



## ENTREPRENEURSHIP IN JORDAN: REGIONAL ANALYSIS AND ENVISAGED ROLE

DOI: 10.17261/Pressacademia.2015312983

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### Keywords

Entrepreneurial activity, Jordan, logit model, governorates, gender.

### ABSTRACT

The objective of this paper is to examine the issue of entrepreneurship in Jordan. Based on the survey of Jordanian adults (2006 individuals in total) which is carried out by the Global Entrepreneurship Monitor (GEM), it is reported that entrepreneurship in Jordan is lower than might be expected. In addition, while cultural attitudes are favorable, males are much more likely than females to become involved in entrepreneurial activity. Finally, the results indicate that while the density of entrepreneurship at the regional level reflects some significant differences, fear of failure is one of the most significant factors that impact entrepreneurial activity. Jordanian policy-makers should not assume that by promoting entrepreneurship per se, the national economy will achieve strong economic growth, and reduce unemployment levels. Such a well-intentioned policy might lead to nothing but disappointment at the macro level. Unless the quality (and quantity) of entrepreneurship improves, the likely impact of Jordanian entrepreneurship, especially female entrepreneurship, will remain centered around poverty reduction.

### JEL Classification

L25, L26, M13

## 1. INTRODUCTION

With a population of 6.7 million and growing at an average annual rate of 2.2 percent, the Jordanian economy has been finding it increasingly difficult to deal with unemployment. During the periods 2000-2004, 2005-2009, and 2010-2013, although economic growth averaged 5.6 percent, 7.4 percent, and 2.8 percent a year in real terms respectively, the unemployment rate has been consistently around 13 to 14 percent. Even more challenging, however, is the 30.8 percent unemployment rate among the 20-24 years old.

Underlying the unemployment problem, it is important to note two observations. First, the age group 0-29 years accounts for about 68 percent of the population. Second, the female participation rate has increased from 9.8 percent in 1990 to 10.4 percent in 2004 and to 14.1 percent by the end of 2013. These observations imply that the economy must generate more employment opportunities than before just to maintain present levels of unemployment.

Based on the above-mentioned few observations, one can appreciate why successive Jordanian governments have persevered with some consistent policies including the commitment to the promotion of the role of the private sector.

With respect to the economic role of the private sector, it is useful to note that the issue on entrepreneurship in Jordan has always been attracting interest. For example, Queen Rania Centre for Entrepreneurship (QRCE), the Young Entrepreneurs Association (YEA), and the Business Development Centre (BDC) were established in 1991, 1998, and 2005 respectively. Essentially, the objective of these non-profit organizations is to promote entrepreneurial activities in the Jordanian economy. In addition, while Jordan has developed a National Microfinance Strategy, currently, there are four micro-credit providers and these are private microfinance institutions, commercial banks, governmental microfinance institutions, and non-governmental organizations (NGOs)

It is common knowledge that the fields of economics, finance, corporate business, and sociology have been attracted to the issue of entrepreneurship. Given its complexity, there is little consensus about what actually constitutes entrepreneurship. Researchers have proposed an array of definitions that resulted in a number of different measures. However, based on the available literature, one can identify three distinct schools of thought on entrepreneurship and these are the German tradition, Chicago tradition, and the Austrian tradition. Indeed, the relevant literature does not have a unified framework, let alone a precise definition of entrepreneurship. This is why the literature contains several measures of entrepreneurship including those published by the Global Entrepreneurship Monitor (GEM), Kauffman Index of Entrepreneurial Activity, Denmark's Entrepreneurship Index, World Bank Entrepreneurship Survey, and other measures based on academic research.

The extensive theoretical and empirical literature which examines the various issues of entrepreneurship is impossible to review. However, despite some overlap, the entrepreneurial studies can be categorized in two groups.

The first group examines the determinants of entrepreneurship at the cross-country and individual-country levels. Some of the papers which use the GEM data include Freytag and Thurik (2007), Klapper et al. (2007), Van Stel et al. (2007), McMullen et al. (2008), Aidis et al. (2008, 2010a and 2010b), Krasniqi (2009), Pete et al. (2010), Tong et al. (2012), Touzani et al. (2013), and many others.

The second group of studies examines the economic consequences of entrepreneurship at the individual-level (i.e. income, survival, and satisfaction), country-level (economic development and growth, employment, investment, wages, survival, innovation, exports, and productivity), and cross-country level. Again, some of these papers include Stam and Van Stel (2009), Thurik (2009), Naude (2008 and 2009), Valliere and Peterson (2009), Braunerhjelm et al. (2010), Martin et al. (2010), Stam et al. (2010), and many others.

The issue of entrepreneurship has been attracting additional research issues as well. Among these are the determinants of female entrepreneurship (Kobeissi, 2010) and regional entrepreneurship. Some of the papers which use the GEM data include Luckgen et al. (2004), Tamasay (2006), Naude et al. (2008), and Bosma and Schutjens (2010). Other papers that use other measures of regional entrepreneurial activity include Okamuro

(2008), Llussa (2009), Audretsch et al. (2010), Ikeuchi and Okamuro (2010), and others. For example, Naude et al. (2008) regress the “total entrepreneurial activity” (start-up rate of new firms) in South Africa’s magisterial districts on a number of explanatory variables including population density, unemployment, economic size, and the degree of financial intermediation.

Against the above background, the primary objective of this research is to empirically examine the issue of regional entrepreneurship in Jordan. In more specific terms, this research examines two main issues: First, regional differences in terms of, primarily, the overall, male, and female entrepreneurship activity, type of entrepreneurial activity (business), and the motivations to involvement in entrepreneurial activity are examined. Second, this research identifies the determinants of regional entrepreneurship.

The rest of the paper is organized as follows. In section 2, we discuss the data and methodology and present and discuss the empirical results. Finally, in section 3, we summarize the key findings and recommendations and present some ideas for future research effort.

## **2. THE DATA, METHODOLOGY AND EMPIRICAL RESULTS**

The main data source of this research comes from the GEM. Indeed, since 1999, the GEM data indicators of entrepreneurial activity have become one of the main sources of entrepreneurship research.

The inclusion of Jordan in the GEM’s measurement of entrepreneurship activity has enabled the researchers to use the survey results of a total of 2006 Jordanian adults. As stated in the introduction, the primary objective of this research is to examine the issue of regional entrepreneurship in Jordan.

The statistical analysis involves two main parts. The first (descriptive) part involves some comparisons between the different Jordanian regions (governorates) in terms of the main variables which are covered by the survey instrument (questionnaire). The second part involves the estimation of an equation (logistic regression model) that expresses the entrepreneurship rate at the regional level as a function of a set of determinants. This set includes personal attributes, entrepreneurial attitudes, and a number of regional variables. In other words, the definitions of the variables are as follows:

Dependent Variable:

A dummy variable which is equal to 0 if the respondent is not an entrepreneur (early-stage entrepreneur) and 1 otherwise.

Independent Variables:

- Gender: A dummy variable with a value of 0 if the person is male and 1 otherwise.

- Age: This is measured by years (natural logarithm).

- Level of Education: This is measured by dummy variables for those who are illiterate and have less than high school, technical college, high school diploma, undergraduate degree, and greater than undergraduate degree.

- Income Level: This is measured by dummy variables for four income groups and these are less than JD 3,600, JD 3, 601-JD9,000, JD9, 001-JD 15,000, and greater than JD 15,000.
- Population Density: Number of people per square km in each region (natural logarithm).
- Unemployment Rate: The rate of unemployment in each region.
- Financial Development: Number of bank branches per capita in each governorate.
- Regional Dummy: A dummy variables for each governorate.

In addition to the above, two additional variables are included in the logit model and these are “fear of failure” and “whether or not have the required skills to run a business”.

Based on the above, the Tobit model is as follows:

$$Y_i = x_i \beta + \mu_i + \epsilon_i$$

where  $y_i$  is a dummy variable measuring whether entrepreneur or not in governorate  $i$ ,  $\beta$  is a vector of parameters to be estimated,  $x_i$  is a matrix of the explanatory variables as discussed above,  $\mu_i$  is a vector of time-invariant unobservable factors determining entrepreneurship, and  $\epsilon_i$  is a vector of stochastic disturbances.

In Tables 1 and 2, we report the total size of the national sample, and its gender and regional distribution.

**Table 1: The National Sample and Age Group**

<b>Gender</b>	<b>Total Number</b>	<b>Proportion</b>
Male	1036	51.6
Female	970	48.4
<b>Total</b>	<b>2006</b>	<b>100.0</b>
<b>Age Groups</b>	<b>Total Number</b>	<b>Proportion</b>
18 – 24	571	28.5
25 – 34	625	31.2
35 – 44	413	20.6
45 – 54	226	11.3
55 – 64	171	8.5
<b>Total</b>	<b>2006</b>	<b>100.0</b>

**Table 2: The National Sample at the Regional level**

Governorate	Sample	Proportion
Amman	806	40.2
Zarka	291	14.5
Madaba	50	2.5
Balqaa	129	6.4
Jerash	57	2.8
Ajloun	41	2.0
Irbid	351	17.5
Mafraq	91	4.5
Karak	81	4.0
Maan	37	1.8
Aqaba	43	2.1
Tafilleh	27	1.3
<b>Total</b>	<b>2004</b>	<b>100.0</b>

As expected, the national population, in terms of gender and regional (governorate) distribution, are well-represented by the national sample. For example, the capital (Amman) accounts for about 40 percent of the sample and this ratio is close to the city's population relative to the whole population.

Based on the definitions of early-stage entrepreneurship (TEA Rate), nascent entrepreneurship rate, new business ownership rate, and the established business ownership rates, which are provided by GEM, we report in Table 3 these estimates at the regional level (the three largest governorates). Clearly, the reported figures reflect some differences. For example, the governorates of Amman and Irbid have 12.7 percent and 9.1 percent TEA rates respectively. On the other hand, while the proportions of necessity driven TEA rates in these governorates are also fairly close to each other, the difference in the nascent entrepreneurship rate is more apparent. Indeed, these are equal to 8.3 percent in Amman and 2.3 percent in Irbid.

When we look at the demographic and other characteristics of early-stage entrepreneurs, some interesting observations are realized.

First, males are much more likely than women to be involved in early-stage entrepreneurial activity. Indeed, this is the case in all the reported regions of Jordan. For example, in Amman the mean male TEA rate of 18.0 percent is much higher than its

corresponding female rate (6.8 percent). On average, this observation also holds when we consider the nascent entrepreneurship and the new business ownership rates

**Table 3: Entrepreneurial Activity in Jordanian Regions**

	<b>Amman</b>	<b>Zarka</b>	<b>Irbid</b>
Early-Stage Entrepreneurial Activity (TEA) Rate	12.7	11.7	9.1
Nascent Entrepreneurship Rate	8.3	6.9	2.3
New Business Ownership Rate	4.3	4.8	6.8
Established Business Ownership Rate	11.0	9.6	9.4
Necessity Driven % of TEA Rate	30.0	30.0	25.0

Second, as expected, the highest prevalence rates are among adults in the 25-34 and 35-44 age groups. The female TEA rate tends to follow the same pattern as the overall rate. For example, in the governorate of Amman 46.2 percent and 30.8 percent of the female who are involved in early-stage entrepreneurship activity belong to the 25-34 and 35-44 age groups respectively.

Third, in all regions, the highest TEA rates are among the first-half income category (household income less than JD 9,000).

Fourth, the motivation of early-stage entrepreneurs is a useful piece of information to have because it differentiates between those who seek entrepreneurship based on necessity or opportunity. The results reveal that the share of opportunity-motivation in TEA is much greater than that of necessity-motivation. For example, the share of opportunity-motivation in TEA in Amman is equal to 66.7 percent.

Fifth, relative to motivation of early-stage entrepreneurs, it would be interesting to report the sector distribution of early-stage and established enterprises. Indeed, the type of new enterprises is useful to know because if they introduce new products and services and, through the application of new technologies, improve productivity levels in the various sectors, they can promote economic growth and employment growth. The results are disappointing. The sector distributions of early-stage enterprises and established enterprises are dominated by consumer-oriented activities (retail enterprises, restaurants, personal and social services). For example, 66.7 of the early-stage enterprises in Amman are consumer-oriented. As expected, this sector does not need much technology.

Sixth, if the early-stage and established enterprises are dominated by the consumer-oriented sector, the resultant employment impact is not expected to be large. This observation is accurate because early-stage enterprises in all governorates employ and expected to employ 1–5 people only.

Finally, it is common knowledge that financing the capital needs of any new business can be a major impediment to any entrepreneurial activity. In addition, it is equally important to have good and professional business advice. Based on the results, a large proportion of the capital needs (37.7 percent) is below JD5000. Moreover, 64.3 percent of the respondents stated that this amount is expected to be self-financed.

With respect to the determinants of regional entrepreneurship, we report the logit results in Tables 4 and 5. Based on the reported results, we can make the following observations.

**Table 4: Logit Regression of Entrepreneurship in All Regions (TEA)**

<b>Gender</b>	-0.861 <sup>*</sup>
<b>Age</b>	0.001
<b>Income</b>	0.128 <sup>***</sup>
<b>Level of Education</b>	-0.035
<b>Financial Development</b>	-0.212
<b>Required Skills</b>	1.855 <sup>*</sup>
<b>Fear of Failure</b>	-0.527 <sup>**</sup>
<b>Regional Dummy</b>	-0.147 <sup>**</sup>
<b>Population Density</b>	0.285 <sup>***</sup>
<b>Regional Unemployment</b>	0.017
<b>Intercept</b>	-1.915

Note: \* and \*\* significant at 1% and 5% respectively.

**Table 5: Logit Regression of Entrepreneurship (TEA in Amman, Zarka, and Irbid)**

<b>Gender</b>	-0.859 <sup>*</sup>
<b>Age</b>	0.001
<b>Income</b>	0.124 <sup>***</sup>
<b>Level of Education</b>	-0.036
<b>Financial Development</b>	-0.210
<b>Required Skills</b>	1.856 <sup>*</sup>
<b>Fear of Failure</b>	-0.520 <sup>**</sup>
<b>Regional Dummy</b>	-0.145 <sup>**</sup>
<b>Population Density</b>	0.284 <sup>***</sup>
<b>Regional Unemployment</b>	0.019
<b>Intercept</b>	-1.952

Note: \*, \*\*, and \*\*\* significant at 1%, 5% and 10% respectively.

First, there is a significant difference in the density of entrepreneurship between all Jordanian governorates. Indeed, even when we repeat the logit model using the three largest governorates (Amman, Zarka, and Irbid), the coefficient of the regional dummy remains significant. In other words, Jordanian regions differ significantly in terms of the entrepreneurial activities.

Second, and as expected, the gender issue is a significant factor in impacting entrepreneurship and this can be seen by the significant coefficient of the gender dummy.

This result is not really surprising. As mentioned in the previous section, the female participation rate is much lower than the male participation rate. However, the fact that the female participation rate in the labour force is increasing, we might expect female entrepreneurship to experience the same trend.

Third, the coefficients of fear of failure and required skills are consistently significant. The fact that a large proportion of the early-stage entrepreneurship activities are dominated by consumer-oriented activities, the start-up capital is relatively small, and most of the finance comes from private sources, one should not be surprised to learn that this factor (fear of failure) is a significant determinant of entrepreneurship. However, what is surprising is the significance of the skills required to run a business. While the positive and significant coefficient of this variable is encouraging, one can argue that, based on the type of early-stage and established enterprises, the skill dimension should not be as important as the results might imply.

Fourth, the income level of the adult population is significant in impacting early-stage entrepreneurship at the 10 percent confidence level. This result is probably not expected given the fact that a large proportion of nascent entrepreneurs' start-up capital is relatively small (less than JD5000). However, this observation implies that the income level of those involved in some form of entrepreneurial activity belong to the low income category. Indeed, and as mentioned below, the coefficient of income is significant in impact entrepreneurship.

Fifth, regional unemployment does not impact entrepreneurship in Jordan. Again, given the "large" differences in regional unemployment levels, while this result is not expected, it is probably due to the fact that the unemployed does not really have the minimum capital to start-up a business even if he/she wants to.

Sixth, age and education level are not significant in impacting entrepreneurship activity. This result is disappointing because one would have expected that those young and educated are more "able" to get involved in entrepreneurship activities. However, the fact that the early-stage entrepreneurship activities are dominated by consumer-oriented activities, one can argue that such activities are not expected to depend on factors like age and education level. In other words, they are too "basic" to warrant young age and high levels of education. Indeed, it was mentioned previously that the technology level of the early-stage and established enterprises is low and that a large proportion of the customers are local.

Finally, the issue of financial development (number of bank branches per capita) is not a significant factor in impacting entrepreneurship. Again, this result is probably due to the fact that a large proportion of the capital needs is below JD5000 and an equally large proportion of the respondents stated that they this amount (capital) is expected to be financed. In other words, the fact a large proportion of the entrepreneurship activities are small, self-financed, and the offered advice comes from private sources (spouse, parents, relatives, and friends), one can appreciate that financial development is not really an issue in impacting entrepreneurship.



#### **4. SUMMARY AND CONCLUSION**

At present, the Jordanian economy is facing many problems despite the fact that it has achieved some strong economic performance during the past few years. One of the most pressing problems is the consistently high unemployment rates.

Relative to the challenges which face the Jordanian economy, one can appreciate the importance of the issue of entrepreneurship and its promotion. Indeed, while the available literature, based on various conceptual and methodological viewpoints, has produced some mixed results, one can state that, on average, entrepreneurship can promote economic growth and reduce poverty. It is within this context that this paper has examined the issue of regional entrepreneurship in Jordan.

Based on the empirical findings, the following conclusions are provided. First, while males are more likely to become entrepreneurs than females, and Jordanian adults of all ages and education levels are involved in entrepreneurial activity, entrepreneurial activity in Jordanian regions reflects some significant differences. Second, the average early-stage entrepreneurship rates are highest for adults who are already employed full-time or part-time. Similarly, private sector employees are more likely to be involved in early-stage entrepreneurial activities than the public sector employees. Third, at the regional level, the distribution of nascent entrepreneurs reflects some significant differences in terms of employment activity and type of work. Fourth, the share of opportunity-motivation in the early-stage entrepreneurship is much greater than that of necessity-motivation and this observation does not change with gender. Fifth, the sector distribution of early-stage enterprises and established enterprises are dominated by consumer-oriented activities. Sixth, the job creation of early-stage enterprises and established enterprises is likely to be modest and the general evidence points out that these jobs are taken-up by expatriate workers. Finally, most early-stage and established enterprises use low-level of technology, offer products and services already offered by competitors and do not rely on the export market. This is probably why the capital need of the nascent entrepreneurs is relatively limited and most of it is self-finance.

In addition to the above, and based on the econometric analysis of the determinants of regional entrepreneurship, the results indicate that region, gender, income level, fear of failure, perceived skills level, and population density are significant factors in impacting the early-stage entrepreneurial activity in Jordan.

Based on the findings of the Jordanian economy's challenges and the analysis of entrepreneurship, we can make the following recommendations.

First, policy-makers should not assume that by promoting entrepreneurship, the Jordanian economy will be able to attain strong economic growth, and reduce unemployment levels. Indeed, such a well-intentioned policy might lead to nothing but disappointment at the national and regional levels. In other words, unless the quality (and quantity) of entrepreneurship improves, the likely impact of Jordanian entrepreneurship, especially female entrepreneurship, will remain centered around poverty reduction. This is the challenges that lies in front of all Jordanian stakeholders.

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