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**A Comparative Analysis of Neopatriarchy and
Female Labor Force Participation in Islamic
Countries¹**

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Abstract

This paper analyzes the cross-national determinants of female labor force participation in Islamic countries. The study explores neopatriarchal perspective using indicators of the role of the government and the political role of women. The results suggest that government plays a significant role determining female employment. Islam however as a cultural variable contributes significantly to the model but it is not the only contributing factor—political atmosphere and economic development also contribute in determining female labor force participation.

It is not a surprise to social scientists to argue that Islamic countries are outliers on gender relations, employment patterns and demographic factors. These countries generally have lower-than-average levels of female employment activities and higher-than-average levels of fertility and mortality relative to non-Muslim nations at the same level of economic development (Weeks 1988). For example, in 1998, female employment in Islamic countries was 21% while for other developing nations the rate was 38% (World Bank World Tables 2000). Other demographic factors, such as fertility, mortality rates and women's educational attainment, are consistent with the same pattern. There is an overwhelming emphasis in the popular press and the academic literature on Islam excluding women from the public domain. It is argued that Islam and the institution of Hijab confines women's activities to the private domain, which in turn creates hindrance, acts as effective cultural devices and as a result inhibits women's integration into the formal and modern sectors of the economy.

This paper investigates the cross-national determinants of female employment patterns in Islamic countries. The study stresses Islam as a powerful cultural, religious and political force, but not the one and only factor (see also studies and debates by Ahmed 1992; Al-Leil 1996; Brand 1996; Moghadam, 2003). I look at the role of the government in these societies as the main employer and investor, mainly because of the role of enormous oil revenue in the Muslim Middle East. I also look at the patriarchal system which is intertwined, often embedded in Islam, and is appropriated by the state to reinforce its rule (Sharabi refers to this as "neopatriarchy." I will explain this in later section).

The Influence of Oil Revenue

The Middle Eastern and North African regions experienced the end of foreign rule and reached independence from Western imperialism shortly after WWII. Colonialism however was replaced by the dominant position of the United States, political influence of the European countries, and the former Soviet Union. The region experienced rapid economic development since the 1950s and the oil boom of the 1970s contributed even further to economic, political, and demographic changes.

Oil producing countries blossomed and gained overnight economic success while for countries importing oil this was an alarming economic and political era (Debeir et al. 1991). The regional economy was transformed from more dependent on agriculture to more concentrated on industry and export of resources. The oil boom also enabled oil-producing countries to adapt an import substitution development strategy (vs. export substitution), which tends to be more capital intensive and less conducive to labor especially female labor (Moghadam 2003).

Debates on Modernization

It is well documented that when societies experience transition from pre-industrial agriculture to industrialism, many aspects of their societal characteristics change. Studies of female employment patterns in Western societies suggests that female employment declines in the early stages of economic development due to a sharp decline in traditional sectors such as agriculture and petty trade. As the formal labor market grows during early stages (and agriculture sector jobs declines), more women leave the agricultural work but do not always join the modern sector (Anker and Hein 1986; Boserup 1970, 1990; Oakley 1974; Ryan 1975; Tilly and Scott 1978). Later with the growth in the country's occupational structure (raising jobs in service and White-collar occupations), women's labor force participation increases again (Evans and Timberlake 1980; Fiela 1983; Kentor 1981; Semyonov and Levin-Epstein 1986). Thus there is a U-shaped or curvilinear rather than linear relationship between economic development and female labor force participation (see Boserup 1990; Haghighat 2002; Oppenheimer 1970; Pample and Tanaka 1986).²

Modernization perspective describes nations as more or less modern according to their degree of industrialization (Inkles and Smith 1974; Moore 1979; Parsons 1971). Societies going through modernization also experience change in their occupational structure and educational opportunities. This is often accompanied by reduced fertility and women's household responsibilities (see classic studies of Collver and Langlois 1962; Wilensky 1968). Thus, modern societies create a more favorable condition for women to enter the labor force. Female participation in the labor market rises with urbanization and modernization (Durand 1975). Social and cultural changes such as increase in age at marriage, demand for more educated men and women, decline of fertility rate, all contribute to a larger supply of female workers. Women are freed from family responsibilities (i.e. housework, childrearing, early marriage, consequent pregnancies and childcare responsibilities) and therefore more available to be employed.

Challenging Modernization

Until Boserup's 1970 work, economic development was assumed to enhance inclusion and participation of women in the labor force. Boserup challenged the view that with modernization and industrialization, technology liberates women by providing better jobs in the modern sector. She argued that improved technology particularly in agriculture lowers women's status and excludes them from productive work, since there is a positive correlation between women's status and their roles in food production. As industrialization, urbanization advances, and societies are introduced to new

technologies, women are more marginalized from agricultural work. Urbanization in fact marginalizes and alienates women not only from economic involvement but also from their kinship support networks available to them in farm communities.

Modernization and Patriarchy

Except Boserup, modernization perspective has been questioned and debated by many other scholars (see Fernandez-Kelly 1983; Jain 1990 for example). This perspective although widely applied, has not been able to explain employment rates in many parts of the world. Muslim Middle Eastern countries are generally considered prime candidates for failure of modernization explanations. Because of their strong kinship system, patrilineal descent tradition and patriarchal norms historically embedded in their cultures, modernization process has not been able to adequately explain demographic and structural changes in these countries.

Other factors such as social and cultural factors tend to explain lower participation of women in the modern sector. Thus, regardless of women's qualifications or demand for their labor, a set of powerful cultural norms on gender relations, discourages women from entering the labor force and participating in the modern sector of the economy. On the demand side, patriarchal values embedded in the culture, discourages employers from hiring women and investing in them (e.g. Papenek 1990). Therefore, societies with strong patrilineal descent and strong kinship system (e.g. Middle East, South and East Asia) tend to keep women out of the labor force. If included, they will be employed in lower paying jobs where men are given priority and get the better paying and more prestigious jobs (see for example Greenhaegh 1985; Jone 1984; Pyle 1990; Salaf 1981).

Youssef (1974) for example, in contrasting the labor force experience of women in the Middle East and Latin American countries, states that "...the level of economic development does not explain the extent to which women participate in the non-agricultural labor force" (1974, p.21); She places greater emphasis on the kinship system and social organization of the family. She links low proportion of women in modern sectors, for example clerical jobs, to cultural norms of the separation of men and women in Islamic societies that stresses restriction and limited interaction of women with non-kin male members. Papenek (1973) analyzes seclusion of women in the Muslim and Hindu societies through their "separate worlds", and the "symbolic shelter" of women who are seen as vulnerable to the outside world. She points out there is a clear connection between the importance that most societies place on the control of descent and women's role.

Cross-national and cross-regional research such as Marshal (1985) and Pampel & Tanaka (1986) has briefly touched on the issue of culture, patriarchy and female labor force participation (See other studies such as Black & Cottrell 1981; Haghghat 2002; Iglitzen & Ross 1986; Joeke 1987; Moghadam 1988; O'Kelly & Carney 1985; Young 1988, Malhotra, Venneman & Kishor 1995). In their study, Clark, Ramsbey and Adler (1991) measured culture by regional differences and found that region is related not only to levels of women's share of the labor force but in some instances, to changes in those levels. Their cross-sectional multivariate analyses find women in Islamic and Latin American nations substantially less likely to participate in the labor force than women elsewhere. They argue that Islam, because of its ideology of seclusion of women and Latin America, and its traditional ideological support for a patriarchal system, have inhibited women's entry into the paid labor force.

In general, these studies perceive the kinship structure of non-Islamic countries as more adaptable to a higher demand for female labor force participation that may accompany economic development. It is argued that since Islamic doctrine encourages the separation of the sexes and clear division of labor, also a patriarchal family system, women are not encouraged to enter the paid labor force (Altorki 1986; Walter 1981). Exclusion of women therefore inhibits their integration in the formal labor force regardless of the country's level of economic development.

Patriarchy Meets Modernity: Neopatriarchal Perspective

While socio-cultural perspective places emphasis on *cultural* structure of the society, neopatriarchal perspective stresses on both the *institutional* as well as the *cultural* structure of the society. A neopatriarchal society is a "modernized" patriarchal society going through rapid economic development and modernization (as in many oil-producing countries since the mid-1950s). This perspective views the process of modernization as a uniquely European phenomenon (Sharabi 1988). Only Western societies experienced modernization in a "pure" sense because it happened without interference from other nations. Today's developing countries would not follow the footsteps of Western nations because of their dependent political and economic position and their cultural differences.

Sharabi (1988), the pioneer theorist developing this perspective, concentrates on Arab Muslim nations. He expresses the two main concepts of neopatriarchy as being 1) patriarchy (cultural), and 2) dependency (economic); its economic structure is dependent capitalism and its social structure is patriarchy. To Sharabi, being modern is a state of mind (psychological changes) consisting of structural changes and processes (political and economic changes) in the society. Therefore, a neopatriarchal society experiences structural changes

under a dependent economic and political system without breaking its patriarchal culture. Thus, "...the success of modernization itself is disabling when carried out in the framework of dependency and subordination and resulting in neopatriarchy" (p.22). These societies, therefore, do not experience the same demographic changes as would be expected of a society approaching "modernization." Slow or no reduction in fertility, mortality, and little or no major sectoral changes in female labor force participation are some of the demographic "imbalances" that might be observed in those societies (see Mabro 1988; Obermeyer 1992). Therefore, neopatriarchy is the product of the interaction between modernity and patriarchy in the context of dependent capitalism.

Sharabi comments on governments of Arab countries. He states that in the transition to modernity (from patriarchy to modernization), their government have "become the central controlling force in society, not just by their monopoly of coercion but also by their vastly increased economic power as owner of the basic industries, source of all major investments...provider of all essential services and the largest employer in society" (Sharabi, p.60). Sharabi concludes that this strategy became financially possible mainly because of the sudden accumulation of oil revenues and other investment strategies.

Moghadam (1992, 2003) for instance applies the neopatriarchal framework to legal and political status of women in Islamic societies. Women's traditional roles are constantly stressed in the political arena as symbols of traditionalism, Islamization of the state, and reaction to the interference of Western politics. On the other hand, Obermeyer (1992) focuses her attention on the politics of fertility, mortality, and female labor force participation in Arab Muslim nations and states:

The ambivalence of any Arab/Muslim leaders toward female emancipation stems from their need to address two conflicting demands in their societies: prosperity, which means modernization; and identity, which is partly rooted in tradition...The traditional bases of identity present themselves as the safest choice, and religion is used selectively to cope with political exigencies and to legitimize the power of individual leaders (p. 52).

Hijab (1988, 1994) also challenges the mainstream view that Islam is the main suppresser of women's status and points to the role of the state rather than religion. She states that conservative attitudes toward women have existed in many parts of the world and in different societies throughout history. She presents studies of countries such as Tunisia and Iraq where the role of the government in changing social attitudes toward women's employment changed when their labor was in demand. For example, Iraq's need for workers was so pressing that the government imported over a million Egyptians to be employed in the agricultural sector. The Iraqi government also made special efforts to

change social attitudes toward women's involvement in the public sector through media and elite channels. Hijab (1988) gives the example of a pharmaceutical plant north of Baghdad where female workers had to be brought in from Baghdad and housed in dormitories because the plant was not able to hire women from the nearby village since local women were not allowed by their male members to work in the factory. The villagers were resentful toward the new plant. Sometimes the buses transporting women from Baghdad were attacked. Gradually, women from the village started to seek work in the factory themselves, first being chaperoned by their male relatives and finally going to work on their own.

Hijab also cites the example of Tunisia where the government had been eager to integrate women into the modern labor force up until the unemployment of men became a serious problem. Hijab states that the male unemployment problem became so serious that the state could not afford to consider the needs of both men and women. The government "was clearly happy to adopt the traditional view that men were the breadwinners and had to be planned for accordingly, and that women were the economic responsibility of their men folks" (Hijab, p.81).

To sum up, it seems that once women's labor in the modern sector is in demand, government responds to the need by integrating women into the labor force. Islamic ideology as a conservative factor to suppress women's equal access to the modern sectors is manipulated when the society is facing a high rate of male unemployment. Government officials engineer this strategy as a way to deflect attention from economic failures. Gender issues had been addressed in those countries superficially because women's labor force participation has never been seriously in demand. Because of high fertility rate, political and economic failures, governments are facing high rates of unemployment and a disproportionately young population in search of jobs. In these circumstances, Islamic ideology is manipulated to keep women out of the labor force and men are given priority.

Research Design and Measures of Principal concepts

All countries of the world, developed and developing are included in the sample where data are available between 1988-1993. After deletion of cases for which data were missing, the sample size is 135 countries. Since there is a large number of countries included in the study and several variables entered in the model, the data was selected for a period of five years instead of one point in time. Data were available for later years for some of the variables (as far as 2003) mainly for developed countries, while data for many of the developing societies were only available up until late 1980s, early 1990s. Therefore, the latest point in time that data was available for most of the countries were

between the five-year range of 1988-1993. In this study (with a large magnitude of cross-national data), this approach allowed the author to prevent skewness and bias in the representation of countries.

Female Employment

Female employment activity is the dependent variable measured as the female share of the labor force for 1990 (FLFP). This measure is preferred over the female labor force participation rate (per 100 adult women), since it entails consideration of female labor activity in relation to male activity and thus minimizes the error introduced by countries varying definitions of labor force participation. The female share of the labor force ranges from 3% (Pakistan) to 56% (Rwanda). The sources for this measure are the *United Nations Statistics Division- Demographic, Social and Housing Statistics* (2000), *1990 World Population Data Sheet*, *World Social Indicators of Development* (1993) and *The World's Women* (1995).

The limitations of the female share of the labor force measure are well recognized. "Statistical discrimination against women" (Hijab 1988) is a serious problem with female employment statistics. This is evident in 1) defining work as labor for wages, which excludes housework, and childcare and 2) national censuses, which exclude unpaid family work such as farm work and petty trade (Anker and Hein 1986; Hijab 1994; Nuss 1989). Hijab uses Egyptian data as an example:

...national statistics in Egypt in 1970 reported that only 3.6 percent of the agricultural labor force was women. A sample of rural household wives throughout the country revealed that half of wives ploughed and leveled the land in lower Egypt, and between 55 and 70 percent participated in agricultural activities, and about 75 percent engaged in milking and poultry activities (UN 1984a, p.41) (p.73).

Hijab concludes that with all the discrepancies in data collection in the Arab world, female labor force participation is still lower in that region than other parts of the world.

Islam

Islamization is measured by the percent of the population that is Muslim (ISLAMIC). Countries with less than .7% Muslim in their population are reported as countries with zero Muslim population.³ There are 28 countries listed as having 75-100% of their population being Muslim and 50 countries show less than one percent Muslim in their population. The sources for this measure are Weeks (1988), <<http://www.Islamicpopulation.com>>, *The Institute*

of *Islamic Information and Education*, *CIA World Facts Book* (2000) and <<http://www.Islamicweb.com>>.

Oil Revenue

Oil revenue (OIL) is calculated from data on crude petroleum production in thousand metric tons in 1990 from the United Nations 1999 *Energy Statistics Yearbook*. Countries with missing values for oil production were not oil producing countries; therefore, missing values are replaced with zero. Converting to an approximate dollar value of \$24 per barrel in 1990 (*Middle East and North Africa 1995, Energy Information Sheet*, 2004) and dividing by Gross Domestic Product (*Energy Statistics Yearbook 1999*) standardizes oil production.

Economic Development

Gross National Product (GNP) per capita and energy consumption per capita (ECPC) are common measures of economic development. Energy consumption per capita is often regarded as preferred to GNP per capita since GNP per capita is more sensitive to inflation rates (Marshall 1985). Both ECPC and GNP per capita were tested in this study. The correlation between these two measures is 0.88 and they were found to have similar effects. ECPC measured as kilogram of coal equivalents is reported in this article. This variable is log transformed because of its skewed distribution (logECPC). A second variable, the logged value squared is also included, in order to test for curvilinearity (log²ECPC). The source of the data is the *World Bank Social Indicators of Development* (1999) and <http://www.EarthTrends.com>.

Role of the State

The concept of neopatriarchy is a complex, multidimensional concept. Different aspects of state structure are measured here to capture different dimensions of the neopatriarchal state. First, patriarchal family structure is reflected in the Total Fertility Rate (TFR). The assumption is that the higher the TFR, the more patriarchal the family structure is in society. Second, governmental role in promotion or disapproval of religion measures the institutional ties between religion and the state. Third, women's involvement in politics (government ministries) measures the access of women to policy making. The last two measures are composites of subscales.

Degree of Religiosity Within the State: Government's role in religion measures the institutional ties that bind religion and state. For this measure, two similar coding strategies are used to create a composite. The first coding measures religious freedom reflected by the government. This coding was originally developed by Barrett (1982, 1992),⁴ Humana (1986),⁵ reported by Sullivan (1991) and updated by this author for the period under this study. Sullivan classifies countries into three categories:

1. Atheistic government-- government formally promotes disapproval of religion.
2. Secular government-- government promotes neither approval nor disapproval of religion.
3. Religious government-- government identifies itself with a particular religion or religion in general.

As table 1 illustrates, Islamic countries are found in all three categories, including the "atheistic government." European countries such as the United Kingdom, West Germany and Norway are coded into the "religious government" group as well. Whenever a government supports religion, whether the Christian Church of England or the Islamic Shariat of Iran, that country is coded as a government that identifies itself with a particular religion or religion in general.

Table 1: Examples of countries and their “religious affiliation with government” rankings

	Europe	Middle East and North Africa	Sub-Saharan Africa	Asia	Latin America
Atheistic Government*	Albania, Bulgaria		Angola, Ethiopia, Mozambique	Afghanistan, Cambodia, China, Laos	Cuba, Nicaragua
Secular government**	Austria, Canada, France, U.S.A.	Syria, Turkey	Chad, Djibouti, Nigeria, Senegal	Indonesia, Japan, Myanmar, South Korea	Belize, Chile, Jamaica, Uruguay
Religious government***	Greece, Ireland, Spain	Algeria, Bahrain, Egypt, Iraq, Jordan, U.A.E.	Ghana, Liberia, Zaire	Bangladesh, Israel, Nepal, Pakistan, Sri Lanka, Thailand	Bahamas, Bolivia, El Salvador, Peru

*Government promotes irreligion

**Government promotes neither religion nor irreligion

***Government identifies itself with a particular religion

Of religious governments, 46 are in predominantly Christian countries and 26 are Islamic countries. Although a higher percentage of Islamic countries have religious governments than do Christian countries, the association is not as strong as some might expect. In predominantly Christian countries, 55% have religious governments, while the percentage for predominately-Islamic countries is 68%.

A second measure of institutional ties between religion and government is reported by Barrett (1982), adopted by Sullivan and again updated by this author. This measure is very similar to the first measure. It ranks countries from 1 to 5, where 5 suggests the heavy influence of religion on the government and society in general and 1 reflects large effort of the government at discouraging religion:

Government hostile to religion- keeps organized religion under strict governmental control.

General government disapproval of religion.

Strictly secular government- neither harassment of nor subsidies for religious

activities.

Government supports or subsidizes some religious activities.

Government sponsors official religions.

Combining these two codings created an index called “political role of religion”[POL+RELIGION]. The inter-correlation for these two variables is 0.65. Again, Islamic countries are not always listed under “religious government” group but rather are found in all five categories. The range of the first measure is from 1 to 3 while the second measure ranges from 1 to 5. To index the political role of religion, the range has changed from 1, 2, 3 to 1, 3 and 5 since categories 2 (first measure) and 3 (second measure) are similar and categories 3 (first measure) and 5 (second measure) describe the same characteristics.

Women’s Involvement in Politics: In neopatriarchal societies, women’s low political status contributes to a variety of institutional and family structures, which may inhibit women’s participation in the modern and formal sector of the economy. Five different measures of women’s involvement in politics are taken into account:

Percent of parliamentary seats occupied by women.

Percent women in executive offices, economic, political and legal affairs-The offices include the president or Prime Minister, and decision-makers in the ministries of finance, trade, industry and agriculture (economic); foreign affairs, interior and defense (political); and law and justice (legal). “Decision makers” are defined as ministers, deputy ministers, secretaries, and deputy secretaries.

Percent women in social affairs ministries-This includes decision-makers in the ministries of health, education, housing and welfare.

Percent women in all ministries-The percent of women decision-makers in all ministries (4) is a broader measure, which includes women in categories 2 and 3.

Percent women in ministerial level occupations-unlike group 4, this measure includes only top-level ministries

All the measures are reported in the *World’s Women: Trends and Statistics* (1991, 1995, 2000) and Kenworthy and Milani (1999, table 1). Factor analysis of the five variables shows high loading for all variables on the first principle components. An index referred to as “political role of women” is created from the mean of the five subscales referred to as POL+WOMEN.

Fertility Behavior

Lastly, the Total Fertility Rate (TFR) measures women's reproductive behavior, which is a summation of age specific fertility rates. Islamic countries have high TFRs so this may lower women's labor force participation. On the other hand, the TFRs may be high because of the lower rate of participation. Because of this potential endogeneity, fertility is included only as a final step in the analysis. Data for this measure are from the 1993 *World Bank World Tables*.

Results

Table 2 presents means and standard deviations for all variables. The correlation matrix is presented in table 3. Female share of the labor force is correlated most strongly with %ISLAMIC, but also with oil production, the political role of religion, and the political role of women. TFR also has a significant but not so strong correlation with female share of the labor force. %ISLAMIC is negatively correlated with the political role of women and positively correlated with the political role of religion, as expected from the discussion of the neopatriarchal states in many Islamic societies.

The log of ECPC shows a weak correlation of $-.161$ with FLFP contrary to the linear explanation expected which states that with more development, female employment will rise. TFR shows a moderate negative correlation with FLFP ($-.296$) suggesting the relative incompatibility of female employment with high fertility.

Table 2: Variable names, minimum, maximum, mean values and standard deviations

Variable	Minimum	Maximum	Mean	Standard Deviation	N
Female share of labor force (FLFP)	3.00	56.00	33.054	12.847	144
% of population Muslim (%ISLAMIC)	0	100.00	23.011	36.195	193
Oil revenue as % of GDP (OIL)	0	1.887	0.053	.143	191
Economic Development: Energy Consumption per Capita (ECPC)	118.30	13820	1633	2340	165
ECPC-log transformed (logECPC)	3.072	9.678	7.348	1.034	165
ECPC-log transformed squared (log²ECPC)	6.776	96.287	43.935	23.947	163
Political/religion index (POL+REL)	1.00	5.00	2.648	1.223	161
Political status of women index (POL+WOMEN)	0	28.010	6.811	5.813	158
Total fertility rate (TFR)	1.100	7.894	3.987	2.011	173

The correlation between %ISLAMIC with log of ECPC is very low ($r=-.161$), indicating that Islamic countries are neither necessarily low nor high in economic development. However, oil revenue and %ISLAMIC show a correlation

of .37, which suggests that oil is concentrated in the Islamic region. %ISLAMIC is most strongly correlated with the TFR ($r=.44$) indicating the higher rate of fertility in Islamic nations. Oil revenue is moderately correlated with economic development variable (.23). This is an indication that oil production might help a country to raise its level of development. But there are other elements than oil revenue that raises a country's level of economic development. There is also a moderate correlation between oil revenue and neopatriarchy variables. This shows that oil revenue does not encourage higher political role of women. Also the presence of oil does not necessarily reflect more religiosity of the state.

The log-transformed value of the development variable shows a moderate and positive correlation with both the political role of religion ($r=.21$) and the political role of women ($r=.20$). The positive correlation between development and political role of religion is not consistent with previous studies based on modernization perspective where it is noted that with more economic development, break down of the political role of religion occurs. Political role of women however shows a consistent relationship as it is stated in the literature—that women enjoy higher political involvement in more economically developed societies.

The two indices that measure religion within the state and women's involvement in politics (measures of neopatriarchy variables) show an almost zero correlation (0.04) with one another. This lack of correlation is an indication that there is almost no multicollinearity between the two variables. Both of the neopatriarchy measures show a strong correlation ($r=.38$ and $-.42$) with TFR. This suggests that in societies with low fertility rate women enjoy higher involvement in politics and countries with higher degree of religiosity experience higher fertility rate. The well-known correlation between development and TFR is evident, i.e. TFR shows significant negative correlation with log of ECPC ($-.69$).

Table 4 presents a stepwise multiple regression of the women's share of the labor force. %ISLAMIC is entered in step 1. The standardized coefficient is -0.627 indicating the great impact of %ISLAMIC on the female share of the labor force; Islamic countries tend to have a much lower female share of the labor force. The equation estimates that in countries with no Muslim population, on average about 38% of the labor force is expected to be female while in countries with 100% Muslim, on average only about 24% of labor force is expected to be female.

Table 3: Correlation matrix of variables

Variable	FLFP	%ISLAMIC	OIL	logECPC	POL+REL	POL+WOMEN	TFR
FLFP	1.00 146	-.509 146	-.479 146	-.161 141	-.418 142	.410 141	-.296 146
%ISLAMIC		1.00 191	.365 165	-.166 163	.223 160	-.384 160	.438 169
OIL			1.00 191	.225 158	.157 162	-.119 155	.301 169
LogECPC				1.00 166	.211 153	.201 151	-.688 160
POL+REL					1.00 162	-.044 153	.381 153
POL+WOMEN						1.00 158	-.418 157
TFR							1.00 169

Table 4: Regression of female share of labor force on %ISLAMIC and other independent variables

	1	2	3	4	5
%ISLAMIC a)	-.185***	-.157***	-.181***	-.111***	-.101***
b)	-.627	-.422	-.481	-.381	-.332
OIL		-21.410**	-13.811**	-10.711*	-8.305
		-.252	-.151	-.135	-.111
LogECPC			-11.273***	-10.373**	-10.550***
			-1.774	-1.540	-1.595
Log2ECPC			.898**	.713**	.691**
			1.611	1.211	1.201
POL+REL				-2.911***	-2.948***
				-.299	-.291
POL+WOMEN				.581***	.549***
				.255	.240
TFR					-1.118+
					-.214
Constant	37.221	37.810	78.551	61.818	68.515
R-square	.278	.313	.418	.557	.562
Number of cases	135	135	135	135	135

a) estimated coefficient
b) standardized coefficient
+ Significant at .1 level
* Significant at .05 level
** Significant at .01 level
*** Significant at .001 level

Model 2 controls for oil production. The standardized coefficient for oil

production is $-.252$, which shows that countries that produce more oil tend to have a lower female share of the labor force. The effect of %ISLAMIC is reduced somewhat from $-.627$ to $-.422$. So some of the total correlation of %ISLAMIC with female share of the labor force is because of oil's disproportionate presence in Islamic countries. The value for R-square increases from 28% to 31%.

In model 3, economic development is added to the equation and the explained variance increases from 31% to 42%. Development variable shows its usual U-shaped curvilinear effect; the logged value of development is negative while the value of the squared log is positive. The result confirms the curvilinearity theory, which states that in the early stages of economic development, female participation in the labor force declines, and then rises in later stages (see Haghighat, 2002).

Development increases the explained variance from 31% to 39%. Also since the correlation between %ISLAMIC and logECPC is low ($r=.17$) we could state that Islamic countries are not always low or high in development. In step 3, in fact, the coefficient for %ISLAMIC increases slightly from $-.422$ to $-.481$.

In step 4, both measures of neopatriarchy, the Political Role of Religion and Political Role of Women, are added to the model. The coefficients for both indices are in the expected directions. Countries with more women in political power tend to have higher female labor force participation while religious governments suppress female employment activities. The R-square increases from 42% to 56% suggesting that about 14% of the variance is uniquely explained by these two variables.

When both measures of neopatriarchy are controlled for, the effect of %ISLAMIC declines from $-.481$ to $-.381$. About a quarter of the Muslim effect is explained by these two neopatriarchy variables. Thus, part of the reason that a low female share of the labor force is observed in Islamic countries is attributable to their different political systems.

In step 5, TFR is added to the equation. The standardized coefficient for TFR is $-.214$ and significant at .1 level. TFR does not show a strong impact on female share of the labor force. The standardized coefficient for %ISLAMIC slightly decreases from $-.381$ to $-.332$. It appears that Islamic countries do not have a lower female share of the labor force because of high fertility; politics are more important.

Discussion

This cross-national study of developing and developed countries has explored the low female share of the labor force in Islamic countries. The emphasis of

the literature on the culture of Islam as the primary suppressor of female share of the labor force was challenged; political factors and the existence of oil wealth were hypothesized to play major roles in determining female employment in those countries. Several analysts have identified the neopatriarchal state as especially important in keeping women out of the labor force. The political role of religion and the women's involvement in politics measured the core of neopatriarchal perspective.

The results confirm the significant negative impact of %ISLAMIC on female share of the labor force; about a quarter of the variance in the dependent variable was explained by %ISLAMIC alone. The results show some empirical support for the hypothesis that oil wealth helps explain the low female share of the labor force in Muslim countries. %ISLAMIC coefficient decreases slightly when the model is controlled for oil revenue, suggesting that oil revenue is not the main reason for low female labor force participation in those countries.

However, the neopatriarchal variables do play a more significant role in explaining the female share of the labor force; about a quarter of the %ISLAMIC effect was lost when the model controlled for the political role of religion and the political role of women. Thus, part of the reason that a low female share of the labor force is observed in Islamic countries is not only because of sociocultural factors alone but also because these countries tend to have different political systems. Even so, most of the effect of %ISLAMIC on female share of the labor force remains after controls for state structure.

To explain this remaining effect, Islamization of the state and its effect on female labor force participation could be further studied. Neopatriarchal ideology embedded in the state as through specific family-related policies for instance, could be used to examine the discouragement of women's employment activities. Case studies of countries could give a better insight into these policies. Islamic countries such as Saudi Arabia (highly neopatriarchal, Islamic, oil producing) vs. Malaysia (not so neopatriarchal, Islamic, low level of oil production) could be used as case studies. The study could shed more light on the female share of the labor force analysis if it is further expanded to a time series analysis where it would look at changes in female employment activities in different points in time. The contribution of this study however is that it challenges the mainstream literature's emphasis on Islam as the main cultural device inhibiting women's integration into the modern sector of the labor force. It brings out an important point, that examining female employment activities requires a more complicated and multidimensional analysis than what is offered in the literature.

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Endnotes

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² In the early stages of development, women's withdrawal from the labor force is caused by 1) the improvement of earnings of male breadwinners and the growth of the middle class status (the "wealth effect") and 2) separation of workplace and home, location of work changes from the home domain in the agriculture to the outside of the home in a different location (e.g. office setting or factory). This separation is usually accompanied by inflexible work schedule. Thus, these limitations result in the reduction of female employment outside the home due to household and childcare responsibilities (women's primary responsibilities) (Boserup 1970; Oakley 1974; Ryan 1975; Tilly and Scott 1978; Anker and Hein 1986).

³ The range of Muslim population varies considerably among countries clustering at the two ends of the distribution.

% Muslim population	0%	.6-24%	25-49%	50-74%	75-100%
# of countries	50	44	7	6	28

⁴ Barrett (1982) considers degree of religious liberty in a country by looking into the following dimensions of the status of organized religion in a country:

- 1) State propagates religion
- 2) Massive or limited state subsidies to churches and other religious institutions
- 3) State subsidies to church school only
- 4) Complete state non-interference
- 5) Limited restrictions on churches' political activities

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- 6) State ambivalent toward religion, regulations and subsidies used to control, discrimination against minority religions
 - 7) State interference and obstruction (including massive subsidies for purposes of surveillance and control)
 - 8) State hostility and prohibition
 - 9) State suppression or eradication

⁵ Humana utilizes information from various sources such as *Amnesty International*, *Europa Yearbook*, and *Statesmen's Yearbook*, *World Development Report* and assigns ratings to countries. There are 40 questions and answers related to various topics coded and added to the ratings. Three of these questions are related to Sullivan's rankings of countries. The questions are answered with a "Yes" or a "No" with some brief explanation. They are as follows:

Q15- Compulsory religion or state ideology are practiced in schools

Q36- Inter-racial, inter-religious or civil marriages are practiced and accepted

Q38- People are free to practice any religion