 pg. 113). A more informed society is more likely to demand the proper implementation of those rights (Hill and Hughes 1999, 104). This awareness, in turn, can affect the level of public support towards these rights. The media has an important role in regards to legislative bodies. It can directly put pressure on public officials through articles and broadcasts, but it can also apply indirect pressure by raising awareness

among citizens who can petition their governments. Increased and widespread coverage of an issue can play a role in public opinion formulation, but media appears to play more of a role in opinion shift and strength rather than initial issue favorability (Costain and Majstorovic 1994; Hoffman, et al 2007).

The effect of the media on support for women's rights has been studied multiple times in the context of the Middle East. This region has been an area of interest for women's rights scholars because, contrary to popular belief, the area is not homogenous. From a political development, economic development, and ethnic perspective, the area is quite diverse, but many people erroneously attribute opposition towards women's rights in the region only to Islam (Ross 2008; Elamin and Omair 2010). Even if there appears to be low respect for women's rights, it cannot be attributed to a single cause. These differences have opened the region to scholars looking at women's rights issues from multiple angles including public opinion on women's rights and gender empowerment. In studies in both Kuwait and Afghanistan (Meyer, Ali, and Rizzo 2005; Manganaro and Alozie 2011), access to formal media sources were found to have a positive and statistically significant effect on support for women's rights. The effect of the media appeared to grow stronger over time. This effect has been partly attributed to the notion that increased formal information access increases social and cultural capital in individuals, which helps them see the benefits of gender egalitarianism. Social and cultural capital refers to an increased understanding and awareness of values and norms that can be gained from social interaction and cultural exposure (Davis and Greenstein 2009). As people gain more knowledge about the rights of women and their empowerment, whether that be the presence of female heads of state and government in developed countries or the increased access for women to education, they might compare those circumstances with the circumstances in their own nation, if their

nation does not have that level of gender egalitarianism or if their nation has a better level of gender egalitarianism. In this comparison, they might see rights for women in a more positive light after seeing the capabilities of women to work and lead in the public sphere. They might also be alerted to the presence and activities of women's groups that are attempting grassroots projects in their own country or elsewhere. In particular, the effects were found to be getting very strong around 1998, when the Internet was gaining momentum as an information source (Meyer, Rizzo, and Ali 2005; Manganaro and Alozie 2011; Sreberny 2005).

In their study, Manganaro and Alozie (2011) differentiated between formal information sources, which they referred to as the media, and informal information sources, which can also be referred to as social and communication networks. They encompassed both formal and informal information sources as a dummy variable known as "information sources," variable was coded in such a way that the authors could differentiate the effect of formal information sources and informal information sources. They claimed that formal information sources have a strong positive and statistically significant effect on attitudes towards women's rights. The authors also included a variable known as "social trust" in their model which looked at the social interactions the people have with one another and the level of trust they have in those social interactions. This variable was also found to have a statistically significant and positive effect on attitudes towards women's rights (Manganaro and Alozie 2011, 518 and 524).

The Internet as a Tool for Political Engagement

The most common uses for the Internet are email and searching for information via search engines, which gives evidence to the notion that the Internet is a single medium that combines both media and social interaction as a way to gather information (Nisbet, Stoycheff, and Pearce 2012; Hill and Hughes 1999). Scholarship using the Internet as a lens to study

political phenomena has been fairly limited because the Internet is still a fairly recent form of ICT. However, it has begun to capture the interest of political scientists because of its potential to affect political discussion, mobilization, and engagement. The Internet and other information sources have the ability to affect political attitudes because these are tools through which citizens can learn about political "norms, values, and practices" (Nisbet, Stoycheff, and Pearce 2012, 250). However, what makes the Internet distinct from formal media is that the Internet allows for information to flow in multiple directions. There is almost a constant feedback from that information. If someone finds intriguing information on political issues, they can either transmit that information to someone else, or they can try to find more information on the subject. It provides a forum for citizens to clarify their misunderstandings on political issues, vent frustrations, and ultimately mobilize themselves and others with shared views into action. Most importantly, the Internet has the benefit of being a fairly cheap and safe environment to access information because people can interact with others anonymously if they wish. It has also been found that citizens of a regime, for which there are many political frustrations, are more likely to use the Internet as a medium to voice those frustrations. One of those voiced frustrations is the lack of democratic indicators such as civil rights. As the Internet becomes larger over time, it becomes more difficult to restrict information from one place to another (Hill and Hughes 2007).

Some might argue that people merely use the Internet as a way to look up entertainment news or validate what opinions they already possess. However, studies show that increased Internet penetration in developing areas especially is associated with increasing positive democratic attitudes (Bouilanne 2009; Nisbet, Stoycheff, and Pearce 2012). Democratic attitudes relate to citizen's ideas on issues surrounding democratization including the notion of civil rights. As citizens have more exposure to the Internet and access to information on both civil

rights injustices and civil rights protection, they are more supportive of democratic ideas and frustrated about the lack of democracy either in their own country or elsewhere, and over time as that Internet access and use increases, this support turns into political engagement. There is still a concern about the potential endogeneity of the relationship between Internet use and political engagement. Some scholars argue that if a citizen is politically curious enough to research political issues on the Internet, then that citizen must already be political engaged (Nisbet, Stoycheff, and Pearce 2012; Hill and Hughes 1999). A few studies on this topic argue that the true causal pathway is hard at times to fully clarify, and this must be considered in the context of my thesis as an alternate theory. However, evidence supports the idea that the relationship is unidirectional. Internet use affects political engagement and not in the other direction (Bouilanne 2009; Nisbet, Stoycheff, and Pearce 2012).

Women's Rights and Gender Empowerment: What is the Difference?

Women's rights are a fairly broad topic, and in different places they can mean different things and encompass different items (Davis and Greenstein 2009); however, when approaching the topic of gender issues, it is important to make the distinction between what Burns and Gallagher (2010) refer to as "gender equity" and "role change." Gender equity issues stem from ideas on legal discrimination. Should women be legally allowed or restricted from doing something? Role change is attributed more to social normative ideas of a woman's place in an ideal society. Even if a woman has the legal right to do something, is it good for society that she do it (Burns and Gallagher 2010)? I agree with Burns and Gallagher on these differences, but I will use slightly different terminology. For the purpose of my study, equity rights relate to any rights that promote equality and do not necessarily need be necessarily gender-based. Equity rights could also refer to rights related to race, religious identity, and sexual orientation. I will,

therefore, refer to equity rights as women's rights to be more specific. Similarly, I will refer to role change as gender empowerment because the term gender empowerment better captures my focus on women's increased power, capabilities, and efficacies. I will be exploring the effects on public opinion on these two ideas separately. To clarify, women's rights are actual rights granted and protected by law. Women's rights include rights related to equal opportunity and treatment as well as issues of reproductive rights and marital rights. Anything that is related the ability for women to do something that is not directly a right in itself, but is either based on a right or on a similar notion, I define as gender empowerment. This notion can be considered acceptable based on moral, cultural, religious, or social grounds.

This distinction is important from a foundational perspective, but in the context of my thesis, it will also be important from a measurement standpoint. Mixing up the two concepts into a single measure on women's rights is not uncommon in scholarship, but it can make the measurement simplistic and potentially invalid (Costain and Majstorovic 1994; Bergh 2009). It is true that support for women's rights is often associated with support for gender empowerment, but support for one does not necessarily imply support for the other (Gibbons, Hamby, and Dennis 1997; Thornton, Alwin, and Camburn 1983). For example, one can support the right to vote but not necessarily support a female public official candidate. Therefore, it would be inappropriate to use one concept as a measurement tool for the other concept. This study attempts to look at gender issues through the lens of information access. Distinguishing between women's rights and gender empowerment ensures that both facets of gender issues are explored. While some studies might combine the two notions into one, others omit one or the other. In order to comprehensively look at women's issues, I will delve into both women's rights and

gender empowerment in order to ensure my measurement is neither too simplistic nor incomplete (Manganaro and Alozie 2011; Costain and Majstorovic 1994: Bergh 2009).

Theoretical Framework

Shu and Zhu (2012) argue that globalization has allowed more people to be exposed to ideologies supporting gender equality and that people, upon receiving this information, are more likely to then internalize this information to have more positive attitudes on women's rights. Likewise, previous scholarship shows that having exposure to information on gender egalitarian ideas can affect public opinion on women's rights. In particular, both communication networks and media access as information sources play a similar role in affecting attitudes towards women's rights and women's empowerment (Bolzendahl and Myers 2004, Meyer, Rizzo, and Ali 2005; Manganaro and Alozie 2011). Finally, Skoric and Park (2013) argue, "there is evidence linking Internet development [increased access] with societal level values and beliefs dealing with interpersonal trust, tolerance, personal freedom, subjective well-being, post-materialism, friendship, and individual sexuality" (Skoric and Park 2013, pg. 3).

I postulate that as the Internet is a combination of media and social communication networks, then increased access to the Internet is a type of increased information access. As a form of information access, exposure to pro-feminist information through the Internet will have an effect on individuals' normative ideas about women's rights and gender empowerment. Internet access has already been found to have a positive association with democratic attitudes including civil rights (Bolzendahl and Myers 2004; Nisbet, Stoycheff, and Pearce 2012). I expand upon this notion of civil rights to include women's rights and gender empowerment. I believe increased access to information, especially gender egalitarian information, via the Internet will result in positive shifts in public opinion of women's rights and public opinion on

gender empowerment much in the way that it leads to more positive attitudes about democracy. This notion is plausible because people will gain both greater knowledge of the status of women around the world as well as greater ability to communicate their ideas with others around the world through forums and social networking sites. Using the media sources and social networks through the Internet, this information will have a constant feedback effect, which will ultimately lead to a push toward more positive attitudes on women's rights and gender empowerment (Bouilanne 2009, pg. 195). I am not specifically examining the role Internet access may play on initial formulation of public opinion. Instead, I will investigate the effects information access will have on increasing the likelihood of supporting women's rights and women's empowerment.

Statements of Hypotheses

I am going to examine how access to information via the Internet affects public opinion on women's rights and gender empowerment. Based on arguments that media and social factors positively affect public opinion on women's rights, and arguments that the Internet is positively related to political engagement and positive democratic attitudes, I construct my theoretical arguments. My theoretical arguments focus on the Internet as a formal and informal information source, but my hypotheses make use of another important idea. In order to use the Internet as an information source, one must have access to it, and I am going to use access to the Internet to capture the relationship between the Internet and public opinion on women's rights and gender empowerment. I construct my hypotheses with the idea that if my theory on the relationship between information access via the Internet and public opinion on women's rights and gender empowerment is confirmed, then the following will be observed:

H_1: As an individual makes increased use of the Internet, a positive shift in the individual's attitudes towards women's rights will be observed.

H_2: As an individual makes increased use of the Internet, a positive shift in the individual's attitudes towards gender empowerment will be observed.

If a negative shift in attitudes towards women's rights and gender empowerment is observed after increased access to the Internet, then my theory and hypothesis will be falsified. The theory will also be falsified if no relationship between Internet access and public opinion on women's rights and gender empowerment is observed. This would be observed if there were actually no relationship between Internet access and public opinion on women's rights and gender empowerment or if potential negative and positive effects cancel each other.

I must consider alternative theories that might explain the relationship between Internet access and public opinion on women's rights and gender empowerment. As mentioned earlier, there are arguments in place that only those who are already politically engaged will actually search for political information on the Internet. It is also possible that those who already have positive attitudes towards women's rights and gender empowerment will access information about women's rights and gender empowerment. Those with negative attitudes will either not search for information, or they will only search for information that confirms their views. If this theory is, in fact, true, then my results will indicate that there is no association as well as no statistically significant relationship between Internet access and attitudes towards women's rights and gender empowerment in either direction; this will mean that there is no effect.

Another theory to consider is the possibility that the relationship between information access and public opinion on women's rights and gender empowerment is endogenous or that there is constant feedback between information access and attitudes towards women's rights and gender empowerment. Those who have access to information via the Internet will gain more positive attitudes towards women's rights and gender empowerment. As they receive more

positive attitudes, they attempt to access more information on the topic, and the cycle will continue. If this is the case, then my results may show a statistically significant relationship when the information access is put in the model as the independent variable and attitudes towards women's rights and gender empowerment is used as the dependent variable and vice versa. Therefore, I must delve deeper into tracing a causal mechanism to show that information access precedes the change in attitudes.

Finally, I must also consider the possibility that attitudes towards women's rights and gender change completely independently of information access. If this is the case, then my results will show a very weak or no association and correlation between the two variables. However, my control variables might provide more substantial and direct evidence that other factors influence attitudes towards gender egalitarianism.

I believe that by testing my primary theory, I will also be simultaneously testing for all these theories, but in particular, I need to be cautious of potential endogeneity.

Data and Methodology

It is difficult to show causality because even when two variables are associated and correlated, it does not ensure causality. In order to show causality, I must be able to demonstrate that the model of the relationship meets three criteria. First, I must demonstrate that information access via Internet access is associated with public opinion on women's rights and gender empowerment. Second, I must show information access via the Internet precedes public opinion in this relationship. Finally, I must rule out all the alternative theories that I mentioned. This study will combine elements of a quantitative and qualitative analysis in order to demonstrate all three points as well as to gain confidence in my results through dual methodology.

Quantitative Analysis

In order to look at data over time, one must use a longitudinal study, but as Davis and Greenstein (2009) mention in their study, there is a dearth of longitudinal studies that examine gender attitudes in comprehensive detail. For a cross-national analysis examining attitudes towards women's rights and gender empowerment, previous scholars have used large cross-sectional public datasets measuring political values including the General Social Survey (Carter, Corra, and Carter 2009; Bolzendahl and Myers 2004) and the World Values Survey (Shu and Zhu 2010; Skoric and Park 2013) and looked at each dataset in isolation while making noted of any shared similarities between models in mind. For the quantitative analysis, I will be following similar suit and use multiple datasets from the Pew Global Attitudes Project because of its comprehensive and widespread nature. These data come from a dataset compiled by the Pew Research Center and investigate individual's political attitudes and beliefs. These datasets are compiled every year, and I will be using the datasets from Spring 2007, Spring 2010, and Spring 2012 because of all the possible surveys, they provide the most extensive data on both ICT and attitudes on women's rights and gender empowerment. These surveys in particular ask the most number of questions related to these issues, which will allow me to test my theory and hypotheses in the most specific and inclusive way possible. What is particularly useful about this survey is that it is conducted in a wide range of countries (high-income, middle income, and low income) in a variety of regions each year. Within each country a random stratified sample of 750-2,000 adults is drawn. This dataset will provide me with a globally comprehensive examination and application of the data that will aid with the generalizability of the theory.

I will conduct a cross-national analysis and simultaneously look at the responses from all the surveyed countries. Indices of support for women's rights and support for gender

empowerment are my two dependent variables. Davis and Greenstein (2009) argue that attitudes towards women's rights and gender empowerment are difficult to measure due to the conceptual arguments as to what constitutes women's rights and gender empowerment. I, therefore, made the conscious decision to differentiate between the two by defining women's rights as having legally-binding terminology. Gender empowerment uses more normative terminology. An additive index of questions related to attitudes on women's rights and gender empowerment is a common and well-praised measurement mechanism that has been used in the previous literature (Manganaro and Alozie 2011; Carter, Corra, and Carter 2009; Gibbons, Hamby, and Dennis 1997; Shu and Zhu 2010). I will create these indices by combining all relevant questions from the dataset for each index together. This scale will be a comprehensive measurement of attitudes towards women's rights and gender empowerment.

There are multiple questions related to both women's rights and gender empowerment for each dataset and these include questions on whether respondents support gender equity rights, the right for women to work outside the home, the acceptability for a woman to choose her own spouse, and the acceptability for women to serve in public office. The questions in the dataset tend to be similar both in wording and in content each year. I will code the questions depending on whether they fall under "attitudes towards women's rights" and "attitudes towards gender empowerment." Specifically, if the question explicitly contains the word "right" or another similar legally binding term such as "discrimination," I will code that under "attitudes towards women's rights." If the question does not include the word "right" and appears more socially normative in nature, I will code it under "attitudes towards gender empowerment." Examples of questions from the datasets (Pew Global Attitudes Project Surveys Spring 2007, Spring 2010, and Spring 2012) to be used include:

Attitudes towards Women's Rights Index

1. Do you think women should have equal rights to men, or shouldn't they?
2. "When jobs are scarce, men should have more rights to a job than women?

Attitudes towards Gender Empowerment Index

1. Please tell me whether you completely agree, mostly agree, mostly disagree, or completely disagree with the following statements...Women should be able to work outside the home.
2. Do you agree or disagree with the following statement? A university education is more important for a boy than for a girl. Do you completely agree, mostly agree, mostly disagree or completely disagree?
3. What kind of marriage do you think is the more satisfying way of life...where the husband provides for the family and the wife takes care of the house and children, or where both have jobs and both take care of the house and children?

Once coded, each set of questions will be compiled into one of two additive indices to be used as the dependent variables. Each index will, therefore, give each respondent two scores: one score representing their support for women's rights, and one score representing their support for gender empowerment. A higher score represents a higher level of support for a given respondent, while a score of zero represents no support. My aim is to ensure that my measurement yields a comprehensive gauge on both attitudes towards women's rights and attitudes towards gender empowerment with similar weights for each question.

Information access via the Internet is my primary independent variable. In order to capture this for my statistical analysis, I will look specifically at questions from the dataset related at Internet use. For earlier datasets, this variable will be made from questions that simply ask the respondent if they have access to and use the Internet. Some datasets expand upon this notion by also asking respondents if the Internet is a primary source of information for them.

I will need to control for a number of factors that might influence the opinions of the individuals towards women's rights and gender empowerment. First, I will need to control for the demographic and socioeconomic factors I previously mentioned. These controls will include

gender, age, employment status, education level, geographic location, and religiosity with the respondent self-identifying each of these factors for themselves as a response. I will also be controlling for a number of political factors. First, I will control for the democratic level of the respondent's home country, which will be captured by the Polity IV score for autocracy-democracy. I will also control for the level of religious fragmentation in a country, which will be capture by the Quality of Governance's measure of religious fragmentation. Next, I will control for the level of female political participation within a respondent's country, by examining the percentage of legislators in the lower house that are female. Finally, I will capture the level of development, which will be measured by national wealth (GDP per capita in that year's US dollars).

I will be running a dual-stage quantitative analysis using these datasets. The ordered logistical regression model is appropriate for the model given the ordinal nature of the additive index scores. The models will be run separately for each dataset and dependent variable, but I will utilize similar control variables. As the same individuals are not surveyed every year, I will not be able to treat this data as a time-series. I will look at each model separately, but I will be looking for patterns and look to see if there are similarities and differences. Ordinal logistical regression coefficients are not directly interpretable due to the ordinal nature of the dependent variable. An ordinal dependent variable implies a nonlinear relationship between the independent and control variables with the dependent variable. For example, for the additive index score, it is easy to tell that a score of 3 implies more support for gender empowerment than a score of 1; however, I cannot assume that a movement from a score of 1 to 2 and a movement from a score of 2 to 3 are equal in substantive terms within the regression model.

In order to provide an interpretation for my models, I will conduct a simulation model that will isolate the effect of each individual independent or control variable while keeping all other variables at their mean. By comparing the effect on the minimum value for a particular variable on attitudes towards women's rights and gender empowerment with the effect on the maximum value, I will be able to provide a more interpretable value of the effect of that variable.

The second stage of the quantitative analysis will involve more complex simulations, which would allow me to look at the effect of the Internet on hypothetical individuals who share similar characteristics. These simulations will allow me to look at certain subsets of the sample in isolation to see the effect of Internet use on attitudes towards women's rights and gender empowerment. I will set all my control variables to a certain level, and the simulation will take only those individuals who match those standards, and then see the predicted level of support for women's rights and gender empowerment when there is not Internet use in place. I will then observe the predicted change when Internet use is added. I will run this method of analysis using all of the datasets and isolating particular subsets.

This dual stage analysis, which will include the use of robust standard errors, will allow me to examine my data in a couple of different contexts and perspectives. It will also help me meet some of the criteria of causality; however, this particular model will not allow me to delve deeply into the causal mechanism of the relationship. Similarly, the quantitative model will not allow me to easily test for endogeneity due to the binary nature of the independent variable. Individuals either have or do not have access to the Internet, so I cannot easily switch the independent and dependent variables of my model to test for endogeneity. Attitudes towards women's rights and gender empowerment cannot logically lead to having access to the Internet, but factors associated with such attitudes could. To properly address this concern, I will therefore

conduct a qualitative analysis to complement the quantitative analysis to investigate the causal mechanism in more detail.

Qualitative Analysis

I will be conducting a comparative case study analysis in order to help trace the causal process of the relationship between information access via the Internet and public opinion on women's rights and gender empowerment. As mentioned for scholars studying women's rights, the Middle East has been an area of special interest, and it is also of special interest to me. Economically, many of the countries in the Middle East are amongst the richest in the world. Though some states may share some history, politically, the region can be diverse in many respects (Ross 2008; Elamin and Omair 2010).

The use of social media during the Arab Spring alerted me the fact that this region might also be of interest from an ICT perspective, so I will examine if there are any significant differences in the use of the Internet within this region. I will attempt to start my analysis before the explosion of global Internet use, in order to set a baseline. I will be beginning my analysis from the time of independence from British imperialism for both states, but my primary focus will be on the time from which Internet penetration first began.

I will be exploring the relationship by comparing the cases of Saudi Arabia and United Arab Emirates to explore how access to information via the Internet has affected public opinion on women's rights and gender empowerment in both places. According to Ross' argument (2008), these countries should have similar conditions for women due to the oil-dependent nature of the economy. Providing this as a baseline I will examine whether this exists in practice both from a legal and social perspective. Following a "most-similar" model of comparative analysis, I will trace the differences in attitudes towards women's rights and gender empowerment between

the two countries to see what role information and ICT access plays to explain any differences between the two bordering states over the last two decades.

Quantitative Analysis: Ordinal Logistical Regression Models[1]

2007 Model

Models 1 and 2, which contain the ordinal regression results of the 2007 respondents, contain a sample of respondents from the Middle East and North Africa, South Asia, Southeast Asia, and Sub-Saharan Africa. The questions for support of women's rights reflect both attitudes towards the right to veil as well as the attitudes towards a woman's right to work outside the home. Therefore, the maximum score for the women's rights additive index is two. The scales for all the models have a minimum score of zero. The index for support for gender empowerment reflects attitudes towards women's abilities to be political leaders, attitudes towards women choosing their own spouse, and attitudes towards girls' having equal access to education as boys. The maximum score of the gender empowerment index is three. The indicators for national wealth, regime type, religious fragmentation, and level of female political participation are the 2007 levels for these indicators. The variable for Sub-Saharan Africa was not included in the model as a means for comparison for the other regions.

2010 Model

Models 3 and 4, which contain the ordinal logistical regression results for the 2010 respondents, contain a sample of respondents from 22 varied countries around the world. The index for women's rights reflects respondents' attitudes for equal gender rights and attitudes about the right for women to have the same access to jobs as men. The maximum score for the

[1] For full explanation of coding of independent, dependent, and control variables, please refer to Appendices A-C starting on pg. 92. The Appendices also provide a list of the countries used in each model.

women's rights index is two. The support for gender empowerment index reflects support for girls' university education, support for the ability for women to work outside the home, and support for women to be working mothers. The maximum score for the gender empowerment index is three. The indicators for national wealth, regime type, religious fragmentation, and level of female political participation are the 2010 levels for these indicators. In this model, the United States is the regional variable that is omitted from the model as a means of comparison with the other regions.

2012 Model

Models 5 and 6, which contain the ordinal logistical regression results for the 2012 respondents, contain a sample of respondents from the Middle East and North Africa as well as Pakistan. Therefore, the sample is primarily of Muslim individuals. The index for women's rights reflects respondents' support for equal gender rights and equal employment rights for women. Like the previous women's rights scales, the maximum score is two. The gender empowerment index reflects attitudes on women's abilities to be political leaders, support for women's ability to choose their own spouse, and support for women to work outside the home. Like the previous gender empowerment scales, the maximum score is three. The indicators for national wealth, regime type, religious fragmentation, and level of female political participation are the 2012 levels for these indicators.

Table 1-1: Ordinal Logistical Regression Results for Internet Access on Support for Women's Rights and Support for Gender Empowerment in the Year 2007

	Model 1 Support for Women's Rights (including Veiling)		Model 2 Support for Gender Empowerment	
Variable	Estimated Coefficient (Robust Standard Error)	95% Confidence Interval	Estimated Coefficient (Robust Standard Error)	95% Confidence Interval
Internet Access	0.175***	[0.083, 0.267]	0.140***	[0.060, 0.218]
	(0.047)		(0.040)	
Female	-0.058	[-0.124, -0.007]	0.607***	[0.544, 0.669]
	(0.033)		(0.032)	
Age	-0.007***	[-0.009, -0.005]	0.002*	[0.00007, 0.005]
	(0.001)		(0.001)	
Religiousness	0.462***	[0.366, 0.558]	-0.138***	[-0.219, -0.056]
	(0.049)		(0.042)	
Employment	-0.309***	[-0.345, -0.274]	0.076***	[0.042, 0.109]
	(0.018)		(0.017)	
Education	-0.115***	[-0.135, -0.095]	0.157***	[0.138, 0.176]
	(0.010)		(0.010)	
National Wealth	0.00003 ***	[0.00003, 00004]	-0.00001***	[-0.00001, -0.000006]
	(0.000)		(0.000002)	
Democracy	-0.230***	[-0.309, -0.151]	0.546***	[0.485, 0.608]
	(0.040)		(0.032)	
Religious Fragmentation	-3.470***	[-3.702, -3.237]	0.716***	[0.568, 0.864]
	(0.119)		(0.076)	
Female Political Participation	0.008***	[0.003, 0.013]	0.022***	[0.018, 0.026]
	(0.003)		(0.002)	

Middle East & North Africa	0.779***	[0.600, 0.958]	0.031	[-0.091, 0.153]
	(0.091)		(0.062)	
South Asia	0.101*	[0.002, 0.199]	-0.589***	[-0.677, -0.500]
	(0.050)		(0.045)	
Southeast Asia	1.619***	[1.488, 1.731]	0.046	[-0.065, 0.157]
	(0.062)		(0.057)	
Number of Observations	18107		18107	
Number of Countries	21		21	
R^2	0.171		0.052	

*Significant at 5% **Significant at 1% *** Significant at 0.1%

Discussion of Results

Model 1: Support for Women's Rights[2]

In Model 1, access to the Internet has a highly statistically significant and positive relationship with support for women's rights. The subsequent simulation model provided the distribution of the sample within the individual score levels. The simulation held everything at its mean with the exception of access to Internet. Comparing the non-Internet sample with the Internet sample showed that those with Internet access were 4.2% less likely to receive a score of 0 than those without the Internet. Similarly, the distribution showed that those with Internet were 1.9% more likely to receive the maximum score of 2 as opposed to those without the Internet. While these results may appear small, when looking at the greater phenomenon of public opinion even a 2% difference related to one factor can be potentially significant. The results from the ordinal logistical regression model and the simulations appear to grant more credibility to the hypothesis that access to gender-egalitarian information leads to a positive shift in attitudes towards women's rights.

Furthermore, it appears that the demographic factors mentioned earlier do play a role in affecting attitudes towards women's rights. Age has a highly statistically significant and negative relationship with support for women's rights, which indicates that older respondents were less likely to support women's rights than the younger respondents. As mentioned earlier, this effect is known as "generational replacement" by feminist scholars (Thornton, Alwin and Camburn 1983; Carter, Corra, and Carter 2009; Davis and Greenstein 2009: Shu and Zhu 2012). This model for women's rights actually yielded some unusual demographic results. First and foremost, the coefficient for gender was negative, indicating that women were less supportive of

[2] Please refer to Appendix D on pg. 114 for full details on results on simulation models for coefficient interpretation.

women's rights than their male counterparts. In particular, the simulation model for gender yielded a result where women were 1.3% more likely to receive a score of 0 in comparison to their male counterparts. In regards to maximum score, women were 0.6% less likely to receive a score of 2 compared to otherwise similar men. Upon further investigation, it was found that more women were less supportive of the right to veil than women who did support the right, which could have contributed to the overall negative result. However, this result was statistically insignificant, so it cannot be said that there is even an effect. Education and employment levels had highly statistically significant negative relationships with support for women's rights. These results indicate that a higher level of education and employment are associated with a lower level of support for women's rights. As the previous scholarship has indicated, even the effects of education on attitudes towards women's rights have been found to be varied. Negative results are not wholly unusual. The level of religiosity had a highly statistically significant and positive relationship with support for women's rights, indicating that more religious people are more supportive of women's rights.

However, these results also need to be considered in the context of the sample. The 2007 models were only run in the Middle East, South Asia, Southeast Asia, and Sub-Saharan Africa. Those with more education and a higher level of employment in these regions also tend to be elites in society, who perhaps have less incentive to support women's rights. National wealth yielded a highly statistically significant and positive relationship with women's rights, indicating that countries' with more wealth per capita and a higher level of development are associated with more support for women's rights, which was a result that was expected. Another unusual result, however, that was yielded was democracy, which had a negatively statistically significant relationship with attitudes towards women's right. This result could be partially attributed to the

fact that this sample is overrepresented with non-democracies and repressive democracies, especially those in the Middle East. Another possible explanation is the fact that as a state gets more democratic, women's rights are taken more for granted. As this is an unusual result, it is difficult to ascertain the exact cause based on this sample.

The level of religious fragmentation has a highly statistically significant and negative relationship with support for women's rights. As a society becomes more religiously fragmented, the odds of lessened support for women's rights are increased more than three-fold. The level of female political participation also appears to play an important role. Female political participation has a positive and highly statistically significant relationship.

The model also demonstrated some variation in the effects of region. The Middle East, South Asia, and Southeast Asia all have positive and statistically significant relationships with attitudes towards women's rights when compared to the results of Sub-Saharan African. These results take into account all the other controlled factors, so these variables explain the actual regional differences, assuming no omitted variable bias.

One final thing to consider with the results of this model is the inclusion of the question of veiling. The issue of veiling is a sensitive one worldwide, but this notion is especially true in the predominantly Muslim nations. The support for women's rights index included a proxy for support for veiling, with more support for a woman to have the right to veil being associated with more support for women's rights.[3] It is possible, due to the unusual nature of veiling rights in comparison to other standard women's rights, that people's attitudes are affected differently than with other rights related to gender.

[3] Please refer to Appendix F on pg. 116 for more information on the effects of veiling.

Model 2: Support for Gender Empowerment[4]

In Model 2, access to the Internet has a highly statistically significant and positive relationship with support for gender empowerment. According to the simulation model, access to the Internet is associated with a 3.4% increase in the likelihood receiving the maximum score for gender empowerment. This result appears to grant more credence to my hypothesis that access to gender-egalitarian information is associated with a positive shift in attitudes towards gender empowerment.

Similar to support for women's rights, many of the demographic influences included in the model influence support for gender empowerment but do not appear to have the same effect as they did in the women's rights model. Gender appears to play a very important role with a highly statistically significant and positive relationship with attitudes towards gender empowerment. Women are 1.2% less likely to receive a score of 0 on the scale and 15% more likely to support gender empowerment by receiving the maximum score than their male counterparts, holding all else equal. Age has statistically significant and positive relationship with support for gender empowerment, which indicates that older respondents were slightly more likely to support actions for women's empowerment. Once again, this result highlights the unusual nature of age in regards to its relationship with attitudes towards gender. Education and employment levels had highly statistically significant positive relationships with support for gender empowerment, indicating the more highly educated and better-employed respondents are more supportive of gender empowerment. In particular, those with the maximum level of education are 30% more likely to receive a maximum score for gender empowerment than those with no education, holding all else equal. Conversely, level of religiosity is highly statistically

[4] Please refer to Appendix E on pg. 115 for result of simulation models for coefficient interpretation

significant and negative in its relationship with gender empowerment, indicating that more religious people are less likely to be supportive of gender empowerment.

In terms of political factors, national wealth is highly statistically significant but negatively related to support for gender empowerment. However in this model, democracy had a highly statistically significant and positive relationship. Another variation is the result from level of religious fragmentation. The level of religious fragmentation has a highly statistically significant and positive relationship with support for gender. The level of female political participation also appears to play an important role. As the level of female participation in the lower house of the national legislature increases, 17% increase in the likelihood of receiving a maximum score on the scale, according to the simulation model.

The Middle East and Southeast Asia both had positive but statistically insignificant relationships with attitudes towards gender empowerment when compared to Sub-Saharan African. South Asia had a negative but highly statistically significant relationship with those attitudes.

The differences in the two models highlight some interesting points. First, it may once again, emphasize that this particular region probably has an important connection to the issue of veiling. The sample respondents were overwhelming Muslim, so wearing a veil is more commonplace for this sample. The issue of attitudes of rights regarding the veil is perhaps a nuanced issue where respondents may share similar views on other aspects of women's rights but may differ on this topic or vice versa. For example, a respondent who does not believe women should wear a veil at all (often considered a rather feminist position) would receive the same score as a respondent who does not believe women should have the right to choose to not wear a veil. The views are very different but receive the same score, which could affect the model.

Second and more importantly, it appears to highlight that there can be a difference between support for women's rights and support for gender empowerment, which at least indicates some necessity of separating the two concepts when conducting an analysis. The word, "right," from a legal standpoint, can perhaps reduce people's incentive to support a legal change. Support for "gender empowerment," on the other hand, does not imply actions with legally binding consequences.

Table 1-2: Ordinal Logistical Regression Results for Internet Access on Support for Women's Rights and Support for Gender Empowerment in the Year 2010[5]

	Model 3 Support for Women's Rights		Model 4 Support for Gender Empowerment	
Variable	Estimated Coefficient (Robust Standard Error)	95% Confidence Interval	Estimated Coefficient (Robust Standard Error)	95% Confidence Interval
Internet Access	0.285*** (0.042)	[0.202, 0.368]	0.264*** (0.041)	[0.184, 0.344]
Female	0.601*** (0.034)	[0.535, 0.667]	0.741*** (0.032)	[0.679, 0.804]
Age	-0.005*** (0.001)	[-0.007, -0.003]	-0.005*** (0.001)	[-0.007, -0.004]
Religiousness	-0.139*** (0.035)	[-0.208, -0.070]	-0.194*** (0.034)	[-0.262, -0.127]
Employment	0.056*** (0.018)	[0.022, 091]	0.056*** (0.017)	[0.023, 0.089]
Education	0.122*** (0.010)	[0.102, 0.142]	0.120*** (0.010)	[0.101, 0.140]
National Wealth	0.00003*** (0.000)	[0.00002, 0.00004]	0.00001* (0.000)	[0.000002, 0.00001]
Democracy	0.906*** (0.044)	[0.820, 0.992)	1.194*** (0.041)	[1.114, 1.274]
Religious Fragmentation	1.149*** (0.098)	[0.958, 1.340]	2.199*** (0.103)	[1.997, 2.401]
Female Political Participation	0.024*** (0.003)	[0.018, 0.030]	0.005 (0.003)	[-0.001, 0.012]
Sub-Saharan Africa	-0.845 (0.244)	[-1.323, - 0.366]	1.002** (0.221)	[0.569, 1.435]
Western Europe	0.424 (0.120)	[0.190, 0.659]	1.566*** (0.099)	[1.373, 1.759]

[5] A question on veiling was originally included in the 2010 model. Due to the controversial nature of veiling across all regions, it was taken out the final model. The table including the veiling results can be found in Appendix E.

Eastern Europe	0.328	[-0.076, 0.732]	1.756***	[1.388, 2.125]
	(0.206)		(0.188)	
Middle East & North Africa	-0.169**	[-0.615, 0.277]	1.930***	[1.512, 2.348]
	(0.227)		(0.213)	
South Asia	-0.615**	[-1.085, -0.146]	0.589**	[0.157, 1.021]
	(0.240)		(0.220)	
Latin America	0.515**	[0.117, 0.912]	1.933***	[1.572, 2.295]
	(0.203)		(0.184)	
East Asia	-1.091***	[-1.367, -0.815]	0.115	[-0.113, 0.343]
	(0.140)		(0.116)	
Number of Observations	19248		19248	
Number of Countries	22		22	
R^2	0.183		0.132	

*Significant at 5% **Significant at 1% *** Significant at 0.1%

Discussion of Results: 2010 Models

Model 3: Support for Women's Rights

Overall, Model 3 has results that reflect previous expectations from the first hypothesis and previous scholarship. This model, as well as Model 4, includes results from a wider variety of countries from a developmental and institutional perspective, which places these results in a slightly different context from Model 1.

Similar to Model 1, Internet access has a highly statistically significant and positive relationship with support for women's rights. Using the related simulation model, it is found that Internet access is associated with a 2% decrease in likelihood of receiving a minimum score of the scale for women's rights. A minimum score demonstrates a lack of support for women's rights. Alternatively, Internet access was associated with a 6.7% increase in the likelihood of receiving a maximum score. These results show that those with Internet access are less likely to be unsupportive of women's rights and more likely to be more supportive of women's rights. Both of these results also give support to the hypothesis that access to more information is associated with a positive shift in attitudes towards women's rights.

The demographic factors in the model clearly influence support for women's rights given that all those results were statistically significant. Gender, state of employment, and education level were all positively associated with support for women's rights. In particular, female respondents were 14% more likely to support women's rights by receiving the maximum score than male respondents. Likewise, the most highly educated were 22.2% more likely to receive the maximum score than the low-educated, holding all else equal. Age and level of religiosity were negatively associated with support for women's rights. Being more religious decreased the likelihood of a respondent supporting women's rights by 3.2%. The negative coefficient of the age variable also gave credibility to the theory of generational replacement.

All the controlled political factors in the model also showed highly statistically significant and positive effects. A higher level of national wealth, democracy, religious fragmentation, and female political participation were associated with an increase in support for women's rights. Most of the highly developed countries in the model, including Western European countries and the United States, are highly religiously fragmented because of the large level of diversity within the national population. Religious fragmentation is represented by the likelihood that any two citizens randomly drawn from the population sample are the same religion. In these highly developed countries, there is far more religious diversity; therefore, there is also far more religious fragmentation.

All of the regional variables' coefficients are in comparison to the United States. Respondents from Western Europe, Eastern Europe, and Latin America appear to have higher support for women's rights than the respondents from the United States given the positive nature of their coefficients; however, Western and Eastern Europe's relationships were found to be statistically insignificant. In contrast, Sub-Saharan Africa, the Middle East and North Africa, South Asia, and East Asia appear to have less support for women's rights in comparison to the United States. These results generally appear in line with all expectation based on levels of development comparisons.

Model 4: Support for Gender Empowerment

Similar to Model 3, these results reflect many expectations that previous scholarship presented. First, the Internet is found to be highly statistically significant and positive in its relationship with support for gender empowerment. It appears that access to the Internet is associated with a 3% decrease in the likelihood of receiving the minimum score and a 3.5% increase in the likelihood of supporting gender empowerment by receiving the maximum score.

This result is in line with my second hypothesis that increased access to information would lead to a positive shift in attitudes towards gender empowerment.

The controlled demographic factors reflect a similar trend established by both Model 2 and Model 3. In particular, the simulation models highlight the fact that women are found to be almost 8% more likely to be supportive of gender empowerment than men with all else equal. Education and employment are highly statistically significant and positive in regards to their association with support for gender empowerment, while age and religiosity are found to be highly statistically significant but negatively related. Those that are highly religious are 2.5% more likely to receive a score of 0 than those that identify as nominally religious or nonreligious and 2.5% less likely to receive a score of 3, while holding all else equal.

There was some variation in the results of the controlled political factors in comparison to the previous models. Democracy and religious fragmentation are both highly statistically significant and positively related to support for gender empowerment. National wealth was found to be positively and highly statistically significantly related to support for gender empowerment. Interestingly enough, female political participation also had a positive, but statistically insignificant relationship with attitudes towards gender empowerment. While increased female political participation can inform citizens about women's positive capabilities to serve in public office, this result might attest to perceptions of the quality of those female politicians within the sample states. Similarly, more female politicians may imply more women working outside the home and more working mothers; the performance of those politicians may deter respondents from incentivizing other women to do the same. These two forces in conjunctions may explain the insignificant result within this sample.

In terms of the regional difference, respondents from Western Europe, Eastern Europe, and Latin America were found to be more likely to support gender empowerment than identical respondents in the United States. Therefore, these results are found to be very similar to those in Model 3 on support for women's rights. Like the previous model, Western Europe and Latin America were both found to have highly statistically significant and positive relationships. In addition, the variables for Sub-Saharan Africa, Middle East and North Africa, and South Asia were also found to be more positive and statistically significant in regards to gender empowerment. One possible explanation for this result relates to a previous idea stated in the scholarship where those with access to gender empowerment may take it more for granted than those that do not. Since gender empowerment is much more a norm in the United States than in the Middle East, those sampled in the Middle East may value gender empowerment more than those sampled in the United States. This result also relates back to the idea that women's rights and gender empowerment are separate concepts. Gender empowerment does not imply a legally binding action, so those in the Middle East might value this concept more because it implies less governmental interference than women's rights. In contrast, those in the US might value a legal right more than the idea of being empowered.

Table 1-3: Ordinal Logistical Regression Results for Internet Access on Support for Women's Rights and Support for Gender Empowerment in the Year 2012 for the Middle East and Pakistan

	Model 5 Support for Women's Rights		Model 6 Support for Gender Empowerment	
Variable	Estimated Coefficient (Robust Standard Error)	Confidence Interval	Estimated Coefficient (Robust Standard Error)	Confidence Interval
Internet Access	0.635*** (0.080)	[0.478, 0.792]	0.335*** (0.075)	[0.188, 0.482]
Female	0.712*** (0.069)	[0.576, 0.847]	0.549*** (0.062)	[0.427, 0.670]
Age	0.002 (0.002)	[-0.003, 0.006]	-0.002 (0.002)	[-0.006, 0.001]
Religiousness	-0.273*** (0.070)	[-0.412, -0.136]	-0.331*** 0.066	[-0.460, -0.203]
Employment	0.054 (0.037)	[-0.018, 0.127]	-0.078* (0.034)	[-0.144, -0.012]
Education	-0.008 (0.017)	[-0.042, 0.025]	0.046** (0.017)	[0.011, 0.080]
National Wealth	0.0002*** (0.000)	[0.0001, 0.0002]	0.00007* (0.0003)	[0.0000007, 0.0001]
Democracy	-1.029*** (0.355)	[-1.726, -0.333]	1.703*** (0.251)	[0.121, 2.196]
Religious Fragmentation	2.034*** (0.184)	[1.674, 2.395]	1.868*** (0.161)	[1.552, 2.185]
Female Political Participation	0.050*** (0.006)	[0.038, 0.062]	0.025*** (0.005)	[0.016, 0.035]
Number of Observations	5116		5116	
Number of Countries	6		6	
R^2	0.088		0.166	

*Significant at 5% **Significant at 1% *** Significant at 0.1

Model 5: Support for Women's Rights

Overall, Model 5 maintains many of the expectations that were made initially based off of previous scholarship, and it shares many similarities with the results of Model 3 for support of women's rights. The results of this model only apply to respondents from the Middle Eastern countries in the sample as well as Pakistan, which mean that these results, like those of Model 1, reflect the attitudes of mostly Muslim individuals. However, these results do have some variation from those of Model 1, which could indicate that time and increased Internet penetration could play a role in affecting attitudes. However, I cannot make that conclusion with any certainty because the sampled respondents are not the same in the two models. It is also important to note that these results reflect a post-Arab Spring society, and the Middle East, from a political perspective, was a very different place after the Arab Spring. With that in mind, it does reveal an interesting comparison with the results of Model 1 and Model 3.

Similar to the results of Models 1 and 3, Internet access appears to play a very influential role in effecting attitudes towards women's rights. At a highly statistically significant level, Internet access increases the likelihood of supporting women's rights by almost 9%. It also decreases the likelihood of receiving a minimum score by more than 10%. Stories from the Arab Spring point to the essential role of the Internet as a means of mobilizing political engagement and action, and these results appear in line with the notion that increased penetration of ICT within the Middle East has the potential for phenomenal political effects. This result, along with the results of Models 1 and 3, helps support my first hypothesis that increased access to information can lead to positive shifts in attitudes towards women's rights.

The demographic control factors also seem to play an influential role. As with the results of Model 3, gender appears to play an influential role with women being more than 10% more

likely to support women's rights than men holding all else equal. State of employment has a positive yet statistically insignificant relationship with support for women's rights. Model 5, however, does yield two new results. In particular, in this model age is a positively related to support for women's rights, while education is negatively related; however, both these results are not statistically significant, and therefore, require more investigation. The result of age, once again, highlights the complexity of the effect of age, which was demonstrated by previous scholarship. Age might imply more traditional values but it also implies more life experience. Both can affect attitudes towards women's rights.

The political factors also reflect similar results to those of Model 3 from 2010. Higher levels of national wealth, increased religious fragmentation, and increased female political participation are also all associated with more support for women's rights at a highly statistically significant level. These results indicate that, on average, more developed countries that have a history of more female political participation are more likely to have citizens that support women's rights, which is a result that is in line with previous expectation. Interestingly, level of democracy, however, was found to be negatively related to support for women's rights, which was similar to the results of Model 1. Female political participation was associated with a 19.2% decrease in the likelihood of receiving a minimum score on the scale and a 12% increased likelihood of receiving a maximum score.

Model 6: Support for Gender Empowerment

Model 6, on the whole, reflects similar results to Models 2 and 4, which measured support for gender empowerment in earlier years. Model 6 also shares some similarities with Model 5, which appear to display a similar set of influences women's rights and gender empowerment in a post-Arab Spring world.

As with all the previous models, Internet access appears to have a highly statistically significant positive relationship with support for gender empowerment. Increased access to the Internet is associated with a 3.2% increase in the likelihood of supporting gender empowerment across the sampled respondents. Internet access was also associated with a 2.4% decrease in the likelihood of sampled respondents receiving a score of 0. These results, as well as the results of Models 2 and 4, help give credibility to my second hypothesis that access to information is associated with a positive shift in attitudes towards gender empowerment.

Similar to Model 5, the demographic indicators for this sample appear to have some varied results for the previous years' models. Once again, gender plays a highly influential role. At a highly statistically significant level, women are 6% more likely to support gender empowerment that men. Increased education was also found to be positively associated with support for gender empowerment at a highly statistically significant level, while increased religiosity was found to be negatively associated. Increased age was found to be negatively associated with support for gender empowerment but at statistically insignificant level. Interestingly, level of employment was found to be negatively associated with attitudes towards gender empowerment at a statistically significant level. This result could potentially be a result of the questions that went into the additive index, many of which were related to women working outside the home. Fully employed men could see fully employed women as a threat to their livelihood or as a threat to the proper raising of children.

The political factor effects in Model 6 were very similar with the results of Model 2, which was also conducted in primarily Muslim countries. The results were also very similar to the results of Model 5, which sampled the same respondents. National wealth, religious fragmentation, and female political participation are all highly statistically significantly and

positively related to support for gender empowerment. Female political participation, in particular, was associated both with a 4% decrease in the likelihood of being unsupportive of gender empowerment and a 5% increase in the likelihood of being supportive of gender empowerment.

While the results of Models 5 and 6 share many similarities, it is clear that different factors can influence support for women's rights and gender empowerment in different ways. It is difficult to ascertain the exact reason why, but it does highlight the fact the two concepts are different and makes it necessary to separate the two concepts when studying political attitudes.

Simulation Models

The first stage of my quantitative analysis gave a lot of endorsement to my two hypotheses that information access via the Internet leads to a positive shift in attitudes towards women's rights and gender empowerment. The next stage of the quantitative analysis takes this notion a step further by really isolating similar individuals within the sample to make an estimated effect of Internet access. The simulation models take Models 1-6 into account when creating the estimates, so that the exact same samples of individuals in the model are also being used in the simulation analysis.

All the independent and control variables are set to a specific quantity, and the model estimates what percentage of the individuals of the subsample that match those specifications received a specific score of support for women's rights and gender empowerment. The aim of the simulation models was to investigate how much of an impact gaining access to the Internet would have on hypothetical individuals. The models show how certain isolated characteristics might affect the likelihood an individual will receive a certain score on the scale. What these percentages represent is the likelihood that an individual will fall into a certain score category. If

a smaller percentage of individuals with Internet received a score of zero than the percentage of those that do not, it indicates that those with Internet are generally less unsupportive of women's rights than those that do have Internet. Likewise, a larger percentage of individuals with Internet that receive the highest score possible, either a 2 for women's rights or a 3 for gender empowerment, than those without Internet, is an indication that those with Internet are more supportive of women's rights and gender empowerment at the maximum level than those that do not have such access.

I ran six simulations that isolated particular outcomes of the control variables with the aim of examining the effect of Internet access amongst those subsamples that should be theoretically the least supportive of women's rights and gender empowerment. The first model is the only one that does not take Internet access into account because it specifically looks at the role of gender. The second model looks at the "average" man in the sample: a nonreligious man with all other control variables held at their mean. The third model investigates the effect of religiousness in relation to Internet access. The fourth model looks at the effect of Internet access on the uneducated and unemployed men of the samples. The fifth model examines the effect of Internet access on men living in poor, autocratic countries. The final model takes all these factors of the previous models into account to look at the effect of Internet access on the subsample that should be the absolute least supportive of women's rights and gender empowerment from a theoretically perspective established upon previous scholarship. All six models examine the results of all three years in a simultaneous manner.

Table 2-1: Simulation Model A

Men with No Internet vs. Women with No Internet

Support for Women's Rights

	A nonreligious man No Internet All other variables at mean	A nonreligious woman No Internet All other variables at mean
	2007	
Pr(Rights=0)	0.720	0.733
Pr(Rights=1)	0.200	0.192
Pr(Rights=2)	0.080	0.075
	2010	
Pr(Rights=0)	0.428	0.329
Pr(Rights=1)	0.517	0.589
Pr(Rights=2)	0.055	0.082
	2012	
Pr(Rights=0)	0.227	0.126
Pr(Rights=1)	0.622	0.608
Pr(Rights=2)	0.151	0.267

Support for Gender Empowerment

	A nonreligious man No Internet All other variables at mean	A nonreligious woman No Internet All other variables at mean
	2007	
Pr(Rights=0)	0.021	0.014
Pr(Rights=1)	0.118	0.085
Pr(Rights=2)	0.398	0.343
Pr(Rights=3)	0.463	0.557
	2010	
Pr(Rights=0)	0.048	0.023
Pr(Rights=1)	0.184	0.102
Pr(Rights=2)	0.420	0.345
Pr(Rights=3)	0.348	0.531
	2012	
Pr(Rights=0)	0.074	0.044
Pr(Rights=1)	0.313	0.223
Pr(Rights=2)	0.495	0.544
Pr(Rights=3)	0.118	0.189

Table 2-2: Simulation Model B

A Nonreligious Man

	Support for Women's Rights	
	A nonreligious man No Internet All other variables at mean	A nonreligious man with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.720	0.683
Pr(Rights=1)	0.200	0.225
Pr(Rights=2)	0.080	0.095
	2010	
Pr(Rights=0)	0.428	0.385
Pr(Rights=1)	0.517	0.550
Pr(Rights=2)	0.055	0.065
	2012	
Pr(Rights=0)	0.227	0.135
Pr(Rights=1)	0.622	0.611
Pr(Rights=2)	0.151	0.251

	Support for Gender Empowerment	
	A nonreligious man No Internet All other variables at mean	A nonreligious man with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.021	0.018
Pr(Rights=1)	0.118	0.103
Pr(Rights=2)	0.398	0.376
Pr(Rights=3)	0.463	0.503
	2010	
Pr(Rights=0)	0.048	0.038
Pr(Rights=1)	0.184	0.154
Pr(Rights=2)	0.420	0.403
Pr(Rights=3)	0.348	0.405
	2012	
Pr(Rights=0)	0.074	0.054
Pr(Rights=1)	0.313	0.257
Pr(Rights=2)	0.495	0.531
Pr(Rights=3)	0.118	0.158

Table 2-3: Simulation Model C

A Religious Man

	Support for Women's Rights	
	A religious man No Internet All other variables at mean	A religious man with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.615	0.569
Pr(Rights=1)	0.263	0.286
Pr(Rights=2)	0.123	0.144
	2010	
Pr(Rights=0)	0.361	0.321
Pr(Rights=1)	0.567	0.594
Pr(Rights=2)	0.072	0.085
	2012	
Pr(Rights=0)	0.278	0.170
Pr(Rights=1)	0.603	0.627
Pr(Rights=2)	0.119	0.203

	Support for Gender Empowerment	
	A religious man No Internet All other variables at mean	A religious man with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.026	0.022
Pr(Rights=1)	0.139	0.122
Pr(Rights=2)	0.422	0.404
Pr(Rights=3)	0.412	0.452
	2010	
Pr(Rights=0)	0.060	0.047
Pr(Rights=1)	0.217	0.183
Pr(Rights=2)	0.426	0.419
Pr(Rights=3)	0.297	0.351
	2012	
Pr(Rights=0)	0.101	0.074
Pr(Rights=1)	0.367	0.312
Pr(Rights=2)	0.444	0.495
Pr(Rights=3)	0.088	0.119

Table 2-4: Simulation Model D

An Uneducated, Unemployed Man

Support for Women's Rights

	A uneducated, unemployed man Nonreligious No Internet All other variables at mean	An uneducated, unemployed man with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.554	0.508
Pr(Rights=1)	0.294	0.314
Pr(Rights=2)	0.152	0.178
	2010	
Pr(Rights=0)	0.476	0.432
Pr(Rights=1)	0.478	0.514
Pr(Rights=2)	0.046	0.054
	2012	
Pr(Rights=0)	0.232	0.138
Pr(Rights=1)	0.620	0.615
Pr(Rights=2)	0.148	0.246

Support for Gender Empowerment

	An uneducated, unemployed man Nonreligious No Internet All other variables at mean	A nonreligious, uneducated, unemployed man with Internet with all other variables at mean
	2007	
Pr(Rights=0)	0.047	0.036
Pr(Rights=1)	0.183	0.167
Pr(Rights=2)	0.450	0.443
Pr(Rights=3)	0.327	0.353
	2010	
Pr(Rights=0)	0.078	0.062
Pr(Rights=1)	0.258	0.222
Pr(Rights=2)	0.422	0.427
Pr(Rights=3)	0.242	0.290
	2012	
Pr(Rights=0)	0.079	0.058
Pr(Rights=1)	0.329	0.268
Pr(Rights=2)	0.485	0.525
Pr(Rights=3)	0.112	0.150

Table 2-5: Simulation Model E

A Man Living in a Poor, Autocratic Country

Support for Women's Rights

	A nonreligious man Poor, autocratic country No Internet All other variables at mean	A nonreligious man Poor, autocratic country with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.715	0.675
Pr(Rights=1)	0.203	0.228
Pr(Rights=2)	0.082	0.097
	2010	
Pr(Rights=0)	0.745	0.648
Pr(Rights=1)	0.241	0.329
Pr(Rights=2)	0.147	0.023
	2012	
Pr(Rights=0)	0.333	0.210
Pr(Rights=1)	0.572	0.625
Pr(Rights=2)	0.095	0.164

Support for Gender Empowerment

	A nonreligious man poor, autocratic country No Internet All other variables at mean	A nonreligious man Poor, autocratic country with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.043	0.037
Pr(Rights=1)	0.211	0.188
Pr(Rights=2)	0.456	0.451
Pr(Rights=3)	0.290	0.324
	2010	
Pr(Rights=0)	0.202	0.165
Pr(Rights=1)	0.398	0.375
Pr(Rights=2)	0.303	0.339
Pr(Rights=3)	0.097	0.121
	2012	
Pr(Rights=0)	0.270	0.210
Pr(Rights=1)	0.474	0.465
Pr(Rights=2)	0.228	0.286
Pr(Rights=3)	0.024	0.039

Table 2-6: Simulation Model F

A Religious, Uneducated, and Unemployed Old Man in a Poor, Autocratic Country with a Minimum Level of Female Political Participation

	Support for Women's Rights	
	An old, religious, uneducated, unemployed man poor, autocratic country No Internet All other variables at mean	An old, religious, uneducated, unemployed man Poor, autocratic country with Internet All other variables at mean
	2007	
Pr(Rights=0)	0.569	0.523
Pr(Rights=1)	0.286	0.308
Pr(Rights=2)	0.145	0.170
	2010	
Pr(Rights=0)	0.916	0.901
Pr(Rights=1)	0.080	0.094
Pr(Rights=2)	0.004	0.005
	2012	
Pr(Rights=0)	0.491	0.340
Pr(Rights=1)	0.457	0.567
Pr(Rights=2)	0.052	0.093

	Support for Gender Empowerment	
	An old, religious, low educated, unemployed man in a poor, autocratic country No Internet with all other variables at mean	An old, religious, low educated, unemployed man in a poor, autocratic country with Internet with all other variables at mean
	2007	
Pr(Rights=0)	0.090	0.081
Pr(Rights=1)	0.310	0.292
Pr(Rights=2)	0.427	0.437
Pr(Rights=3)	0.173	0.191
	2010	
Pr(Rights=0)	0.310	0.260
Pr(Rights=1)	0.416	0.415
Pr(Rights=2)	0.216	0.252
Pr(Rights=3)	0.057	0.072
	2012	
Pr(Rights=0)	0.397	0.320
Pr(Rights=1)	0.441	0.466
Pr(Rights=2)	0.146	0.191
Pr(Rights=3)	0.016	0.023

Discussion of Results: Simulation Models

These results place the likelihood an individual within the given subsamples will receive a particular score of support of women's rights and support for gender empowerment. The simulation models highlight the value of a difference in just one variable in affecting the change in likelihood of support when all else is held equal. In particular, these models are meant to emphasize the differences in the likelihood of scoring a minimum score on the scale as well as scoring a maximum score, but close examination can also be made of the transition between the minimum and maximum scores.

Simulation Model A is the only model that does not take Internet access into account. This model is meant to highlight the importance of gender in regards to support for women's rights and gender empowerment. It can be seen that with the exception of support for women's rights in 2007, women are less likely to receive the minimum of 0 compared to their male counterparts and are more likely to receive a maximum score (either a 2 for support for women's rights or a 3 for supper for gender empowerment). Of particular note, for the 2010 and 2012 samples, the differences in the minimum and maximum score likelihoods between men and women were around 10%, which is a fairly significant change when only one factor is being taken into consideration. These results, once again highlight, that a person's gender can play a very influential role on their gender role attitudes.

The remainder of the models used Internet access as the only difference between the two subsamples. In every single model and in every single year, those with Internet access were less likely to receive the minimum score than those without Internet access. Furthermore, those with Internet access were more likely to receive the maximum score than those without Internet access. For example, the differences in 2010 and 2012 for a man living in a poor, autocratic country were more than 10%, which means a man with Internet in such a country is potentially

10% more likely to be supportive of women's rights and gender empowerment than a man without access. In many of the models, the differences may appear to be small with many results around the 1-5% range. However, as seen by the previous literature and the models, many factors affect individuals' attitudes towards women's rights and gender empowerment; however, for just one factor to make that sort of difference is very interesting because it is a factor that is easily implemented. Demographic and political factors are difficult to change, but this is one factor that can be changed.

This notion can be particularly relevant when considering the final model. The final model aimed to create the subsample of individuals who were the least likely to support women's rights. These subsamples were made up of highly religious, uneducated, unemployed, older men living in poor, repressive societies. In every single case of this model, the Internet seemed to lead to an increased likelihood of supporting women's rights and gender empowerment. Particularly interesting is that the Internet in 2012 appeared to make a huge effect. People without Internet were 49% likely to receive a minimum score compared to the 34% likelihood of receiving a minimum score when there was Internet. That is a 15% reduction in the likelihood of being unsupportive of women's rights. What this simulation highlights is the potential the Internet has in effecting change for individuals that do not have a large amount of access to such resources. Even reducing the likelihood of being unsupportive of women's rights and gender empowerment is something essential to keep into consideration.

The models compare the likelihoods of being supportive of women's rights and gender empowerment. While the effect of the Internet appears perfectly isolated in these models, it is not enough to show causality or the fact that the Internet truly precedes the shift in attitudes towards women's rights and gender empowerment. The Internet clearly has a strong relationship

with support for women's rights and gender empowerment, but the next section aims to strengthen this relationship by looking in detail at the mechanism of change in such attitudes.

Qualitative Analysis

The dual-stage quantitative analysis highlighted the potential positive effect that access to the Internet has on attitudes towards women's rights and gender empowerment. In particular, the models for 2007 and 2012 show these results in the context of primarily Muslim populated countries. The quantitative model, however, does take the liberty of making assumptions of how sampled respondents utilize the Internet as an information source. The qualitative analysis aims to take these results a step further and delve deeper to see in practice how Internet penetration and access can affect attitudes towards women's rights and gender empowerment in an Arab context without making the quantitative assumption of Internet access implying information access. The comparative analysis provides examples of the effect of Internet as an information source at work within two comparable societies. The section will first place women's rights into the general context of the Middle East, and then it will explore the relationship of ICT and gender norms in Arab society. Finally, a short case study between Saudi Arabia and the United Arab Emirates will highlight how a state with greater Internet penetration can have a larger shift in positive gender norms over the same timeframe.

Women's Rights in the Middle Eastern Context

As a region, the Middle East has been one of great interest to political scientists, especially in regards to issues of gender. At first glance, the region resembles a culturally and politically similar unit. Many of the states in the region share religion, language, and common history. The manifestation of women's rights and gender empowerment has been changing over time within the region, but the state of rights is still heavily influenced by traditional social and

cultural norms in most states. It is often thought that Islamic culture is the root of the norms, but this notion is not completely true. The Qur'an establishes that men and women are different, and therefore, their roles are different but still equal. Gender disparity in rights is not explicitly advocated by Islamic doctrine; therefore, it is how Islamic doctrine is utilized by states that have created such disparities (Metcalfe 2008; Ross 2008; World Bank 2013).

Krause (2008) noted that pre-colonialism and before the discovery of oil in the Persian Gulf region, societal norms in the Middle East were based primarily on the norms of tribal groups. Under these customs, women seemingly had more rights in effect than they do now, and these rights remained until the time that the modern Arab states were created (pgs. 30-31). The current traditional norms are attributed to the "patriarchal kinship networks" that were established after the royal families increasingly gained power after the states became independent at the end of colonial rule (World Bank 2013, Freedom House 2005). These new norms restricted women's freedom of movement, equality in marriage contracts and employment, and the access to political power.

Oil discovery also resulted in the royal families and political elites tightening their control over their states. Today, many of the Gulf States including Saudi Arabia, the United Arab Emirates, and Kuwait are characterized as autocratic states, which mean that the political elites within those states have much control over the laws and granted rights in their states. The World Bank (2013) stated that the continuation of the poor manifestation of women's rights within the region has been attributed to the norms and legal framework of the states which persist in keeping women inferior in society. Traditional norms have established that women are unfit to have the same rights as a man, and the laws are created to reflect these norms. Therefore, in the Middle East, the one good way to capture attitudes towards women's rights and attitudes towards

gender empowerment is to look at the laws of the state that guide rights and empowerment (World Bank 2013 pgs. 55-59). These relationships appear to exist even though the states are highly autocratic. The governments cannot always function completely autonomously from the people; public opinion has some value. However, until public opinion truly challenges the current laws of an Arab State, the government has no incentive to change the laws. An example of this notion has been female suffrage laws, which came to Middle Eastern states after citizens began making more demands for it (Manea 2011 pgs. 1, 24-25). Similarly, no Arab State has laws protecting women from domestic violence or job discrimination, due to an apparent lack of demand for such changes (World Bank 2013 pg. 16; Metcalfe 2008 pg. 86).

To change the laws related to women's rights is no easy task in the Middle East because gender stereotypes manifest themselves in almost all aspects of daily life, and they manifest themselves differently within each state. Women's rights can manifest themselves differently in each country as attitudes towards women and gender empowerment change within states. As part of the Millennium Development Goals, most Middle Eastern countries have reduced the disparities in education. Most states have almost achieved the goal of universal primary education, and university enrollments for young women have rapidly increased. However, these improvements in education have not always translated into increased opportunities for women. There still remains a very high gender disparity in unemployment in the Middle East with many more young women being unemployed than their similarly educated male counterparts (al-Hudhaif and Nalband 2012; World Bank 2013).

Societal norms appear to accept the education of young females, but this acceptance seems to decline soon after women reach puberty. Though home to highly educated women, the Middle East still has the lowest female labor participation rate in the world (Metcalfe 2008 pg.

87). Employers are still reluctant to hire qualified women due to the perceived risk of their employment. Employers fear women will leave work for marriage, married women will not be committed to work hard, or pregnant workers' maternity care will be too expensive to maintain. Furthermore, there is a perception by many that certain career fields are inappropriate for women because it might incentivize them to socialize with men outside their own families (World Bank 2013 pgs. 3-9). Most female employees in the Middle East are employed in the public sector in areas of health, education, and social welfare because the "benefits and working conditions are preferable" (Metcalfe 2008 pg. 90). Even in those positions, however, women hold the lowest level positions (al-Hudhaif and Nalband 2012 pg. 193; Metcalfe 2008 pg. 90)

Another difficulty facing the young women is the necessity of a *mahram* or *wali*, which is a male guardian. Societal norms in many Arab states restrict women's mobility. They are not allowed to be in public places without their *mahram*, and this restriction in travel results in many women being unable to travel to their workplace alone (World Bank 2013 pg. 16, 179). If the *mahram* works in a different area, then a woman will be unable to take up a job anywhere else. This rule appears to most affect young female teachers who are seeking full time teaching positions (World Bank 2013 pg. 104; Metcalfe 2008 pg. 90)

In its 2013 report, the World Bank stated that "MENA citizens overall hold less favorable views about women in leadership positions, as business executives, or as politicians" (World Bank 2013 pg. 13). Entrepreneurship opportunities are, therefore, also restricted to women, who find it increasingly difficult to gain access to credit or the markets (Mathew 2010 pg. 164). They can even find it difficult to acquire professional skills outside of formal education. In many Middle Eastern states, women are considered "legal minorities" which inhibits their ability to make business decisions on their own. Multi-national corporations are trying to help promote

female entrepreneurship in the Middle East but have met limited success (World Bank 2013 pg. 109-113; Metcalfe 2008 pg. 94). Likewise, political opportunities appear to be restricted for women, who are often perceived as being unable to be strong leaders and hold public office. More importantly, there are some objections to women as politicians due to the proximity female politicians would have to work with male politicians. While these gender stereotypes persist, they appear to be unfounded. While Middle Eastern female politicians often struggle to get into public office, once in office, Middle Eastern female politicians appear to have just as much success representing their constituents and serving on committees as their male counterparts. This reality is rather astounding given that female politicians always come into office with far less professional and political experience (World Bank 2013 pg. 9, 64, 144).

Changing the perceptions of women is the first step to real change, but this can be easier said than done because these stereotypes and norms continue to permeate. Historically, the state-run media continued to use "stereotypical representations" of women in their press and broadcasting, and many blamed the media for continued gender disparities in rights (Shirazi, Gholami, and Higón 2009 pg. 427). However, the reality of women's rights is slowly beginning to change. Most of the Middle Eastern states have sections in their constitutions that refer to equality of all persons, but not all explicitly mention gender. However, by the mid-2000s, almost all Middle Eastern countries had ratified the Convention on the Elimination of All Forms of Discrimination against Women (World Bank 2013 pg. 72; Freedom House 2005 pg. 15).

The Arab Spring, in particular, has been credited for quickening the change in perceptions because it brought attention to the use of media in spreading political messages. Messages about women's rights can only be successfully spread when both traditional and social media cooperate to facilitate the transmission of such messages (World Bank 2013 pg. 4, 26).

Metcalfe (2008) stated that "A major problem for women in the Middle Eastern Region is a lack of information about women's leadership and women's global achievements" (Metcalfe 2008 pg. 91-92). Furthermore, citizens often do not have access to data regarding the success of women's rights policies abroad. The World Bank (2013) refers to this lack of information as a "paucity of relevant global data on gender issues," and says that without the information, women lack the knowledge and experience to fully understand how to demand their rights and what rights to demand (World Bank 2013 pg. 26).

The Internet and ICT in the Middle East: What Have Women Gained?

According to Shirazi, Gholami, and Higón (2009), the use and access of ICT in the Middle East grew 541% between 1995 and 2005. The use of ICT has been linked with socio-economic growth in the region. As GDP per capita increases, more people have the ability to access satellite television, cell phones, computers, and the Internet, which has led to more global awareness in citizens (Shirazi, Gholami, and Higón 2009 pg. 427). Middle Eastern citizens have had access to satellite television since the early 1990s, which led to increased access to varying news sources from around the region. With increasing widespread use of the Internet, they have also gained access to international newspapers, which Ghareeb (2000) claims is "shaping public opinion" on political issues so that opinions are no longer based solely on old ideologies (Ghareeb 2000 pg. 397). Between 2000 and 2008, 23% of the Arab population had access to the Internet, and this was an increase of 1296.2% over that time span. It appears that as access to the Internet in the Middle East increases, more citizens engage politically because they have an avenue to express opinions and gain feedback. The Internet also helps connect average citizens to information and resources from both public and private agencies and institutions, and this

innovation can results in major political change (Shirazi 2012 pg. 45; al-Nashmi, Cleary, Molleda, and McAdams 2010 pgs. 722-723; Mathew 2010 pgs. 164-165).

In particular, increased access to the Internet has played an important role for women in pursuit of more rights and opportunities to demonstrate gender empowerment. In its 2013 report, the World Bank stated that "The Internet is a very effective means of reaching target audiences. New media are powerful tools to disseminate information and build awareness of women's rights and capabilities" (World Bank 2013 pg. 149). Women's rights advocates now have an easier time communicating with others about their desires for political change (al-Nashmi, Cleary, Molleda, and McAdams 2010 pg. 722). These advocates were also amongst the first to really utilize the Internet as a means to demand more rights. Through blogs, social media, and other articles, women have been able to transmit information about women's rights within their countries and abroad as well as organize protests to demand more rights (Shirazi 2012 pg. 48; Metcalfe 2008 pg. 89). Women's rights blogs in the region are amongst the most popular and frequently visited websites on the Internet, and they are primarily used to report the conditions of women's rights within a country and transmit the information as a plea for change. Women have also utilized the Internet to help create networks with other women and women's rights agencies in order to increase support for feminist movements and alterations of laws (Shirazi 2012 pg. 51; Metcalfe 2008 pg. 95). ICT in the region has the potential to increase female entrepreneurship in the region by increasing women's access to information about business practices and their ability to facilitate transactions (Mathew 2010 pgs. 164-165).

Saudi Arabia and the United Arab Emirates: an Introduction

The relationship between the Internet and women's rights appears to exist within the region of the Middle East, but differences in regards to ICT and women's rights exist between

the states in the region. While it is important to understand the region as a whole, it does not fully answer my research questions. The quantitative analysis provided results which demonstrated that Internet access might lead to a positive shift in attitudes towards women's rights and gender empowerment, but the results do not explain how this effect works in the practice. By looking closer at these interstate differences, it will become clearer how information access via the Internet actually helps change political attitudes. The following case study comparing Saudi Arabia and the UAE will follow the "most-similar" format, where I will demonstrate that while similar in many ways, Saudi Arabia and the UAE differ on their level of Internet penetration. I will investigate whether this difference in Internet penetration has led to differences in attitudes towards women's rights and gender empowerment.

Economic and social globalizations have benefited both Saudi Arabia and the United Arab Emirates (UAE) in very similar ways. Metcalfe (2008) noted that globalization has led to the "generation of jobs in export processing, free trade zones, and work market factories, improvement in commerce and finance" in both states (Metcalfe 2008 pg. 86). These results should be unsurprising given that the two states share many important political similarities. First, Saudi Arabia and the UAE share a border, and as a result, are very similar geographically. Due to their proximity, they also share a colonial history with both states being British colonies before achieving independence in the mid-20th century (Manea 2011 pg. 18; Krause 2008 pg. 27).

Both Saudi Arabia and UAE have grown wealthy through their exploitation of their oil resources. They are two of the five countries that collectively share more than half of the world's oil supply (World Bank 2013 pg. 56; Shirazi, Ghomali, and Higón 2009 pg. 427). The oil-dependent nature of the economy has resulted in the royal families and other political elites becoming very wealthy, often neglecting the rights of the average citizen. This economic advantage has been leveraged into a political advantage, and both Saudi Arabia and the UAE are classified as highly autocratic countries with the level of political rights for citizens in both countries being roughly equal (Freedom House pg. 2005, al-Nashmi, Cleary, Molleda, and McAdams 2010 pg. 720, Shirazi, Gholami, and Higón 2009 pg. 430). This reality can be seen in the similarity of the Polity IV scores, which are a -10 to 10 score that ranks a country on its level of autocracy and democracy. A score of -10 classifies a state as a total autocracy, and a score of 10 indicates a total democracy. Saudi Arabia has consistently had a score of -10 since independence, while the UAE has had a score of -8 consistently since independence. (Marshall, Gurr, and Jaggers Polity IV Report Data).

Shirazi, Gholami, and Higón (2009) mentioned that Middle Eastern countries generally have two approaches to promoting the development of ICT. Governments can either use the liberal approach of "full or partial privatization." The second option is to have partial or full state control of all ICT (Shirazi Gholami, and Higón 2009 pg. 427). Both Saudi Arabia and the UAE have opted for the second option, and the governments continue to have a large amount of

control over ICT supply and diffusion (Manea 2011 pgs. 16-17). In a similar manner, their evolution of the manifestation of women's rights followed a similar trajectory, and some laws in place related to gender equality are the same in both states. However, in the modern age and especially since the rapid diffusion of ICT use, the two states have begun to diverge in relation to gender norms and subsequent legal frameworks surrounding gender (The World Bank 2013 pgs. 31, 54, 81-82). Therefore, it is essential to investigate deeper into the trajectories of both countries to analyze why there may be a difference.

Saudi Arabia

In 1932, Saudi Arabia was unified and became an independent nation after the end of British colonialism. It was created as a hereditary monarchy with the king as an absolute monarch. The king serves both as the head of state and head of government (Freedom House 2005; al-Nashmi, Cleary, Molleda, and McAdams 2010). The Saudi Arabia government and constitution were created to be highly influenced by *Wahhabism*, which is a type of "state-sponsored Sunnism" that scholars describe as being amongst the most conservative interpretations of the Qur'an (Freedom House 2005 pg. 258; al-Rasheed 2013 pgs. 16-17). The Saudi constitution, therefore, makes full use of Sharia law, and it is embedded into all political and economic institutions. In particular, the constitution and legal institutions provide very little protection to citizens in legal proceedings, especially in regards to defendants. Torture is commonly used and there are few to no due process rights (al-Rasheed 2013 pgs. 16-18; Freedom House 2005 pg. 258).

Within the Wahhabi interpretation of the Qur'an, the government does not view men and women as equals under the law, and women's rights are reflective of the norms of gender relations within Saudi society. Women are not considered to be a full people before the law, which is why marriage contracts are made between the husband and the woman's *mahram*. Women also often require male witnesses to testify on their behalf because it is considered immoral or dishonorable for a woman to appear before the court. This norm has made it very difficult for women to be granted a divorce, gain custody of children, or prosecute rape. Similarly, women find it difficult to receive medical care especially if it is an emergency and the *mahram* is not present. Furthermore, even with a *mahram*, a woman can only be in public spaces during certain times of the day (Freedom House 2005 pgs. 255-265, 270; Manea 2011 pg. 6).

However, while Saudi Arabia remains one of the most repressive societies for women, there appears to be slow but real change occurring in the country. Saudi Arabia is the second largest producer of oil in the world, and this increased growth and wealth has led to Saudi Arabia having one of the fastest increases in human capital development. The increasing oil revenue over the last two decades has also resulted in investments in technological innovation and infrastructure. In particular, the government has been channeling more and more financial resources into the ICT and telecommunications sector (Shirzai, Gholami, and Higón 2009 pg. 427; World Bank 2013 pg. 5).

Saudi Arabia was originally a leader in ICT introduction and innovation in the Middle East. It was the first country in the region to introduce satellite television in 1985, which it achieved through the use of the Arab Satellite Communications Organization, or Arabsat for short. However, Saudi Arabia soon fell behind countries like Iran and the UAE in regards to ICT innovation as evidenced by the fact that the Internet was only introduced in Saudi Arabia in

1999, which was well after some other Arab states like the UAE. Initially the Internet was introduced in Saudi Arabia primarily for governmental reasons and use, and for a few years the government had very little incentive to release widespread access to the public. It feared a threat to governmental stability and was the last Middle Eastern country to allow its citizens to have access to the Internet (Samin 2008 pgs. 197-208; al-Nashmi, Cleary, Molleda, and McAdams 2010 pg. 724). Between 2000 and 2006, there was an 1170% increase in Internet use but most of this diffusion was intra-governmental. It was not until 2004 that private citizens fully started having access to the Internet. Today, Saudi Arabia boasts one of the highest Internet usage rates for the total Middle East percentage, higher than that of the UAE. This rate refers to the number of people online. However, at a 2013 estimated population of almost 27 million, Saudi Arabia also has a population five times the size of the UAE, which helps to explain the difference in absolute terms (Ghareeb 2000 pg. 397; 2013 CIA Factbook).

As mentioned earlier, the Saudi government maintains tight control over the dispersion of ICT technology, and Saudi Arabia is known have some of the strictest and widespread Internet censorship mechanisms in the world (al-Nashmi, Cleary, Molleda, and McAdams 2011 pg.724). However, even with this level of governmental control, Saudi citizens are using the Internet as a medium for political dialogue. Samin (2008) believed this notion to be true because “the Internet removes many of the boundaries that exist in the physical world” (Samin 2008 pg. 2010). The Internet provides a space where the average citizen can voice opinions in public forums. In particular, al-Nashmi and his fellow authors (2011) found in their study that politics, issues related to open dialogue, and Islam are the most popular topics that are discussed on Saudi public forums on the Internet. A benefit for women and women’s rights with the Internet is that Saudi men and women can communicate through the Internet. They can interact and exchange ideas,

and they are doing so through these public forums. Amongst the political issues, the topic of women's rights is one of the most popular on the Saudi blogosphere (al-Nashmi Cleary, Molleda, and McAdams 2011 pg.727-729; 734). Women's organizations in Saudi Arabia cannot operate without a certain level of government control, but they can disperse information much more freely and easily through the Internet. Prior to the Internet, such groups had to depend on the traditional Saudi media to spread gender egalitarian information, which was done with very limited success because it was not a topic of interest to the media. While the Internet was initially used by the government to reinforce social norms, over time the Internet has also begun to promote the subversion of those same norms through mobilization and public forums (Metcalfe 2008 pg. 92; Samin 2008 pg. 207; al-Rasheed 2013 pgs. 154-155).

In 2000, Saudi Arabia signed onto CEDAW with "reservations," which appeared to be the first movement towards women's rights since granting girls the right to primary education in the 1960s. Freedom House (2005) credits the al Saud family, which is the royal family of Saudi Arabia, with some of the prevalent conservative gender role attitudes (Freedom House 2005 pg. 271; World Bank 2013 pg. 34). Before the September 11th attacks, Saudi Arabia society enjoyed a certain level of isolation as a result of limited access to the Internet. After the attacks, media coverage about and within Saudi Arabia increased, and members of the royal family felt the need to respond. It did not take long for the international media attention to turn to the rights of Saudi women. Saudi princesses were amongst the first to heavily utilize the Internet as a means to spread gender egalitarian information. This movement inspired other women and women's rights advocates to take to the Internet to gain more access to gender egalitarian information and spread the message. While not a cohesive and collective movement, there was a larger demand on the

government to find better ways to protect women and their rights (al-Rasheed 2013 pgs. 24; 139-140)

The World Bank (2012) listed the state of employment as one of the most prevalent gender issues in Saudi Arabia, and the issue of female unemployment in Saudi Arabia is a complex one. Starting in 2003, the number of females enrolled in university has been equal to the number of males enrolled. The unemployment rate for females is four times that of males, and almost 80% of those women who are unemployed have a college degree. The percent of women in the total labor force has slowly grown from 10.7% to 14.2% between 1990 and 2012, and the percentage of working women among the total adult female population has grown from 15.3% to 19.1% (World Development Indicators). These increases appear small, but they reflect the slow changes that have been occurring in Saudi Arabia to alleviate female unemployment. Historically, oil companies in the region have supported "occupational segregation" by maintaining and supporting a policy of separate sex offices, which precludes women from advancing within the company. This segregation is based not only by gender but job responsibilities. With a narrow range of tasks, women are never able to develop further skills in order to advance in their careers (Metcalfe 2008 pg. 86). Similarly, women are not allowed to drive within the country and are not allowed to openly travel without a *mahram* (al-Hudhaif and Nalband 2012 172). Finally the Saudi Arabian government has established a list of conditions under which a woman could work. A woman needs to demonstrate that she must work to provide for her family, that her legal guardian allowed her to work, that the work would be separate from that of men, and that she would behave in a manner that adhered to Sharia law. One of the most vivid examples of job discrimination in Saudi Arabia is the inability for women to be judges or

lawyers. Any women trained in the law can only work as assistants to lawyers even though they have the same qualifications as the male lawyer (World Bank 2013 pg. 83; 142).

One of the demands often made in the blogosphere is for the reduction of these barriers to female employment. Women have begun posting Youtube videos of themselves driving. With the expectation that they would get arrested for some actions, other activists have posted complementary articles onto the Internet explaining how women should use the court system to their own advantage in order to be let off with a lesser punishment or at least gain greater media attention. More access to the online media surrounding women's issues has led to more liberal attitudes towards such media, and women are using this principle to the fullest (al-Rasheed 2013 pg. 146; 154-155). While women have yet to be granted the right to drive, they have succeeded in reducing some of their restrictions to open travel. A woman can attain an ID card that requires only a one-time written permission signature from the woman's *mahram* allowing open travel without the *mahram* being physically present. This document is posted to a woman's passport, and as long as she carries it with her and can demonstrate the permission, she will not be harassed by law enforcement. The purpose of this change was to allow women to be able to more freely travel to places of employment, and therefore, expand employment opportunities for women (Metcalfe 2008 pg. 90; World Bank 2013 pg. 104). Along the same lines, the Saudi Chambers of Commerce and Industry (CCI) have recently begun creating programs that will help promote entrepreneurship and job-skills training in women as another means of expanding employment opportunities (Metcalfe 2008 pg. 94). Lastly, in 2012, the Saudi government implemented a new unemployment benefit plan primarily targeted for unemployed women. It provides more benefits for them as they search for jobs (World Bank 2013 pg. 103).

Demands for rights have also extended to political rights for women. These rights include citizenship rights, enfranchisement rights, and political participation rights. Like the UAE, Saudi Arabia has restrictions on women passing on citizenship to their children. Citizenship was only originally granted to a child if the child's father was a Saudi citizen. These laws were put into effect to place restrictions on women marrying non-nationals and also to further establish a lessened status of women before the law. As globalization continued and more foreign nationals came into Saudi Arabia, a citizenship crisis emerged in Saudi Arabia; some children born in Saudi Arabia could not gain citizenship from their father's home country due to those countries' citizenship laws, and they could also not gain Saudi citizenship from their mothers. A whole group of "stateless" children were born, and citizens demanded changes to citizenship laws to give these Saudi-born children a home country (World Bank 2013 pg. 83). In 2012, Saudi Arabia granted special privileges for women married to non-Saudi men to pass on Saudi citizenship to their children, who would otherwise be stateless. For these women, their position as "legal minorities" was removed in regards to their families and children (World Bank 2013 pg. 83).

Due to second-class legal status, Saudi women have never been allowed to vote and run for public office. This particular topic under women's rights was a popular one as well on the Saudi blogosphere (al Nashmi, Clearly, Molleda, and McAdams 2011 pg. 731). After much public pressure through various mediums but especially online mediums, the Saudi government finally relented, granting women the right to vote in September 2011. The voting law also gave women the right to starting running for public office during the next national election, which will occur in 2015. Finally, the law made for provisions to allow women some autonomy in their decision-making in regards to voting. Under the normal legal minority status, a woman would be unable to make a political decision without a *mahram*'s approval; however, the law made a

provision to allow women to vote for whomever they please without a man's interference (World Bank 2013 pgs. 10, 51). Saudi Arabia is clearly making progress in regards to the implementation and manifestation of women's rights, but it is still behind other countries in the region. One such country is the UAE.

The United Arab Emirates

Similar to Saudi Arabia, the United Arab Emirates was under British rule for a large portion of its modern history. In December 1971, the UAE was established as an independent state after Great Britain removed all forces from the Persian Gulf. With a 2013 estimated population of around 5.5 million, the UAE is one of the smaller countries in the Middle East region; however, it is still one of the largest producers of oil in the world. The UAE and Saudi Arabia are similar in regards to their oil production, but overall, the UAE produces less oil per capita than Saudi Arabia (Sokol and Sisler 2010 pg. 5; 2012 CIA Factbook; Shirazi Gholami, and Higón 2009 pgs. 427-428).

The UAE is made up of seven "emirates," or sheikdoms, each which is ruled by an emir. The seven emirates are Abu Dhabi, Dubai, Ajman, Fujairah, Ras al-Khaimah, Umm al-Quwain, and Sharjah, and one of the emirs serves as the President of the UAE (Krause 2008 pg. 27). Due to its oil production, the UAE is one of the richest countries in the Middle East, but it is also still a fairly repressive and autocratic society. No political parties are allowed, and the emirs serve as absolute monarchs in their emirate. Similar to Saudi Arabia, the UAE also has very clear influence of Sharia law on the constitution (Freedom House 2005 pg. 314; Shirazi Gholami, and Higón 2009 pg. 428).

From a population standpoint, the UAE is very unusual because a large portion of the population is made of up foreign nationals. Though Islam is the official religion of the UAE with

76% of the population identifying as Muslim, the country is largely South Asian; therefore, there are also considerable numbers of Hindus and Christians in the society, especially in Dubai. The UAE has one of the highest population growth rates in the world, and the population is largely made up of young foreign nationals, who work in the commercial and financial sectors. Of the national citizen population, 80% are employed in the public sector in some capacity (Sokol and Sisler 2010 pgs. 5-6; Krause 2008 pg. 29).

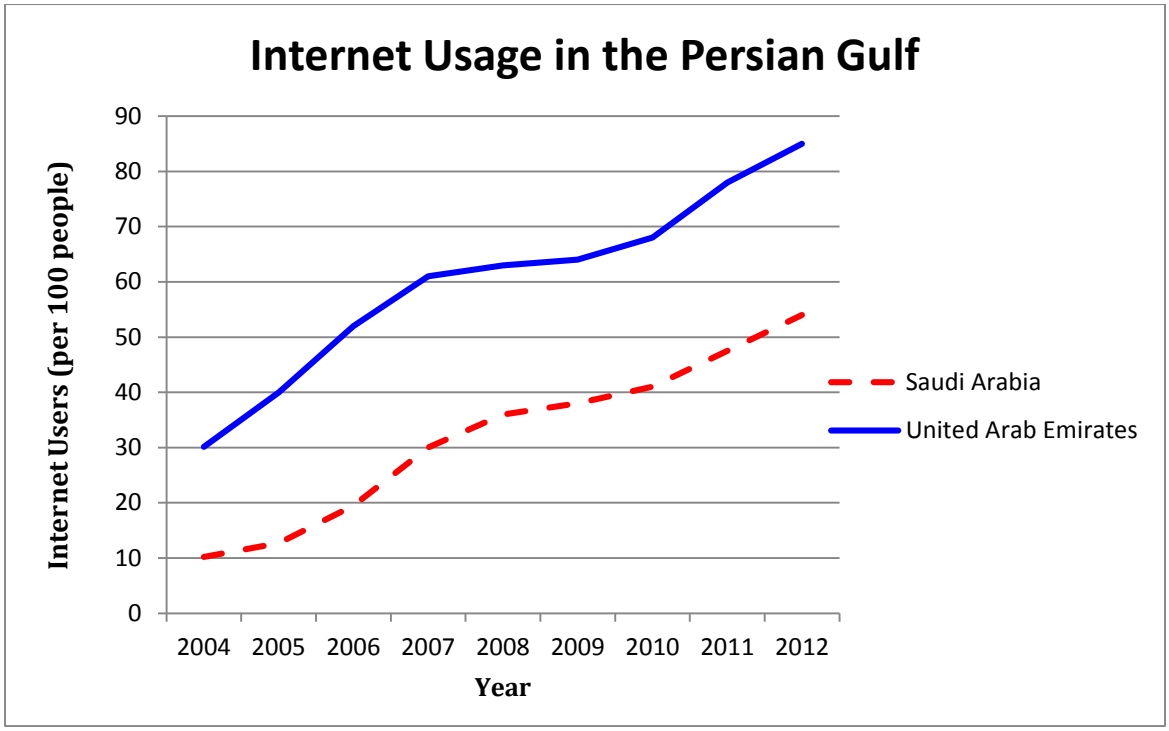
Like Saudi Arabian women, Emirati women appeared to have more rights before large-scale oil exploitation due the tribal customs of the area. However, when established as an independent nation, the UAE also had in place many of the same repressive measures on women as other countries in the region. In particular, the UAE had many of the same restrictions on female employment because it felt that the oil-dependent nature of the economy posed threats against the moral lives of women if they were in the same workplace. Likewise, as the foreign national population grew in the UAE, restrictions on women passing on citizenship to their children were put in place to reduce the incentive for Emirati women to marry non-nationals (Krause 2008 pgs. 30-31; World Bank 2013 pgs. 81-82). However, over the last twenty years, the realization of women's rights in the UAE has vastly begun to change as globalization begins to affect the norms of the country.

In 1974, four government-controlled women's organizations were established to allow women to meet and share ideas on Islamic doctrine, but the average woman did not have access to the resources of the organizations because physical distance precluded many from participating. As a result, participation was initially very low. This low level of interaction soon began to change as innovations in ICT increased. In 1995, the UAE introduced the Internet. Unlike Saudi Arabia, the UAE introduced the Internet for primarily commercial reasons;

therefore, the Emirate public had access to the Internet very soon after the first introduction occurred. The Internet was primarily distributed through Etisalat, the national telecommunications provider, which provided services to universities, businesses, and private households. Etisalat is a unique type of Arab telecommunications provider because the government owns 60% of the company and Emirati citizens own the remaining 40%. This distribution also gave the government more incentive to provide the Internet to the Emirati public (Krause 2008 pg. 36; Ayyad 2011 pgs. 40-43).

Today, the UAE has the highest percentage of Internet users relative to its population in the Middle East, which means it has the highest percent of its public online. It is continuously ranked first among the Arab World both by the World Summit on Information Society and by the Arab Innovation Index for "internet connectivity," putting it far ahead of Saudi Arabia in both rankings (Sokol and Sisler 2010 pg. 9). It has also had a consistently higher Internet penetration rate than Saudi Arabia since 1999, when Saudi Arabia introduced the Internet. The Internet penetration difference of four years may not appear to be a large amount of time, but what makes the difference significant is the diffusion of the Internet after penetration. The UAE very quickly granted the public access to the Internet after initial penetration because the Internet was introduced for commercial reasons. In contrast, Saudi introduced the Internet for governmental reasons, and there was little incentive to grant the public access to the Internet upon initial penetration. This notions helps explains the large difference in diffusion rates in the time period between 1995-2005, which is shown in the figure below (Ghareeb 2000 pg. 397; Sokol and Sisler 2010 pg. 3-9).

Figure 1-1: Internet Usage for Saudi Arabia and the UAE[6]



Oil revenue has led to an increase in government investment into ICT in the UAE, and ICT has been an important priority. As economic growth increased, the government worked to increase and quicken the diffusion of ICT. Shirazi, Gholami, and Higón (2009) describe the UAE's approach to ICT development as "more liberal" than that of Saudi Arabia because the Emirati government invests far more money relative to the overall national budget to ICT than Saudi Arabia and other Gulf States (Shirazi Gholami, and Higón 2009 pg. 427). As a result, the UAE has become the most popular ICT provider state in the region by becoming a network hub and by investing more money in diversifying its ICT services. Ayyad (2011) proclaims the UAE to be "one of the top nations of the online world" (Ayyad 2011 pg. 43).

The Internet in the UAE is used for a variety of reasons. It is a form of fast two-way communication that Ayyad (2011) describes as being "a tool for persuasion, pro-social behavior,

[6] Data for Figure 1-1 provided by the World Bank Databank for Gender Statistics. http://data.worldbank.org/data-catalog/gender-statistics. Full citation in the data citation section of the bibliography.

intergroup conflict, leadership, group discussion, and decision-making" in the UAE (Ayyad 2011 pg. 43). Due to the large amount of young people in the Emirati population, the traditional print and broadcast media are no longer in high demand because young people favor the Internet as a source of information and communication. Public forums and news sources are the most visited sites in Emirati cyberspace. Many young people have the Internet in their houses, and use the Internet to stay aware of local and global news and voice their opinions on public issues. Women's rights appear to be a particularly popular topic on the Internet in the UAE because many young Emirati people see the Internet as a medium to communicate that is unbiased to gender. Men and women can freely interact on the Internet (Ayyad 2011 pgs. 43, 50-55, Sokol and Sisler 2010 pg. 1, 4, 13; Samin 2008 pg. 209).

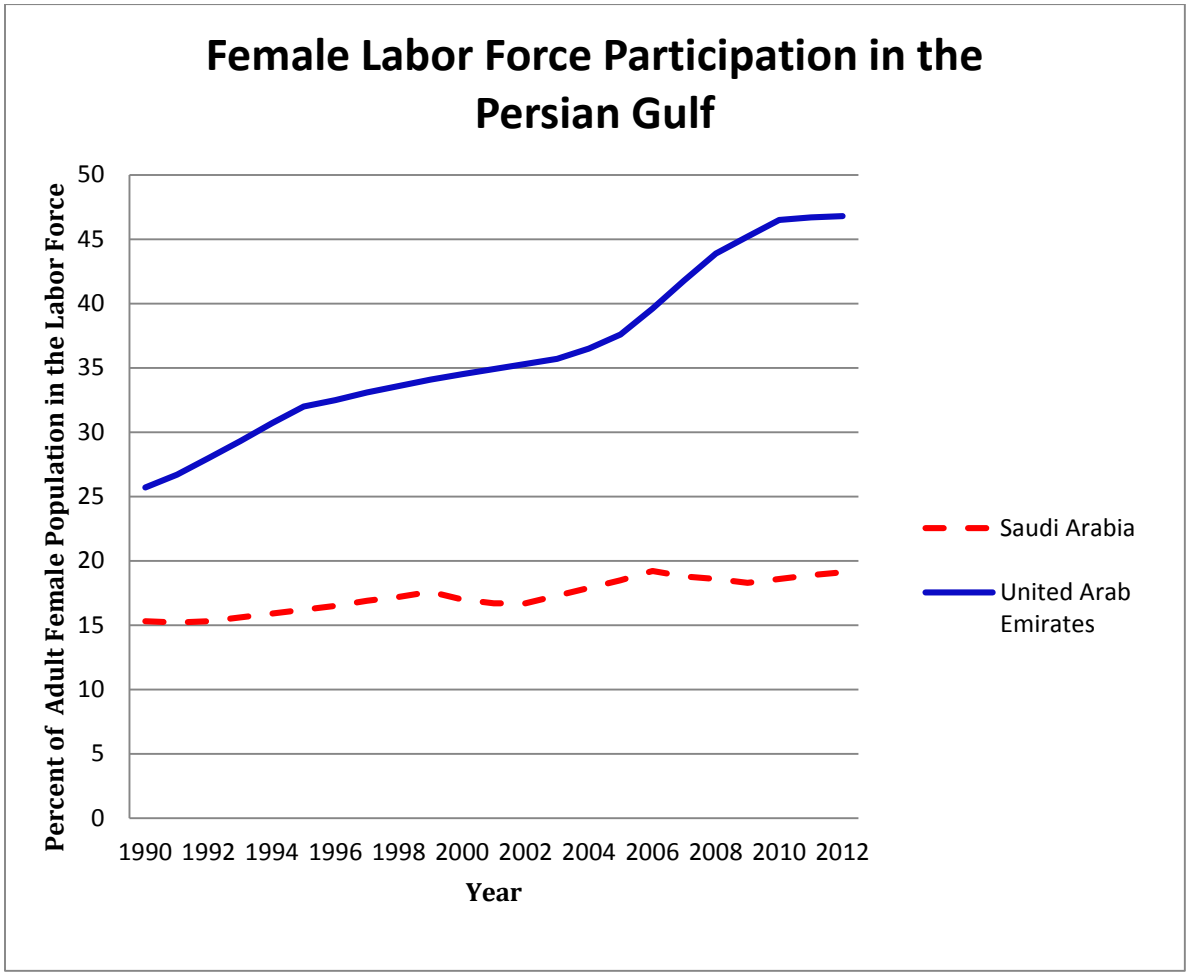
The Emirati constitution does not explicitly mention gender equality, and the UAE only ratified CEDAW with reservations in 2004 (Freedom House 2005 pg. 315-317). However, as a result of freely available Internet access, women's associations in the UAE have also slowly begun to use the Internet as a means of mobilizing after initially distributing CDs via the mail as a means of sharing information. The Emirati government has increased the ability for women to associate in such groups because it provides an avenue of legitimacy to the state. Women have been taking advantage of the ease of networking through the Internet to slowly expand their freedoms and political rights. As these mechanisms of networking have expanded, so has Emirati women's ability to demand for freedoms (Krause 2013 pgs. 11, 59-74).

One of the ways in which these women's organizations have been successful is breaking down some of the gender stereotypes that permeated in Emirati society. Like in the case of Saudi Arabia, Emirati women were considered to be unable to be impartial, which was why they, too, had restrictions placed on their abilities to be judges and lawyers and vote. However, after much

demand through networking mediums, the UAE granted women the right to vote in 2006. The enfranchisement of Emirati women occurred five years before Saudi women were given this right (World Bank 2013). In 2004, the Emirati government also placed its first female within the cabinet as the Minister of Economy (Krause 2013 pg. 44). Since that time, women have expanded on their enfranchisement abilities to make demands to be able to serve in public office. By demonstrating their ability to vote for public officials, women showed the government their ability to be politically viable candidates. Starting in 2007, more women began service in national office, with the female candidates in public office fluctuating between 17.5% to 22.5% in the lower house between 2007-2012, while in Saudi Arabia, women can only start serving in national office beginning in 2015. Today, the UAE is considered one of the best Middle Eastern countries for gender empowerment in regards to the percent of women serving in political office and female life expectancy (Inter-Parliamentary Union Statistics; World Bank 2013 pg. 9). Similarly in 2008, the UAE granted women the right to work as judges and marriage registrars. It was the first Middle Eastern country, along with Egypt, to allow women to become registrars (World Bank 2013 pg. 86; Krause 2013 pg. 44).

In regards to other employment opportunities, the UAE has been expanding opportunities for women, and this work has resulted in the highest labor force participation rate for women in the Middle East. In 2010, the UAE was reported to have a 59% national female participation in the labor force, which was more than a 548% increase since 1960 (al-Hudhaif and Nalband 2012 pg. 173; World Bank 2013 pg. 8; Metcalfe 2008 pg. 87).

Figure 1-2: Labor Force Participation Rate in Saudi Arabia and the UAE[7]



In particular, the Emirati government has been trying to increase incentives for women to work as police officers in addition to serving in other positions in the public sector (Krause 2013 pg. 41). As can be seen in Figure 1-2, the UAE has consistently had a larger percentage of its female population in the labor force than Saudi Arabia; in particular, there are more women working within the technology sector in the UAE than Saudi Arabia, which is has also helped explain the increased capability of ICT to facilitate change in women's rights in the UAE as

[7] Data for Figure 1-2 provided by the World Bank Databank for Gender Statistics. http://data.worldbank.org/data-catalog/gender-statistics. Full citation in the data citation section of the bibliography.

more women are involved in the diffusion of the Internet (World Bank Gender Statistics; Metcalfe 2008 pgs. 87-88).

Even with all the changes, it is important to recognize that the UAE, like all Middle Eastern countries, has not reached a point of total gender equality. In the last fifteen years, the UAE has made great progress in reaching this point, but this fact must also be reconciled with the reality that the UAE was amongst the last Middle Eastern countries to sign international conventions protecting women's rights. While the UAE has expanded the rights of women and opportunities for gender empowerment, this expansion only applies to women's public lives. The rights do not protect women within the home, and in patriarchal households, women can still live very repressive lives. They still require their *mahram's* consent to work. Furthermore, the UAE recently put forth legislation to restrict women's rights to marriage by making it illegal for Emirati female citizens to marry non-Muslims. By doing so, the government made it more difficult for national women to obtain divorces. Lastly, like many other Middle Eastern women, Emirati women find it difficult to pursue entrepreneurship opportunities because they have difficult access to credit (Krause 2013 pgs. 44-45; Freedom House 2005 pg. 316; Sokol and Sisler 2010 pg. 14). Some scholars attribute this inconsistency in Emirati policy to the presence of female foreign nationals. It has become difficult to implement and maintain laws when they are not applicable to all women in the country (Freedom House 2005 pg. 320). Despite these continued restrictions, it is clear that in the late-20th century, the UAE was considered one of the most repressive societies for women, but in just a few short decades, it is considered one of the better Middle Eastern societies for women.

Discussion of Qualitative Analysis

In this analysis, I aimed to show how information access via the Internet affects attitudes towards women's rights and attitudes towards gender empowerment. Politically, economically, and culturally, Saudi Arabia and the UAE share many important similarities. Both are oil-rich neighbor autocracies with a shared colonial history that have had negative reputations in regards to the treatment of female citizens throughout their history. Both states demonstrate their society's gender norms through the laws that grant or fail to grant rights to women. Saudi Arabia and the UAE have shared many similar laws related to women, but over the last twenty years these similarities have begun to fade. In 1995, the UAE allowed the penetration of the Internet within its borders, and the government quickly worked to ensure that the diffusion of the Internet was rapid. There was a commitment to ensure Emirati citizens had access to the Internet. In contrast, the Internet arrived four years later in Saudi Arabia, and the Saudi government worked to keep control of the Internet. Therefore, there was almost a ten year gap from when Emirati citizens had access to the Internet and when Saudi citizens had access. Today, that gap still exists, but what the Internet penetration gap represents is a gap of informational resources between Emirati and Saudi citizens.

Emirati women took advantage of the rapid diffusion of the Internet to gain access to information about women's rights and gender empowerment and then to spread the information to other women and groups. Therefore, Emirati women were able to mobilize much earlier and quicker to make a demand for their rights. Their success of changing the gender norms in society can be seen by the enfranchisement of women in 2006 and the ability for women to participate in public office. Saudi Arabia, by not allowing as quick diffusion, stalled the ability of Saudi

women from doing the same. Saudi women have only recently been enfranchised, and the ability for them to serve in public office only begins next year.

The gap in attitudes towards gender empowerment can be seen in Figure 1-2 which shows the differences in female participation in the labor force between the two countries. While most employed women in both countries work primarily in the public sector, the UAE has consistently had much more of its adult female population in the workforce. Due to the restrictions placed on women of both states, women can only work when the environment appears socially accepting of their participation in the labor force. This gap appears to demonstrate that Emirati gender norms find employed women more acceptable than Saudi gender norms.

By looking more closely at how the Internet has been used as an information and mobilization source, I am better able to demonstrate in practice how information access via the Internet has affected attitudes towards women's rights and gender empowerment. The quantitative analysis showed a positive effect and the qualitative analysis shows more credibility to my theory by showing the actual mechanism of change.

Conclusion

When I approached this study, I had a vague idea as to the power of the Internet from a very general and broad perspective. With corporations investing millions on different new and innovative mechanisms of information and communication technology, whether that is in mobile applications or social media, it is clear that many believe ICT to be a key to the future especially in the developed world. However, with tales from the Arab Spring, the Invisible Children's video on Joseph Kony, and even stories from the recent violence in Ukraine, the Internet is becoming an important tool for political change in the developing world. It is becoming a means of

receiving information, broadcasting information out, and social mobilization. With the knowledge that it can be a tool for political change in regards to political uprisings and revolutions, I wanted to investigate whether access to information via the Internet could also be related to political change in other fields, namely human rights. In particular, does the Internet have the potential to affect change in regards to women's rights and gender empowerment?

A movement towards gender equality, both in rights and empowerment, is a long process, so my goal was to analyze a narrow, but crucial part of this process of improved gender rights and empowerment. Improving attitudes towards women's rights and gender empowerment is an important step to achieving the goal of gender equality because more positive attitudes towards women's rights and gender empowerment implies more support for the implementation and manifestation of such rights and capabilities to be empowered. As mentioned by the World Bank in their MENA report (2013), few countries have the incentive to really rethink and restructure the manifestation of gender equality if the population does not appear particularly supportive (World Bank 2013 pg. 59).

One of the first points that the quantitative analysis highlighted was the reality of the differences between women's rights and gender empowerment, a notion that was touched upon in previous scholarship. Previous scholarship illustrated that there were difficulties in measuring women's rights because it was difficult to define the concept of women's rights. In order to avoid these measurement difficulties, I decided to separate the legally-binding attitudes from those that were more norms-based.

Gender empowerment is a much softer term than women's rights because the implications between the two vary. Women's rights imply legally-binding consequences which involves much more governmental input and time. The risks of supporting a right are often

higher than that of gender empowerment. Gender empowerment, on the other hand, does not imply any action or commitment by the government. It is much more normative, rather than legal, in nature. Therefore, for individuals in areas where gender inequality is prevalent, it is probably less risky to support gender empowerment than women's rights. Another possible explanation is that such individuals might believe that changes in gender empowerment are more realistically attainable than changes in women's rights.

The quantitative simulations results give support to this notion. For the same sample of hypothetical individuals, a much smaller percentage of the individuals with no Internet received a minimum score for gender empowerment than the percentage of individuals who received the minimum score for women's rights. These results illustrated that for my model, it was important to separate the two concepts because there appear to be real differences between the two. Individual's perceptions about women's rights did not imply similar perceptions about gender empowerment; therefore, it was prudent to not combine the two in a single measure.

By separating the two concepts, I was able to examine the crucial point of my study more carefully and that was the effect information access via the Internet had on attitudes towards gender rights and empowerment. The results of the dual-stage quantitative analysis and the qualitative analysis highlight the incredible potential the Internet has as a means of dramatic political change. The two sets of analyses gave quite a bit of support to my two hypotheses that increased access to gender-egalitarian information would lead to a positive shift in attitudes towards women's rights and attitudes towards gender empowerment. The simulation models revealed that even those that would appear the least supportive of women's rights and gender empowerment could become more receptive to a change in gender norms if they had increased access to information from the Internet. Even a small percentage change in likelihoods can be

interesting when only one factor is being taken into consideration. While my R^2 results were, admittedly, small (in the 5%-20%) range, it does not reduce the potential significance of the results. The aim of the research was to examine how one factor can influence a much bigger phenomenon, while keeping in mind the myriad of factors that influence perceptions of gender rights and empowerment.

Further analysis of the contrast between Saudi Arabia and the United Arab Emirates emphasized the importance of Internet penetration as a medium through which women can increasingly demand their rights. Both Saudi Arabia and the UAE are not inherently the types of societies and regimes in which women have easy access to spread their message and mobilize, but something has clearly changed over the last two decades. As Internet penetration continues both in these countries and in other developing states, this shift in gender perceptions could become even more rapid.

According to the International Telecommunications Union, the ICT agency of the United Nations, around 40% of the world was "online" as of 2013, which is more than double the amount of those online in 2005. In particular, the developing world has more than quadrupled its Internet penetration within that same time frame. Today, 30% of the developing world is now online (International Telecommunications Union ICT Time-Series Data). The role that the Internet could play in the developing world cannot be underestimated, and my research supports this claim.

Changing attitudes towards women's rights and gender empowerment is a difficult undertaking because there are many factors that play a role. Changing the level of national wealth, turning towards democracy and changing the level of religious fragmentation within a society are not easy or practical ways to change such attitudes. In contrast, the Internet is a cheap

intervention tool for an actor interested in changing attitudes towards gender rights and empowerment. Increasing Internet access within a given society is a feasible option even within slowly developing countries because the technology already exists and is readily implementable. The research and development costs would not be a burden on developing states; more importantly, governments are already investing in ICT for government purposes. As the case with the UAE demonstrated, once Internet has penetrated within a given society, it does not take an inordinately long time to quickly diffuse. With proper management, the diffusion process can be rapid.

Based on this evidence, I believe that from a policy-standpoint, NGOs, especially Human Rights Organizations (HROs), international organizations, and governments should focus on increasing access to the Internet as a way of improving women's rights and gender empowerment abroad. In a country where there is a poor human rights record for women, development efforts by HROs in collaboration with international organizations should focus on establishing Internet access or increasing Internet access in rural areas as a method to improve the attitudes toward women's rights. Perhaps by improving the public opinion in a country, there will be more support by the people so that an HRO can better implement programs to directly improve women's rights such as education or skill development programs.

The NGOs should also work with telecommunications regulatory groups to dissuade countries from censoring the Internet. If the information is censored, the usefulness of Internet access to disseminate information is compromised. At the same time, watchdog groups should increase efforts in those areas where Internet access is increased to ensure there is not a simultaneous increase in the exploitation of women via the Internet especially in regards to human sex trafficking.

Particular attention should be paid to provide access to a wide range of the population especially women and young people. Generally in poorer areas, men hold a monopoly in regards to Internet access because men overwhelming tend to be elites in society. If women have access to the Internet, they will be better aware of the efforts currently in progress to improve their rights. The Internet could also help them to network with other people around the world to learn new ways to invest their money or other tools to become economically independent. Also, knowledge of the Internet could result in more occupational opportunities especially outside the agricultural and informal sectors. If young people have access, the next generation can be more favorable towards women's rights from the very beginning. They would also be more privy to information about the violations of women's rights taking place and mobilize them to propose change.

Future Research

While I feel this research has yielded some very interesting and applicable results to help answer my two research questions, many more questions were created in the process. These questions should provide foundations of future research. In particular, three questions and projects came to mind as I worked through this thesis.

First, the case study of Saudi Arabia and the quantitative analysis of China, which was embedded into Models 3 and 4, generated the very interesting question of censorship. While Internet access does imply more information access, how much information access is actually available cannot always be known. In my quantitative models, I did have to make assumptions about what kind of information was accessed via the Internet when examining the effect of Internet access. The reality is that not all citizens have equal access to information even when they have equal access to the Internet. This fact means that countries with similar levels of

Internet penetration do not necessarily have similar amounts of information accessible on the Internet. The question, therefore, becomes what role does censorship play in this relationship between information access via the Internet and attitudes towards women's rights and gender empowerment? The first step in this project would be to investigate how much gender-egalitarian information is being censored in countries that use strict censorship practices.

A second question that appeared takes the effect of ICT on attitudes towards women's rights and gender empowerment a step further. While the Internet itself appeared to have a positive effect, how would this effect be altered if the lens became even narrower? One segment of the Internet as ICT that is becoming increasingly more important is social media. How would social media affect this relationship? The 2010 and 2012 Pew Global Attitudes Project datasets both contained questions about the use of social media for those who affirmed to using the Internet. As future research, it would be interesting to see how social media, a type of Internet usage that is meant to be a means of distributing information and communicating, particularly affects attitudes towards women's rights and gender empowerment. Is there a similar effect? If so, is the effect stronger or weaker?

Finally, the statement of the World Bank brought up an interesting question about the relationship between gender norms and women's rights legislation. Changes in gender norms create incentives to rewrite legislation related to gender equality (World Bank 2013 pg. 59). This particular research focused on the relationship between information access via the Internet and attitudes towards women's rights and gender empowerment. I would be very interested in taking this a step further and examining the relationship between ICT and human rights legislation and implementation. If ICT can affect gender norms, can it also affect how well women's rights

legislation is implemented? An interesting point in this would be to examine whether or not governments utilize the Internet as a means to better implement legislation and policy.

Appendix A

2007 Models: Model 1 and Model 2

Survey Background and Methodology

The Pew Global Attitudes Project (PGAP) Survey conducted from April 7, 2007 to May 28, 2007 was conducted using both telephone interviews and face-to-face interviews in 47 varied countries. A sample between 500 and 2000 was used in each country, and mostly all were collected using a randomized sample taken from the entire population. These individual national samples yielded a total sample of 45, 239 for the entire 2007 PGAP dataset. The total sample used in the model was 18, 107.

Surveyed Countries (under names used by PGAP)

- Argentina
- Bangladesh
- Bolivia
- Brazil
- Britain
- Bulgaria
- Canada
- Chile
- China
- Czech Republic
- Egypt
- Ethiopia
- France
- Germany
- Ghana
- India
- Indonesia
- Israel
- Italy
- Ivory Coast
- Japan
- Jordan
- Kenya
- Kuwait
- Lebanon
- Malaysia
- Mali
- Mexico
- Morocco
- Nigeria
- Pakistan
- Palestinian Territories
- Peru
- Poland
- Russia
- Senegal
- Slovakia
- South Africa
- South Korea
- Spain
- Sweden
- Tanzania
- Turkey
- Uganda
- Ukraine
- United States
- Venezuela

Countries Used in Model:

- Bangladesh
- Egypt
- Ethiopia
- Ghana
- India
- Indonesia
- Ivory Coast
- Jordan
- Kenya
- Kuwait
- Lebanon
- Malaysia
- Mali
- Morocco
- Nigeria
- Pakistan
- Senegal
- South Africa
- Tanzania
- Turkey
- Uganda

Due to its disputed status as a state and for the dearth of total data available, I omitted the Palestinian Territories from my analysis. I used specific data from every other country to conduct my analysis and create my variables.

For both my dependent variables, which were attitudes towards women's rights and attitudes towards gender empowerment, I used individual questions pertaining to these attitudes and combined them to create an index with which to judge overall attitudes towards women's rights and gender empowerment. Each individual question was ordered such that the value increased as the respondent became more supportive of women's rights and gender empowerment.

Dependent Variable: Attitudes towards Women's Rights

In order to analyze shifts in attitudes towards women's rights, a summation index was created combining scores of individual questions relating to specific attitudes. Each question was turned into a specific variable with an appropriate name. Below, I will be using the variable names primarily rather than question number.

- VEIL: this variable was created from Question 74A (original variable name was "Q74A") which stated "Women should have the right to decide if they wear a veil" and asked respondents to respond with their level of acceptance.
    - Original question choices
        - Completely agree = 1
        - Agree = 2
        - Disagree = 3
        - Completely disagree = 4
        - Don't know = 8
        - Refused (to answer) = 9
    - New variable
        - Completely disagree = 1
        - Disagree = 2
        - Agree = 3

        - Completely agree = 4

I then turned the variable "VEIL" into a dummy variable, called "VEILd," which was the actual variable used in the summation. The dummy variable was created to give respondents a score of "affirmative" or "not affirmative" that would be captured in the overall index.

    - VEILd
        - Not affirmative = 0. This score was given for VEIL =1 or VEIL = 2. This score was also given for any respondents who did not answer the question for whatever reason (missing value).
        - Affirmative =1. This score was given for VEIL = 3 or VEIL = 4.

- WOMENWORK: this variable was created from Question 74B (Q74B), which stated, "There should be restrictions on men and women being employed in the same workplace" and asked respondents to respond with their level of acceptance.
    - Original question choices
        - Completely agree = 1
        - Agree = 2
        - Disagree = 3
        - Completely disagree = 4
        - Don't know = 8
        - Refused (to answer) = 9
    - New variable
        - Completely agree = 1
        - Agree = 2
        - Disagree = 3
        - Completely disagree = 4

I then turned the variable "WOMENWORK" into a dummy variable, called "WOMENWORKd," which was the actual variable used in the summation. The dummy variable was created to give respondents a score of "affirmative" or "not affirmative" that would be captured in the overall index.

    - WOMENWORKd
        - Not affirmative = 0. This score was given for WOMENWORK =1 or WOMENWORK = 2. This score was also given for any respondents who did not answer the question for whatever reason (missing value).
        - Affirmative = 1 for WOMENWORK = 3 or WOMENWORK = 4

- RIGHTSscale

  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to both VEIL and WOMENWORK. This variable was created by simply adding the scores of VEILd and WOMENWORKd for each individual to give a total score of support for women's rights, which yielded a score of 0 to 2. In order to properly deal with missing values, and therefore, yield a more conservative estimate of the effects on attitudes towards women's rights, all missing values were coded as a "Not affirmative" in the final score.

Dependent Variable: Attitudes towards Gender Empowerment

The dependent variable for attitudes towards gender empowerment was created in a very similar manner to the previous dependent variable. Questions pertaining to attitudes towards gender empowerment were used. In particular, these questions do not contain the word "right," or any other similar legally-binding term.

- LEADER: this variable was created from Question 47 (Q47), which asked, "Which one of the following statements comes closest to your opinion about men and women as political leaders?"
    - Q47
        - "Men generally make better political leaders than women" = 1
        - "Women generally make better political leaders than men" = 2
        - "In general, women and men make equally good political leaders" = 3
        - Don't know = 8
        - Refused = 9
    - New Variable was recoded to suit spectrum of more support in the upward direction
        - "Men generally make better political leaders than women" = 1
        - "In general, women and men make equally good political leaders" = 2
        - "Women generally make better political leaders than men" = 3

I then turned the variable "LEADER" into a dummy variable, called "LEADERd," which was the variable used in the summation

- LEADERd
    - Not affirmative = 0 for "LEADER" =1 or any missing values
    - Affirmative = 1 for "LEADER" = 2 or "LEADER" =3

- HUSBAND: was created from Question 48 (Q48), which asked, "Do you think a woman should choose her own husband, or do you think it is better for a woman's family to choose her husband?"
    - Q48
        - "Woman should choose" = 1
        - "Family should choose" = 2
        - "Both should have a say" = 3
        - "Don't know = 8
        - "Refused" = 9

  - New Variable
    - "Family should choose" = 1
    - "Both should have a say" = 2
    - "Woman should choose" = 3

  I then created "HUSBANDd" as the dummy variable for the index.
  - HUSBANDd
    - Not affirmative = 0 for "HUSBAND" = 1 or missing values
    - Affirmative =1 for "HUSBAND" = 2 or "HUSBAND" = 3

- EDUCHILD: was created from Question 46 (Q46), which asked, "Which of the following statements comes closest to your opinion about raising children?"
  - Q46
    - "It is more important for boys than for girls" = 1
    - "It is more important for girls than for boys" = 2
    - "It is equally important for boys and girls" = 3
    - Don't know = 8
    - Refused = 9
  - New Variable
    - "It is more important for boys than for girls" = 1
    - "It is equally important for boys and girls" = 2
    - "It is more important for girls than for boys" = 3

  I then created the variable "EDUCHILDd" as a dummy for the summation index.
  - EDUCHILDd
    - Not affirmative = 0 if EDUCHILD = 1 or there were missing values
    - Affirmative = 1 if EDUCHILD = 2 or EDUCHILD = 3
- EMPOWERscale

  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to LEADER, HUSBAND, and EDUCHILD. This variable was created by simply adding the scores of LEADERd, HUSBANDd, and EDUCHILDd for each individual to give an overall score of support for gender empowerment that was between 0 and 3. In order to properly deal with missing values, and therefore, yield a more conservative estimate of the effects on attitudes towards gender empowerment, all missing values were coded as a "Not affirmative" in the final score.

Independent Variable: Information Access via the Internet

For my independent variable, I used Internet access as a proxy for information access because studies show the more access an individual has to the Internet, the more access they have to gender egalitarian information.

- INTERNET: was created from Question 39 (Q39), which asked, "Do you use the Internet, at least occasionally?"
  - Q39

        - "Yes" = 1
        - "No" = 2
        - Don't know = 8
        - Refused = 9
    - New Variable
        - "No" = 0
        - "Yes" = 1
        - All missing values = 0

Control Variables

- FEMALE: coded from Question 107 (Q107).
    - Q107
        - "Male" = 1
        - "Female" = 2
    - New Variable
        - "Male" = 0
        - "Female" = 1
- AGE: coded from Question 108 (Q108). The two variables are exactly with the value being equal the respondent's age. I removed all "Don't Know" and Refused" from the sample
- RELIGIOUS: coded from Question 117 (Q117), which asked, "How important is religion in your life – very important, somewhat important, not too important, or not at all important?"
    - Q117
        - "Very important" = 1
        - "Somewhat important" = 2
        - "Not too important" = 3
        - "Not at all important" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - New variable was coded to move from least religious to most religious.
        - "Not at all important" = 1
        - "Not too important" = 2
        - "Somewhat important" = 3
        - "Very important" = 4
    - RELIGIOUSb: this was the variable that was ultimately used in the model, and its goal was to isolate those who were very religious from those who were either nominally religious and those who were irreligious.
        - "Not very religious" = 0
        - "Religious" =1
- EMPLOY: coded from Q120, Q120INDA (India), Q120SPA (Spain), and Q120US, which asked "What is your current employment situation?"

  - Q120
    - "Full-time employed" = 1
    - "Part-time employed" = 2
    - "Pensioner and employed" = 3
    - "Self-employed" = 4
    - "Pensioner, not employed" = 5
    - "Unemployed, no state benefit" = 6
    - "Unemployed, receiving state benefit" = 7
    - "No job, other government assistance for such things as maternity or disability" = 8
    - "Not employed (e.g. housewife, houseman, student)" = 9
    - "Don't know" = 98
    - "Refused" = 99
  - New Variable
    - "Unemployed" = 0 if Q120 = 5, 6, 7, 8, or 9
    - "Part-time employed" = 1 if Q120 = 2 or 3
    - "Full-time employed" = 2 if Q120 = 1 or 4
- EDUCATION: coded for each individual country's Q118 (each country had its own sub-variable attached to Q118, such as Q118US). Each variable had varied coding options, so I consolidated based on the standardized equivalent.
  - New variable
    - "No formal education/illiterate" = 0
    - "Incomplete primary education" = 1
    - "Complete primary education" = 2
    - "Incomplete secondary education" = 3
    - "Complete secondary education" = 4
    - "Incomplete college/junior college/vocational school" = 5
    - "Complete college/ junior college/vocational school" = 6
    - "Incomplete graduate level study" = 7
    - "Complete graduate level study" = 8
- "NATWEALTH" was coded giving each respondent their country's 2007 GDP per capita given from the World Bank Development Indicators Dataset
- "REGIME" was coded giving each respondent their country's 2007 Polity IV autocracy-democracy score for the Polity IV Time Series Dataset The score subtracts the autocracy score (out of 10) from the democracy score (out of 10), with -10 being the score of a total autocracy, 0 being a neutral score, and 10 being the score of a total democracy.
- HIGH: was coded to group all the high-income countries together as a means of making comparisons across levels of development. All countries with a 2007 GDP per capita equal to or above $15,000 were included in this group. Canada, Czech Republic, France, Germany, Britain, Israel, Italy, Japan, Kuwait, Slovakia, South Korea, Spain, Sweden, and the United States were grouped under "high-income."

- MID: was coded to group all middle-income countries together. All countries with a 2007 GDP per capita that fell between (but did not include) $2000 and $15000 fell into this group. Argentina, Brazil, Bulgaria, Chile, China, Jordan, Lebanon, Malaysia, Mexico, Morocco, Peru, Poland, the Russian Federation, South Africa, Turkey, Ukraine, and Venezuela were grouped under “middle-income.”
- LDC: was coded to group all low-income countries together. All countries with a 2007 GDP per capita of $2000 or below fell into this group. Bangladesh, Bolivia, Egypt, Ethiopia, Ghana, India, Indonesia, Ivory Coast, Kenya, Mali, Nigeria, Pakistan, Senegal, Tanzania, and Uganda fell under “low-income.”
- RELFRAG: was coded from the dataset Quality of Governance. This variable gives each respondent their country’s 2007 score for religious fractionalization. It is a score from 0 to 1, with a higher number represented a more religious fractionalized state. A higher score indicates the likelihood that two randomly drawn people from the population will not be of the same faith. This section of the dataset was compiled by Alesina, Devleeschauwer, Easterly, Kurlat & Wacziarg. The variable name “al_religion” from the original dataset was renamed “RELFRAG” when inserted into the PGAP dataset.
- FEMALEPOL: was coded from data collected by the Inter-Parliamentary Union, which tracks how many females are in office. Each respondent is given the value of the percentage of legislators in the lower-house of the legislative branch that are female in their country as of December 31, 2007.
- worldsample: was coded to isolate all the respondents that answered the relevant questions about women’s rights and gender empowerment. It isolated the respondents from the Middle East and North Africa, South Asia, Southeast Asia, and Sub-Saharan Africa, all of whom were the only respondents to answer the questions pertaining to women’s rights.
- mena: was coded to isolate the respondents from the Middle East and Africa. It grouped the respondents from Egypt, Jordan, Kuwait, Lebanon, Morocco, and Turkey together.
- sa: was coded to isolate the respondents from South Asia together. It grouped the respondents from Bangladesh, India, and Pakistan.
- sea: was coded to isolate the respondents from Southeast Asia together. It grouped the respondents from Indonesia and Malaysia together.
- ssaf: was coded to isolate the respondents from Sub-Saharan Africa together. It grouped the respondents from Ivory Coast, Kenya, Mali, Nigeria, Senegal, South Africa, Tanzania, and Uganda. This variable was the one that was omitted from the model as the reference dummy.

Appendix B

2010 Models: Model 3 and Model 4

Survey Background and Methodology

The Pew Global Attitudes Project (PGAP) Survey conducted from April 7, 2010 to May 8, 2010 was conducted using both telephone interviews and face-to-face interviews in 22 varied countries. A sample between 700 and 4000 was used in each country, and mostly all were based on a sample taken from the entire population, with the exception of China, India, and Pakistan, which had a more urban representation. These individual national samples yielded a total sample of 24, 790 for the entire 2010 PGAP dataset. My effective sample for the model was 19, 248, which included representation from all the countries that were sampled.

Surveyed Countries (under the names used by PGAP)

- Argentina
- Brazil
- Britain
- China
- Egypt
- France
- Germany
- India
- Indonesia
- Japan
- Jordan
- Kenya
- Lebanon
- Mexico
- Nigeria
- Pakistan
- Poland
- Russia
- South Korea
- Spain
- Turkey
- United States

Similar to the 2007 Models, two indices measuring attitudes towards women's rights and attitudes towards gender empowerment were used as the dependent variables in the model. I used individual questions pertaining to these attitudes and combined them to create an index with which to judge overall attitudes towards women's rights and gender empowerment. Each individual question was ordered such that the value increased as the respondent became more supportive of women's rights and gender empowerment.

Dependent Variable: Attitudes towards Women's Rights

- WOMENRIGHTS: this variable was created from Question 80 (Q80) which asked "do you think women should have equal rights to men, or shouldn't they?"
    - Q80
        - "Should" = 1
        - "Should not" = 2

        - "Don't Know" = 8
        - "Refused" = 9
    - New Variable
        - "Should not" = 0
        - "Should" = 1

I then created the dummy variable "WOMENRIGHTSd" to be used in the summation index.

    - WOMENRIGHTSd
        - "Not affirmative" = 0 if WOMENRIGHTS = 0 or if there were missing values
        - "Affirmative" = 1 if WOMENRIGHTS = 1

- JOB: was created from Question 69C (Q69C) which asked "When jobs are scarce, men should have more right to a job than women."
    - Q69C
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - JOB
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4

I then created the dummy variable, "JOBd" which was actually used in the summation index

    - JOBd
        - "Not affirmative" if JOB = 1, JOB = 2, or if there were any missing values
        - "Affirmative" if JOB = 3 or JOB = 4

- RIGHTSscale

  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to both, WOMENRIGHTS, and JOB. This variable was created by simply adding the scores of WOMENRIGHTSd, and JOBd for each individual to give a total score of support for women's rights, which yielded a score of 0 to 2. In order to properly deal with missing values, and therefore, yield a more conservative estimate of the effects on attitudes towards women's rights, all missing values were coded as a "Not affirmative" in the final score.

Dependent Variable: Attitudes towards Gender Empowerment

- EDUCHILD: was created from Question 33 (Q33), which asked, "Do you agree or disagree with the following statement? A university education is more important for a boy than for a girl. Do you completely agree, mostly agree, mostly disagree or completely disagree?"
    - Q33
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - New Variable
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4

    I then created the variable "EDUCHILDd" as a dummy for the summation index.

    - EDUCHILDd
        - "Not affirmative" = 0 if EDUCHILD = 1, EDUCHILD = 2, or if there were missing values
        - "Affirmative" = 1 if EDUCHILD = 3 or EDUCHILD = 4
- WOMENWORK: was created from Question 69B, which stated, "Women should be able to work outside the home," and asked respondents for their level of acceptance of the statement.
    - Q69B
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - New Variable was altered so that a higher value which was equivalent to more support for women's rights.
        - "Completely disagree" = 1
        - "Disagree" = 2
        - "Agree" = 3
        - "Completely agree" = 4

I then created the variable "WOMENWORKd," which was a dummy variable that was used in the actual summation index.

  - WOMENWORKd
    - "Not affirmative" = 0 if WOMENWORK = 1, WOMENWORK = 2, or if there were any missing values.
    - "Affirmative" = 1 if WOMENWORK = 3 or WOMENWORK = 4
- MARRIAGE: was created from Question 93 (Q93), which asked respondents "What kind of marriage do you think is the more satisfying way of life?"
  - Q93
    - "One where the husband provides for the family and the wife takes care of the house and children" = 1
    - "One where the husband and wife both have jobs and both take care of the house and children" = 2
    - Don't Know= 8
    - Refused = 9
  - New Variable
    - "One where the husband provides for the family and the wife takes care of the house and children" = 1
    - "One where the husband and wife both have jobs and both take care of the house and children" = 2

I then created the dummy variable, "MARRIAGEd," to be used in the summation index.

  - MARRIAGEd
    - "Not affirmative" = 0 if MARRIAGE = 1 or if there are any missing values
    - "Affirmative" = 1 if MARRIAGE = 2.
- EMPOWERscale

  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to EDUCHILD, WOMENWORK, and MARRIAGE. This variable was created by simply adding the scores of EDUCHILDd, WOMENWORKd, and MARRIAGEd for each individual to give an overall score of support for gender empowerment that was between 0 and 3. In order to properly deal with missing values, and therefore, yield a more conservative estimate of the effects on attitudes towards gender empowerment, all missing values were coded as a "Not affirmative" in the final score.

Independent Variable: Information Access via the Internet

For my independent variable, I used Internet access as a proxy for information access because studies show the more access an individual has to the Internet, the more access they have to gender egalitarian information.

- INTERNET: was created from Question 63 (Q63) that asked, "Do you use the Internet, at least occasionally?"
  - Q63
    - "Yes" = 1

        - "No" = 2
        - Don't know = 8
        - Refused = 9
    - New Variable
        - "No" = 0
        - "Yes" = 1
        - All missing values = 0

Control Variables

- FEMALE: coded from Question 120 (Q120).
    - Q120
        - "Male" = 1
        - "Female" = 2
    - New Variable
        - "Male" = 0
        - "Female" = 1
- AGE: coded from Question 121 (Q121). The two variables are exactly with the value being equal the respondent's age. I removed all "Don't Know" and Refused" from the sample
- RELIGIOUS: coded from Question 127 (Q127), which asked, "How important is religion in your life – very important, somewhat important, not too important, or not at all important?"
    - Q127
        - "Very important" = 1
        - "Somewhat important" = 2
        - "Not too important" = 3
        - "Not at all important" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - New variable was coded to move from least religious to most religious.
        - "Not at all important" = 1
        - "Not too important" = 2
        - "Somewhat important" = 3
        - "Very important" = 4
    - RELIGIOUSb: this was the variable that was ultimately used in the model, and its goal was to isolate those who were very religious from those who were either nominally religious and those who were irreligious.
        - "Not very religious" = 0
        - "Religious" =1
- EMPLOY: coded from Q130, Q120CHI (China), Q120SPA (Spain), and Q120US (United States), which asked "What is your current employment situation?"
    - Q120

        - "Full-time employed" = 1
        - "Part-time employed" = 2
        - "Pensioner and employed" = 3
        - "Self-employed" = 4
        - "Pensioner, not employed" = 5
        - "Unemployed, no state benefit" = 6
        - "Unemployed, receiving state benefit" = 7
        - "No job, other government assistance for such things as maternity or disability" = 8
        - "Not employed (e.g. housewife, houseman, student)" = 9
        - "Don't know" = 98
        - "Refused" = 99
    - New Variable
        - "Unemployed" = 0 if Q120 = 5, 6, 7, 8, or 9
        - "Part-time employed" = 1 if Q120 = 2 or 3
        - "Full-time employed" = 2 if Q120 = 1 or 4
- EDUCATION: coded for each individual country's Q129 (each country had its own sub-variable attached to Q129, such as Q129US). Each variable had varied coding options, so I consolidated based on the standardized equivalent.
    - New variable
        - "No formal education/illiterate" = 0
        - "Incomplete primary education" = 1
        - "Complete primary education" = 2
        - "Incomplete secondary education" = 3
        - "Complete secondary education" = 4
        - "Incomplete college/junior college/vocational school" = 5
        - "Complete college/ junior college/vocational school" = 6
        - "Incomplete graduate level study" = 7
        - "Complete graduate level study" = 8
- "NATWEALTH" was coded giving each respondent their country's 2010 GDP per capita given from the World Bank Development Indicators Dataset.
- "REGIME" was coded giving each respondent their country's 2010 Polity IV autocracy-democracy score for the Polity IV Time Series Dataset The score subtracts the autocracy score (out of 10) from the democracy score (out of 10), with -10 being the score of a total autocracy, 0 being a neutral score, and 10 being the score of a total democracy.
- HIGH: was coded to group all the high-income countries together as a means of making comparisons across levels of development. All countries with a 2010 GDP per capita equal to or above $15,000 were included in this group. France, Germany, Japan, South Korea, Spain, the United Kingdom and the United States were grouped under "high-income."

- MID: was coded to group all middle-income countries together. All countries with a 2010 GDP per capita that fell between (but did not include) $2000 and $15000 fell into this group. Argentina, Brazil, China, Egypt, Indonesia, Jordan, Lebanon, Mexico, Poland, the Russian Federation, and Turkey were grouped under “middle-income.”
- LDC: was coded to group all low-income countries together. All countries with a 2010 GDP per capita of $2000 or below fell into this group. India, Kenya, Nigeria, and Pakistan fell under “low-income.”
- RELFRAG: was coded from the dataset Quality of Governance. This variable gives each respondent their country’s 2010 score for religious fractionalization. It is a score from 0 to 1, with a higher number represented a more religious fractionalized state. This section of the dataset was compiled by Alesina, Devleeschauwer, Easterly, Kurlat & Wacziarg. The variable name “al_religion” from the original dataset was renamed “RELFRAG” when inserted into the 2010 PGAP dataset.
- FEMALEPOL: was coded from data collected by the Inter-Parliamentary Union, which tracks how many females are in office. Each respondent is given the value of the percentage of legislators in the lower-house of the legislative branch that are female in their country as of December 31, 2010.
- ssaf: was coded to bring together all the respondents from Sub-Saharan Africa. It grouped together those from Kenya and Nigeria.
- weu: was coded to bring together all the respondents from Western Europe. It grouped together those from Britain, France, Germany, and Spain.
- eeu: was coded to bring together all the respondents from Eastern Europe. It grouped together all those from Poland and the Russian Federation.
- mena: was coded to bring together all the respondents from the Middle East and North Africa together. It brought together those from Egypt, Jordan, Lebanon, and Turkey.
- sa: was coded to bring together all the respondents from South and Southeast Asia. It grouped those from India, Pakistan, and Indonesia.
- la: was coded to bring together all the respondents from Latin America. It grouped those from Argentina, Brazil, and Mexico.
- ea1: was coded to bring all those from East Asia together. It grouped respondents from China, Japan, and South Korea.
- na: was coded to represent all those from North America. For this sample, that was only the American respondents. This variable was the one omitted from the model as a reference dummy.

Appendix C

2012 Models: Model 5 and Model 6

Survey Background and Methodology

The Pew Global Attitudes Project (PGAP) Survey conducted from March 18, 2012 to April 20, 2012 was conducted using both telephone interviews and face-to-face interviews in 21 varied countries. The Princeton Survey Research Associates International helped to direct the project. A sample between 800 and 4,100 was used in each country, and mostly all were based on a sample taken from the entire population. These individual national samples yielded a total sample of 26, 210 for the entire 2007 PGAP dataset. The effective sample for the model was 5116.

Surveyed Countries (under names used by PGAP)

- Brazil
- Britain
- China
- Czech Republic
- Egypt
- France
- Germany
- Greece
- India
- Italy
- Japan
- Jordan
- Lebanon
- Mexico
- Pakistan
- Poland
- Russia
- Spain
- Tunisia
- Turkey
- United States

Countries Used in Models 5 and 6:

- Egypt
- Jordan
- Lebanon
- Pakistan
- Tunisia
- Turkey

Dependent Variable: Attitudes towards Women's Rights

As with the 2007 and 2010 models, a summation index of individual questions was used as the dependent variable. An overall score based on the results of each question for each respondent was created.

- WOMENRIGHTS: was created from Question 85 (original variable name "Q85") which asked respondents, "do you think women should have equal rights with men, or shouldn't they?"
    - Q85
        - "Should" = 1
        - "Should not" = 2
        - "Don't Know" =8
        - "Refused" = 9
    - New Variable
        - "Should not" = 0
        - "Should" = 1

I then created the dummy variable "WOMENRIGHTSd" to be used in the summation index.

    - WOMENRIGHTSd
        - "Not affirmative" = 0 if WOMENRIGHTS = 0 or if there were missing values
        - "Affirmative" = 1 if WOMENRIGHTS = 1
- JOB: was created from Question 86B (Q86B) which asked "When jobs are scarce, men should have more right to a job than women."
    - Q69C
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - JOB
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3

        - "Completely disagree" = 4

I then created the dummy variable, "JOBd" which was actually used in the summation index

    - JOBd
        - "Not affirmative" if JOB = 1, JOB = 2, or if there were any missing values
        - "Affirmative" if JOB = 3 or JOB = 4

- RIGHTSscale
  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to WOMENRIGHTS, and JOB. This variable was created by simply adding the scores of WOMENRIGHTSd, and JOBd for each individual to give a total score of support for women's rights, which yielded a score of 0 to 2. In order to properly deal with missing values, and therefore, yield a more conservative estimate of the effects on attitudes towards women's rights, all missing values were coded as a "Not affirmative" in the final score.

Dependent Variable: Attitudes towards Gender Empowerment

The dependent variable for attitudes towards gender empowerment was created in a very similar manner to the previous dependent variable. Questions pertaining to attitudes towards gender empowerment were used.

- LEADER: this variable was created from Question 101 (Q101), which asked, "Which one of the following statements comes closest to your opinion about men and women as political leaders?"
    - Q101
        - "Men generally make better political leaders than women" = 1
        - "Women generally make better political leaders than men" = 2
        - "In general, women and men make equally good political leaders" = 3
        - Don't know = 8
        - Refused = 9
    - New Variable was recoded to suit spectrum of more support in the upward direction
        - "Men generally make better political leaders than women" = 1
        - "In general, women and men make equally good political leaders" = 2
        - "Women generally make better political leaders than men" = 3

I then turned the variable "LEADER" into a dummy variable, called "LEADERd," which was the variable used in the summation

    - LEADERd
        - Not affirmative = 0 for "LEADER" =1 or any missing values
        - Affirmative = 1 for "LEADER" = 2 or "LEADER" =3

- HUSBAND: was created from Question 102 (Q102), which asked, "Do you think a woman should choose her own husband, or do you think it is better for a woman's family to choose her husband?"

- Q102
  - "Woman should choose" = 1
  - "Family should choose" = 2
  - "Both should have a say" = 3
  - "Don't know = 8
  - "Refused" = 9
- New Variable
  - "Family should choose" = 1
  - "Both should have a say" = 2
  - "Woman should choose" = 3

I then created "HUSBANDd" as the dummy variable for the index.

- HUSBANDd
  - Not affirmative = 0 for "HUSBAND" = 1 or missing values
  - Affirmative =1 for "HUSBAND" = 2 or "HUSBAND" = 3

- WOMENWORK: was created from Question 86A (Q86A), which stated, "Women should be able to work outside the home," and asked respondents for their level of acceptance of the statement.
  - Q69B
    - "Completely agree" = 1
    - "Agree" = 2
    - "Disagree" = 3
    - "Completely disagree" = 4
    - "Don't know" = 8
    - "Refused" = 9
  - New Variable was altered so that a higher value which was equivalent to more support for women's rights.
    - "Completely disagree" = 1
    - "Disagree" = 2
    - "Agree" = 3
    - "Completely agree" = 4

I then created the variable "WOMENWORKd," which was a dummy variable that was used in the actual summation index.

- WOMENWORKd
  - "Not affirmative" = 0 if WOMENWORK = 1, WOMENWORK = 2, or if there were any missing values.
  - "Affirmative" = 1 if WOMENWORK = 3 or WOMENWORK = 4

- EMPOWERscale

  This variable is the summation index that gives a total score to each sampled individual based on his or her responses to LEADER, HUSBAND, and WOMENWORK. This variable was created by simply adding the scores of LEADERd, HUSBANDd, and WOMENWORKd for each individual to give an overall score of support for gender empowerment that was between 0 and 3. In order to properly deal with missing values,

and therefore, yield a more conservative estimate of the effects on attitudes towards gender empowerment, all missing values were coded as a "Not affirmative" in the final score.

Independent Variable: Information Access via the Internet

For my independent variable, I used Internet access as a proxy for information access because studies show the more access an individual has to the Internet, the more access they have to gender egalitarian information.

- INTERNET: was created from Question 77 (Q77) that asked, "Do you use the Internet, at least occasionally?"
    - Q63
        - "Yes" = 1
        - "No" = 2
        - Don't know = 8
        - Refused = 9
    - New Variable
        - "No" = 0
        - "Yes" = 1
        - All missing values = 0

Control Variables

- FEMALE: coded from Question 141 (Q141).
    - Q141
        - "Male" = 1
        - "Female" = 2
    - New Variable
        - "Male" = 0
        - "Female" = 1
- AGE: coded from Question 142 (Q142). The two variables are exactly with the value being equal the respondent's age. I removed all "Don't Know" and Refused" from the sample
- RELIGIOUS: coded from Question 152 (Q152), which asked, "How important is religion in your life – very important, somewhat important, not too important, or not at all important?"
    - Q152
        - "Very important" = 1
        - "Somewhat important" = 2
        - "Not too important" = 3
        - "Not at all important" = 4
        - "Don't know" = 8
        - "Refused" = 9

  - New variable was coded to move from least religious to most religious.
    - "Not at all important" = 1
    - "Not too important" = 2
    - "Somewhat important" = 3
    - "Very important" = 4
  - RELIGIOUSb: this was the variable that was ultimately used in the model, and its goal was to isolate those who were very religious from those who were either nominally religious and those who were irreligious.
    - "Not very religious" = 0
    - "Religious" =1
- EMPLOY: coded from Q155, Q155CHI (China), Q155SPA (Spain), and Q156US (United States), which asked "What is your current employment situation?"
  - Q155
    - "Full-time employed" = 1
    - "Part-time employed" = 2
    - "Pensioner and employed" = 3
    - "Self-employed" = 4
    - "Pensioner, not employed" = 5
    - "Unemployed, no state benefit" = 6
    - "Unemployed, receiving state benefit" = 7
    - "No job, other government assistance for such things as maternity or disability" = 8
    - "Not employed (e.g. housewife, houseman, student)" = 9
    - "Don't know" = 98
    - "Refused" = 99
  - New Variable
    - "Unemployed" = 0 if Q120 = 5, 6, 7, 8, or 9
    - "Part-time employed" = 1 if Q120 = 2 or 3
    - "Full-time employed" = 2 if Q120 = 1 or 4
- EDUCATION: coded for each individual country's Q154 (each country had its own sub-variable attached to Q154, such as Q154US). Each variable had varied coding options, so I consolidated based on the standardized equivalent.
  - New variable
    - "No formal education/illiterate" = 0
    - "Incomplete primary education" = 1
    - "Complete primary education" = 2
    - "Incomplete secondary education" = 3
    - "Complete secondary education" = 4
    - "Incomplete college/junior college/vocational school" = 5
    - "Complete college/ junior college/vocational school" = 6
    - "Incomplete graduate level study" = 7
    - "Complete graduate level study" = 8

- "NATWEALTH" was coded giving each respondent their country's 2012 GDP per capita given from the World Bank Development Indicators Dataset.
- "REGIME" was coded giving each respondent their country's 2012 Polity IV autocracy-democracy score for the Polity IV Time Series Dataset The score subtracts the autocracy score (out of 10) from the democracy score (out of 10), with -10 being the score of a total autocracy, 0 being a neutral score, and 10 being the score of a total democracy.
- HIGH: was coded to group all the high-income countries together as a means of making comparisons across levels of development. All countries with a 2012 GDP per capita equal to or above $15,000 were included in this group. Britain, Czech Republic, France, Germany, Greece, Italy, Japan, Spain, and the United States were grouped under "high-income."
- MID: was coded to group all middle-income countries together. All countries with a 2010 GDP per capita that fell between (but did not include) $2000 and $15000 fell into this group. Brazil, China, Egypt, Jordan, Lebanon, Mexico, Poland, the Russian Federation,, Tunisia, and Turkey were grouped under "middle-income."
- LDC: was coded to group all low-income countries together. All countries with a 2010 GDP per capita of $2000 or below fell into this group. India and Pakistan fell under "low-income."
- RELFRAG: was coded from the dataset Quality of Governance. This variable gives each respondent their country's 2010 score for religious fractionalization. It is a score from 0 to 1, with a higher number represented a more religious fractionalized state. This section of the dataset was compiled by Alesina, Devleeschauwer, Easterly, Kurlat & Wacziarg. The variable name "al_religion" from the original dataset was renamed "RELFRAG" when inserted into the 2010 PGAP dataset. 2010 was the most recent score that was available.
- FEMALEPOL: was coded from data collected by the Inter-Parliamentary Union, which tracks how many females are in office. Each respondent is given the value of the percentage of legislators in the lower-house of the legislative branch that are female in their country as of December 31, 2012.
- mena: was coded to group together all those from the Middle East. This group included those from Egypt, Jordan, Lebanon, and Turkey.

Appendix D

Table 3-1: Coefficient Interpretation Simulations for Support for Women's Rights

Support for Women's Rights						
2007						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
With Internet	0.585	0.627	**-0.042**	0.136	0.117	**0.019**
Female Gender	0.640	0.627	**0.013**	0.111	0.117	**-0.006**
Old Age	0.719	0.598	**0.121**	0.080	0.130	**-0.050**
Religious	0.608	0.711	**-0.103**	0.125	0.083	**0.042**
Education	0.747	0.541	**0.206**	0.070	0.159	**-0.089**
FemalePol	0.591	0.651	**-0.060**	0.134	0.106	**0.028**
2010						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
Internet	0.068	0.088	**-0.020**	0.427	0.360	**0.067**
Gender	0.050	0.088	**-0.038**	0.505	0.360	**0.145**
Age	0.113	0.079	**0.034**	0.299	0.386	**-0.087**
Religious	0.093	0.082	**0.011**	0.345	0.377	**-0.032**
Education	0.054	0.123	**-0.069**	0.485	0.263	**0.222**
FemalePol	0.105	0.118	**-0.013**	0.486	0.289	**0.197**
2012						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
Internet	0.160	0.264	**-0.104**	0.214	0.127	**0.087**
Gender	0.150	0.265	**-0.115**	0.228	0.127	**0.101**
Age	0.246	0.270	**-0.024**	0.139	0.123	**0.016**
Religious	0.278	0.227	**0.051**	0.119	0.151	**-0.032**
Education	0.272	0.260	**0.012**	0.122	0.129	**-0.007**
FemalePol	0.167	0.359	**-0.192**	0.206	0.085	**0.121**

Appendix E

Table 3-2 Coefficient Interpretation Simulations for Support for Gender Empowerment

Support for Gender Empowerment						
2007						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
Internet	0.023	0.026	**-0.003**	0.463	0.429	0.034
Gender	0.014	0.026	**-0.012**	0.579	0.429	0.150
Age	0.023	0.027	**-0.004**	0.464	0.419	0.045
Religious	0.027	0.023	**0.004**	0.423	0.457	-0.034
Education	0.012	0.042	**-0.030**	0.618	0.312	0.302
FemalePol	0.018	0.034	**-0.016**	0.531	0.362	0.169
2010						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
Internet	0.114	0.143	**-0.029**	0.174	0.139	**0.035**
Gender	0.074	0.139	**-0.065**	0.253	0.174	**0.079**
Age	0.179	0.130	**0.049**	0.110	0.153	**-0.043**
Religious	0.155	0.131	**0.024**	0.129	0.152	**-0.023**
Education	0.091	0.207	**-0.116**	0.213	0.094	**0.119**
FemalePol	0.130	0.152	**-0.022**	0.153	0.131	**0.022**
2012						
Variable	*Minimum Score for Internet Users*	*Minimum Score for non-Internet Users*	*Difference in Minimum Score*	*Maximum Score for Internet Users*	*Maximum Score for non-Internet Users*	*Difference in Maximum Score*
Internet	0.069	0.093	**-0.024**	0.127	0.095	**0.032**
Gender	0.056	0.093	**-0.037**	0.154	0.095	**0.059**
Age	0.105	0.090	**0.015**	0.085	0.098	**-0.013**
Religious	0.101	0.074	**0.027**	0.088	0.119	**-0.031**
Education	0.075	0.105	**-0.030**	0.117	0.084	**0.033**
FemalePol	0.071	0.114	**-0.043**	0.124	0.077	**0.047**

Appendix F

Additional Models for 2007

Due to the somewhat unusual nature of the results of Model 1 (Support for Women's Rights in 2007), I did further investigation and analysis into the individual components of the additive index for support for women's rights. My suspicion was that the topic of veiling might have played a role in effecting the results, but given that Model 1 was based off mostly Muslim responses, I believed that veiling would not have as much as an effect on Model 1 as it would in Model 3, where Muslims were no longer a majority of respondents (please refer to Appendix E for further information about veiling in Model 3). I ran two individual ordinal logistical regression models: one on support for the right to veil and one on support for the right for women to work outside the home.

Please refer to the table on the next page

Table 4-1: Ordinal Logistical Regression Results for Support for Veiling and Support for Women Working Outside the Home in the Year 2007

	Model 7		Model 8	
	Support for Women's Right to Veil		Support for Women's Right to Work Outside the Home	
Variable	Estimated Coefficient (Robust Standard Error)	Confidence Interval	Estimated Coefficient (Robust Standard Error)	Confidence Interval
Internet Access	0.068	[-0.047, 0.018]	-0.053	[-0.159, 0.052]
	(0.059)		(0.054)	
Female	0.386***	[0.300, 0.472]	0.184***	[0.102, 0.266]
	(0.044)		(0.042)	
Age	0.003	[0, 0.006]	-0.001	[-0.004, 0.002]
	(0.002)		(0.001)	
Religiousness	-0.090	[-0.196, 0.016]	-0.297***	[-0.401, -0.193]
	(0.054)		(0.053)	
Employment	-0.072***	[-0.119, -0.025]	0.005	[-0.039, 0.049]
	(0.024)		(0.022)	
Education	0.073***	[0.048, 0.098]	0.053***	[0.030, 0.077]
	(0.013)		(0.012)	
National Wealth	0.00003***	[0.00002, 0.00004]	0.00001***	[0.00000, 0.00001]
	0.000		0.000	
Regime Type	0.065***	[0.055, 0.074]	0.061***	[0.052, 0.070]
	(0.005)		(0.005)	
Religious Fragmentation	-0.978***	[-1.160, -0.080]	-0.669***	[-0.844, -0.494]
	(0.093)		(0.089)	
Female Political Participation	0.006	[-0.004, 0.015]	0.045***	[0.036, 0.055]
	(0.005)		(0.005)	
Middle East & North Africa	0.235**	[0.071, 0.399]	0.330***	[0.173, 0.488]
	(0.083)		(0.080)	
South Asia	0.794***	[0.656, 0.931]	-0.412***	[-0.538, -0.286]
	(0.070)		(0.064)	

Southeast Asia	-0.049	[-0.180, 0.082]	-0.090	[-0.214, 0.033]
	(0.007)		(0.063)	
Number of Observations	10180		10109	
R^2	0.028		0.023	

*Significant at 5% **Significant at 1% *** Significant at 0.1%

Appendix G

Additional Model for 2010 Dataset

The final model for "Support for Women's Rights" in 2010 originally contained a question on veiling for Muslim women. The question specifically asked respondents, "Should a woman have the right to choose to wear a veil?" The question was coded such that more support for the right to veil was equivalent to more support for women's rights. When included in the model, the model yielded some very unusual results. Namely, Western Europe, which should have had a positive relationship with support for women's rights showed a negative response. This result was rather unusual given that the Middle East was showing a stronger and more positive relationship with support for women's rights.

Upon further investigation, it was clear that the topic of veiling is complex. It is especially controversial in wealthier countries in Western Europe. Laws in France have removed the right for women to veil, and other Western Europeans share similar views. Therefore, it was imperative to see the results without this question to see if the results changed. When the question was removed, the results varied greatly. Therefore, this question was not included in the final model, but it has been included here on the next page. To see the effect that veiling as on support for women's rights, I also ran the model using support for veiling as the dependent variable. As it can be seen, Western Europe has a statistically significant negative relationship with support for veiling, which can explain the influence this question had on the additive index.

Coding for Variable:

- VEIL: this variable was created from Question 59, which asked, "Some countries are considering a ban on Muslim women wearing full veils that cover all of the face except the eyes in public places including schools, hospitals, and government offices. Would you approve or disapprove of such a ban in [your] country?" and 69A which stated "Women should have the right to decide if they wear a veil" and asked respondents to respond with their level of acceptance.
    - Q59 and Q59A
        - "Approve" = 1
        - "Disapprove" = 2
        - "Don't Know" = 8
        - "Refused" = 9
    - Q69A
        - "Completely agree" = 1
        - "Agree" = 2
        - "Disagree" = 3
        - "Completely disagree" = 4
        - "Don't know" = 8
        - "Refused" = 9
    - New variable which combined values in all three variables

- "Completely disagree" = 1
- Disagree = 2 (includes Q59 & Q59FRA = 1)
- Agree = 3 (includes Q59 & Q59FRA = 2)
- Completely agree = 4

I then turned the variable "VEIL" into a dummy variable, called "VEILd," which was the actual variable used in the summation. The dummy variable was created to give respondents a score of "affirmative" or "not affirmative" that would be captured in the overall index.

- VEILd
  - Not affirmative = 0. This score was given for VEIL =1 or VEIL = 2. This score was also given for any respondents who did not answer the question for whatever reason (missing value).
  - Affirmative =1. This score was given for VEIL = 3 or VEIL = 4.

Please refer to the next page for the table.

Table 4-2: Ordinal Logistical Regression Results on Support for Women's Rights and Support for the Right to Veil for the Year 2010

	Model 9 Support for Women's Rights (including Veiling)		Model 10 Support for the Right to Veil	
Variable	Estimated Coefficient (Standard Error)	Confidence Interval	Estimated Coefficient (Standard Error)	Confidence Interval
Internet Access	0.181*** (0.041)	[0.102, 0.261]	0.021 (0.062)	[-0.102, 0.143]
Female	0.430*** (0.031)	[0.368, 0.492]	0.415*** (0.050)	[0.317, 0.513]
Age	-0.012*** (0.001)	[-0.014, -0.010]	-0.015*** (0.002)	[-0.018, -0.012]
Religiousness	0.284*** (0.035)	[0.217, 0.352]	0.168*** (0.056)	[0.058, 0.278]
Employment	0.016 (0.017)	[-0.017, 0.049]	-0.080*** (0.026)	[-0.131, -0.028]
Education	0.046*** (0.010)	[0.025, 0.066]	0.032* (0.013)	[0.006, 0.058]
National Wealth	0.00005*** (0.000)	[0.00005, 0.00007]	-0.00004*** (0.00001)	[-0.00007, -0.00002]
Regime Type	0.058*** (0.007)	[0.044, 0.071]	0.218*** (0.010)	[0.199, 0.237]
Religious Fragmentation	0.654*** (0.114)	[0.429, 0.877]	0.430*** (0.137)	[0.161, 0.700]
Female Political Participation	0.056*** (0.003)	[0.051, 0.061]	0.032*** (0.008)	[0.016, 0.047]
Sub-Saharan Africa	0.078 (0.226)	[-0.364, 0.520]	-1.921* (0.702)	[-3.298, -0.544]
Western Europe	-0.828*** (0.097)	[-1.018, -0.638]	-2.845*** (0.193)	[-3.224, -2.466]

Eastern Europe	-0.449*	[-0.826, -0.072]	Omitted	
	(0.192)			
Middle East & North Africa	1.746***	[1.313, 2.178]	0.019	[-1.202, 1.239]
	(0.221)		(0.623)	
South Asia	-0.175	[-0.630, 0.279}	-1.713**	[-3.016, -0.410]
	(0.232)		(0.665)	
Latin America	-0.464*	[-0.839, -0.089]	Omitted	
	(0.191)			
East Asia	-1.918***	[-2.148, -1.689]	Omitted	
	(0.117)			
Number of Observations	19248		8964	
R^2	0.139		0.120	

*Significant at 5% **Significant at 1% *** Significant at 0.1%

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