International Journal of Manpower

Gender-based differences in employment conditions of local and expatriate workers in the GCC context: Empirical evidence from the United Arab Emirates

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Received 13 October 2013
Revised 26 March 2014
Accepted 23 April 2014

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Abstract

Purpose – The labor force participation rates of females have been increasing steadily over the past few decades in the UAE and other Gulf Cooperation Council (GCC) countries and are expected to continue to increase due to increasing levels of education and social change. While, there is a substantive amount of literature on the issues of gender gap in wages and employment conditions in Western developed economies, the evidence from developing economies – especially in the Middle East – remains very scant. Therefore, the purpose of this paper is to contribute to bridging this gap by examining gender-based differences in employment conditions for local and expatriate workers in the context of the GCC region.

Design/methodology/approach – The authors utilize a data set from the 2007 cross-section Dubai Labor Market Survey which covers a stratified random sample of employees in the UAE labor market. In addition to descriptive statistics and cross-tabulations of the data by workers' gender, nationality, and various characteristics of their employment conditions, two empirical models intended to investigate factors that influence access to employment and wage determination of male and female workers in the UAE labor market were estimated.

Findings – The findings of the study reveal that there are gender-based differences and inequity in employment in the UAE labor market. The authors highlight specific impacts of contextual factors on the employment conditions of women compared to men. The gender gap in the UAE context is compounded by nationality effects; whereby gender-based differences become less apparent in the case of foreign workers compared to UAE nationals.

Originality/value – This paper is one of very few studies that addressed the gender gap in employment conditions in the Arab Middle Eastern or GCC context. The paper uses quantitative data from a large random sample of workers in the UAE.

Keywords Employment, Equal opportunities, Gender, Disadvantaged groups, Earnings, Expatriates

Paper type Research paper

1. Introduction

In many societies to various degrees, it is still common to find that working women often perform different tasks and work in different sectors than men, and the conditions of their employment are on average inferior to those experienced by men. The gender gap is a persistent global phenomenon that no country in the world has yet managed to eliminate (Hausmann *et al.*, 2011). In terms of occupations, for example, nearly two-thirds of women in manufacturing are categorized as laborers, operators, and production workers while only a few can be found in the administrative and

International Journal of Manpower
Vol. 36 No. 3, 2015
pp. 397-415

0143-7720
DOI 10.1108/IJM-10-2013-0236

managerial positions predominantly held by men (Tzannatos, 1999). Also, women's average wages are lower than that of men in many countries with the difference in average wages generally persistent.

There is a substantive amount of literature on the issues of gender gap in wages and employment conditions in Western developed economies, but evidence from developing economies – especially in the Middle East – remains very scant. The gender gap in most Arab countries is evidenced by the relatively low female labor market participation rate. In the mid-1990s, for example, the average rate for the Arab countries was 21 percent – the lowest among the six developing regions of the world. This is substantially lower than the 80 percent rate for East Asia, 56 percent for sub-Saharan, 37 percent for Latin America, and 35 percent for South Asian countries (United Nations Development Programme, 1995).

The Arabian Gulf Cooperation Council (GCC) countries share unique cultural, religious, and socio-economical characteristics that distinguish them from other parts of the world and make the study of gender gap in this context especially important. However, there is very limited research that addresses employment conditions of women in the labor market in the GCC context. Therefore, this study intends to contribute to filling this gap by exploring gender-based differences in employment conditions in the labor market in one GCC country – the United Arab Emirates – a country which both shares the socio-cultural characteristics common to other Arab countries as well as the unique labor market situation of the GCC region.

The paper starts with a review of key characteristics of the labor market context in the UAE that might have implications on women's employment. This is followed by a discussion of the main relevant theoretical perspectives and findings from previous research on gender discrimination in employment. Finally, the key findings and conclusions are discussed with implications for policy makers and practitioners.

2. Context

There are six countries in the GCC: Bahrain, Saudi Arabia, Oman, Qatar, Kuwait, and the United Arab Emirates – all of which share similar economic, political, and cultural structures. Like other GCC countries, the UAE suffers from a severe shortage of labor and therefore relies largely on foreign workers to maintain its rapid economic growth which is fueled by increasing oil revenues over the past few decades. The high local fertility rates coupled with importation of foreign workers contributed to increasing the country's population from 3.3 million in 2005 to 8.19 million in 2010 (Al-Khouri, 2010). In order to support the growth and development of its economy, the UAE – similar to other GCC countries – allowed employers to freely recruit foreign workers due to a severe shortage in local human resources over the past few decades. The labor policy with regard to foreign workers in the GCC countries follows the "guest worker" or "contract worker" model where foreign workers are hired on a temporary basis and are concentrated in jobs and economic sectors where local skills and expertise are lacking or the type of work is unattractive to nationals for various reasons (Abdalla *et al.*, 2010).

Because of relatively inferior working conditions in the private sector, the local workers are concentrated in the public sector where they enjoy an attractive income and favorable working conditions among which are job security, generous retirement plans, and other welfare benefits(Abdalla *et al.*, 2010; Al-Waqfi and Forstenlechner, 2012). This has resulted in the segmentation of the labor market in most GCC countries – including the United Arab Emirates – with a public vs private and national vs non-national division. Table I shows the distribution of the labor force in the GCC region by nationality (locals vs expatriates) and gender in the year 2008.

	Total labor force	Females (%)	Locals Total	Locals Total labor force (%)	Locals Females (%)	Expatriates Total	Expatriates Total labor force (%)	Expatriates Females (%)
Saudi Arabia	8,455	15.0	4,173	49.4	16.0	4,282	50.6	14.0
UAE	3,043	14.3	455	15.0	22.0	2,588	85.0	13.0
Oman	1,085	nd	276	25.4	nd	809	74.6	9.8
Bahrain	597	20.0	139	23.3	33.0	458	76.7	17.0
Qatar	1,265	10.0	72	5.7	36.0	1,193	94.3	8.0
Kuwait	2,093	27.0	351	16.8	46.0	1,742	83.2	23.0
Totals	16,538	16.2	5,466	33.05	19.3	11,072	66.95	14.4

Note: It must be noted here that reliable statistics in the Arab Middle East countries are generally lacking and available figures tend to vary depending on the source
Source: Author calculations based on Baldwin-Edwards (2011, Tables 2 and 23)

Table I. Distribution of the labor force in the GCC countries by nationality and gender in 2008 (000s)

The percentage of non-local to local workers in the UAE has reached 85 percent in 2008 (Baldwin-Edwards, 2011). However, because employers prefer to recruit males, representation of females in the foreign workforce in the GCC region is one of the least in the world with only 14.4 percent of the expatriate workforce being females. A substantial number of those females are Asian female migrants who are engaged in the occupation of domestic servants (Malecki and Ewers, 2007). It must be noted that labor laws in the UAE prohibit discrimination in wages and employment conditions between males and females who are filling the same job. Also, the UAE has ratified the ILO's Equal Remuneration Convention in 1997 and Discrimination (Employment and Occupation) Convention in 2001.

The majority of female expatriate professionals in the GCC region are those who have accompanied a working spouse or parents on a family visa and have later managed to secure a job opportunity.

Labor market participation of local females increased significantly in recent years due to high levels of education among females and changing social perspectives on employment of females. Nonetheless, females represented only 19.3 percent of the local labor force in the GCC region in the year 2008 as shown in Table I. However, there are substantial variations in female participation in the local labor force across the six GCC countries from a low rate of 16 percent in Saudi Arabia to a relatively high female participation rate of 46 percent in the local labor force in Kuwait. The labor force participation rates of females are expected to continue to increase in the UAE and other GCC countries due to increasing levels of education and social change. Therefore, it is essential that equal opportunities be available for all workers, including females in a non-discriminatory work environment. UAE's economic growth and prosperity in a highly competitive and global marketplace will depend on the full utilization of the talents, skills, knowledge, and energy of all available human resources including males and females. However, apart from incidents reported in the media (*Khaleej Times*, 2006), there remains a paucity of empirical research addressing the labor market experience of females in the GCC context and the extent to which women in employment might experience various forms of disadvantage or inferior treatment compared to men.

3. The gender gap: theoretical perspectives

In order to understand the gender gap phenomenon, researchers in Western contexts have focussed on the human capital perspective on the labor market outcomes for men and women (Becker, 1964). According to this perspective, the employment opportunities and wages earned by workers should be determined by the quality of their human capital which is expected to be translated into productivity that employers are willing to pay for. Human capital explanations of inferior accomplishments of women compared to men in the labor market are based on the rational choices that women make with respect to their education and careers (Turner and McMahon, 2011). The argument here is that women might possess less human capital than men mainly because they place more importance on family commitments over work commitments, which lowers their investment in their human capital (Anker, 2001). Females have made significant gains in terms of educational achievements throughout the Arab world over the past few decades. In fact, more females than males have been graduating from universities in recent years in some GCC countries such as the UAE with many of them entering the labor market. About two-thirds of university graduates in the UAE are females who account for 73.0 percent of the graduates in 2001 and 66.8 percent in 2006 (Hijazi *et al.*, 2008)[1]. However, educational attainments do not translate automatically into labor market participation for females in many Arab countries due to a variety of cultural and religious restrictions placed on women's employment. The Arab Human Development Report, United Nations Development Programme and Arab Fund for Economic and Social Development (2003), indicates that Arab nations tend to strongly support gender equality in education but not gender equality in employment. In the GCC context, this is shown clearly through a better comparative position of the six GCC countries in the gender gap in educational attainments as compared to the gender gap in economic participation – as indicated by the Global Gender Gap Report 2011 (Hausmann *et al.*, 2011). Among the 134 countries covered in the report, the rankings in the gap regarding economic participation of women were very low for all of the GCC countries with the UAE ranked 119, Kuwait 107, Bahrain 115, Qatar 104, Oman 130, and Saudi Arabia ranked 131. In terms of the gender gap on educational attainments, the six countries were ranked much better; with the UAE ranked 59, Kuwait 84, Bahrain 81, Qatar 57, and Saudi Arabia 92.

According to the human capital perspective, the variance in occupational achievements in terms of pay or employment conditions between equally qualified men and women can be attributed to gender discrimination. Workplace discrimination in general refers to any behaviors, decisions, or actions involving different or inferior treatment of individuals on the basis of their race, gender, ethnic origin, or any other grounds that are not related to their occupational merit (Al-Waqfi and Jain, 2007). This includes overt or direct discrimination as well as indirect or systemic discrimination.

There are several theories that attempt to explain the factors leading to gender discrimination in employment by scholars from different disciplines including economics, sociology, social psychology, and organizational behavior. One of the early economists who addressed discrimination in employment was Gary Becker (1957). He argued that discrimination occurs as a result of prejudice or "taste for discrimination" which the employer or his agents are willing to pursue at the added cost associated with hiring and promoting less qualified males. Such prejudiced attitude toward women are rooted in the culture and tradition of societies characterized by high gender role differentiation which is the case in most of the Middle Eastern societies including the Arabian Gulf countries (Javidan and House, 2001).

Other economists including Arrow (1998), Phelps (1972), and Aigner and Cain (1977) proposed an explanation of discrimination that does not assume the employer is prejudiced or forgoes profits to indulge in his taste to discriminate. Employers may discriminate because they often lack the competence and the information needed to assess the true human capital characteristics of job candidates. Therefore, they rely on generalizations that lead to errors in selection and discrimination. The theory of statistical discrimination is an information-based theory. Employers according to this theory rely on group membership (such as race or gender) as a signal that allows them to improve their predictions of a candidate's potential to perform. For example, if men and women happen to differ on average productivity, then the experience of employers over time will cause them to use the observable characteristics, such as gender, as a surrogate for the unobservable characteristics which in fact cause the productivity differences (Arrow, 1998).

Apart from the human capital and the prejudiced or incompetent employer perspectives, there are certain factors rooted in the socio-cultural and institutional environment which shape the opportunities available for women and men in the labor market and may subsequently result in various forms of gender discrimination. Segmentation on gender lines according to this perspective is viewed as socially constructed rather than based on objective criteria (Gardiner, 1998). Therefore, the gender gap in developing economy contexts is often attributed to two main factors: the larger culture and family structures and the institutional factors affected by the state and employers (Mehra and Gammage, 1999; Miles, 2002). Societies in the Arab countries including those in the GCC region share common cultural orientations; they share high group-orientation as well as hierarchical and masculine cultural norms (Kabasakal and Bodur, 2002). In a comparative study of world cultures, the Arabic cluster scored – on average – relatively high on power distance and low on gender egalitarianism compared to other clusters (Kabasakal and Bodur, 2002). In addition, the conservative nature of Arab societies plays an important role in shaping the experience of women in the labor market. Studies in the Arab Middle Eastern context focus on various social and cultural factors to explain the low participation of women in the labor force and their inferior conditions of employment. Such factors include the patriarchal and male-dominated culture, the conservative nature of Islam, strict codes of gender segregation, strength of family ties and social definition of women's role as that of wife and mother, and cultural restrictions on women's mobility (Moghadam, 1998; Miles, 2002; Krause, 2008; Shallal and Abdalla, 2012).

Another explanation of gender segregation in the GCC context is related to the role of institutional factors in shaping work outcomes. Institutional barriers to women employment might result from the internal managerial rules and strategies, social and cultural factors, as well as regulations and policies imposed by the government that can limit access and opportunity for women in the labor market (Rubery and Fagan, 1995; Elson, 1999; Turner and McMahon, 2011). For example, if managers in a given organization tend to favor employing men over women then the organization will over time develop declared or implied policies and tools to continuously hire and promote men over equally qualified women. This will leave only jobs that are unattractive to men to be filled by women who would be pushed to accept lower wages and employment conditions.

Apart from prevailing social and cultural norms, another important institutional factor in the GCC context is related to the unique composition and distribution of the workforce in the labor market with a sizable percentage of foreign workers mainly employed in the private sector. The segmentation of the labor market in the UAE by

sector (public vs private) and nationality of workers (citizens vs expatriates) (Abdalla *et al.*, 2010) is likely to influence the obstacles facing women in the labor market. As indicated above, the public sector in the UAE (and other GCC countries) is the preferred sector of employment as it offers better pay and working conditions than the private sector. Also, institutional barriers to women's employment are expected to be weaker in the public than the private sector as standardized rules for entry and promotion contribute to preventing discrimination along gender lines (Turner and McMahon, 2011). Therefore, it is expected that women who work in the public sector will enjoy better working conditions and less discrimination than their counterparts in the private sector.

Moreover, most citizens in the GCC region, including the UAE, work in the public sector where they enjoy attractive income and favorable working conditions such as job security, generous retirement plan, and other welfare benefits (Abdalla *et al.*, 2010). Also, public policy measures such as quotas are applied to support citizens' employment in the private sector despite their relatively high reservation wage compared to foreign workers. This has led to a labor market segmentation by nationality with citizens enjoying better pay and working conditions in both the public and private sectors. Therefore, it is expected that women who are citizens will enjoy better working conditions and less discrimination than those who are non-citizens.

Given the above discussion of various factors that might lead to gender-based differences or gender discrimination in the unique labor market context of the GCC countries, this study attempts to examine gender differences empirically within the labor market of the United Arab Emirates. By doing so the study attempts to answer the following research questions:

RQ1. Are there gender-based differences in access to employment opportunities and treatments of employees in the UAE labor market?

RQ2. Are there gender-based differences in pay between employees in the UAE labor market?

RQ3. Are there variations in patterns of gender differences in pay and working conditions in the UAE based on nationality of workers (citizens vs expatriates) and sector of employment (public vs private sector)?

4. Data and methodology

4.1 Data utilized

We utilize a cross-section data set from the 2007 Dubai Labor Market Survey (DLMS). DLMS is a stratified random sampling survey, designed to explore a range of workplace issues. DLMS randomly selects a sample of establishments and draws a sample of employees within these establishments. The sample covers three employment sectors: public, joint (public and private ownership), and private. For private institutions, the sampling frame was restricted to establishments with ten workers or more. Information is directly obtained from employers and full-time employees, respectively, through self-report and face-to-face administered questionnaires. The Employee Questionnaire explores issues related to employees' general characteristics, formal training, earnings, employment conditions, and use of technology. The sample utilized in this study consists of 282 public and private sector establishments (workplaces) and 1,403 employees. Stratification of the sample in the private sector intended to ensure representation of all workers in the labor market (excluding laborers and unskilled workers).

4.2 Sample characteristics

Table II gives the key demographic characteristics of the sample surveyed in this study. The sample involved 1,403 respondents, 960 of them (68.4 percent) were males and the remaining 443 (31.6 percent) were females. Around 80 percent of the respondents were from the private sector, three-quarters of them were males. Females represented more than 56 percent of respondents from the public sector in the sample. In terms of nationality, the three dominant nationality groups in the UAE workforce were fairly represented with 55.7 percent Asians, 24.6 percent Arabs, and 16.6 percent local Emiratis – similar to a 2005 UAE census distribution of residents by nationality. The sample was also fairly representative of various educational levels and job categories as shown in Table II.

	Number	%
Gender		
Male	960	68.4
Females	443	31.6
Total	1,403	100.0
Marital status		
Married	899	64.7
Single	490	35.3
Total	1,389	100.0
Sector		
Public		
Male	116	43.3
Female	152	56.7
Total	268	100.0
Private		
Male	844	74.4
Female	291	25.6
Total	1,135	100.0
Nationality		
UAE	232	16.6
Other GCC	13	0.9
Other Arab countries	344	24.6
Asian	778	55.7
Western (European, North American, etc.)	21	1.5
Other nationality	8	0.6
Total	1,396	100.0
Education level		
Less than high school	88	6.3
High school or equivalent	188	13.4
Some post high school	135	9.6
College/university degree	804	57.3
Graduate degree (master's and above)	188	13.4
Total	1,403	100.0
Job category		
Manager	161	11.7
Professional	296	21.4
Technician	107	7.8
Office/clerical/sales/customer service	705	51.1
Production employees	111	8.0
Total	1,380	100.0

Note: Percentages might not add up exactly to 100 percent due to rounding

Table II. Sample characteristics

The distribution of respondents with regard to gender across the three nationalities was as follows: Asians (567 males, 210 females), Arabs (280 males, 64 females), and Emiratis (84 males, 147 females).

4.3 Analysis techniques

First, descriptive statistics and cross-tabulations of the data by workers' gender, nationality, and employment characteristics such as job category and pay were used to assess gender-based differences in employment conditions and identify any patterns of differences that might indicate possible discrimination.

Second, two empirical models intended to investigate factors that influence employment and wage determinants of male and female workers in the UAE labor market were estimated. Research on employment and participation in labor markets and wage determinants has its long history in empirical economics (see e.g. Greene, 2000 and the eminent Mincer human capital model of 1974). The methodology presented by Neuman and Oaxaca (2004) was utilized to construct a two equation model of workers employment (access) and wage determination.

4.4 Access to employment and wage determination models

We assume that employment of the *i*th worker of a *j*th gender (i.e. male or female worker) within a particular sector of the UAE labor market is associated with a number of attributes, Y_i'. These include a worker's experience and nationality and employer preference for a particular gender. Therefore, the model that describes employment chances can be written as:

$$Z_{ij}^{*} = Y_i'\alpha_j + \xi_{ij}, \tag{1}$$

where Z_{ij}^{*} is a latent variable associated with employment of the *j*th gender. αj is the associated parameter vector indexed on gender, and ξ_{ij} is i.i.d. normally distributed error term that follows the normal distribution. The probability of employment of the *j*th gender in the labor market is, therefore, given by:

$$\Pr\left(Z_{ij}^{*} > 0\right) = \Pr\left(\xi_{ij} > -Y_i'\alpha_j\right), \tag{2}$$

$$= \phi\left(Y_i'\alpha_j\right),$$

where $\phi(.)$ is the standard normal C.D.F.

On the other hand the market wage (in logs) for the *j*th gender, W_{ij}, can be expressed as:

$$W_{ij} = X_i'\beta_j + \zeta_{ij}, \tag{3}$$

where X_i' is a vector of determinants of market wages including human capital and skills attributes, β_j is the associated parameter vector indexed on gender, and ζ_{ij} is i.i.d normally distributed error term.

Wages are observed for the *j*th gender with $Z_{ij}^{*} > 0$, so that the expected wage observed for a worker of the *j*th gender is given by:

$$E\left(W_{ij} | Z_{ij}^{*} > 0\right) = X_i'\beta_j + E\left(\zeta_{ij} | \xi_{ij} > -Y_i'\alpha_j\right) \tag{4}$$

$$= X_i'\beta_j + \theta_j\lambda_{ij}$$

where $\theta_j = \rho_j \sigma_{\zeta_j}, \lambda_{ij} = \varphi(Y_i'\alpha_j)/\phi(Y_j'\alpha_j)$, and $\varphi(.)$ is the standard normal density function. ρ_j denotes the correlation between ξ_j and ζ_j. The estimating equation for workers of the jth gender may be expressed as:

$$W_{ij}|Z_{ij}^{*} > 0 = X_i'\beta_j + \theta_j\lambda_{ij} + \text{error} \quad (5)$$

where λ_{ij} denotes the inverse of the Mill's Ratio (IMR), selectivity correction term.

Employment of a worker of a given gender in the labor market is unlikely to be random, which might lead to bias in the estimated coefficients of the explanatory variables of the wage function. To control for selectivity bias, Heckman's (1979) two-step estimation procedure is used. In the first stage, the workers' employment probabilities are estimated (Equation (2)). In the second stage, these probabilities are utilized to construct the selection correction terms, λ_{ij}. The wage function is then augmented by λ_{ij} as depicted in Equation (5).

5. Results

5.1 Differences in education level, pay, and job assignments

Table III shows the distribution of respondents by gender and educational achievements. It is clear that employed females have higher educational qualifications than males – applying to both Emiratis and expatriates. There are

	Gender				
	Male		Female		
	Count	Column (%)	Count	Column (%)	χ^2 test
UAE					
High school or less	17	20.2	21	14.3	$\chi^2 = 6.498$ df = 3 p-value < 0.10
Some post high school	14	16.7	12	8.2	
College/univ. degree	47	56.0	97	66.0	
Graduate (master's or above)	6	7.1	17	11.6	
Total	84	100.0	147	100.0	
Arab					
High school or less	40	13.8	3	4.5	$\chi^2 = 6.417$ df = 3 p-value < 0.10
Some post high school	40	13.8	7	10.4	
College/univ. degree	186	64.1	48	71.6	
Graduate (master's or above)	24	8.3	9	13.4	
Total	290	100.0	67	100.0	
Asian					
High school or less	174	30.8	14	6.7	$\chi^2 = 51.623$ df = 3 p-value < 0.01
Some post high school	45	8.0	14	6.7	
College/univ. degree	265	46.9	140	66.7	
Graduate (master's or above)	81	14.3	42	20.0	
Total	565	100.0	210	100.0	

Note: Percentages might not add up exactly to 100 percent due to rounding

Table III. Distribution of respondents by nationality, education level, and gender

more females (percent) with university or graduate degrees in the three nationality groups and the χ^2 test shows that the relationship between gender and education level is statistically significant at 10 percent significance level, with a clear strong relationship in the case of Asians, p-value < 0.01. About 86.7 percent of Asian respondents were females with a university or graduate degree compared to 61.2 percent males. Similarly, among the UAE citizens the percentage of respondents who have university degrees or above were 76.6 percent for females compared to 63.1 percent for males. In the case of Arabs, 85.0 percent of female respondents had university or graduate degrees compared to 72.4 of males.

Despite their apparent superior average human capital endowment as measured by educational levels, women in the UAE experienced inferior conditions compared to men in terms of pay levels as well as access to higher job categories. As shown in Table IV, women experience relatively lower representation in management positions and professional occupations and are more concentrated in clerical and office administration jobs. The "glass ceiling" or "vertical segregation issues" facing women in employment is an international phenomenon. A recent report indicated that in OECD countries on average, less than one-third of managers are women, with small variations across countries (OECD, 2012).

The inferior promotion opportunities for women are consistent across the three nationality groups; UAE citizens, Arabs, and Asians, as shown in Table IV. The percentages of managers in the sample were 26.2 percent for Emirati males compared to 20.1 percent for Emirati females. Similarly among respondents of Arab nationalities, managers represented 13.8 of males compared to 6.3 percent of females. While among Asian respondents, male managers were 8.4 percent compared to 4.9 percent managers among respondents who are females. Table IV shows that among Emirati respondents,

	Gender							
	Male				Female			
	Mean	Median	Count	%	Mean	Median	Count	%
UAE								
Manager	21,894	23,000	22	26.2	20,564	20,000	29	20.1
Professional or technician	15,496	12,240	17	20.2	12,609	12,000	52	36.1
Clerk/office/sales, etc.	9,854	10,000	41	48.8	10,258	10,000	63	43.8
Production worker	3,250	3,250	4	4.8	–	–	0	0
Total	14,059	12,000	84	100	13,236	11,650	144	100
Arab								
Manager	11,165	7,000	38	13.8	8,875	10,000	4	6.3
Professional or technician	7,729	6,000	92	33.3	10,564	7,500	17	27.0
Clerk/office/sales, etc.	4,798	4,800	126	45.7	4,951	4,000	41	65.1
Production worker	2,160	1,600	20	7.2	4,000	4,000	1	1.6
Total	6,485	5,000	276	100	6,738	4,750	63	100
Asian								
Manager	7,655	7,000	47	8.4	7,071	6,500	10	4.9
Professional or technician	4,967	4,000	152	27.3	5,384	3,000	55	27.1
Clerk/office/sales, etc.	3,315	3,000	279	50.1	3,658	3,300	134	66.0
Production worker	1,823	1,375	79	14.2	2,633	3,000	4	2.0
Total	3,888	3,000	557	100	4,362	3,500	203	100

Note: Percentages might not add up exactly to 100 percent due to rounding

Table IV.
Wage (monthly pay) distribution by job category, nationality, and gender

women represented 43.8 percent compared to 48.8 percent men in the clerical jobs while for Asians and Arabs the percentage of respondents in this category of jobs were 50 percent men compared to 66 percent women and 45.7 men compared to 65.1 percent women, for the two nationality groups respectively. In terms of production job, the percentage of Emiratis who occupied these jobs by gender were 4.8 percent males and 0 percent females. While for the other two nationalities, respondents in this occupational category included 14.2 percent males compared to 2 percent females in the case Asian respondents and 7.2 percent males compared to 1.6 percent females in the case of Arabs.

The picture becomes clearer when we compare the average pay levels between males and females holding the same job categories. Here, also, we found that female managers were consistently paid less compared to their male counterparts. This also applied to all of the three nationality groups. The average monthly pay of a male manager of UAE nationality is AED 21,894 compared to an AED 20,564 for an Emirati female manager. Similarly, an Arab manager is paid on average a monthly salary of AED 11,165 if he is male compared to an average of AED 8,875 if she is a female. In the case of Asians, a male manager made on average AED 7,655 compared to AED 7,071 for an Asian female manager.

The pay levels were consistently lower for females in almost all the other job categories for respondents who are UAE citizens. The picture is different when we look at respondents from the other two nationalities as pay levels were slightly more favorable for females than males for other job categories apart from managers. It is interesting to note the significant differences in pay across the three main nationalities making up the total workforce in the UAE labor market. Regardless of the job category, a person's monthly pay ranges from AED 14,059 for an Emirati to AED 6,485 for an Arab and AED 3,888 for an Asian. The variations in pay levels between foreign individuals from different nationalities holding the same job might be attributed to several factors. This includes differences in the reservation wages in their home countries as well as factors related to employers' perceptions of the quality of human capital and the stereotyping of members of various nationality groups. However, the discussion of wage setting mechanisms for foreign workers is beyond the scope of this study.

5.2 Gender employment model

The binary response variable in the probit employment model of Equation (2) takes the value one if the worker is employed in the public sector and zero if the worker is employed in the private sector. The model is fitted separately to male and female sub-samples. To account for possible gender employment selection bias, the IMR is estimated based on the produced probit estimates and is used to correct monthly wages as introduced in Equation (5). Table V displays results related to the probit model fit and parameter estimates. The coefficients are interpreted as reflecting the likelihood of employment in the public sector of the UAE labor market relative to employment in the private sector. Results in Table V reveals experience as an important determinant of employment in the UAE labor market. Experienced males and females have better chances of employment in the public sector relative to the private sector (significant at the 1 and 5 percent levels, respectively). Female workers at the graduate (masters or above) and the college education levels have higher employment chances in the public sector compared to male workers. This shows that females are subjected to stricter

Parameter	Males	Females
Intercept	−2.763*	−2.708*
Experience	0.026*	0.031**
Citizenship of employee	2.417*	2.349*
Arabic oral skills	0.785*	0.783*
Test knowledge for job match?	0.395*	0.258
Education level		
College/university degree	0.220	0.550**
Graduate (master's or above)	0.719*	0.723***
Sample size	821	376

Table V. Maximum likelihood estimates of probit model of employment of male and female gender

Notes: Probit model: probit(p) = intercept+BX; dependent variable = 1 if worker employed in the public sector, and 0 employed in the private sector; reference group for Citizenship of employee is "non-citizen"; reference group for Arabic oral skills (worker has oral communication skills in Arabic) is "No"; reference group for test knowledge for job match? is "No"; reference group for Education level is "Secondary or below." *,**,***Coefficients are significant at 1, 5 and 10 percent levels, respectively
Source: Abdalla *et al.* (2007)

selection criteria based on educational qualifications. In other words, if you are a female, you need higher qualifications to get the job. Education gives an advantage for females compared to males as it improves their chances of employment more significantly than in the case of males as shown in Table V. Table V also indicates that male workers with college/university level of education have the same employment chances as male workers with secondary level of education or below (the reference group) in both the public and the private sectors. The absence of a significant difference might generally reflect the labor intensive nature of the UAE labor market which favors male workers (Abdalla *et al.*, 2010). It seems that in a male-dominated labor intensive market such as the UAE labor market, employers do prefer low cost and adequately educated workers. Those who are highly educated might be regarded as over-qualified.

Other characteristics such as Arabic oral communication skills and UAE citizenship significantly determine individual's employment in the public sector (p-value < 0.01). Testing individual's knowledge relative to job requirements is a significant determinant of employment only in the case of males workers, p-value < 0.01, Table V.

5.3 Wage equations by gender

Estimates of the wage model of Equation (3) for the male and female genders across the public and private sectors are displayed in Table VI. Variables used in this model include the log of the monthly wage as a dependent variable. A number of predictors are utilized to explain variation in wages. The two predictors, years of work experience and education level are considered the two main factors that account for human capital endowment of workers. In addition, the number of work hours per week, citizenship of the employee (national vs non-national) as well as the job category are used as control variables in examining the differences in pay between the male and the female gender. Experience squared is used to capture the experience-wage profile.

In addition to fitting the standard OLS wage equations, models corrected for selectivity bias based on Heckman's (1979) two-stage procedure were also estimated. It is believed that employment in the UAE labor market is not randomly driven by productivity variables, but influenced by other factors such as employers' preference

	Public sector				Private sector			
	Male		Female		Male		Female	
Parameters	OLS	Corrected	OLS	Corrected	OLS	Corrected	OLS	Corrected
Constant	8.332*	8.419*	7.807*	8.736*	7.880*	7.860*	8.291*	8.060*
Hours of work per week	−0.005	−0.005	0.012*	0.013*	−0.011*	−0.010*	−0.014*	−0.010***
Citizenship of employee	0.800*	0.704***	0.706*	0.014	0.243	−1.021**	0.551*	−0.641
Experience	0.011	0.017	0.002	−0.003	0.040*	0.033*	0.065*	0.070*
Experience square	0.0001	−0.0002	0.0003	0.0002	−0.001**	−0.001**	−0.002*	−0.002*
Education level								
College/ university degree	0.400*	0.381**	0.372*	0.245**	0.525*	0.506*	0.265**	0.138
Graduate (master's or above)	1.198*	1.176*	0.971*	0.847*	0.575*	0.458*	0.638*	0.596*
Job category								
Manager	0.523*	0.523*	0.207**	0.241**	0.715*	0.720*	0.789*	0.750*
Professional or technician	0.235***	0.250***	0.067	0.067	0.299*	0.277*	−0.141	−0.093
λ	–	−0.062	–	−0.483**	–	−0.946*	–	−0.929*
R^2 (adjusted)	0.62	0.61	0.61	0.64	0.37	0.39	0.36	0.41
Sample size	94	91	128	126	708	636	230	194

Notes: Dependent variable: log(monthly wages); reference group for Citizenship of employee is "non-citizen"; reference group for Education level is "Secondary or below"; reference group for Job category is "Office/clerical/sales, etc." *,**,***Coefficients are significant at 1, 5 and 10 percent levels, respectively
Source: Abdalla *et al.* (2007)

Table VI.
Log monthly wage regressions, male and female full-time workers

for a particular gender. The constructed model is identified by omitting the variable "Arabic Oral Skills" from the wage model but including it in the worker employment probit model. Arabic is the official language in the UAE and therefore it might have some influence on workers' employment in the UAE labor market, particularly in the public sector. It is believed that employers might have preference for workers who can orally communicate in Arabic but once employed, we believe that, this would have no significant impact on actual wages. It is further argued that most employers are most likely to prefer employment of workers who have the knowledge and qualifications that fit and match the intended job. This argument is supported by the sample data in the case of male workers (p-value < 0.01) as shown in Table V. Predictors in both the OLS and the selectivity adjusted models explained over 60 percent of the total variation in log wages in the case of the public sector models and between 36 and 41 percent in the private sector models.

The Chow test is used to test for differences in the UAE wage structure between male and female workers. Rejection of any differences would entail the presence of only one wage structure that characterizes the entire UAE labor market. Using the standard OLS parameter estimates of the wage equations (Table VI) led to rejecting the null hypothesis of no difference in wage structure at 1 percent significance level between the two genders in both the private and the public sectors.

When adjusting for selection bias, the wage structure is significantly different at the 1 percent level in the private sector, and weakly different, at 10 percent level, in the public sector.

Results displayed in Table VI suggest the presence of significant selectivity bias in the employment of male and female workers in the UAE private sector (p-value < 0.01), and for females in the public sector (p-value < 0.05). This generally suggests that assignment of workers in the UAE labor market is not random; it depends on other discriminatory factors in addition to workers' productivity and endowments. As a result, there is the likelihood that expected wages be influenced by this bias. The negative sign of the selection term (λ), as shown in Table VI, in both the male and the female cases indicates a biased assignment of workers in the labor market. This means that those with productivity lower than the average receive higher remuneration. The selectivity bias might reflect the structural segmentation in the UAE labor market described above or inefficiency caused by favoritism in hiring which is prevalent in the UAE labor market among both citizens and expatriates. To correct for the bias in estimated coefficients, model (5) is fitted to the wage data, leading to selectivity bias corrected estimates. The inclusion of selection terms in the models has resulted in reducing the impact of the variable citizenship (citizen vs non-citizen) significantly, indicating that selection was biasing up the wage returns for both Emirati males and females, particularly in the private sector. Similar, but slight, biasing is observed for the effect of education on wages. It is worthy to note that selection has also resulted in lowering down pay reward for female managers employed in the public sector, Table VI. The following interpretations and discussion of results are, therefore, based on corrected wage equation estimates presented in Table VI.

As indicated, education is generally positively related with wages of male and female workers in both the public and the private sectors, with significant return at all levels of education, except for females at the college or university level in the private sector. In the public sector male workers receive higher pay reward for education compared to female workers at the same levels of educations. However, female workers in the private sector who achieved graduate level of education receive higher compensations compared to male workers. Years of experience, as a human capital factor, positively and significantly impact both male and female wages in the private sector (p-value < 0.01), not the public sector.

Emirati males and females receive higher pay in the public sector compared to non-Emiratis (only significant in the case of male workers), but both are negatively rewarded in the private sector.

Increased hours of work per week are associated with decreasing wages for males and females in the private sector. This may signify absence of over-time pay system and that workers who work longer hours are usually those with low or no skills. In the public sector, however, increased hours of work are translated into a significantly higher pay for female workers (p-value < 0.01). This might be explained by the fact that large proportion of women who work in the public sector in our sample are in professional or technical jobs. It is common in this kind of occupations to work long hours and people in these occupations are also generally highly compensated.

It is clear that male and female managers in both the public and the private sectors are significantly rewarded according to occupational status (p-value < 0.05), they receive higher pay compared to other occupational groups as shown in Table VI. Contrary to females, male professionals or technicians working in both the public and

the private sectors receive significantly higher pay relative to office, clerk and sales workers (p-value < 0.10 and < 0.01, respectively). In this context, we quote Abdalla *et al.* (2010): "One concern of using occupational variables as regressors in wage equations is their relationship with education (Newell and Reilly, 1996), since education is considered a key determinant of occupational status. As a result, they might deprive education from some of its effect."

To investigate this concern and the presence of any multicollinearity between predictor variables the variance inflation factor (VIF) for each estimated coefficient is produced. The VIF for each of the estimated coefficients across all fitted models does not exceed the commonly acceptable level in the literature of 1.5-4.0 (Montgomery *et al.*, 2006), indicating that employed predictors are not seriously correlated with each other, in particular, coefficients of education and occupation levels reported VIFs ranging from 1.10 to 3.37.

The overall average pay differentials, in log scale, in favor of male workers are 0.645 and 0.078 in the public and the private sectors, respectively. It would be instructive to decompose these wage gaps into two components, one attributable to differences in workers perceived productivity and wage generating characteristics (endowments), and the other measures returns to characteristics and unobservable factors, commonly termed as the discrimination component. Using the traditional Oaxaca decomposition approach (Oaxaca, 1973) based on the uncorrected regression estimates of Table VI and using the male wages as the prevailing wage structure in the UAE, it is clear that, overall, female workers command higher productivity endowments in both the public (−0.244, −37.7 percent) and the private (−0.054, −68.3 percent) sectors, however, returns to endowments in the two sectors are highly in favor of the male gender, (0.889, 137.7 percent) and (0.132, 168.3 percent), respectively.

6. Conclusions and implications

Women represent half of the society and ensuring that they receive fair treatment in employment is a matter of great importance to policy makers, especially in the case of the UAE and other GCC countries which suffer from severe shortage in the local labor force. The well-being of female workers can have a significant impact on their work outcomes.

In this paper, we examined the employment conditions of women compared to men in the UAE labor market. Results from both descriptive statistics and estimation of determinants of wages and access to employment regression models indicate that there are significant discrepancies between the two genders which generally favor the male gender. Our results based on data from the 2007 DLMS indicate that females, including both citizens and expatriates in the UAE labor market are subjected to a glass-ceiling as they are less represented than males in managerial positions and overrepresented in clerical and office administration jobs. This is consistent with findings from other parts of the world as reported in previous studies. In a study that examined the allocation of women on major occupational groups across the major regions of the world, Mehra and Gammage (1999) found that women worldwide are concentrated in clerical, sales, and service jobs which are traditionally regarded as "female" occupations while being significantly underrepresented in managerial and production jobs traditionally dominated by men. Our findings as shown in Table IV above are consistent with this phenomenon. Women from the three main nationalities in our sample – including Emirati citizens, Asians, and Arabs – are less represented in managerial and production

jobs. Also, with the exception of Emiratis, women from the other two nationalities were indeed relatively more represented in clerical and sales jobs and less concentrated in production jobs. The high representation of Emirati females in professional jobs might be attributed to their relatively high educational achievements in recent years since professional jobs generally require advanced education.

The differences between males and females were also noted in terms of lower pay levels for females managers compared to males in the same job category across the three nationality groups. The pay levels are also lower for females compared to males across all job categories in the case of Emiratis. The glass-ceiling is affecting expatriate females in the same way as in the case of national females. Compared to their national female counterparts, the expatriate female workers in the UAE labor market receive significantly lower pay throughout all job categories. Similar conclusions also apply when comparing non-national females to both national and non-national male workers. However, for non-UAE citizens, nationality seems to be a more salient factor than gender in determining pay levels. They generally experience a clear disadvantage in this regard compared to citizens.

Our regression analysis show that females are subjected to stricter selection criteria based on educational qualifications, whereby females need relatively higher educational qualifications than males to gain access to the same job opportunities. Results from the access to employment models indicated the presence of a selectivity bias in the employment of both males and females in the private sector, and females in the public sector. The negative sign of the selection term reflects inefficiency in the segmented labor market in the UAE as described above. This inefficiency is probably caused by favoritism in hiring which is prevalent in the UAE among both citizens and expatriates.

In terms of wage structure, the results showed that there are differences in wage determination between the two genders in favor of males in both the public and private sectors. Analysis of gender pay gap using Oaxaca decomposition revealed that male workers in both the public and the private sectors generally receive higher returns to productivity endowments compared to female workers. Males receive higher return on education than females in both public and private sectors and at all levels of education, with the exception of females with graduate level of education in the private sector who receive higher return on education compared to males. This is an evidence of a segmented UAE labor market where human capital and other characteristics have different returns across the two genders. However, it is clearly evident that UAE government policies are reducing the gap between genders in the public sector.

Our results indicate that the segmented nature of the labor market described above has implications on the gender gap in the UAE. Both Emirati males and females receive higher wage levels compared to non-Emiratis in the public sector but they are negatively rewarded for citizenship in the private sector. This might reflect both the government policy of using the country's oil revenues and wealth to provide high salaries and standard of living for its nationals in the public sector, and on the other hand, reflects the private sector tendency to discourage employment of nationals on the ground of high employment cost, in the presence of cheap foreign labor with higher levels of experience.

Findings of this study provide significant practical implication for HR practitioners who are interested in attracting, retaining, and managing talented female workers in the UAE and similar contexts. Findings of this study may also help women advocacy groups and policy makers in the region to support women's effective integration into

the labor market. They can also assist individual females in managing their careers and exploring career opportunities within the local labor market. Policy makers in the UAE are also called to consider legislative initiatives to foster employment equity for women and other groups who might be subject to potential disadvantage in the labor market.

While this study focussed on the demand side by addressing the experience of women from the perspective of employer practices, the effects of societal restrictions and the family role in shaping the opportunities of women in the labor market in the UAE and the wider GCC context remain largely unresearched. Apart from the employer's perspective, it would be interesting for future research to examine how societal values regarding sex roles and the conservative nature of families affect the supply side and women's decision to pursue various employment opportunities in this context.

Note

1. Despite the availability of government funded university education to eligible citizens, majority of males in the GCC region may choose not to pursue higher education as they prefer to obtain employment at early age in traditionally male-dominated sectors such as the armed forces, police, and other government departments.

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