

# innovATE

Innovation for Agricultural Training and Education



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## Muslim Women in Agricultural Education and the Labor Force

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This document was written as part of a series of InnovATE thematic studies. These research papers examine a particular AET system, cross-cutting theme, model, or technique and offer an analysis of the subject in question. These studies often highlight AET innovations in good practices. Case studies examine how agricultural education and training intersects with other development issues which are important to AET capacity building.

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## Acronyms and Abbreviations

AET	Agriculture Education and Training
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
GGGI	Global Gender Gap Index
GII	Gender Inequality Index
GPI	Gender Parity Index
IDB	Islamic Development Bank
ILO	International Labour Organization
InnovATE	Innovation for Agriculture Training and Education
MENA	Middle East and North Africa
MMCs	Muslim-majority Countries
MPI	Multidimensional Poverty Index
LDCs	Least Developed Countries
OECD	Organization for Economic Cooperation and Development
OIC	Organization of Islamic Cooperation
SESRIC	Statistical, Economic and Social Research and Training Center for Islamic Countries
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Program
USAID	United States Agency for International Development
WANA	Western Asia and North Africa
WB	World Bank

## Introduction

Innovation for Agricultural Training and Education (InnovATE) is a USAID-funded project supporting the capacity development of agricultural training and education systems from primary school through secondary institutions as well as vocational and technical schools and universities. The InnovATE program, implemented by a consortium of US universities led by Virginia Polytechnic and State University and including Pennsylvania State University, Tuskegee University, and the University of Florida, aims to strengthen the range of institutions that train and educate agricultural professionals (InnovATE, 2013).

In support of the InnovATE program goals, a series of special topic desk studies are commissioned to provide relevant background information to form the basis for identifying gaps in the Agricultural Education and Training (AET) programs and institutions in target InnovATE countries. This report explores Muslim women's overall participation in the AET sector in selected Muslim-majority Countries (MMCs) stretched mainly across two continents (Africa and Asia). The report attempts to provide the situational analysis of the challenges faced by women in agriculture to better understand women's access and participation in various educational systems from primary through tertiary and vocational education. The report also discusses women's participation in the labor market with particular emphasis on the agricultural sector.

The agricultural sector in many countries, including MMCs, is in the process of change driven by socioeconomic and political reforms, food security and climate change issues, globalization and technological advances, population growth, and women's overall claim for more gender inclusivity and recognition in agriculture. Understanding opportunities and challenges female agriculturalists face is paramount to addressing gender inequality issues in education and the labor force.

The first section of the report provides background on the Muslim world including a general overview of the economic performance with special emphasis on the agricultural sector. The second section briefly describes the prevalent patriarchal gender system operating in the Muslim world. The third section describes Muslim women's participation in the labor force. The fourth section discusses the issues facing Muslim women's enrollment and attainment in the educational system followed by the demand side of the labor market and existing skill gaps. The final section provides a short conclusion and a set of recommendations.

At the outset one key issue should be clarified. There is a great deal of ambiguity in the terms used to describe regional groupings, and thus those provided by the author may not always match the regional groupings used in other reports (e.g., "MENA" also includes non-Arab Iran and Turkey while the "Arab States" includes all Arabic-speaking countries). Therefore, care should be taken when interpreting and comparing performance results by regions. Additionally, data from each country is not always directly comparable or, in some cases, available.

## Overview of the Muslim World

Islam is the world's second largest religion and is followed by an estimated 1.6 billion Muslims or about 23% of the world's population. Muslims are spread across all geographic regions with the majority residing in Asia-Pacific (62%), Middle East and North Africa (MENA, 20%), and Sub-Saharan Africa (15%). In Europe and the Americas, Muslims are a small minority, making up 3% and 0.3% of the respective populations (Pew Research Center, 2011). Muslims are the majority in forty nine countries and represent diverse ethnic and linguistic backgrounds (major languages spoken are Arabic, Urdu, Bengali, Punjabi, Malay (Bahasa Indonesian) and Javanese), political structures (democracy, republic, monarchy, and dictatorship), natural resource endowments, and human and financial capital (Hasan, 2012).

**Table 1. Muslim-majority countries<sup>1</sup> by region**

Geographic Grouping	MMCs
North Africa	Algeria, Egypt, Libyan Arab Jamahiriya (Libya), Morocco, Sudan, Tunisia
Sub-Saharan Africa	Burkina Faso, Chad, Comoros, Djibouti, Eritrea, Gambia, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, Sierra Leone, Somalia
Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
South and Southeast Asia	Afghanistan, Bangladesh, Brunei Darussalam (Brunei), Indonesia, Iran (Islamic Republic of), Malaysia, Maldives, Pakistan
West Asia	Azerbaijan, Bahrain, Iraq, Jordan, Kuwait, Lebanon, Occupied Palestinian Territory, Oman, Qatar, Saudi Arabia, Syrian Arab Republic (Syria), Turkey, United Arab Emirates (UAE), Yemen
Europe	Albania, Bosnia and Herzegovina, Kosovo

Source: Hasan, 2012

Indonesia is the largest Muslim populated country accounting for 13% of the world's Muslims, followed by Pakistan (11%), India (11%) and Bangladesh (9%). Among the ten countries with the largest number of Muslims only Egypt, Algeria and Morocco are Arab states (Table 2). Overall, the Muslim population is young with 60% of the population under age 30; it is projected that by 2030 three out of ten of the world's youth and young adults will be Muslims (Pew Research Center, 2011).

**Table 2: Overview of ten countries with the largest number of Muslims in 2010**

Country	Estimated Muslim population (000)	% of total population	Total female population (000)	Dominant Muslim sect	Income level	Religion and state
Indonesia	204,847	88.1%	116,455	Sunni	Lower middle	Neutral
Pakistan	178,097	96.4%	89,638	Sunni	Lower middle	State religion
India	177,286	14.6%	587,266	Sunni	Lower middle	Secular
Bangladesh	148,607	90.4%	81,292	Sunni	Low	State religion
Egypt	80,024	90%	41,998	Sunni	Lower middle	State religion
Nigeria	75,728	47.9%	78,916	Sunni	Lower middle	Secular
Iran	74,819	99.6%	36,924	Shia	Upper middle	State religion
Turkey	74,660	98.6%	37,689	Sunni	Upper middle	Secular
Algeria	34,780	98.2%	17,540	Sunni	Upper middle	State religion
Morocco	32,381	99.9%	16,484	Sunni	Lower middle	State religion

<sup>1</sup> Muslim-majority counties are countries with Muslims representing 50% or more of the population.

*Source: Pew Research Center's Forum on Religion & Public Life, 2011; UN: The World's Women 2010 - Trends and Statistics, 2010; WB Data*

The Organization of Islamic Cooperation (OIC), the second largest intergovernmental organization after the United Nations, represents the collective agency of 57 Muslim countries<sup>2</sup>. Most of the OIC countries<sup>3</sup> fall within the categories of lower middle and low-income countries. Twenty-one OIC countries are among the world's remaining forty-eight Least Developed Countries<sup>4</sup> (LDCs), which are mostly located in Sub-Saharan Africa and South Asia (Afghanistan, Benin, Burkina Faso, Comoros, Guinea Bissau, Mali, Niger, Nigeria, Sierra Leone, Somalia, Sudan, Togo). Nineteen OIC countries depend on the production and export of oil and gas, with the majority located in the Middle East (Kuwait, Qatar, UAE, Saudi Arabia) (Timmer and McClelland, 2004; Statistical, Economic and Social Research and Training Center for Islamic Countries (SESRIC), 2012). Overall, the Muslim world includes countries that are politically and economically stable (the majority of the Gulf countries, Indonesia, Jordan, Kazakhstan, Turkey), as well as countries in a state of war or political turmoil (Iraq, Libya, Palestine, Syria, Yemen). Some countries are without functioning governments or are in humanitarian crises caused by natural disasters or religious insurgencies (Afghanistan, Bangladesh, Chad, Niger, Nigeria, Pakistan, Somalia, and Sudan).

Extraction of oil and natural resources are the primary drivers of MMCs economic growth. All high-income MMCs are oil rich and their growth is driven neither by a knowledge economy nor an advanced industrial complex (compared to the Organization for Economic Cooperation and Development (OECD) members). Turkey (OECD member) and Lebanon are the only countries among MMCs that are not dependent on oil or other natural resources, and have strong manufacturing and service sectors that propel growth (Chowdhury & Tadjoeeddin, 2012). Foreign-earned remittances are essential to maintain the political stability of many MMCs. They are particularly important in populous MMCs such as Bangladesh, Nigeria, Pakistan, and Egypt. The remittances are used to support daily needs of families but in macroeconomic terms they help generate foreign exchange holdings<sup>5</sup> (SESRIC, 2012).

According to Tadjoeeddin and Chowdhury (2012), Muslim countries rarely trade with each other outside their regions regardless of their common Islamic culture. Trade is limited to neighbors. For example, in 2008, Tunisia and Morocco exported more goods to Europe than to the MENA region. Imports to MMCs come primarily from the USA, EU, and China. Investment flows from capital-rich Gulf countries to capital-poor MMCs is limited. Capital-poor MMCs receive more Foreign Direct Investments from the USA, EU, and China. Currently, the single integrating factor among MMCs is the flow of migrant workers from labor surplus countries (Bangladesh, Pakistan, Egypt) to rich Gulf States. Even in this case this flow is a one-way movement of unskilled labor, which does not stimulate economic integration characteristic of a two-way exchange of skilled labor.

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<sup>2</sup> About OIC. Retrieved from [http://www.oic-oci.org/oicv2/page/?p\\_id=52&p\\_ref=26&lan=en](http://www.oic-oci.org/oicv2/page/?p_id=52&p_ref=26&lan=en).

<sup>3</sup> Some countries with large Muslim populations (China, India and Ethiopia) are neither members nor observers.

<sup>4</sup> According to the United Nations, LDC is a country with the lowest socioeconomic performance indicators.

<sup>5</sup> Foreign exchange holdings are held by a central bank of a nation to stabilize local currency and reduce the effects of economic shocks.



Poverty is widespread across all regions of the Muslim world with the exception of the Gulf countries. Rural areas are particularly poor and suffer from the lack of basic services and vital infrastructure important for rural economic development (Islamic Development Bank (IDB), 2009). Rural poverty is the main causes of male exodus from rural areas. Men search for better economic opportunities in urban areas or in other countries, leaving women behind to look after families. Augustin et al. (2012) describes rural poverty as “female, landless and regionalized” (p.19). Poverty is especially acute in rural households headed by women, and in families displaced by prolonged conflicts (Afghanistan, Pakistan, Somalia, Sudan, Syria). Families that depend on pastoralism and subsistence agriculture are also among those severely affected, which is further exacerbated by climate change and natural resources depletion (ibid). Multidimensional poverty<sup>6</sup> is particularly prevalent in Sub-Saharan Africa; the multidimensional poverty index (MPI) provides an indication of the level of this poverty. The countries that are extremely poor according to this index include Burkina Faso (83%), Gambia (61%), Guinea (88%), Guinea-Bissau (80%), Mali (86%), Niger (90%), Sierra Leone (74%), and Somalia (82%) followed by several South Asian countries like Afghanistan (59%), Bangladesh (50%), and Pakistan (46%). In the MENA region only Yemen has a significant percent of the population classified as MPI poor (38%). The civil war in Syria and insurgency waves in Iraq have probably increased the number of MPI poor in those countries although no current data is available to measure the effect of prolonged war in these countries (United Nations Development Program (UNDP), 2014).

### *Agricultural Sector*

Agriculture is the primary economic activity in many MMCs with the exception of the Gulf States. The MMCs represent a wide variation of agricultural production systems, although arid and semi-arid systems are prevalent with water being the primary limiting resource for production expansion. Augustin et al. (2012) provided a good summary of these agricultural systems in their report presented in Table 3 which is expanded below to include a few more MMCs<sup>7</sup>.

The gender roles in Table 3 show that women are key players in most agricultural production systems, although their role dissipates as agricultural produce leaves the farm gate. Women work in the fields as producers, farm labor or family “helpers,” whereas men often take farm produce to the market. As cited in Augustin et al. (2012), the patriarchal gender system enables the Boserup-classified “male farming system”, which perpetuates “[among women] high incidences of landlessness, high levels of agricultural wage labor, inheritance through male lines and a lower presence of women in the field [and the market] due to strict norms of female seclusion resulting in women concentrating mainly on tasks within the home” (p. 32).

In terms of economic return from the agricultural sector, the majority of Sub-Saharan Muslim countries are highly dependent on agriculture for economic development and rural employment (Table 4). The same is true for South Asia, although the services and industry sectors are slowly outpacing agriculture.

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<sup>6</sup> Multidimensional poverty index, introduced in 2010, measures poor people’s experience and intensity of deprivation such as poor health, lack of education, inadequate living standards, lack of income, disempowerment, poor quality of work and threat of violence.

<sup>7</sup> Augustin et al. (2012) report included only countries in the Western Asia and North Africa (WANA) region



Developing forward and backward linkages by supplying outputs as inputs to and stimulating the demand for intermediate inputs from other sectors of the economy are important to transition an agriculture-based economy to industry or service-oriented economies (Timmer and McClelland, 2004).

**Table 3: Agricultural systems and gender roles for select MMCs**

<b>Agricultural System</b>	<b>Countries</b>	<b>Gender Roles</b>	<b>Livelihood</b>	<b>Poverty Prevalence</b>
Irrigated-large scale	Egypt, Iraq, Kazakhstan, Kyrgyzstan, Pakistan, Saudi Arabia, Sudan, Tajikistan, Turkey, Turkmenistan, Uzbekistan	Women: planting, weeding, harvesting, packing, storing Men: irrigation, input supply & marketing	Fruits, vegetables, cash crops (cotton, cereals)	Limited in some countries but extensive in others
Irrigated small-scale	Characteristic to most MMCs	Women: planting, weeding, harvesting, packing. In addition, small ruminants and poultry Men: irrigation, input supply & marketing	Farm-based	Moderate
Highland mixed	Iran, Jordan, Morocco, Pakistan, Yemen	Same as above for men and women. In addition for women: provision of firewood, fodder & water	Cereals, legumes, sheep, off-farm work	Extensive
Rainfed mixed	Algeria, Indonesia, Iraq, Malaysia, Morocco, Syria, Turkey	Women: home gardens, harvesting, food processing, off-farm work (small scale marketing) Men: input supply & marketing	Tree crops, cereals, legumes, rice, off-farm work	Moderate (for small farmers)
Dryland mixed	Algeria, Egypt, Lebanon, Libya, Morocco, Tunisia	Women: livestock care, milking, fodder preparation Men: marketing, off-farm work	Cereals, sheep, off-farm work	Extensive for small farmers
Pastoral	Algeria, Burkina Faso, Egypt, Jordan, Iran, Mali, Mauretania, Morocco, Niger, Somalia, Sudan, Syria, Tunisia	Women: livestock care, milking, fodder preparation, fodder & water provision Men: marketing, off-farm work	Sheep, goat, barley, off-farm work	Extensive for small herders
Sparse (arid)	Algeria, Iran, Libya, Morocco, Saudi Arabia, Somalia, Sudan, Sub-Saharan countries, Tunisia	Women: support men in animal husbandry Men: animal breeding, off-farm work	Camel, sheep, off-farm work	Limited Extensive (in Sub-Saharan Africa)
Coastal artisan fishing	All coastal countries in Africa and Asia	Women: processing & marketing Men: fishing	Fishing, off-farm work	Moderate
Urban agriculture	Across all MMCs except Gulf States	Women: subsistence Men: commercial	Horticulture, poultry, off-farm work	Limited

Source: Augustin et al., 2012, (Figure 3); FAO portal<sup>8</sup>

<sup>8</sup> Food and Agriculture Organization (FAO). Analysis of Farming Systems. Retrieved from [http://www.fao.org/farmingsystems/description\\_en.htm](http://www.fao.org/farmingsystems/description_en.htm).

**Table 4: Select MMCs with agricultural indicators**

Region	Country	GDP by sector (%)				Ag products
		Employment by sector (%)				
		Agriculture	Industry	Services		
North Africa	Egypt	14.5	37.5	48 (2013 est.)	Cotton, rice, corn, wheat, beans, fruits, vegetables, livestock	
		29	24	47 (2011 est.)		
Sub-Saharan Africa	Burkina Faso	33.6	23.6	42.8 (2013 est.)	Cotton, peanuts, she nuts, sesame, sorghum, millet, corn, rice, livestock	
	Mali	90	10 (2000 est.)	37 (2013 est.)	Cotton, millet, rice, corn, vegetables, peanuts, livestock	
		38.5	24.4			
	Niger	80	20 (2005 est.)	50.6 (2013 est.)	Cowpeas, cotton, peanuts, millet, sorghum, cassava, rice, livestock, poultry	
		35.2	14.2			
	Nigeria	90	6	4 (1995)	Cocoa, peanuts, cotton, palm oil, corn, rice, sorghum, millet, cassava, yams, rubber, cattle, sheep, goats, pigs, timber, fish	
		20.6	25.6	53.8		
Central Asia	Tajikistan	70	10	20	Cotton, grains, fruits, grapes, vegetables, livestock	
		21.1	23.2	55.7 (2013 est.)		
	Uzbekistan	46.5	10.7	42.8 (2013 est.)	Cotton, vegetables, fruits, grains, livestock	
		19.1	32.2	48.7 (2013 est.)		
South and Southeast Asia	Afghanistan	25.9	13.2	60.9 (2012 est.)	Opium, wheat, fruits, nuts, wool, mutton, sheepskin	
		20	25.6	54.4		
	Bangladesh	78.6	5.7	15.7	Rice, jute, tea, wheat, sugarcane, potatoes, tobacco, pulses, oilseeds, spices, fruit, beef, milk, poultry	
		17.2	28.9	53.9 (2013 est.)		
	Indonesia	47	13	40 (2010 est.)	Rubber, palm oil, poultry, beef, forest products, shrimp, cocoa, coffee, medicinal herbs, essential oil, sea products, spices	
		14.3	46.6	39.1		
West Asia	Jordan	38.9	13.2	47.9 (2012 est.)	Citrus, tomatoes, cucumbers, olives, strawberries, stone fruits, livestock, poultry, dairy	
		3.2	29.9	67		
	Pakistan	2.7	20	77.4 (2007 est.)	Cotton, wheat, sugarcane, fruits, vegetables, milk, beef, mutton, eggs	
		25.3	21.6	53.1 (2013 est.)		
	Saudi Arabia	45.1	20.7	34.2 (2010 est.)	Wheat, barley, tomatoes, melons, dates, citrus, mutton, poultry, eggs, milk	
		2	62.5	35.5		
	Yemen	6.7	21.4	71.9 (2005 est.)	Grains, fruits, vegetables, pulses, qat, coffee, cotton, dairy, livestock, poultry, fish	
	7.7	30.9	61.4 (2013 est.)			

Source: CIA: *The World Factbook*, 2014

Agricultural development is important for Sub-Saharan (Mali, Niger, Burkina Faso) and South Asian countries (Afghanistan, Bangladesh, Pakistan) because almost 60% of their populations reside in rural areas. Among rural residents subsistence agriculture is the major livelihood strategy as shown in Table 3. For example, in Nigeria (which is the fastest growing country in Africa) about 90% of the food is produced by small-scale/subsistence farmers, who live on less than US\$1.25 a day<sup>9</sup>. According to the World Bank (WB) classification, twenty-two Muslim countries (mostly in Sub-Saharan Africa but also Afghanistan, Bangladesh, Pakistan, Tajikistan and Yemen) are ‘agriculture-based’ meaning that their

<sup>9</sup> Rural poverty in Nigeria. Retrieved from <http://www.ruralpovertyportal.org/country/home/tags/nigeria>

agricultural sector contributes more than 20% to the GDP, and employs more than 45% of the country's labor force (IDB, 2009).

Food security is a critical issue in many Muslim countries especially for rural residents, who are more food-insecure than urban residents. Rural families often do not have enough fertile land to grow food or lack money to buy food. Food insecurity is also exacerbated by climate change effecting agriculture. Extreme weather conditions, such as droughts and floods, are affecting agricultural productivity (e.g., floods in Bangladesh and droughts in Sudan). Women and children are particularly vulnerable to food insecurity and climate change. Women, being the primary producers of staple food, are affected by droughts, fluctuation in rainfall and flooding, which can severely disrupt production. Declining water resources are also forcing rural women in Sub-Saharan Africa to walk longer distances to secure water for their families (Augustin et al., 2012).

Overall, the agricultural sector faces a number of limitations (on local, national and regional levels), which impedes its growth potential. Among local impediments the most common are the lack of infrastructure and related services, depletion/degradation of natural resources, low productivity, lack of inputs and agricultural technologies, complex land tenure and water rights, lack of local capacity, and inequalities in resource allocation. National impediments include the lack of political stability, poor macroeconomic climate, lack of legal/regulatory framework, lack of financial resources and physical infrastructure, weak institutional capacity, and cumbersome bureaucracies (red tape). On the regional level, the absence of economic integration (trade and transport infrastructure), weak regional institutions and high tariffs compound the problem (IDB, 2009 p.6).

*Among limitations faced by women in agriculture, the major impediment is the unrecognized role of women in agriculture. The national statistics of many MMCs do not reflect the role of women in agriculture because women's products are immediately consumed in the households. Women also face unequal access to key productive resources, such as land, water, credit, technology or information, and marketing services (Augustine et al., 2012).*

## Women in the Muslim World

Women account for almost half of the Muslim population. Despite being geographically dispersed, the majority of women live under a “patriarchal gender system<sup>10</sup>”, which is particularly predominant in rural areas (Moghadam, 2004; Offenhauer, 2005; Augustin et al., 2012; Makama, 2013). According to Offenhauer (2005), the system stretches across the “patriarchal belt ... from North Africa across the Muslim Middle East (including non-Arab Turkey and Iran) to South and East Asia (Pakistan, Afghanistan, Northern India, and rural China). The belt, regardless of religion, is characterized by kin-based patrilineal extended families, male domination, early marriage (and consequent high fertility), male child preferences, restrictive codes of behavior for women, and the association of family honor with female virtue (p.10).”

The patriarchal system, wherein men have primary authority, regulates men and women’s daily interactions in the private and public spheres<sup>11</sup>, and provides a binding structure for beliefs, norms and values, as well as the legal and regulatory framework, which grants or seizes rights, and establishes social responsibilities (Moghadam, 2004; Hamdan, 2005; Augustin et al., 2012). Mothers are considered the first to form and pass gender roles to their children by grooming boys to enforce society’s rules on girls and for girls to become ‘good’ wives and mothers. Families, schools, communities, media and government systems further reinforce the gender roles by depicting women as “weak, emotional, in need of care and protection, indecisive and soft” (Hamdan, 2005; Augustin et al., 2012; p.25). As a result, gender-based discrimination (inheritance laws<sup>12</sup>, child marriage, full veiling, sex-segregation, and oppressive practices such as female genital mutilation and honor killing) is socially acceptable and legitimized by referencing the Quran<sup>13</sup>. This is further exacerbated by a male-controlled culture, kin/tribe-based and, in some instances, polygamous family structures (Offenhauer, 2005; Lichter, 2009; Augustin et al. 2012).

Augustin et al. (2012) further states that the prevailing gender system in Muslim countries “is closely linked and reinforced by the current system of socio-political institutions and governance, codified through the constitutions, personal status law, labor laws, and the interpretation of religious texts and ultimately the patriarchal, centralized political system” (p.25). The system determines the extent of women’s participation in economic activities and access to key resources. Moreover, the lives of Muslim women are also defined by social class, ethnic background, level of education, place of residence, and age. The

*A few recent reforms in the Muslim world included Khula (women’s right to divorce), the right of women to give citizenship to their children, establishing a minimum age for girls’ marriage, and ensuring the right to equal wages.*

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<sup>10</sup>Described also as “patriarchal gender paradigm” by Augustin et al. (2012) and “patriarchal gender contract” by Moghadam (2004).

<sup>11</sup>In more conservative Muslim societies women are excluded from public life. Their space is limited to private. Women’s interaction with the public sphere is channeled through a male family member (husband, father, brother or uncle).

<sup>12</sup>Quran allows women a right to inherit half the share available to men.

<sup>13</sup>A sacred book of Muslims.

well-educated urban women of the economic elite in MMCs enjoy greater freedoms compared to their less-educated counterparts in urban and rural areas. However, recent broad social and economic changes around the world have started to challenge the duality of the legal system (i.e., Sharia law<sup>14</sup> and Western-based civil law) in the majority of Muslim countries, although in some countries the change is regressive (Iraq, Libya, Nigeria, Pakistan, Somalia, Sudan, Syria).

### *Gender Inequality in Muslim Countries*

There are two primary measures of gender inequality in the world: United Nations' Gender Inequality Index (GII) and World Economic Forum's Global Gender Gap Index (GGGI). Each focuses on specific aspects of gender disparity. The GII score measures gender inequalities in reproductive health, empowerment and labor market participation in 149 countries<sup>15</sup>, whereas GGGI score measures the magnitude and scope of gender-based inequalities in economic participation and progress in closing the gender gap<sup>16</sup>.

The median world GII score decreased between 2011 and 2013 (see Table 5) meaning overall gender inequality decreased. Slight to moderate improvements were achieved in Afghanistan, Bangladesh and Mali in these years due to increased participation of women in parliament and low to moderate increases in attainment in secondary education and the labor force, although these countries still suffer from high maternal mortality and adolescent births, as well as institutionalized gender gaps (especially in Afghanistan). Turkey and Saudi Arabia achieved significant improvements based on investments in women's health and education. However, gender inequality in Burkina Faso, Indonesia, Syria, and Tajikistan worsened (score increased) due to weakening of human development and economic position of women. On a regional scale, poor GII performers were Sub-Saharan Africa (0.578), South Asia (0.539), Arab states (0.546), and Central Asia (0.317), due mostly to the worsening of women's reproductive health and early childbearing (UNDP, 2014).

**Table 5: GII and GGGI scores for select MMCs**

Year	World	Afghanistan	Egypt	Syria	Burkina Faso	Turkey	Indonesia	Mali	Pakistan	Bangladesh	Saudi Arabia	Tajikistan
<b>GII</b>												
2011	0.492	0.707	-	0.474	0.596	0.579	0.443	0.712	0.573	0.550	0.646	0.347
2013	0.451	0.705	0.580	0.556	0.607	0.360	0.500	0.673	0.563	0.529	0.321	0.383
<b>GGGI</b>												
2011	-	-	0.5933	0.5896	0.6153	0.5954	0.6594	0.5752	0.5583	0.6812	0.5753	0.6526
2013	-	-	0.5935	0.5661	0.6513	0.6081	0.6613	0.5872	0.5459	0.6848	0.5879	0.6682

Source: UNDP, 2011; UNDP, 2014; World Economic Forum GGGI, 2013

In the World Economic Forum's 2013 GGGI ranking of 136 countries, MMCs accounted nine of the ten lowest scores. Yemen ranked the lowest (136 out of 136) followed by Pakistan (135), Chad (134), Syria (133), Mauritania (132), Cote d'Ivoire (131, not a MMC, Muslim population 38%), Iran (130), Morocco (129), Mali (128), and Saudi Arabia (127). These low GGGI scores highlight the magnitude of gender-

<sup>14</sup>Sharia is the body of Islamic law, which provides the legal framework for public and private aspects of life, including politics, economics, banking, business law, contract law, sexuality, and social issues.

<sup>15</sup>GII scores are measured on a scale of 0 to 1: 0 stands for gender equality and 1 is for gender inequality.

<sup>16</sup>GGGI scores are measured on a scale of 0 to 1: 0 standing for gender inequality and 1 is for gender equality. The opposite of GII scores.

based inequality. Coupling the GGGI score with the total number of women living in these nine MMCs, reveals that nearly 50% of the population of these countries experience moderate to severe systematic gender-based inequalities in labor force participation, compensation and career advancement, as well as in access to education, health care and improving their survival (particularly including the current phenomenon of “missing women<sup>17</sup>” in Asia) (World Economic Forum GGGI, 2013).

Data from these two indexes show that gender inequality persists in the majority of MMCs in various forms. Augustin et al. (2012) relates persistent gender gaps to the duality of the legal structure (Sharia and civil laws), which forces women to seek a male family member’s permission before applying for job or starting a business, and in some countries seek a man’s escort even when completely under veil (e.g., burqas in Afghanistan). Hamdan (2005) argues that women’s inequality is institutionalized in the society by traditions and uniqueness of women’s “presence and yet non-presence in the public sphere” (p.45). Women also inherit smaller shares of family wealth, which further restricts their credit-worthiness when applying for loans. In aggregate, the existing legal and social structures exacerbated by traditional beliefs and gender norms makes families invest more in boy’s education rather than girls, believed to be the only bread-winner in the family.

However, the situation is starting to change in some countries. Women across the Muslim world (e.g., Indonesia, Jordan, Malaysia, Lebanon, Tunisia, and Turkey) have started to contest men’s traditional status quo by demanding greater equality for women and greater participation in the economic and political arenas. This trend is positively affecting even more conservative societies like Saudi Arabia where in 2013 Saudi women contested the driving ban in the country<sup>18</sup>, although the changes are slow and modest. Hamdan (2005) reports that Saudi women started using religious ideology to challenge interpretations that exclude women. The current economic and political climate across the Muslim world is at a crossroads. The threats from Islamic extremism are challenging even the conservative societies (in Gulf countries), which have begun to realize that previous investments in women’s education would be unrealized sunk costs<sup>19</sup> unless women are fully integrated into the economy.

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<sup>17</sup> Meaning the loss in the number of women as a result of sex-selective abortion and female infanticide.

<sup>18</sup>Amos. D. (2013). Saudi women go for a spin in latest challenge to driving ban. NPR. (10/24/2013). Retrieved from: <http://www.npr.org/blogs/parallels/2013/10/24/240491843/saudi-women-go-for-a-spin-in-latest-challenge-to-driving-ban>.

<sup>19</sup>Unrealized sunk costs are lost benefits from the past costs that have already incurred and cannot be recovered.

## Employment

Compared to non-Muslim countries, women in Muslim countries have the highest rates of economic inactivity in the world, although this can be erroneous due to the fact that women's participation in unpaid work in subsistence agriculture, the informal sector, and the household is often omitted from national statistics (Augustin et al. 2012). On average, women in MMCs account for 28% of the total labor force, which is the lowest in the world. On an individual country level, the women's share of the formal adult labor force varies considerably (see Table 6 below). For example, in Afghanistan it stands at 23%, Bangladesh (40%), Egypt (26%), while in Jordan, Saudi Arabia and UAE it is less than 19%. In most Sub-Saharan MMCs, women have higher rate of labor force participation although primarily in agriculture (UN, 2010).

*Women's overall contribution to the economy would double if countries' GDPs accounted for women's unpaid work doing household chores such as child care, cooking, and cleaning (Elborgh-Woytek, 2013).*

Moghadam (1990) linked the lower levels of MENA female labor force participation to the conservative culture of the MENA countries, which enforces traditional gender roles. Furthermore, Roudi-Fahimi and Moghadam (2003) claim that the region's oil-rich economies also reinforce traditional gender roles. Men are more likely to access wage employment and control over wealth, whereas women stay largely economically dependent on male family members. The use of capital-intensive technologies, especially in the oil industry, requires fewer workers along with higher wages offered to men, which in aggregate impede women's access to and greater participation in the labor force. Haghighat-Sordellini (2009) also found that the presence of oil in the economy reduces female labor force participation in both modern (industry and service) and traditional (agriculture) sectors. This is confirmed by Offenhauer (2005) who concluded that "a state's reliance on labor-intensive industry for development has quite different effects on the demand for female labor than does a state's reliance on oil exports" (p. 72). For example, Bangladesh's labor-intensive garment industry draws many women to the formal labor force, while the opposite is true of oil exporting countries. Women's employment in the MENA region is limited to fewer options of socially acceptable occupations, such as teaching and medicine. In the Gulf States, unsuitable jobs for local (Arab) women are often occupied by migrant female laborers from South and East Asia, which help inflate the national statistics for female labor force participation in these countries (UN, 2010; Augustin et al., 2012).

Moreover, Augustin et al. (2012) connected the level of women's labor force participation in the Muslim countries to the demographic dynamics of a country. For example, the low rate of women's participation in the labor force in the occupied Palestinian territories is correlated to the higher incidence of births and early marriages. A similar situation was observed in Jordan: although Jordanian women enjoy greater equity and educational opportunities, a low rate of female labor force participation contributed to the country's high population growth rate (3.86%). In contrast, in Kazakhstan, where 50% of females are in the labor force, the country's population growth rate currently stands at 1.17% (CIA World Factbook, 2014). Similar arguments were made by Haghighat-Sordellini (2009) with regard to fertility rates affecting women's labor force participation in different sectors. He



found that high fertility was more compatible with agriculture sector participation because field work and home chores are less likely to be separated in rural areas, whereas high fertility considerably reduced female labor force participation in the modern sectors (industry and services).

The female labor force participation is higher in Central Asia (above 45%) and in South and Southeastern Asia (above 35%), which are similar to the developed world (e.g., USA, Table 6). The higher participation of women in the Central Asia labor force, particularly in the service industry (except Tajikistan, which is the poorest in the region) can be explained by the fact that these countries took advantage of the compulsory education system during the former Soviet Union period, which continues through today. Women were actively integrated into the formal economy by working in education, health, government, factories, state and collective farms (essentially everybody had a job). Employment was incentivized through social protection such as free childcare, paid maternity leave and retirement.

Finally, table 6 illustrates that countries with a large agricultural sector (Tajikistan, Pakistan, Bangladesh, Egypt, and Turkey) involve more women working in agriculture, which will be discussed in the next section. However, this trend is changing in some countries. According to Roudi-Fahimi and Moghadam (2003), Morocco, Tunisia and Turkey made progress in moving women away from agricultural occupations to non-agricultural by investing in export-manufacturing industries (e.g., food processing).

**Table 6: Select MMCs' labor force participation and unemployment, 2010**

Region	Country	Adult (15+) labor force participation rate (%)		Women's share of the adult labor force (%)	Labor force by economic sector, 2004-2007 (%): female only		
		Women	Men		Agriculture	Industry	Services
North Africa	Egypt	25	71	26	43	6	51
	Sudan	32	71	31	-	-	-
Sub-Saharan Africa	Burkina Faso	78	89	47	-	-	-
	Mali	37	64	39	30	15	55
	Somalia	55	89	39	-	-	-
Central Asia	Kazakhstan	65	76	50	32	10	58
	Tajikistan	58	70	47	75	5	20
South and Southeast Asia	Afghanistan	29	89	23	-	-	-
	Bangladesh	58	84	40	68	13	19
	Indonesia	50	87	37	45	15	41
	Iran	34	76	30	33	29	38
	Pakistan	23	85	20	72	13	15
West Asia	Qatar	42	91	16	-	4	96
	Jordan	16	71	18	2	12	84
	Saudi Arabia	20	80	16	-	1	99
	Turkey	24	69	25	47	15	38
	UAE	41	92	15	-	6	92
	Yemen	22	66	25	-	-	-
North America	USA*	58	72	46	1	9	90

Source: UN: *The World's Women 2010 - Trends and Statistics, 2010, (Table 4a)*

\*Included for comparison purposes, not an MMC.

Another trend, thanks to women's improved access to education, is that many women have started to seek formal employment even in MENA. Many women find themselves as successful entrepreneurs. The Economist (2013) reported on the share of MENA women-entrepreneurs, which grew to 35%, in the cyber space sector where they can become tech founders. Many Muslim women also seek employment in the service sector (public and private) despite being characterized by low productivity and pay. Female-owned businesses in the MENA region are growing especially in the service sector making up 77% of all businesses in Yemen, 59% in Egypt and 37% in Morocco. A similar trend is characteristic to Lebanon where many women work as entrepreneurs (Roudi-Fahimi & Moghadam, 2003; Augustin et al., 2012).

However, women continue facing discrimination in the labor force (both formal and informal) compared to men. They are often hired last and are the first to be laid off. The employment prospects for displaced female workers and new female entrants are depressing, offering either the limited choice of working in agriculture as unskilled laborers, accepting an unequally low-paying job in the export manufacturing sector (such as Tunisia, Morocco, Turkey, Bangladesh) or joining the informal economy where women are already overrepresented (Offenhauer, 2005). Working women often lack female-friendly employment services (e.g., kindergarten or shorter hours), incentive systems and promotion policies (e.g., lack of leadership opportunities). The difference between urban and rural employment among women is another area of concern. The seasonal nature of farming takes its toll on women by depriving them of a steady annual income to feed their families. Declining wages in rural areas and limited job prospects push men to out-migrate, leaving women to take on the extra workload to feed their family. In Sub-Saharan countries like Djibouti, Somalia and Sudan where desertification is compounded by climate change, lack of water and loss of productive land, further deprives rural populations, especially women, from decent livelihoods and food security.

### *Female Labor Force Participation in Agriculture*

Agriculture is the most important source of employment for women across the Muslim world. An FAO study (2011) found that agricultural employment is particularly high for women in South Asia and Sub-Saharan Africa (accounting for almost 70% of the female agricultural labor force in South Asia and 60% in Sub-Saharan Africa), whereas less significant for women in East Asia, MENA and the Central Asia (e.g., 45% in MENA). The female share of the economically active population in agriculture varies greatly from country to country, in some countries it exceeds 50% (Bangladesh, Turkey). Table 7 below shows that countries such as Jordan, Libya and Syria (before conflict) experienced the highest and fastest growth in female agricultural labor force from 1980 to 2010, suggesting a "feminization" of agriculture in these countries. Male outmigration to urban areas or other countries is one of the explanations for this phenomenon, which also contributed to increased incidences of female-headed households in rural areas (Moghadam, 1990). In Tajikistan and Uzbekistan, men's outmigration to Russia has also increased female share in agriculture, though confined to lower paid and lower skilled work (Alimdjanova, 2009). Women's role in agricultural work is even higher when specific crops and activities are considered (subsistence crops, weeding, post harvest processing). However, even with the increasing number of women in agriculture, women are still constrained with limited access to productive resources and extension information for their home garden plots which lead to increased incidence of food insecurity

among women and their households (e.g., in Tajikistan based on USAID/CAR Gender Assessment report, 2010).

Even in countries where women are highly involved in agriculture they often earn less, occupy more seasonal and part time jobs, and have lower productivity rates than men. Women have fewer chances than men to be employed in agriculture as wage labor. For example, in Bangladesh 24% of rural men are in wage employment vs. only 3% of rural women. Even if women are employed for wages the arrangements are more likely to be part-time, seasonal and/or low paying, and often unprotected (i.e., lack social security and secured income). In Bangladesh, the wage gap is wide where 80% of women are in low-paying jobs vs. 40% for men. Research shows that many factors explain this paradox: women are less educated and experienced (although other studies show that women are still paid less even when they are better qualified than men), time constraints due to reproductive duties in the household, social norms and gender roles (FAO, 2011). In some instances, the political change in the country has negatively affected women's position in the labor market. For example, in Uzbekistan women used to occupy managerial and decision-making positions in agriculture during the Soviet period but now women can be rarely seen in these positions. This trend is further reinforced by discrimination in agricultural education. For example, Alimdjanova (2009) showed a significant gender disparity in professional/vocational education between men and women (in 2005-2006, 70% of students were male vs. 30% female), while the disparity was wider in higher agricultural education (86% vs. 14% respectively).

**Table 7: Agricultural Labor Force Indicators for selected MMCs**

Region	Country	Economically active (EA) population								
		Total (000)			Ag share (% of total)			Female share of EA in Ag (% of total)		
		1980	1995	2010	1980	1995	2010	1980	1995	2010
North Africa	Egypt	11,780	18,531	27,492	53.8	35	25.1	25.9	34.9	40.3
	Libya	838	1,517	2,425	22.4	7.6	3	37.2	50	69.9
Sub-Saharan Africa	Burkina Faso	2,989	4,421	7,425	92.2	92.3	92.1	46.7	48.1	47.7
	Mali	1,963	2,508	3,517	88.3	83	74.9	36.6	35.9	37.7
	Niger	1,965	3,045	5,228	90.2	87.2	82.9	36.5	36.1	36.6
	Nigeria	23,353	33,165	49,144	53.9	38	24.9	36.6	34.8	39.7
Central Asia	Uzbekistan		8,088	12,788	-	31.2	21.4	-	51.6	53
	Tajikistan	-	1,678	2,896	-	37.4	27.4	-	52.2	53
South and Southeast Asia	Afghanistan	4,548	5,620	9,384	70.4	65.8	59.7	29.4	28.5	31.1
	Indonesia	55,181	84,276	115,905	57.8	51.7	41.4	33.7	39	39.3
	Bangladesh	38,345	56,409	78,232	71.9	59.9	45.4	42.4	44.5	51
West Asia	Jordan	444	1,160	1,882	16.7	11.3	6.3	41.9	44.3	62.2
	Syria	2,020	4,240	7,365	33.6	28.5	20	31.7	50.7	60.7
	Turkey	15,299	22,518	25,942	56.2	46.2	32.3	40.4	48.2	52.3

Source: FAO: *The State of Food and Agriculture, 2011a*, (Table 4a).

Finally, as it was noted earlier, researchers claim that women's participation in the labor force is underestimated as national census tend to account only for income-generating activities while leaving subsistence agriculture unaccounted where many rural women are heavily involved (e.g., rearing small

livestock, kitchen plots, or post-harvest processing) (FAO, 2011). Doss (2013) adds that definitional and methodological issues in data collection also contribute to discrepancy in the national census because even rural men and women describe women's agricultural work as "housework" and women farmers as "helpers" leaving women's contribution to the rural economy unaccounted and hence invisible.

## Supply Side

### Overview of Education

Despite significant progress in improving access to schooling in recent years, education is still a major challenge across Muslim countries. The 2012 OIC's Education and Scientific Development report states that the average total literacy rate in OIC countries as a group was still behind the world average (72% vs. 80%), while the literacy gap between men and women was even wider (64% vs. 86%, respectively). The best performers in adult literacy rates were Central Asian countries (99%) where literacy was universal, whereas Sub-Saharan Africa performed extremely low (Niger, Mali, Burkina Faso, Somalia, Guinea).

**Table 8: Literacy rate (age 15 and over that can read and write) in select countries**

Region	Country	Total Population	Men	Women	Education Expenditures from GDP
North Africa	Egypt	73.9%	81.7%	65.8%	3.8%
	Jordan	95.9%	97.7%	93.9%	NA
	Libya	89.5%	95.8%	83.3%	NA
Sub-Saharan Africa	Burkina Faso	28.7%	36.7%	21.6%	3.4%
	Guinea	41%	52%	30%	2.5%
	Mali	33.4%	43.1%	24.6%	33.4%
	Niger	28.7%	42.9%	15.1%	4.2%
	Somalia	37.8%	49.7%	25.8%	NA
Central Asia	Kazakhstan	99.7%	99.8%	99.7%	3.1%
	Kyrgyzstan	99.2%	99.5%	99%	6.8%
	Tajikistan	99.7%	99.8%	99.6%	3.9%
South and Southeast Asia	Afghanistan	28.1%	43.1%	12.6%	NA
	Bangladesh	57.7%	62%	53.4%	2.2%
	Indonesia	92.8%	95.6%	90.1%	2.8%
	Iran	85%	89.3%	80.7%	3.7%
West Asia	Iraq	78.5%	86%	71.2%	NA
	Kuwait	93.9%	95%	91.8%	3.8%
	Lebanon	89.6%	93.4%	86%	2.2%
	Pakistan	54.9%	68.6%	40.3%	2.1%
	Saudi Arabia	87.2%	90.8%	82.2%	5.1%
	Turkey	94.1%	97.9%	90.3%	2.9%
	Yemen	65.3%	82.1%	48.5%	5.2%
World		84.1%	88.6%	79.7%	5%

Source: CIA World Factbook, 2014

Table 8 illustrates that women's education in several Muslim countries remains low and the gap between male and female literacy rates is sometimes as high as 28% (e.g., Niger). Moreover, women are less likely than men to be literate when the proportion of the total literate population is low. For example, Afghanistan's adult literacy rate for females is 13% and 43% for men and the total literacy of

the population is 28%. Moreover, gender disparities between rural and urban citizens are wide and also vary across countries. For example, in 2009 Pakistan had a 17% adult literacy rate among rural women vs. 52% among urban women. In Kyrgyzstan, the rural-urban divide was almost non-existent (about 98% for adult literate women in rural areas vs. 100% in urban areas).

In Sub-Saharan Africa, a large share of women and men did not advance beyond the primary level (39% women and 48% men). In terms of secondary and tertiary education attainment, less than 18% of women and 25% of men in Sub-Saharan Africa were enrolled in secondary education and less than 6% of both men and women were enrolled a tertiary education (UN, 2010). MENA's educational attainment is comparatively better in countries such as Kuwait, Qatar, Jordan and Turkey experiencing moderate, rather than severe gender disparities. More women are entering tertiary education and traditionally male-dominated fields. However, gaps in educational attainment are serious considerations especially when they disproportionately disadvantage women, which further intensifies their non-employability in more knowledge-driven economic sectors. The Al-Fanar Media (MENA's higher education news and opinion portal) periodically reports on the frustration of young highly educated Arab women failing to find jobs in male-dominated fields. Compared to adults, the gender disparities in youth literacy rates have narrowed. In 2007, the global literacy rate for young women reached 87%, up from 79% in 1990. Youth literacy is close to universal in the majority MENA countries, while South Asia and Sub-Saharan Africa still lag behind because of early dropouts or restricted access to schools. Literacy levels of young women are almost two times higher than those for older women (ages 25 and over) even when the total literacy rate for these countries is low (UN, 2010). While governments and the international community focuses on increasing girls' school participation and retention, the educational needs of older women appear neglected. Older women require more targeted adult literacy programs as well as activities focused on reducing gender and income disparity among women from poor and rural households.

Despite general progress in education, the quality of education (and training) still lags behind labor market needs, frustrating the efforts of young men and women to better their economic positions. According to SESRIC Education report (2012), in 2009, the students in OIC countries lagged in science, mathematics and reading compared to the rest of the world. The report also included Muslim countries' contribution to the global intellectual powerhouse. The OIC countries accounted for less than 2% of patent applications compared to 74% of total patents submitted by USA, Japan, China and Korea combined. The World Bank (2008) ranked several MENA countries (Djibouti, Yemen, Iraq and Morocco) as the worst educational reformers in the world because of their failure to ensure more equitable access and higher quality education. Augustin et al. (2012) described school curricula in Muslim countries as gender biased. This has been further discussed by Mayyada Abu Jaber (2015) in Al-Fanar Media stating that 30% of textbooks in Jordan highlighted the division of labor among men and women. Despite emphasis on the importance of female education the Jordanian textbooks included "hidden messages" about unsuitable vocational jobs for women, negative impact of working women on family wellbeing, and females' inability to manage finances or make decisions. The textbooks also highlighted the marriage market for women, and the job market for men.

### Attacks on Education

A recent study by the Global Coalition to Protect Education from Attack (GCPEA) titled *Education Under Attack 2014*<sup>1</sup> documented horrifying facts about the level of deliberate attacks on education across 70 countries of the world during 2009-2013. These attacks are especially disturbing in Muslim countries where assaults were directed against female education. Among the 30 most affected countries (with patterns of systematic attacks), five MMCs were singled out: Afghanistan, Pakistan, Somalia, Sudan, and Syria. For example, in Afghanistan 1,110 or more attacks took place on “school-level education, including arson attacks [especially targeting girls], explosions and suicide bombings. School staff were threatened, killed and kidnapped” (p. 42). In Sudan, at least 15 university students were killed, 479 injured and more than 1,040 detained by government forces. Finally, the current war in Syria affected 2,445 schools, which were damaged, destroyed or used as detention centers, as well as country’s most prestigious universities (Aleppo and Damascus Universities).

Stated reasons for attacks on schools included “block[ing] education of girls [and] block[ing] education that is perceived to impose alien religious or cultural values [challenging gender roles]” (GCPEA, 2014, p. 47). The perpetrators of the attacks include militants, insurgents, Taliban as well as government army, police, and intelligence services armed with political, military, sectarian or religious ideologies. The study also examined the attacks on higher education (universities, students and academics) aimed at suppressing advanced ideas or calls for reforms in education and the economies of these countries. The attacks affected 28 out of 30 countries profiled in the report, although the study found that higher education was less monitored than elementary and secondary schools. Among Muslim countries, Yemen had the largest student loss in higher education (73 student killed and 139 injured during anti-government riots in 2011) followed by Sudan and Iraq (500 Iraqi academics have been killed since 2003)<sup>2</sup>. These attacks have been exacerbated by ongoing violence from the recent rise of a Sunni Jihadist group called Islamic State (formerly known as Islamic State of Iraq and the Levant), which closed eight universities across northern Iraq<sup>3</sup> (ibid).

The long-term impacts of such attacks on education are difficult to assess; a shaken education system affects every layer of society and results in lasting damage to human development and economic progress. While thousands of children (especially girls) are denied access to education that can last for years, drop-outs and brain drain can also cause significant disparities in skills gaps and economic performance. Subsequently, scarce resources redirected from other vital sectors of the economy (e.g., health) to rebuild educational infrastructure puts a further burden on social development of these nations. According to the GCPEA’s report (2014), the international research community has not yet profoundly assessed the scope, nature and impact of the attacks on higher education. The interconnectedness of the education systems should not leave this education segment under-researched because it is central to the advancement of country’s intellectual, economic, and political capacity, and also helps to ensure stability and equality for both men and women.

<sup>1</sup>Global Coalition to Protect Education from Attack (GCPEA). (2014). Education under attack 2014. Retrieved from: [http://protectingeducation.org/sites/default/files/documents/eua\\_2014\\_full\\_0.pdf](http://protectingeducation.org/sites/default/files/documents/eua_2014_full_0.pdf).

<sup>2</sup>Faek, R. (2014). Education under attack: Eight Arab countries affected. The Al-Fanar Media: News and Opinion about Higher Education. 03/09/2014.

<sup>3</sup>Naeel, G. (2014). Islamic State advance in Iraq closes eight universities. The Al-Fanar Media: News and Opinion about Higher Education. 08/22/2014.

## *Primary Education*

The gross enrollment rate (GER) for girls in primary education showed significant improvements particularly in regions where girls' participation was historically low. In Sub-Saharan Africa the gender parity index (GPI) increased from 0.85 in 1999 to 0.93 in 2010, in South Asia from 0.83 to 0.98, and Arab States 0.87 to 0.93 accordingly. This was mostly attributed to the elimination of school fees and improved access of girls to education. Afghanistan, at the bottom of the ranking in 2010, experienced the most significant gain in girl's enrollment: from only 4% of total girls starting school in 1999 when the Taliban banned girl's education to 79% in 2010 nine years after the fall of the Taliban<sup>20</sup>. Several MMCs have achieved gender parity in education access, including Iran, Bangladesh, the Gambia, and Mauritania. In MENA, the primary school enrollment for girls was high and several countries (Bahrain, Jordan and UAE) achieved greater gender parity (UN, 2010; UNESCO, 2012).

In principle, education is a key strategy for poverty reduction, however poverty is also one of the reasons girls have less access to primary schools. In places where girls' education is less valued, families send boys to schools when schooling is too expensive. For example, in Guinea only 44 out of 100 girls from the poorest households started school compared to 57 boys. Even in affluent families, gender disparity persists. For example, in Mali 70 out 100 girls from affluent families started school compared to 81 boys (UNESCO, 2012).

Among problems afflicting the encouraging progress in the female GER is a significant portion of girls failing to stay through the end of primary schooling. This is especially severe in Sub-Saharan MMCs where more than half of girls drop out of school. In Guinea, only 26% of girls in the last grade of primary school transition to secondary school, while in Nigeria, only 29% of girls entering grade one reach grade six. The major factors contributing to this problem are widespread poverty, poor health and malnutrition of girls, which make them miss school, teacher absenteeism, school location, poor quality educational provision, and inadequate facilities to encourage girls' families to keep their children in school (UN, 2010; UNESCO, 2012). Additionally, a recent article in Al-Fanar Media claimed that the high incidence of child marriage in rural areas, where poverty is high and social traditions are still strong (e.g., in Egypt), forces families to withdraw girls from school and marry off to reduce expenses<sup>21</sup>.

Another disturbing trend spread across poorer MMCs is the high rate of grade repetition at the primary level. In 2007, among Sub-Saharan MMCs, Guinea-Bissau had the highest rate, approximately one-quarter of all students had to repeat grades (affecting both boys and girls). The high incidence of grade repetition in MMCs is related primarily to the extent of poverty especially in rural areas. However, other factors also contribute, such as a lack of teaching and learning materials, overcrowded classrooms, teacher absenteeism, school safety especially for girls, and absenteeism of girls due to household chores or illness in the family where the burden is transferred to a female member irrespective of age (UN, 2010). Lloyd, Mete and Grant (2009) found that a mother's education level could also influence the

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<sup>20</sup>Trading Economics. School Enrollment—Primary-Female (% gross) in Afghanistan. Retrieved from <http://www.tradingeconomics.com/afghanistan/school-enrollment-primary-female-percent-gross-wb-data.html>.

<sup>21</sup> Lynch, S. (2015). Child brides in Egypt blocked from education. Al-Fanar Media, 18 May 2015.



length of daughter's school attendance. They found that in rural Pakistan girls whose mothers had some form of education were less likely to drop out of school or repeat the grade.

### *Secondary Education*

Globally, girls' secondary GER has increased, but in the Muslim world fewer girls in the secondary-school age group attended schools, although this trend had a wide regional variation. For example, in Sub-Saharan Africa, 18 countries had fewer than 90 girls enrolled for every 100 boys three of which are MMCs (Burkina Faso, Mauritania, Niger). This was also true for 6 countries in the MENA region, one of which is a MMC (Morocco), 12 countries in South Asia, one of which is a MMC (Pakistan) and 1 country in Central Asia that is also a MMC (Tajikistan). The main factor attributing to lower GER in secondary education among girls is related to the fact that fewer girls transition to secondary schooling after primary education (UN, 2010; UNESCO, 2013).

However, some countries proved to be exceptions. Afghanistan and Yemen achieved considerable gains in girls' secondary gross enrollment. In 1999 Afghanistan had no girls in secondary schools, but by 2011 the female GER reached 34%. In Yemen, female GER increased from 21% in 1999 to 35% in 2011. In some countries gender parity favored more girls than boys. For example, in Bangladesh, targeted support to enroll more girls in both primary and secondary schools (provision of fee-free secondary schooling and a stipend) resulted in increased number of girls attending secondary schools (1.13 GPI), while the enrollment and retention among the boys was lower. Other countries where gender parity favored girls were Algeria, Jordan, Lebanon, Tunisia, Indonesia, and Malaysia (UNESCO, 2012; UNESCO, 2013).

The situation is less promising when rural women's foundation skills<sup>22</sup> are compared to rural men's. Young rural women (ages 15-24) are at a substantial disadvantage in many MMCs. The gender disparity is particularly severe in countries where the majority of rural residents fail to complete primary schooling and lower levels of secondary schooling. The situation is particularly grave in Niger, Burkina Faso, Mali and Guinea (for Sub-Saharan Africa), Morocco, and Syria (for MENA region) (UNESCO, 2012).

### *Technical and Vocational Education and Training (TVET)*

Overall the enrollment of young Muslim women in the upper secondary TVET is weaker compared to non-Muslim women. Recently though, numbers are trending upward, matching the general upward trend in female's secondary school enrollment. At the regional level, Central Asia (47%) and East Asia (45%) had significantly higher levels of TVET enrollment rates among young women compared to Arab States (40%), Sub-Saharan Africa (40%), and South and West Asia (32%) in 2010 (SESRI Education and Scientific Development, 2012; UNESCO, 2012). On the individual country level, Table 9 illustrates the highest TVET enrollment in Azerbaijan and the lowest in Niger and Bahrain.

Among explanations about lower female participation in TVET programs, Hartl (2009) argues that many traditional TVET programs are inaccessible to women who have low levels of schooling and literacy, or lack language skills of the official language of instruction in the program. Some point at unattractiveness

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<sup>22</sup>Foundation skills include math, reading, writing and basic science.

of TVET among young women and the general stereotyping among public and parents that TVET programs do not provide vertical mobility for graduates to progress. Often courses taught in TVET schools are geared toward traditional male-dominated trades leaving limited options for women-oriented trades, such as accounting or sewing. Finally, in Muslim countries a lack of female staff and trainers in TVET programs is another reason why TVET programs are unattractive to Muslim women and their families.

The Economist Intelligence Unit report (2013) stated that many TVET programs in South Asia were essentially workplace training that ranged from traditional apprenticeships in the informal sector to more formal on-the-job training. The majority of these programs were funded by donors, governments, and non-governmental organizations. In fact, in Bangladesh the government in collaboration with the non-government sector has launched a skills development strategy to target marginalized groups, specifically aiming to increase female enrollment in TVET by 60% by 2020 (Engel, 2012). In Tunisia, the government established the National Employment Fund in 1999, which supports vocational apprenticeships allowing women aged 15 to 20 with no skills to work with qualified instructors in public or private institutions to develop basic skills (UNESCO, 2012). Engel (2012) provided another example from Pakistan, where the government drafted its 2030 Vision with a goal of increasing secondary technical and vocational enrollment for young women from 4.2% in 2010 to 15% in 2015 toward achieving 40% by 2030.

**Table 9: Female enrollment in TVET**

Region	Countries	Percent
North Africa	Algeria	35%
	Sudan	24%
	Tunisia	35%
Sub-Saharan Africa	Burkina Faso	46%
	Guinea	44%
	Niger	14%
	Senegal	52%
Central Asia	Uzbekistan	48%
	Kazakhstan	30%
	Kyrgyzstan	27%
	Tajikistan	15%
South and southeast Asia	Bangladesh	21%
	Malaysia	43%
	Pakistan	42%
	Iran	34%
	Indonesia	42%
	Brunei	41%
West Asia	Bahrain	13%
	Palestine	35%
	Azerbaijan	51%

Source: UNESCO, 2012.

### TVET in Agriculture

Overall, women continue to be under-represented in formal agricultural TVET programs such as agronomy or animal science. Social barriers to travelling or interacting with male farmers are the main reasons why women do not pursue agricultural TVET programs. Women prefer to study in socially-acceptable-to-women fields such as making handicrafts, food processing and micro-enterprise, as a result women's enrollment in these programs is fairly high (Hartl, 2009).

### Higher Education

The gains in tertiary education especially favored women despite regional variations. Women overtook the worldwide dominance of men by reaching 51% of total students in tertiary education in 2007 (Table 9). Central Asia and Arab States had more or the same percentage of women enrolled as men, while South Asia and Sub-Saharan Africa had fewer female enrollees. For example, fewer than six women for every ten men study in tertiary schools in Sub-Saharan Africa, underlying the fact that women in this region face significant barriers to participation in higher education, attributed to lower success rate in completing primary and secondary education levels as discussed above (UN, 2010; UNESCO, 2012).

**Table 10: Share of women in tertiary education by region, 1990 and 2007**

	1990		2007	
	Both sexes	Women, (%)	Both sexes	Women, (%)
World	66,912	46	152,483	51
Arab States	2,375	37	7,302	50
Central Asia	1,545	49	2,534	52
East Asia and the Pacific	13,911	38	46,714	48
South and West Asia	6,213	31	18,504	41
Sub-Saharan Africa	1,273	32	4,141	40

Source: UN, 2010, Table 3.5 (slightly modified)

At the country level, Afghanistan, Bangladesh, Iraq, and Yemen had less than 40% of women enrolled in tertiary schools, whereas Brunei, Indonesia and Malaysia along with the other Arab states achieved gender parity (UN, 2010). Roudi-Fahimi et al. (2003) reported that women in MENA were more likely to enroll in universities than in the past, which resulted in countries such as Bahrain, Jordan, Kuwait, Lebanon, Oman, Qatar, and Saudi Arabia exceeding gender parity in the female GERs. Research shows that the rise in women's participation in tertiary education is driven by several factors:

- Women are delaying marriage, which provides women an option to either enter the labor market or continue education.
- Families are seeking additional income to offset the rising costs of living, thus are more receptive to removing social barriers to women's professional aspirations.
- Oil-rich Gulf countries have increased investments in education and offer targeted programs to entice women.
- Economy is effectively responding to market signals of increased demand for nursing or teaching jobs, or in some countries to knowledge-based sectors, such as medicine, IT and computer service support.

However, despite success women are more likely to concentrate in traditionally-acceptable-for-girls fields (such as education, nursing, social sciences, humanities and arts), while remaining underrepresented in sciences (including agriculture), engineering, and medicine (UN, 2010). The patriarchal gender system plays a major role in delineating which occupations are socially acceptable to women. Muslim families and communities value women's role in running a household and raising children rather than having a successful professional career as an engineer, doctor, or in agriculture (Augustin et al., 2012).

### **Tertiary enrollment by discipline**

It is necessary to look at women's enrollment by discipline at the tertiary or post-secondary level in order to move beyond the simple notion of gender parity. Gendered patterns in enrollment by discipline reflect cultural and gender norms as well as if they are shaped by individual preferences or socio-cultural stereotypes<sup>23</sup>.

<sup>23</sup>According to Hamdan (2005), many Saudi women and men believe that women's nature is different from men's, thus preventing women to work in the same jobs as men. Teaching and nursing are considered appropriate for

The 2007 charts presented in the UN's *The World's Women 2010* report, documented women's representation in eight disciplines as a share of women in total tertiary enrollment: education, health and welfare, humanities and arts, social science, business and law, science, engineering, manufacturing and construction, agriculture, and services. Not surprisingly, women prevailed in traditional "feminine" fields, like education, health and welfare, humanities and arts, social science, and business and law, although their participation had slightly increased in science, agriculture and services. However, in the fields of engineering, manufacturing and construction, women were extremely underrepresented.

Women particularly dominate the education field based on the analysis of 120 countries where the share of women in this field was more than 50% in 92 countries and 75% in 36 countries. For example, in Lebanon, more than 90% of women were enrolled in the field of education. The share of women in non-traditional "masculine" fields such as science, engineering, manufacturing and construction, and agriculture, was much lower compared to men even in countries where women exceeded parity in tertiary enrollment. However, in several Arab countries, where many men attend overseas universities, women are taking advantage by pursuing non-traditional fields such as science (UN, 2010). Although no data yet exist to look at the proportion of female graduates engaged in non-traditional careers for women such as engineering, medicine or agriculture. The OECD study (2011) found that in 2008 Indonesia displayed the most balanced distribution of female and male graduates across all fields with a slightly higher share of females in all disciplines, even in comparison to OECD countries. The share of women exceeded men in mathematics and computer science fields as well as in engineering, manufacturing and construction (51% for females vs. 49% for male), which was considerably higher than the OECD average (24% for females and 76% for males).

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women's nature. The belief that women cannot be seen by strange men is still prevalent, thus limiting employment options for women.

## Demand Side

### *Labor Market and Job Growth*

According to the WB's jobs report (2013), the wide range of jobs performed in developing countries can be grouped into formal and informal labor market. Almost 50% of the jobs are outside of the formal labor market (i.e., in nonwage employment). In the Muslim World, the nonwage (self-employment and farming) employment is prevalent among women: more than 80% of women in Sub-Saharan Africa work in the informal economy, comprised 41% of the self-employment category and 39% in farming. The same is true for 75% of women in MENA countries, 60% of women in South and East Asia and less than 20% of women in Eastern Europe and Central Asia (ibid).

The informal sector is the most important sector for women in MMCs. Many women are engaged in small-scale home production (e.g., dress-making or food processing) and street businesses (e.g., vending), which is wide spread in Bangladesh and Pakistan. Being young and a woman doubles the risk of informality (WB, 2013). The latest available data provided in the UN's The World's Women report (2010) showed that in 2004, informal employment as a percentage of total non-agricultural employment in Turkey was almost equally distributed between men and women (35% vs. 36% respectively) whereas in Mali it was dominated by women (89%). For other countries in the Muslim world this type of data is not available. The importance of the informal sector for women is difficult to miss but what becomes obvious is that research is less focused on this sector for many reasons. This sector is difficult to capture for GDP calculations, while in some countries the government fails to accept that its economy has a large share of people depending on the informal economy (as in the case of Uzbekistan).

According to the International Labor Organization (ILO, 2014), job growth in Central Asia is weak and continues to face sharp deceleration of economic activity due to weak commodity exports, combined with low domestic investment activity and low consumer demand. Annual employment growth rate for women in 2014 was projected at the same level as in 2013 (about 0.1%). Gender wage gaps in the region remain high. For example, male wages exceed female wages by 65% in Tajikistan. The collapse of the Soviet Union in 1991 severely affected the manufacturing basis of Central Asian countries. The region heavily relies on extractive industries and their exports: aluminum in Tajikistan, gas and gold in Uzbekistan, oil in Kazakhstan and Azerbaijan, and uranium and gold in Kyrgyzstan. The textile industry and agriculture are also important sectors especially in Tajikistan and Uzbekistan. Extractive industries contribute little to job creation and when they do the jobs are dominated by male labor. Government efforts to diversify national production and the export base, increase worker's productivity and quality of current jobs, as well as create new jobs in female-friendly sectors (e.g., services) remain inadequate (ibid).

The job growth in South-East Asia and the Pacific is also weak due to slightly reduced activity in both import and export markets, which were booming in 2010-2012. In 2014, the annual employment growth rate for women was estimated at 1.6%, which is slightly higher than men's (1.5%). The movement of workers from low-productivity agriculture to higher-productivity non-agriculture activities is slow. As stated earlier, agriculture is still the largest employer (41% in 2013), although services are expected to outpace this over the next five years, driven in part by limited prospects in agriculture. Creating more

productive and higher wage off-farm employment remains on government agendas. The region's labor market is prone to high incidence of vulnerable employment<sup>24</sup> especially affecting women (63.1% compared to 56% of men), which is projected to decline by 2017. The share of workers earning less than US\$2 a day saw a sharp decline, from 62% in 2000 to 31% in 2013, with projections of a further 10% decline by 2018. The share of workers making approximately US\$4 a day has increased from 22% in 2000 to 36% in 2013, and the share of the 'middle class' workers (making US\$4-13 a day) is projected to increase by 5% (ibid.)

In South Asia, the annual job growth rate for women is estimated at 2.2% vs. 1.8% for men. However, the labor market is dominated by low-paying and low-productive informal and agricultural jobs. For example, in Pakistan agricultural activities account for 74% of female jobs. The global economic slowdown after the 2008 financial crisis, domestic challenges (poor education base, wealth disparities and lack of social programs) and political instability (in Afghanistan and Pakistan) are expected to continue depressing job creation (ibid.)

In the MENA region, annual job growth rate for women is estimated at 2.8%, which is very low considering the fact that the majority of women are underutilized in the economy despite their high qualification base. This is associated with high specialization in sectors, especially in commodity-exporting sectors, that generate low employment growth but offer high wages raising overall labor costs and wage expectations across other economic sectors, thus hindering job creation in more employment-intensive industries or services. However, it should be pointed out that rich Gulf States have a relatively good wealth redistribution system offering generous wages to citizens, but in the long-term it is not sustainable for the business climate. In MENA countries, the state is a leading employer (WB, 2013). Overall, MENA region receives a large share of foreign direct investments (FDIs), although it is highly concentrated in oil-rich countries (e.g., Saudi Arabia accounts for 44% of it). The FDIs are primarily directed to construction (18%), telecommunications (13%) and energy (27%), while manufacturing and agriculture are neglected. The recent civil strife in Egypt and Tunisia has significantly reduced the FDI flow into these countries, thus further depressing the job creation prospects (ILO, 2014).

In Sub-Saharan Africa, female annual employment growth rate was estimated at 3.1% in 2014. Agriculture still dominates the labor market, although the informal and subsistence activities are widespread especially among women. In countries like Nigeria and Sudan, the industrial sectors comprised of mining and construction, do not serve as engines for job creation. Instead, in Nigeria there is a wider wealth divide between oil-rich south and oil-poor north, which contributes to the Islamic insurgency in the north. Overall, less than 10% of the population in Sub-Saharan Africa is employed in industry, which is the lowest in the world. The regional policy-makers have developed national plans for job creation and transforming agrarian economies to more advanced economies, however the plans would take years to implement (ILO, 2014).

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<sup>24</sup>Vulnerable employment is a self-employment or contributing labor to family, which lacks social protection usually offered by formal employment.

## *Employment Sectors*

On the global scale, job creation in the service sector continues to grow for both women and men. The same trend occurs in the Muslim world, although it has regional variations. In Northern Africa, agriculture and services accounted for more female jobs (about 40% each) in 2010, while in Sub-Saharan Africa, agriculture was the primary employer for women (68%). In Southern Asia, women were also predominantly engaged in agriculture (55%), while services accounted only for 28% of female jobs (UN, 2010).

In terms of sectoral job composition, health and education are the primary employment options for women across the entire Muslim world, for reasons covered earlier in this report. The government is another important employer for women, especially in the Middle East. In industry, women's presence is particularly prominent in light manufacturing such as food processing and textiles, with Bangladesh leading the trend.

In terms of women's share of employment in occupational groups relative to women's share of total employment, women were overrepresented in four occupations according to latest 2004-2008 data: clerks, professionals, technicians and associated professionals, and service workers and shop/market sales workers. The representation of women was very low in occupations such as legislators, senior officials and managers, skilled agricultural and fishery workers, craft and related trade workers, and plant and machine operators and assemblers. In addition, when women were present in these occupations they tended to be at the lower end of the skills spectrum (UN, 2010). It is important to point out that women's share of employment in these occupational groups vary by region in the MMCs. In countries, where the share of educated women is high and they are not constrained by traditional segregation of space (i.e., private vs. public) women are present in these groups (Kazakhstan, Kyrgyzstan and Uzbekistan). In Bangladesh and Pakistan women's share overall in these occupational groupings is low due to their high illiteracy levels, low job skills and prevalent cultural norms that restrict women's full economic participation.

## *Agricultural Industry*

The integration of economies into the global market did not leave MMCs unaffected. Instead, economic development even in Sub-Saharan countries is helping to slowly transform the agricultural sector. Rising incomes in the MMCs are creating greater demand for high-value crops, high-protein-based products (meat, milk and eggs), and processed foods. The food supply chain is becoming vertically integrated linking producers with input suppliers, processors, distributors and retailers (supermarkets) (FAO, 2011).

The smallholder production systems are particularly challenged with pressures to meet the growing market demand for high quality products. The current trends in the agricultural sector especially affect women smallholders who tend to farm smaller plots, be less educated and constrained with access to productive resources and technologies. Integrating these women (through education and skills development) into the market system has become essential and many MMC governments are developing national plans to transform subsistence agriculture into modern forms of agroindustry.



While women smallholders continue to face the prospects of limited agricultural production, some new forms of organizations in supply chains for export-oriented crops and agroprocessing are creating better job opportunities for rural women. The large-scale incorporation of women in the packing of non-traditional agro-export production (e.g., fresh fruits, flowers, vegetables or livestock products) is one of the examples of this development. Many development programs are working with private and public sectors in MMCs to establish commercial value chains that can provide rural and urban Muslim women a good source of reliable employment (Doss, 2011). For example, Maertens and Swinnen (2009) studied the development of the modern horticulture supply chains in Senegal. They found that women received better benefits from working at a large-scale farm operation and agroindustrial processing than from household contract farming where they provided unpaid family labor.

### *Skills Development Shortages and Gaps*

Engel (2012) conducted a study on Bangladesh, Ethiopia, Jordan, and Sierra Leone's efforts to increase access to skills training for youth. He found that these countries have attempted to launch broad reforms to modernize TVET systems and connect skills development to labor market needs. The conclusion generated in this report, are characteristic of other MMCs:

- There are severe skills shortages and gaps across all countries. The formal TVET system has a poor base to meet the demands of a modern economy. Job skills development in both TVET and higher education is not coordinated with market needs, thus contributing to overall growth of youth unemployment because they have no employable skills.
- The emerging knowledge economy (high tech technologies) is one of the primary drivers for policy makers in addressing skills development although this is more characteristic of middle and higher middle-income countries that see a pressing need to participate in the global knowledge economy.
- The growing poverty and unemployment in rural and marginalized areas are other important drivers for policy makers. The promotion of skills development for a more productive agro-industrial complex is on the agenda of many MMCs, although to what extent they commit investments remains unclear.
- Particularly in Bangladesh and Jordan (also characteristic of other countries that supply unskilled migrant labor), migration patterns are pushing for a skills development agenda. In Jordan, the role of immigrants and refugees (from Syria) in low-skilled and low-pay jobs is driving the government's effort to improve Jordanian youth's employability in order to pacify angry youth (and their parents) and to prevent and waylay negative reactions to the Syrian job seekers.
- Job skills development programs remain highly uncoordinated among various actors (government ministries, NGOs, donors) and bogged down in numerous ministries and agencies. For example, in Jordan and Bangladesh, youth ministries are responsible for training marginalized groups. In Jordan, the Ministry for Social Development (MSD) works with women's groups to develop their skill base while the Ministry of Labor focuses on certification of skill sets absent any coordination with the MSD. These uncoordinated efforts become more costly to the economy and generate wasteful allocations of resources.

It is worth mentioning that formal general education and TVET only partially depict the job skills picture. Often the data gathered on enrollment in these types of schools does not provide for the kinds of skills youth require for employment. Moreover, the UNESCO Brief (2012) states that in those countries where TVET is offered for women, the skills are limited to traditional gendered tasks in the garment (Bangladesh), food, health, and service sectors (Hartl, 2007). This means that TVET programs continue the path of gendered division of labor.

Several countries have dedicated agricultural TVET programs, such as Agricultural Vocational High Schools in Turkey, or incorporate agricultural curriculum in TVET programs, however information is not available on the percentage of male and female enrollees or on the agricultural curricula. In Egypt, the Social Fund for Development coordinates agriculture-based vocational training centers for women. The centers are often community-based centers designed to meet community development needs, including rural areas (Abraham, 2003).

Engel (2012) further states that despite the governments' and donors' effort to create a wide range of large- and small-scale skills development programs, many of them are outside the formal training and skills development systems. It is unclear to what extent they are aligned with labor market needs or national development priorities. Moreover, TVET programs often channel women into labor market sectors that require low skills, and offer low pay and social protection (UNESCO, 2012).

On a positive note, to stay on track with skills development, governments are also attempting to create oversight institutes. For example, in Pakistan, the Sindh Technical and Vocation Training Authority provides overall coordination. In recent years a more consolidated effort to improve the quality of TVET in the public and private sectors of the member countries is coming from OIC. As a result, in 2008 during the 24<sup>th</sup> Session of the COMCEC the OIC-VET (Vocational Education and Training Programme for the Member Countries of the OIC) was established. Within the framework of this program, SESRIC facilitates a wide range of capacity building efforts to improve the capacity of national institutions in OIC countries to better serve market needs (SESRIC Education and Scientific Development, 2012).

## Conclusions

The Pew Research Center (2011) projects that the number of Muslims will increase from 23% of the world's population at about twice the rate of the non-Muslim population over the next two decades. This means that by 2030, Muslims will make up 26% of the world's total projected population. About half of this increase will be women. Achieving greater gender parity under this scenario remains a significant challenge.

Overall, gender parity in educational attainment among Muslim countries has improved although regional variations are still wide, requiring broader action to increase enrollment and retention of girls and women-adults in primary and post-primary education as well as in TVET. Women remain underrepresented in the fields of science (including natural and agricultural sciences), technology, engineering and mathematics, thus hindering their access to an economy that is becoming more knowledge-oriented. Labor markets reveal various gender gaps. Persistent imbalance exists in the household division of paid and unpaid labor. Women are less likely to work for pay and reach decision-making positions inside and outside their households. While agriculture in many countries is becoming feminized, women still lack access to key agricultural inputs and assets to take a full advantage of the modern agricultural production systems. Women are under-represented in the entrepreneurial field and growth-oriented sectors. These shortfalls in aggregate, combined with disparities in education and training, increase women's chances of facing poverty, poor health and unemployment especially in rural areas, which in turn can affect entire households, especially children.

This paper attempted to illustrate the relative position of Muslim countries in relation to women's participation in the AET and labor markets. The paper provided empirical evidence on women's contribution to the agriculture and the overall economy of many MMCs forming a base for subsequent analysis of gender inequalities in agriculture. A significant lack of knowledge persists in many areas, from barriers to girls' education and training to labor force participation in agriculture. Moreover, further studies are needed to improve understanding of gender roles in agriculture and how they change over time and in response to new opportunities.

## *Recommendations*

The recommendations provided below represent selected strategies and successful interventions found throughout the literature studied for this report. The list is not exhaustive and should be carefully weighed to account for the context of the countries where women reside and interventions are targeted.

**Table 11: Recommendations and successful practices to increase Muslim women's participation in AET and the labor force**

RECOMMENDATIONS	SUCCESSFUL PRACTICES
<b>PRIMARY &amp; SECONDARY LEVEL: Increase girls' enrolment and retention and reduce the urban-rural divide</b>	
<ul style="list-style-type: none"> <li>• Develop gender-sensitive curricula and update existing curricula.</li> <li>• Ensure secondary-school curricula focuses on skills development required by labor markets (e.g., transferable and soft skills).</li> <li>• For students at high risk of dropping out, create flexible opportunities for schooling (account for girls' division of labor).</li> <li>• Organize mobile schools to reach children in remote areas (especially for Afghan rural girls).</li> <li>• Eliminate school fees.</li> <li>• Offer support for educational supplies, especially to those marginalized.</li> <li>• Offer stipends and/or meal plans especially for those from marginalized neighborhoods and rural areas.</li> <li>• Design and provide professional development programs or in-service training for teachers to improve their classroom performance and pedagogical skills.</li> <li>• Create targeted educational programs (with a focus on life skills) for illiterate women and men.</li> <li>• Increase awareness among rural communities and families about the importance of girl's education.</li> </ul>	<ul style="list-style-type: none"> <li>• Akanksha, an Indian NGO, works with children and adolescents in Mumbai slums. The NGO focuses on effecting non-cognitive skills such as self-esteem and positive aspirations through the use of workshops, mentoring, drama, art, sports, and storytelling.</li> <li>• In Ghana, the government launched a distance-learning program in 2007 that trained about 25,000 teachers by 2010.</li> <li>• The Sister-2-Sister Initiative in Malawi targets young vulnerable women (ages 15-19) with life skills education provided by older young women ('big sisters'). The training is extracurricular: while it supplements the long-established formal life skills curriculum, it can also be delivered to young women who are out of school.</li> </ul>
<b>TVET: Increase women's enrolment and equip them with skills for the agricultural sector</b>	
<ul style="list-style-type: none"> <li>• Create apprenticeships programs integrated with the secondary school curricula (especially the upper level) to connect female students with the TVET system early on.</li> <li>• Improve traditional apprenticeships programs by improving the technical and training capacities of the training staff, studying and working conditions, and ensuring that skills are certified through national qualification systems.</li> <li>• Develop market value chain curricula to educate more women and men in agricultural trades to provide support for female-based agricultural production.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Youth: Work Jordan</i>, a five-year initiative started in 2009 (led by the International Youth Foundation and funded by USAID with support from the Jordanian Ministry of Social Development). The program targets young men and women (aged 15–24) who are not in school, are unemployed and lack opportunity.</li> <li>• In Bangladesh, the Volunteers Association for Bangladesh offers a Computer Literacy Program (CLP), which operates in 348 computer literacy centers and 150 classrooms across 56 rural districts. Since its launch, the CLP trained more than 70,000 students 50% of who were female.</li> </ul>

RECOMMENDATIONS	SUCCESSFUL PRACTICES
<b>TVET: Increase women's enrolment and equip them with skills for the agricultural sector (cont.)</b>	
<ul style="list-style-type: none"> <li>• Develop information and communication technology (ICT) skills related to the knowledge-based economy.</li> <li>• Develop business skills programs that will allow women to seek employment in business-level positions.</li> <li>• Create linkages with corporations to develop on-the-job training opportunities especially in female-dominated service sectors (health, hospitality, education, and ICT).</li> <li>• Proactively recruit women and work with their families to increase the number of women, especially in fields typically dominated by men</li> <li>• Increase the range of courses offered in TVET schools to include disciplines that might be of more interest to women.</li> <li>• Ensure that the learning environment is "women friendly"</li> <li>• Make use of female role models and mentoring approaches.</li> </ul>	<ul style="list-style-type: none"> <li>• In 1994 the Egyptian Government set up a dual system of school- and work-based technical education, known as the Mubarak-Kohl initiative, with German support. Students spend two days a week at school and four days in a company. MOE covers the cost of schooling, including classrooms and teachers, while the private sector pays for training in factories and provides a stipend for trainees throughout the three-year program. By 2009, the initiative included 76 technical secondary schools and 1,900 companies providing training in 32 trades to 13,000 students.</li> <li>• Since 2002, Chile Solidario provides cash transfers together with other forms of support, including preferential access to training aimed at increasing employability, with a focus on poor women with low educational attainment and little or no professional experience.</li> </ul>
<b>HIGHER EDUCATION: Increase female enrolment and distribution along different disciplines</b>	
<ul style="list-style-type: none"> <li>• Offer scholarships and stipends</li> <li>• Offer pre-entry remedial programs for women and other disadvantaged groups</li> <li>• Develop flexible PhD programs that work with women's schedules</li> <li>• Develop mentoring programs to allow women to obtain coaching and mentoring from peers and role-models</li> <li>• Create linkages with secondary schools and TVETs to encourage young adults to explore university programs and degrees.</li> <li>• Create linkages with corporations to develop internship programs for women.</li> <li>• Use female role models and mentoring to recruit and encourage girls throughout their studies</li> </ul>	<ul style="list-style-type: none"> <li>• African Women Leaders in Agriculture and Environment (AWLAE), supports 20 women in doctoral programs.</li> <li>• African Women in Agricultural Research and Development (AWARD) Fellows benefit from a two-year career-development program focused on fostering mentoring partnerships, building science skills, and developing leadership capacity. 320 women have benefited from the program.</li> <li>• Association of Agricultural Engineers in Jordan offers internships for university graduates to work in the private sector; many of these are women are then employed based on this experience.</li> </ul>
<b>WORKPLACE: Enhance females' workplace opportunities and improve for social protection</b>	
<ul style="list-style-type: none"> <li>• Provide a wide range of social protection measures (from childcare facilities/support to educational programs) to enhance women's attainment in the workplace.</li> <li>• Enhance public-private partnerships to create regional networks that support the integration of rural women into formal agricultural employment.</li> </ul>	<ul style="list-style-type: none"> <li>• In Bangladesh several donor projects are working with local garment factories to offer prenatal care, breastfeeding support, childcare, water, sanitation and hygiene to 40000 female factory employees. In addition, employers offer nutrition program to all women.</li> </ul>

RECOMMENDATIONS	SUCCESSFUL PRACTICES
<b>RURAL EMPLOYMENT: Enhance workplace opportunities for women</b>	
<ul style="list-style-type: none"> <li>• Develop and strengthen community-based organizations (CBOs), which can offer a range of services to members (training, advocacy, and space for women’s socialization and social capital building).</li> <li>• Organize farmer field schools and trainings via CBOs or cooperatives (especially in livelihood diversification, entrepreneurship and business skills).</li> <li>• Improve access for women and marginalized groups to land, farm inputs and new production technologies, followed by training and extension services on how to adapt new technologies.</li> <li>• Facilitate and strengthen women’s access to markets by developing value chains that target women’s products.</li> <li>• Connect local and regional extension offices with women’s CBOs and cooperatives to streamline the information/technology flow.</li> </ul>	<ul style="list-style-type: none"> <li>• In Jordan, CBOs provide necessary training opportunities to women in rural areas. Some CBOs started to specialize in offering legal service to members.</li> <li>• In Bangladesh, Grameen Bank and BRAC (Bangladesh Rural Advancement Committee) pioneered microfinance infrastructure for poor rural women. The lending opportunities are tied to literacy, numeracy and other life skills trainings to help women diversify their livelihoods in rural and marginalized communities.</li> <li>• In Africa, Camfed targets poor rural adolescent girls, providing business management skills, a grant, microloans and peer mentoring. Their approach has resulted in over 90% of the businesses created by the young women turning a profit.</li> <li>• In India, Self-Employed Women’s Association (SEWA) has more than million female members in 14 districts and aims to increase women’s self-organization and collective action by improving access to markets and fair treatment, capacity building, the SEWA Bank for women’s deposit and lending practices, and establishing women support units, associations and networks (e.g., SEWA helped small-scale women farmers create the Sabarkantha Women Farmer’s Association).</li> </ul>
<b>GENDER-SENSITIVE GOVERNMENT POLICIES: Promote broad reforms in education</b>	
<ul style="list-style-type: none"> <li>• Develop a National Plan to increase girl’s education enrolment and attainment.</li> <li>• Coordinate and streamline the work between ministries for women, education or social development to address gender issues in secondary and higher education.</li> <li>• Develop a sectorial gender policy to provide a framework for integrating gender at all education levels.</li> <li>• Facilitate the establishment of career guidance and counseling in educational facilities (especially at vocation schools, colleges and universities).</li> <li>• Improve national data collection (disaggregated by sex) that will collect data from all school levels including TVET and higher education.</li> <li>• Launch an information campaign to raise public awareness about accountability in education.</li> <li>• Launch legal reform that eliminates gender discrimination in education.</li> <li>• Promote greater participation of NGOs and civil society movement to support women’s education and training, especially in rural areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Uganda launched the Public Expenditure Tracking Survey, information campaign to raise public awareness about accountability in education, which helped reduce resource leakage and corruption at the local levels.</li> <li>• In 2001, Nigeria launched the National Sexuality Education Curriculum for Upper Primary, Secondary and Tertiary Institutions. In response to concerns from parents, politicians and religious leaders that the curriculum was too explicit, discussions on condoms and contraception were removed and the title was changed to Family Life and HIV Education. After being successfully scaled up in Lagos state, the program is being extended to all primary and junior secondary schools in all states, with funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria. The 2010 Nigeria Education Data Survey found that 59% of parents and guardians with a child in primary or secondary school were aware that the curriculum was being taught.</li> </ul>

RECOMMENDATIONS	SUCCESSFUL PRACTICES
<b>GENDER-SENSITIVE GOVERNMENT POLICIES: Promote broad reforms in education (cont.)</b>	
<ul style="list-style-type: none"> <li>• Create education programs to provide-second chance education for women with low or no foundational skills.</li> </ul>	
<b>GENDER-SENSITIVE GOVERNMENT POLICIES: Promote reforms in workplace</b>	
<ul style="list-style-type: none"> <li>• Facilitate the development of female demand-driven initiatives (e.g., through improved quality of training and apprenticeships) and supply side initiatives (e.g., through access to finance, public works projects).</li> <li>• Develop market information systems for the female job market.</li> <li>• Improve national data collection (disaggregated by sex) on all types of employment and from formal and informal markets.</li> <li>• Improve labor (formal and informal) market regulations to reduce entry barriers for women.</li> <li>• Develop a National Women's Plan to integrate women into the economy.</li> <li>• Develop microfinance infrastructure to offer loans to women and provide financial management training for women.</li> <li>• Launch legal reforms that eliminate gender discrimination in the workplace. Promote legal reforms that can reach the informal job market to eliminate gender discrimination.</li> <li>• Link skills trainings with social protection for women.</li> </ul>	<ul style="list-style-type: none"> <li>• Ethiopia's 2010/11–2014/15 Growth and Transformation Plan gives high priority to skills development. The plan particularly focuses on increasing the productivity of micro and small enterprises primarily within urban areas, acknowledging their considerable potential to create jobs and reduce poverty.</li> <li>• In Bangladesh, the National Skills Development Policy 2011 is coordinated by the National Skills Development Council headed by the Prime Minister. The goal of the policy is to improve women and marginalized groups' access to skills offered in public and private TVET systems, and to facilitate industry's input in skills development.</li> </ul>
<b>DONORS: Promote coordination and work through public-private partnerships</b>	
<ul style="list-style-type: none"> <li>• Improve coordination between different types of donors (government and private foundations) and align support with national priorities.</li> <li>• Provide support for job skills development programs in coordination with the government and private sector to ensure trainings are linked to labor market needs.</li> <li>• Facilitate regional and international networks for informational exchange.</li> <li>• Increase funding transparency.</li> </ul>	<ul style="list-style-type: none"> <li>• In May 2011, UNESCO launched two new initiatives: the Global Partnership for Girls' and Women's Education and the High Level Panel on Girls' and Women's Education for Empowerment and Gender Equality.</li> <li>• The William and Flora Hewlett Foundation with support from the Bill &amp; Melinda Foundation has developed the Quality Education in Developing Countries initiative (targeting Ghana, India, Kenya, Mali, Senegal, Tanzania and Uganda). On the initiatives was to generate data on learning outcomes in developing countries.</li> </ul>

Source: Augustin et al., 2012; Economist Intelligence Unit, 2013; Engel, 2012; UNESCO, 2012; Zselezky et al., 2013.



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