

## Conference Paper

# Women and Entrepreneurship in the Contemporary Middle East

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## Abstract

The purpose of this paper is to assess the nature of relative female entrepreneurship in the contemporary Middle East, using data from the seven Middle Eastern countries that participated in the GEM Consortium in 2016 (GEM Global Report, 2016). This data will show that while some of these countries are approaching parity in terms of gender shares in new business start-ups, in others the rate of female early stage entrepreneurship is a half or even less of the rate for males. Interestingly it is the richer Middle Eastern countries that are closest to parity, even though this includes some of the traditionally more conservative and patriarchal Gulf countries. There are important lessons for the development of policy here – some countries are foregoing substantial opportunities to increase the pool of new female-owned businesses and their subsequent economic development impacts. The data analysis will include statistical tests for significant differences between countries, and will introduce a new methodology for comparing the ratios of sample proportions. The literature on entrepreneurship evidences a continuing debate on the nature of female early-stage entrepreneurial activity, and whether female owned and run businesses grow more slowly and are less profitable than male owned businesses, (see for example Minniti and Naude 2010 & 2011). While GEM data says little about the actual performance of new businesses, that performance may be closely related to the plans and expectations of the entrepreneur, an area that is specifically addressed by GEM. Hence this paper will assess differences in attitudes and expectations by gender, including job creation and international orientation, as well as differences in opportunity and necessity entrepreneurship. The paper will conclude with some lessons for policy development.

Received: 10 March 2018

Accepted: 10 April 2018

Published: 2 August 2018

Publishing services provided by  
Knowledge E

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Selection and Peer-review under the responsibility of the International Applied Research Symposium Conference Committee.

## 1. Introduction

The purpose of this article is to assess the nature of relative female entrepreneurship in the contemporary Middle East and North Africa (MENA), using data from the 10 Middle Eastern and North African countries (Egypt, Turkey, Iran, Israel, Jordan, Lebanon,

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Morocco, Qatar, Saudi Arabia and the United Arab Emirates) that participated in the Global Entrepreneurship Monitor project in 2016 (GEM Global Report, 2016). The GEM Consortium is an international research project, whereby national teams administer the same questionnaire (the

Adult Population Survey or APS) to a random sample of at least 2000 adults in their own country. Response are then checked and validated by the central GEM Consortium, ensuring that results are comparable between countries. Sixty-five countries participated in the 2016 APS, including the ten outlined earlier.

This GEM data will show that while some of these MENA countries are approaching parity in terms of gender shares in new business start-ups, in others, the rate of female early-stage entrepreneurship is a half, or less, of the rate for males. Interestingly, it is the richer Middle Eastern countries that are closest to parity, even though this includes some of the traditionally more conservative and patriarchal Gulf countries. There are important lessons for the development of policy here – some countries are foregoing substantial opportunities to increase the pool of new female-owned businesses and hence their subsequent economic development impacts. The data analysis will include statistical tests for significant differences in gender entrepreneurship between countries, and it will introduce a novel methodology for comparing the ratios of sample proportions.

The literature on entrepreneurship evidences a continuing debate on the nature of female early-stage entrepreneurial activity, and whether female-owned and -run businesses grow more slowly, and are less profitable, than male-owned businesses (see, e.g., [1, 2], plus the GEM Report on Women's Entrepreneurship [3]). While GEM data says little about the actual performance of new businesses, that performance may be closely related to the plans and expectations of the entrepreneur, an area that is specifically addressed by GEM. Bosma provides a summary of the contribution of GEM-based research on entrepreneurship [4]. This article will assess whether gender differences in entrepreneurship can be related to differences in attitudes and expectations, including whether individuals personally know an entrepreneur, whether they see good opportunities to start a business, whether they see themselves as having the knowledge and skills to start a business or whether the fear of failure would prevent them starting. The article will conclude with some lessons for policy development.

## 2. Levels of Entrepreneurial Activity Across MENA

Table 1 sets out 2016 GEM survey results for levels of Total early-stage Entrepreneurial Activity (TEA), for the 10 MENA (There are many different definitions of the composition of MENA. The definition adopted here includes Turkey) countries participating in 2016, as well as the separate levels for men (TEA<sub>m</sub>) and for women (TEA<sub>f</sub>). TEA is defined by GEM as the share of adult population actively involved in starting a new business, but not yet paying wages and salaries for three months or more (Nascent Entrepreneurs), plus those running a new business, paying salaries for more than three but less than 42 months (New Business Owners). Those paying salaries for more than 42 months are classed as Established Business Owners and are not counted by GEM as part of TEA.

The average level of TEA varied considerably across MENA in 2016, from just over 5 percent (Morocco and UAE), to more than 20 percent (Lebanon). For comparison, the average 2016 level in Africa was 18 percent, in Asia and Oceania 11 percent, in South America and Caribbean 19 percent, in Europe 8 percent and North America 15 percent (GEM Global Report, 2017). The highest level of TEA in MENA (Lebanon) ranked 8th of the 65 GEM countries in 2016, whilst the lowest (Morocco) ranked 59th. In 2016 in MENA, Egypt, Turkey and Lebanon were relatively highly entrepreneurial, Iran, Israel, Jordan, Saudi Arabia and Qatar were middling, and Morocco and UAE were low in terms of early-stage entrepreneurial activity.

TABLE 1: Levels of overall TEA (%) by country (TEA<sub>16</sub>), for males (TEA<sub>16,m</sub>) and females (TEA<sub>16,f</sub>), plus Established Business Ownership by gender (EBO<sub>16,m</sub> & EBO<sub>16,f</sub>), 2016.

Country	TEA <sub>16</sub>	TEA <sub>16,m</sub>	TEA <sub>16,f</sub>	EBO <sub>16,m</sub>	EBO <sub>16,f</sub>
Egypt	14.30	20.91	7.48	10.27	1.82
Turkey	16.14	22.31	9.96	13.51	5.31
Iran	12.79	16.60	8.93	19.03	4.00
Morocco	5.56	6.70	4.46	12.18	2.97
Lebanon	21.15	26.24	16.07	26.62	13.6
Jordan	8.20	12.76	3.26	4.26	1.02
Saudi Arabia	11.44	12.85	9.74	2.89	1.59
United Arab Emirates	5.66	6.58	3.70	2.60	0.31
Israel	11.31	13.27	9.36	5.27	2.81
Qatar	7.85	8.09	6.80	3.52	0.61

Source: GEM, 2016.

However, Table 1 also demonstrates that these overall averages hide considerable variation by gender, with levels of TEA amongst men that ranged from nearly 7 percent

in Morocco to more than 26 percent in Lebanon, whilst the (lower) levels amongst women ranged from just over 3 percent in Jordan to 16 percent in Lebanon. In terms of male entrepreneurship, Egypt, Turkey and Lebanon ranked highly, Iran, Jordan, Saudi Arabia and Israel were middling, while Qatar, UAE and Morocco ranked low. Female entrepreneurship painted a very different picture, with Lebanon having a rate of female entrepreneurship that was almost twice that of the next highest country, with Turkey, Iran, Saudi Arabia, Qatar and Israel having rates ranging from nearly 7 to 10 percent, and Morocco, Jordan and the UAE each having female entrepreneurial rates that were less than 5 percent.

Table 1 also shows rates of Established Business Ownership by gender. This gives a clearer picture of traditional male dominance in the ownership of established businesses, with rates of male ownership that were close to twice as high as female ownership, and in some cases many multiples of this. In Egypt, Iran, UAE and Qatar, the level of established male business ownership was at least four times higher than that of females. Seen in this context, the closer parity in rates of start-ups between genders offers some prospect of closer parity in future Established Business Ownership levels – but there is a long way to go. This article will consider gender inequalities in terms of new business start-ups in more detail and will seek to relate gender differences in entrepreneurial activities to differences in perceptions and expectations.

### 3. Measuring Gender Differences in Entrepreneurship

The usual way to measure gender difference in levels of entrepreneurship [5] is to subtract the female rate from the male rate, with the results shown in the second column of Table 2. These **absolute** gender differences were highest in Egypt, Turkey and Lebanon, and lowest in Qatar, Morocco and UAE. Large sample sizes allow for testing of the statistical significance for differences in proportions, and hence for consideration of whether the absolute gender differences set out in Table 2 are significant. Then, for example, consider Qatar, where  $TEA_m$  was 8.09 percent and  $TEA_f$  was 6.80 percent, and hence  $TEA_m - TEA_f = 1.29$  percent. Some simple calculations ( $Z = (p_1 - p_2) / \left( \sqrt{p(1-p) \left( \frac{1}{n_1} + \frac{1}{n_2} \right)} \right)$ , where  $p = (p_1 + p_2) / 2$ ). Then, given that for Qatar  $p_1 = 8.09\%$ ,  $p_2 = 6.80\%$  and assuming that  $n_1, n_2 =$  (at least) 1000,  $Z = 1.099$ . At a 5% level of significance, for a one-tailed test, the critical value of  $Z$  is 1.645) show that there was no significant difference in male and female entrepreneurship rates for Qatar in 2016. Similar logic demonstrates that for the other nine MENA countries in Table 2, the rate

of male early-stage entrepreneurial activity was significantly higher than the female rate.

However, it would be inappropriate to consider countries with highest absolute gender differences as being most unequal and those with low absolute gender differences as most equal because the absolute measure takes no account of the overall level of early-stage entrepreneurial activity. Take, for example, Lebanon, with an absolute gender difference of more than 10 percentage points – on the face of it substantial gender inequality in entrepreneurship. Yet, at the same time, Lebanon had a female entrepreneurship rate of more than 16 percent, or more than 6 percentage points higher than the next highest other country in Table 2, suggesting that female entrepreneurs in Lebanon faced more opportunities, and less obstacles, than their counterparts elsewhere in MENA. Meanwhile, the UAE had an absolute gender gap of less than 3 percentage points, but a rate of male entrepreneurship that was nearly twice that of females. Then, a better measure of gender equality may be the **relative** gender gap, measured as the ratio of male to female rates of early-stage entrepreneurship. This is set out in the third column of Table 2 and depicts a very different portrayal of gender inequality in entrepreneurship.

TABLE 2: Absolute and relative differences in male and female TEA rates (%), plus Confidence Intervals, 2016.

Country	$TEA_m - TEA_f$	$TEA_m / TEA_f$	Lower	Upper
Egypt	13.43	2.795	2.179	3.856
Turkey	12.35	2.240	1.799	2.789
Iran	7.67	1.859	1.460	2.368
Morocco	2.24	1.502	1.039	2.171
Lebanon	10.17	1.633	1.370	1.947
Jordan	9.5	3.914	2.291	5.692
Saudi Arabia	3.11	1.319	1.029	1.691
United Arab Emirates	2.88	1.778	1.200	2.634
Israel	3.91	1.418	1.105	1.820
Qatar	1.29	1.190	0.873	1.623

In terms of the relative gender gap, it is Jordan that is most unequal, with a level of male early-stage entrepreneurial activity that was almost four times that of females, followed by Egypt (2.8 times) and Turkey (2.2 times). By contrast, the Gulf States of Qatar (1.2) and Saudi Arabia (1.3) score much better in terms of relative gender equality.

The final columns of Table 2 set out confidence intervals for the ratio of male to female early-stage entrepreneurship. (Testing the statistical significance of the ratio  $TEA_m / TEA_f$  is more difficult than for the difference in proportions ( $TEA_m - TEA_f$ ).

However, if  $R = TEA_m / TEA_f$ , equal to  $(m/n_1) / (f/n_2)$ , where  $m$  = number of male early stage entrepreneurs,  $n_1$  = number of males in the sample,  $f$  = number of female entrepreneurs,  $n_2$  = number of females in the sample, then, from the delta method,  $Variance(\log R) = (1/m - 1/n_1 + 1/f - 1/n_2)$ . Taking the square root gives the standard error for  $R$ ,  $SE(R)$ . If  $\log R$  is normally distributed, the 95 percent confidence interval for  $\log R$  is  $\log R \pm 1.96SE(\log R)$ . Exponentiating, the confidence interval becomes:  $R.e \pm (1.96SE(R))$ . For Qatar in 2016, the 95 percent Confidence Interval for  $TEA_m / TEA_f$  is 0.873 to 1.623. Since unity is included in this range, the male to female entrepreneurial ratio for Qatar cannot be assessed as significantly different from one – hence, and as shown earlier, the male and female entrepreneurial rates were not significantly different from each other. The other countries in Table 2 can be divided into two groups – those where the confidence interval includes two or more, and therefore the male rate of entrepreneurship can be said to be at least twice that of the female rate (i.e., Egypt, Turkey, Morocco, Jordan and UAE), and the second group where male entrepreneurship is less than twice the female rate. This group includes Lebanon (just!), Saudi Arabia and Israel.

#### 4. Differences in Knowledge, Attitudes and Perceptions

The individual decision to start a new business is of course socially constructed within an economic environment, inevitably subject to a multitude of influences that can be personal or systemic. Having seen that men are, across the MENA region, more likely to start businesses than women, attention now turns towards whether these differences can be associated with differences in knowledge, perceptions or attitudes. The GEM APS addresses these issues through some very specific questions to all respondents, including whether or not they personally know someone who had started a new business, whether they themselves see good opportunities to start a business, whether they consider themselves to have the skills and knowledge to run a business or whether the fear of failure would prevent them starting a business. Results from each of these questions will be considered in turn.

Table 3 shows that in each of the surveyed MENA countries, men were more likely to personally know a new – business entrepreneur than women, although the absolute levels varied widely amongst both men and women. For example, more than two-thirds of women in Saudi Arabia reported that they personally knew someone who had started a new business, a level higher than that of men in all the countries except Lebanon and Saudi Arabia itself. Only a quarter of Egyptian men knew someone who

TABLE 3: Absolute and relative differences in percentages of men ( $Know_m$ ) and women ( $Know_f$ ) who personally knew someone who had started a new business, 2016.

Country	$Know_m$	$Know_f$	$K_m - K_f$	$K_f / K_m$
Egypt	25.76	11.72	14.04	2.20
Turkey	30.51	18.03	12.48	1.69
Iran	55.54	45.62	9.92	1.22
Morocco	50.39	36.9	13.49	1.37
Lebanon	71.59	61.87	9.72	1.16
Jordan	41.89	18.28	23.61	2.29
Saudi Arabia	74.7	68.14	6.56	1.09
UAE	65.6	53.52	12.08	1.23
Israel	54.02	47.06	6.96	1.15
Qatar	32.55	20.25	12.30	1.61

had started a new business, a level exceeded by women in Iran, Morocco, Lebanon, Saudi, UAE and Israel. It was country, much more than gender, that influenced whether an individual was likely to know a new-business entrepreneur or not. The greatest absolute and relative gender differences were in Jordan and Egypt, and the smallest in Saudi Arabia and Israel.

Adults in each country were asked whether they saw good opportunities to start a business, with results set out in Table 4. While men were generally more likely to see good opportunities, in many cases the differences were very small (and in five of the ten countries, those differences were both less than 10 percent and not statistically significant, marked as \* in Table 4); whilst in the UAE, the difference was negative (i.e., more women than men saw good opportunities to start a business).

TABLE 4: Absolute and relative differences in percentages of men ( $Opp_m$ ) and women ( $Opp_f$ ) who saw good opportunities to start a business, 2016.

Country	$Opp_m$	$Opp_f$	$O_m - O_f$	$O_m / O_f$
Egypt	58.78	47.84	10.94	1.23
Turkey	53.74	44.93	8.81	1.20
Iran	34.83	34.03*	0.80	1.02
Morocco	46.21	43.67*	2.54	1.06
Lebanon	60.29	58.92*	1.37	1.02
Jordan	34.92	25.61	9.31	1.36
Saudi Arabia	86.14	75.77	10.37	1.14
UAE	23.60	30.26	-6.66	0.78
Israel	54.57	52.74*	1.83	1.03
Qatar	48.62	47.31*	1.31	1.03

Once more, country differences appeared more marked than gender differences, with the majority of men and women in Saudi Arabia, Lebanon and Israel seeing good opportunities compared to one-third of men and women in Iran, one-third of men in Jordan, nearly one-third of women and a quarter of men in the UAE and a quarter of women in Jordan. Hence, the lowest levels of perceived opportunity were in the UAE (men) and Jordan (women). By contrast, more than three quarters of men and women in Saudi Arabia saw good opportunities to start a business.

Another important perception variable in the decision to start a new business is whether individuals see themselves as having the necessary skills and abilities. Table 5 sets out the results of asking this question in the GEM APS across the MENA countries in 2016. In all cases, a significantly higher proportion of men than women saw themselves as possessing the necessary skills and abilities to start a business, with the proportion of men ranging from just under half in Israel to nearly four out of five in Lebanon and Saudi Arabia. By contrast, the proportion of women varied from a low of less than a third in Egypt and Israel to just over six out of ten in Saudi Arabia. It may well be lack of confidence in their own abilities that offers some explanation for the entrepreneurial gender gap.

TABLE 5: Absolute and relative differences in percentages of men ( $Skil_m$ ) and women ( $Skil_f$ ) who saw themselves as having the necessary skills and abilities to start a business, 2016.

Country	$Skil_m$	$Skil_f$	$S_m - S_f$	$S_m / S_f$
Egypt	59.11	33.16	25.95	1.782
Turkey	63.63	44.69	18.94	1.423
Iran	68.04	50.39	17.65	1.350
Morocco	67.49	44.78	22.71	1.507
Lebanon	78.58	57.33	21.25	1.370
Jordan	60.48	35.27	25.21	1.714
Saudi Arabia	77.69	62.23	15.46	1.248
UAE	61.43	42.29	19.14	1.452
Israel	49.32	32.82	16.50	1.502
Qatar	53.90	36.49	17.41	1.477

The smallest absolute and relative gender differences were in Saudi Arabia, though still substantial at 15 percent and a quarter higher for men than women, while the largest differences were in Egypt. Gender differences in confidence in their own ability were then substantially greater than gender differences in personally knowing someone who had started their own business or in spotting good opportunities to start a business.



The final table looks at the related issue of the proportion of adults who saw good opportunities to start a business but would be deterred by the fear of failure and paints a slightly different picture to the previous table. Whilst typically more women than men would be deterred by fear of failure, in two countries (Morocco and UAE), more men than women would be deterred. More than half of men in UAE and Israel and more than half of women in Iran, Saudi Arabia and Israel would be deterred by fear of failure, whereas less than a third of men in Egypt, Turkey and Saudi Arabia would be similarly deterred. Interestingly, Saudi Arabia was amongst the lowest for men and highest for women in terms of being deterred by the fear of failure, and hence, had both the highest absolute and relative gender differences.

TABLE 6: Absolute and relative differences in percentages of men ( $FFail_m$ ) and women ( $FFail_f$ ) who saw good opportunities to start a business but would be deterred by fear of failure, 2016.

Country	$FFail_m$	$FFail_f$	$F_m - F_f$	$F_m / F_f$
Egypt	28.04	38.53	-10.49	0.73
Turkey	31.84	39.49	-7.65	0.81
Iran	41.78	50.68	-8.90	0.82
Morocco	42.59	35.26	7.33	1.21
Lebanon	34.5	42.52	-8.02	0.81
Jordan	38.82	42.31	-3.49	0.92
Saudi Arabia	32.19	52.65	-20.46	0.61
UAE	52.21	45.71	6.50	1.14
Israel	52.49	54.56	-2.07	0.96
Qatar	31.66	35.71	-4.05	0.89

## 5. Conclusions and Policy Implications

There are substantial differences in the level of entrepreneurial activity across countries of the MENA region, and these differences are amplified when gender is taken into account. Whilst absolute gender differences exceeded 10 percentage points in Egypt, Turkey and Lebanon, and were less than 5 percentage points in Morocco, UAE, Saudi Arabia, Israel and Qatar, relative gender differences painted a different, and perhaps, more meaningful picture. The male early-stage entrepreneurial activity rate was nearly four times that of females in Jordan, and nearly three times in Egypt, but less than a third higher for men than women in Saudi Arabia and just a fifth higher in Qatar. These may be surprising results, given the media image of these two Gulf countries as patriarchal and socially conservative.

A preliminary assessment used GEM data to look at gender differences in spotting opportunities, personally knowing a new-business entrepreneur, whether the individual saw themselves as having the skills and abilities to start a business or whether they saw good opportunities, but the fear of failure would stop them. Country mattered much more than gender in terms of spotting new business opportunities or knowing someone who had started a new business, but gender differences in perceived abilities and fear of failure were substantial. There is much to do across MENA to raise the skills and self-confidence of potential women entrepreneurs.

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