Factors influencing social entrepreneurship in North African countries: An empirical analysis using Logit model

العوامل المؤثرة في المقاولاتية الاجتماعية في دول شمال إفريقيا: دراسة قياسية باستخدام نموذج Logit

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Abstract:
The main contribution of this study is to provide quantitative evidence (the model) on the effect that some factors have on the behavior of social entrepreneurship in North African countries, mainly: Egypt, Morocco, and Tunisia. The study is carried out through a logistic regression analysis, using the Global Entrepreneurship Monitor « GEM » (2015) international database as the primary source. The analysis is conducted in two phases: a global analysis where the data of the three countries are combined and a national analysis by country. The results indicate that entrepreneurs' educational level and attitude towards entrepreneurial projects positively affect the involvement in social entrepreneurship activity, both for the global and national analysis. However, results indicate the financial context, both in global and national analysis, does not promote social entrepreneur in North African countries.
Keywords: Social entrepreneurship, Logistic regression, GEM, North African countries.
JEL Classification Codes : L31, M13, L38, O35.

ملخص:
تتمثل المساهمة الرئيسية لهذه الدراسة في تقديم دليل كمّي (النموذج) لتأثير بعض العوامل على سلوكيات المقاولاتية في دول شمال إفريقيا، لاسيما: مصر، المغرب وتونس. تم إجراء الدراسة من خلال تحليل الانحدار اللوجستي باستخدام قاعدة البيانات الدولية Global Entrepreneurship Monitor (2015) وذلك كمصدر أساسي. أُقيمت الدراسة على مرحلتين: دراسة عامة تم فيها دمج بيانات الدول الثلاثة، و أخرى خاصة حسب كل دولة. أشارت النتائج إلى أن المستوى التعليمي للمقاولين وموقفهم تجاه المشاريع المقاولاتية يؤثّران بشكل إيجابي على المشاركة في نشاط المقاولاتية الاجتماعية، سواء على المستوى العام أو الخاص بكل دولة. بالمقابل، بيّنت النتائج أن العامل المالي، في كلّ من الدراسة العامة و تلك الخاصة بكل دولة، لا يقود إلى تشجيع المقاول الاجتماعي في دول شمال إفريقيا.
كلمات مفتاحية: المقاولاتية الاجتماعية، الانحدار اللوجستي، GEM، دول شمال إفريقيا.
تصنيفات JEL : L31، M13، L38، O35.

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INTRODUCTION:

Social entrepreneurship is one concept that receives increasing attention from society and academia. The current trend is gradually evolving, as there is a society in which social and environmental problems are becoming increasingly important. This phenomenon concerns the promotion of improvements for society and the solution of social problems.

In addition, there is an increasing disparity in wealth, there is a movement toward corporate social responsibility if it is maintained both at the market and the level of institutions, and significant advances are being made in the field of technology and sharing responsibilities (Zahra & Wright, 2016). To overcome these barriers, social entrepreneurship emerges as a solution to demolishing barriers by developing alternative economic models in which the social end is preceded by the traditional economic end of the entrepreneurship activity.

Social entrepreneurship can be a powerful solution for North African countries. By combining financial sustainability (profits) with a priority of social impact, social enterprises will contribute to economic revitalization and social reconstruction. Analyzing social entrepreneurship activities and their characteristics is an important topic, but research into these countries remains a field that requires more attention (Sassmannshausen & Volkman, 2018), which is especially important in quantitative studies.

Therefore, this study aims to examine the effect of some factors on involving a social entrepreneurship activity in North African Countries. An empirical analysis is conducted based on Global Entrepreneurship Monitor (GEM) data from the 2015 survey. Using logistic regression (Logit model), this study allows understanding of the most significant factors that can motivate entrepreneurs to be involved in social entrepreneurship in North African countries.

According to the GEM survey, only three North African countries were introduced: Egypt, Tunisia, and Morocco. This empirical analysis makes it possible to differentiate the general conditioning factors of social entrepreneurship and analyze the influence that these factors have on the social entrepreneur. It differentiates the model into two categories depending on the involvement of entrepreneurs in social entrepreneurship activities (non-social entrepreneurs and social entrepreneurs).

This study complements the scarce quantitative research on social entrepreneurship in North African countries compared to the abundance of studies based primarily on theoretical reviews. Furthermore, because it is based on an international empirical analysis, this research represents a step forward compared to the lack of harmonized and comparable international data (Hoogendoorn & Hartog, 2011), which has slowed the challenges to address this research gap.

This study is divided into four sections. Section 1 highlights the term of social entrepreneurship, including definition, characteristics, and its emergence in North African countries. Section 2 detailed the determinants of social entrepreneur behavior and built a research hypothesis. Section 3 describes the data and methodology adopted. The variables of the study variables and the regression model were detailed. The results of the empirical analysis are discussed in Section 4. Finally, the study concludes with the main findings, the implications, limitations, and the possible field for future researches.

1- Literature Review

1-1 Social Entrepreneurship

Social entrepreneurship is frequently associated with creating social enterprises, and it is critical to distinguish the conceptual differences between the two to establish competencies to be developed. Entrepreneurship as a theoretical foundation has its origins in established disciplines such as economics, psychology, and sociology, leading to contemporary theoretical models of the field being viewed as fragmented.

However, it is possible to realize that the phenomenon's essence is found in the necessary relationship between individuals and opportunities because opportunities that can generate financial results and entrepreneurial individuals are critical aspects for understanding entrepreneurship (Moroz & Hindle, 2012). Therefore, the study of the phenomenon involves evaluating the process in which individuals discover, evaluate, and exploit profitable opportunities resulting in the development of goods and services (Shane & Venkataraman, 2000).

According to the literature, social entrepreneurship is an activity that investigates opportunities to create, sustain, distribute, and disseminate social and environmental value through social innovation (Alegre & others, 2017) (Grando & others, 2011). A social enterprise is an organization that carries out innovative business operations that are self-sustaining and guarantee the creation, sustainability, distribution, and dissemination of social or environmental value (Grando & others, 2011). As a result, the investment's sole purpose is to achieve one or more social objectives, such as health care, housing, or financial services for the poor, the provision of safe drinking water, etc.

In this regard, we generally define the social entrepreneur as someone committed to an initiative that helps solve a social and environmental problem in their community, thus becoming a critical change agent. According to the (European Commission Report, 2013), Social Enterprises are the organizations where:

- The main objective is to have a social impact. Therefore, Social Enterprises have a social objective (social impact).
- The production of goods and services in an entrepreneurial and innovative way is their way of operating.
- Management of social entrepreneurs in a responsible, transparent, and innovative manner, mainly through the participation of workers, clients, and all those affected by their activity.

However, the fundamental approaches to social entrepreneurship are grouped in the general definition proposed by (Niels & others, 2019) in the Global Entrepreneurship Monitor (GEM) Report on Social Entrepreneurship: *"people who are starting or currently directing any type of activity, organization, or initiative that has a particular social, environmental, or community objective."*

From the above, we can understand the profile of a social entrepreneur, and thus the competencies that characterize him, by defining and delimiting what we mean by social entrepreneurship. For social entrepreneurs, the creation of social value is not something secondary or indirect; and it is the valid reason for creating their business.

The existing literature indicated that social entrepreneurs have unique attitudes, skills, and practices that distinguish their work from others (Light, 2009). However, it is suggested to establish clear conceptualizations of social entrepreneurship, social enterprise, and social entrepreneur (Saxena, 2019).

Therefore, we construct an operationalization of social entrepreneurship competence comprised of four components: social change, social innovation, social and environmental value, and management component for social change. Therefore, to understand social entrepreneurship, we believe it is necessary to detail the factors that influence it.

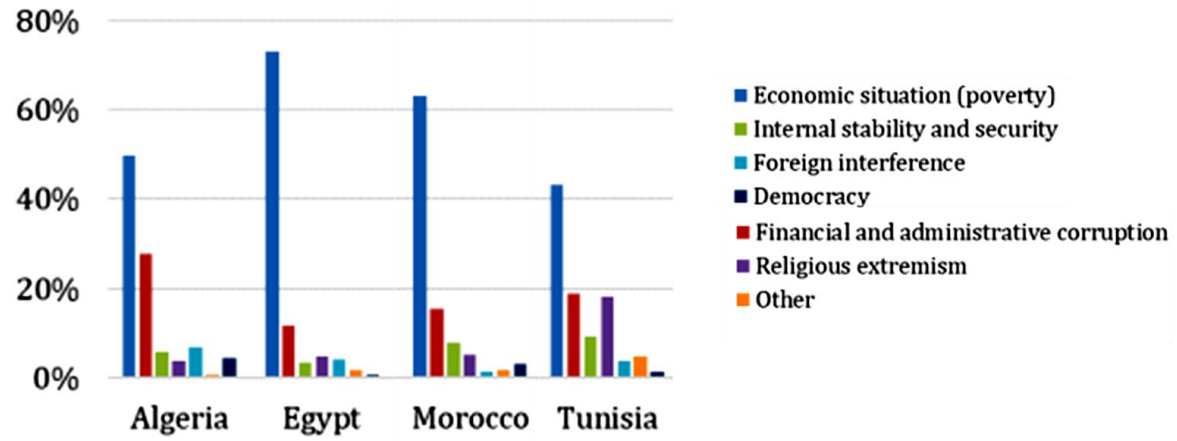
1-2 Social Entrepreneurship in North-African countries

Creating jobs and ensuring a fair distribution of economic progress necessitates an innovative development model in the North African countries. These countries are facing the socio-economic challenge, especially after the Arab Spring. On the one hand, they must confront the reality of long-term unemployment, particularly among young people.

The North African countries are marked by many gaps between urban and rural, men and women, privileged class, and simple citizens. On the other hand, they face inequalities that tend to increase and a lack of inclusiveness. Social entrepreneurship could play an essential role in these countries in this context. If an appropriate public policy supports this initiative, it helps improve vulnerable populations' economic security.

According to the Arab Barometer survey conducted in 2016, the main challenge expressed by the region's populations is corruption, particularly in Algeria and Tunisia, as shown in the figure below. Moreover, companies perceive corruption as an obstacle in their day-to-day operations in Egypt and Tunisia.

Fig (1): The main challenges in North African countries



Source: (Arab Barometer survey Wave IV, 2016)

Social enterprises are economically efficient while strengthening equity, diversity, equality, territorial development, and respect for the environment. However, the emergence and development of social enterprises in North Africa remain largely below its potential, and social innovation faces persistent obstacles (British State of Social Enterprise Report, 2015).

A study carried out by the Euro-Mediterranean Forum of Economic Sciences Institutes (FEMISE, 2019) already underlined that the legal framework for these countries is frequently

unsuitable for social enterprises. Because of the lack of awareness of the potential of social entrepreneurship, government and financial institutions offer little financial and technical means to support this type of entrepreneurship.

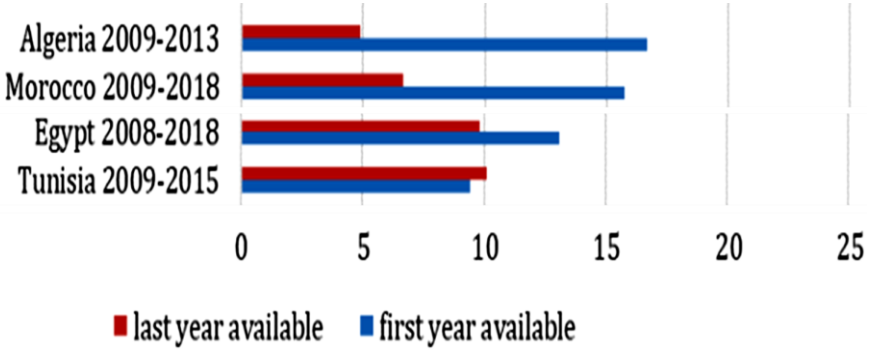
Table (1): Socio-economic indicators in some North African countries

Indicator			Country		
			Egypt	*Tunisia*	*Morocco*
Population (million)	2013		84.15	10.92	32.85
GDP growth (%)	2000-2010		5	4.4	4.6
	2013		2.1	2.7	4.5
Unemployment and the labor market (%)	2013	As a % of the labor force	13	16.7	9.2
		15-24 years	24.8	42.3	18.6
		Participation in Labor Market	34	33	36
Poverty and inequality (%)	National		22	3.8	9
	Rural		30	-	14.5
	Gini index		30.8	41.4	40.9

Source: Authors' elaboration based on (Forum Euroméditéranéen des Instituts de Sciences Economiques "FEMISE", 2019)

Social enterprises of the North African countries are often young and do not benefit from the know-how and management practices of the sector. They suffer from their financial resources' irregularity and a low-skilled workforce. This is why the evolution of the new entrepreneurial activities is not developed. We can see from the following figure that the rate of new entrepreneurs has fallen in Egypt and even more sharply in Morocco and Algeria. In addition, almost all countries are below the MENA average (which is 12%)

Fig (2): Evolution of the entrepreneurial activity



Source: (Niels & others, 2019)

Access to finance is also one of the biggest obstacles. Enterprises sometimes have access to foundations, government grants, international donors, and humanitarian agencies, but access remains limited. The possibility of accessing sustainable finance tools could be a solution, but it remains relatively underdeveloped.

Social entrepreneurship is a powerful solution because it helps to reduce social and environmental problems without relying on charity or public funding.

2- Research hypothesis

Creating a commercial or social company is critical for the entrepreneur to convert a business idea into a productive project. These factors include:

2.1 Personal characteristics

According to many studies in entrepreneurship, the decision to launch a business activity is influenced by the entrepreneur's personal characteristics, such as gender, age, or education.

Globally, in the field of entrepreneurship, the male gender predominates. The traditional image of men as having a more rational and economic component, such as business management, and women as having a more emotional component, such as greater involvement in the needs of others or in solving environmental problems, causes men to outperform women in entrepreneurship (Themudo, 2009).

This trend is also explained by more incredible difficulty for women in certain countries accessing capital. For these reasons, empirical studies such as (Hechavarria & others, 2017) show that women identify with social and environmental activities. As a result, this gender is increasing in the case of social entrepreneurship.

On the one hand, the entrepreneurship context supposes most young people in entrepreneurship activity. Concerning social entrepreneurship, Hoogendoorn and Hartog (2011) affirm that young people value non-materialistic goals more and, therefore, prefer the creation of social enterprises.

The entrepreneur's decision to start a business is influenced by gender or age and education. According to (Van der Scheer, 2007), the individual with a higher educational level has a higher probability of starting a business project because higher education implies more training and security to start a business and less difficulty accessing resources.

2.2 Values and the attitudes to start a business activity

(Harding, 2006) asserts that knowledge of an entrepreneurial network, perception of opportunities in the environment, possession of skills and abilities to start a business project, and fear of failure are values and attitudes that differentiate the behavior of the social and commercial entrepreneur. Individuals who have been able to observe and learn entrepreneur-like attitudes in their lives, such as the search for alternative paths, taking risks, or taking advantage of opportunities, are more likely to begin entrepreneurial activities (Stevenson, 2000) (Lumpkin & Wright, 2011).

In addition, having the necessary skills and abilities to carry out a business project allows the entrepreneur to face the risks inherent in entrepreneurship and successfully run the business, increasing the likelihood of starting a business initiative. Any social entrepreneurship approach necessitates paying attention to the necessary skills and capacities and their perception.

Economic loss or social exclusion influences an individual's perception of failure. Similarly, entrepreneurship entails taking a risk that may impact the individual when starting a business. In the case of the social entrepreneur, a distinction is made between the previously mentioned personal risk and the financial risk (Lumpkin & Wright, 2011).

2.3 Entrepreneurial context

Along with the previously detailed factors, external conditions also influence the decision to undertake. This includes the entrepreneur's economic, political, socio-cultural, or legal

environment. In addition, the country's level of development could influence the process of creating a company and generate differences between commercial and social entrepreneurship. Also, the measures and facilities to get loans and the finance system can influence entrepreneurship.

Thus, considering the previous information, it is possible to propose the following hypotheses:

Hypotheses 1: Personal characteristics affect the involvement in social entrepreneurship activity

H1a: Gender affects the involvement in social entrepreneurship activity

H1b: Age affects the involvement in social entrepreneurship activity

H1c: Educational level affects the involvement in social entrepreneurship activity

Hypotheses 2: Values and attitudes affect the involvement in social entrepreneurship activity

H2a: Entrepreneurial network affects the involvement in social entrepreneurship activity

H2b: Perceptions of opportunities affects the involvement in social entrepreneurship activity

H2c: Skills affects the involvement in social entrepreneurship activity

H2d: Fear of Failure affects the involvement in social entrepreneurship activity

Hypotheses 3: Entrepreneurial Context affects the involvement in social entrepreneurship activity

H3a: Measures affect the involvement in social entrepreneurship activity

H3b: Ease of starting business affects the involvement in social entrepreneurship activity

Hypotheses 4: Financial context affects the involvement in social entrepreneurship activity

H4a: Getting credit affects the involvement in social entrepreneurship activity

H4b: Financial system affects the involvement in social entrepreneurship activity

3- Data and Methodology

3.1 Data Source

The Global Entrepreneurship Monitor (GEM)[2] is the main source of data, an international observatory that brings together a national network of more than 700 entrepreneurship experts. It analyzes the entrepreneurial phenomenon through numerous variables on an annual basis, and the data generated is published in annual reports on a global, national, regional, and local level.

Because the methodology used is consistent globally, it is possible to compare the entrepreneurial situation in different countries. The GEM data brings two survey-based data collection tools:

- The Adult Population Survey (APS): It assesses the entrepreneurial activity, attitudes, and aspirations of a representative sample of the population that have between 18 and 64
- The National Expert Survey (NES): It seeks to assess the factors influencing national entrepreneurial activity (such as financing, government policies, education, and more) using the expertise of qualified experts from each country.

[2] Data was retrieved from : https://www.gemconsortium.org/data

By analyzing the GEM data, both APS and NES, only three North African countries are included: Egypt, Tunisia, and Morocco. The following table presents the number of entrepreneurs in each country included in the analysis.

Table (2): Number of social entrepreneurs and non-social entrepreneurs

Country	Social Innovation		Non-Social innovation		Total
	Number	%	Number	%	
Egypt	87	37.50	2425	38.23	**2512**
Tunisia	121	52.16	1881	29.65	**2002**
Morocco	24	10.34	2037	32.11	**2061**
Total	**232**	**3.53**	**6343**	**96.47**	**6575**

Source: Authors' elaboration

Table 2 indicates that among the 6575 surveyed entrepreneurs in Egypt, Morocco, and Tunisia, 3.53% have claimed social entrepreneurship, 52.16% of which are located in Tunisia. Results also indicate that most entrepreneurs (96.47%) have entrepreneurial business activities.

It should be mentioned that in addition to the APS and NES data, some variables were retrieved from the Doing Business Website[3]. These variables are ease of starting a business, getting credit, and financial system.

3.2 Variables of the study

The variables of the current study are:

Dependent variable: Social Entrepreneurship Activity refers to the individuals involved in the phenomenon of social entrepreneurship (they encompass entrepreneurial initiatives with a solving goal of social, cultural, and environmental problems).

Independent variables are summarized in table3, and divided into personal characteristics, the entrepreneur's values and attitudes toward the business project, the entrepreneurial environment, and the financial environment.

Table (3): Variables of the study

Independent variables		Description
Personal characteristics	Gender	male (category with value 1) and female (2)
	Age	in years
	Education	educational level grouped into three categories: primary (1), secondary (2), and university (3) level
Variables related to the values and the attitudes to launch a business project Authors create these variables with a value of 1 if a sample observation meets a particular characteristic and 0 otherwise	Entrepreneurial network	knowing someone from involved in entrepreneurial initiatives
	Perceptions of opportunities	perceive opportunities to start a business in the next six months
	Skills	required capacities, knowledge, and skills to start a business project
	Fear of Failure	someone who considers the fear of failure

[3] Data was retrieved from :https://www.doingbusiness.org/en/data

		as an impediment to starting a business project
Entrepreneurial Context It includes the entrepreneurial context variable with a 9-point Likert scale (1 = "completely false", 9 = "completely true")	Factor affecting entrepreneurial context	such as financing for entrepreneurs, government policies, government programs, entrepreneurial education and training, the transfer of R&D, access to professional infrastructure or physical and services, the dynamics and access barriers of the internal market, and social and cultural norms.
	Ease of starting a business	procedures for the creation of a new business, as well as the time and cost
Financial and institutional context: The financial and institutional environment includes three variables:	Getting credit	measures that facilitate loans and the degree of dissemination of information related to credits
	Financial system	financing provided to the private sector by financial institutions (calculated as a %of GDP)

Source: Authors' elaboration

3.3 Methods

Instead of the traditional linear regression analysis, the logistic regression model (Logit model) is used because the dependent variable is dichotomous and takes a value of 1 if the entrepreneur is involved in a social entrepreneurship activity or 0 if not involved in social entrepreneurship activity.

In the same way that occurs in the latter, a set of independent variables defined in the previous table is determined. However, instead of being a numerical response variable, the dependent variable (Soc_Entrp) describes a response in the form of two possible events (involved in social entrepreneurship or not). This type of regression is an increasing monotonic function (Hilbe, 2009) (Sedkaoui, 2018) , as shown in the following:

$$P(y = 1/x_1, x_2, \cdots, x_k) = \frac{\exp\,(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n)}{1 + \exp\,(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n)}$$

Where:

y_i: The dependent variable.

β_n: Parameters (coefficients for each independent variable).

x_i: Independent variables

The logistic distribution function transforms the regression into the interval (0,1). Therefore, we definite the Logit(x) as follows:

$$logit(x) = \log\,(\frac{x}{1-x})$$

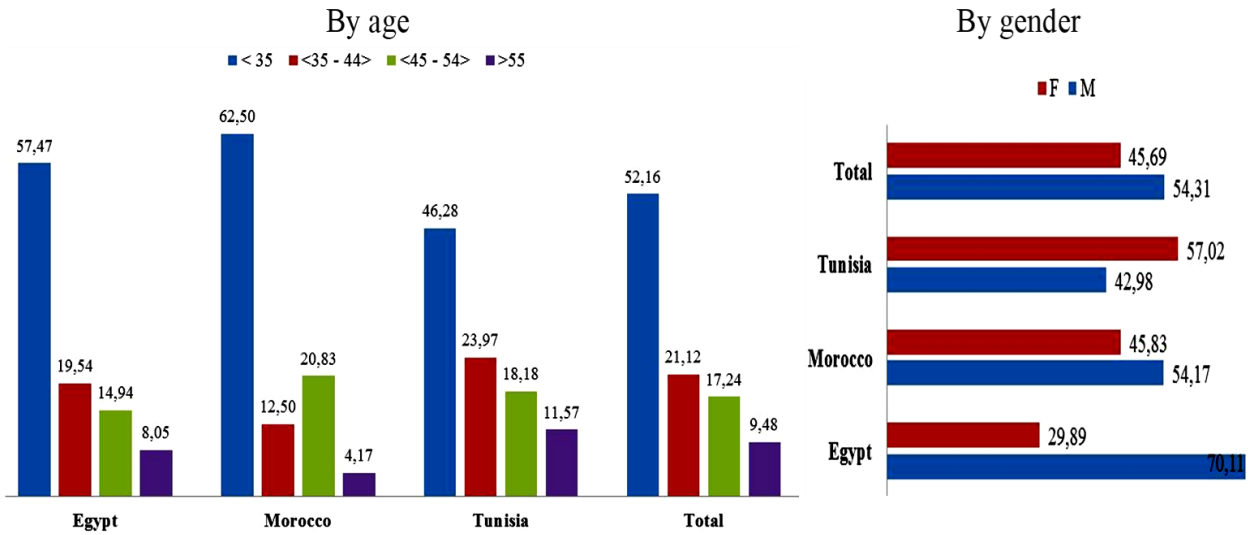
The parameters allow evaluating the influence of each independent variable on the probability of these two situations: Involving and not involving a social entrepreneurship activity.

It should be mentioned that β_0 is the constant. However, to facilitate interpreting the results, the relative risk ratio is used to measure the association between the dependent and independent variables. It shows the frequency of occurrence of the event analyzed (1 or 0).

4- Results and Discussions

Before indicating the results of the empirical analysis, we should verify the characteristics of the entrepreneurs involved in the social entrepreneurship activity in the three countries. These characteristics can be summarized in the following figure.

Fig (3): % of entrepreneurs involved in social activity by age and gender



Source: Authors' elaboration based on GEM data

It can be seen through the previous figure that 52.16% of social entrepreneurs surveyed by GEM have less than 35 years old. It shows that this type of entrepreneurship is valued more by young people. This result is similar to the study of Hoogendoorn and Hartog (2011) that indicated that young people prefer the creation of social enterprises. The results are the same when we compare the three countries, with some interest of the 45-54 category of age in Morocco (almost 21%).

54.31% of the surveyed social entrepreneurs are men, confirming the previous literature's theory that men predominate in any entrepreneurship activities (Themudo, 2009). However, it can also be related to the socio-cultural environment in these countries, especially in Egypt, with more than 70% of men social entrepreneurs. So, we notice that social entrepreneurship attracts young entrepreneurs, and the Appendix shows the age pyramid of the surveyed entrepreneurs.

Regarding the third personal characteristic, related to the educational level, the analysis results show that the majority of surveyed social entrepreneurs have university degrees.

The method proposed in the previous section shows a set of results expressed through two different perspectives. The first one collects the general model as a whole (model A), while the second reflects the results of said model differentiated by country: Egypt (model B.1), Morocco (model B.2), and Tunisia (model B.3).

The results of "model A" are presented in the following table, which indicates the risk ratio (RR), the level of significance (Sig), number of observations, coefficient of determination

(R^2), and variance inflation factor (VIF). It should be mentioned that RR is calculated using the following equation:

$$RR = \frac{probability\ of\ outcome\ among\ exposed}{probability\ of\ outcome\ among\ not-exposed}$$

Table (4): Results of analysis (the three countries combined) – Model A

Variables		Not Soc_Entrp	Soc_Entrp	VIF	β	Sig
Gender		0.885**	0.879**	1.183	-.084	.577
Age	<35	0.938**	1.035**	1.030	-.008	.185
	35-44	0.445**	1.023**			
	45-54	0.343	1.002*			
	>54	0.538	0.389			
Education	Primary	-	-	1.122	0.708	<.001
	Secondary	0.781	0.876			
	University	1.126**	1.772**			
Entrepreneurial network		2.089**	1.867**	1.196	.770	<.001
Perceptions of opportunities		1.687**	1.699**	1.065	.660	<.001
Skills		3.383**	2.008**	1.290	.199	<.001
Fear of Failure		0.689**	0.796**	1.099	.086	.571
Measures		1.276**	1.164**	1.305	0.086	<.001
Ease of starting a business		0.979**	1.085**	1.006	0.107	<.001
Getting credit		1.038**	0.602**	1.168	-1.079	0.265
Financial system		0.827**	0.733**	1.209	-0.942	0.678
Nbr of Observation = 6575			*R^2=0.1308*			
** *0.01 Significance level* / * *0.05 Significance level*						

Source: Authors' elaboration based on SPSS outputs

The results of 'model A' allow determining the factor that can influence and motivate entrepreneurs in the three countries combined. The values of VIF show that there are no multicollinearity problems since VIF values in all variables are less than 10 (Chatterjee & Hadi, 2012). Therefore, they can be incorporated together into the model.

The results show that gender negatively affects social entrepreneurship activity in these countries since males are predominantly social and non-social entrepreneurship.

Regarding age, results show that entrepreneurs under 35 years old predominate in social and non-social entrepreneurship. As age increases, both types of entrepreneurship decrease, which means a negative relationship after 35 years.

The educational level shows a positive relationship for both types of entrepreneurship because most of the surveyed entrepreneurs have a higher level of education. Therefore, the entrepreneurs' propensity to be involved in social or non-social entrepreneurship increases.

As indicated in table 4, three values and attitudes variables are statistically significant (sig <0.01), respectively: Entrepreneurial network, Perceptions of opportunities, and Skills. These three variables affect the two types of entrepreneurship (RR > 1), while the last variable related to fear of failure has a negative influence on entrepreneurship (RR < 1).

The group of variables related to entrepreneurial context shows that the different factors (funding, government policies, training, technology, access to infrastructure and services, barriers of the internal market, and social and cultural context) affect the two types of entrepreneurship.

It should be mentioned that the entrepreneurial environment is evaluated from the point of view of qualified experts (NES). In addition, the facilities to start and launch business activity positively influence social entrepreneurs (1.085), but it is not a statistically significant variable for non-social entrepreneurs (0.989).

Regarding the variables that reflect the financial environment in these countries combined, it is indicated that they negatively affect the two types of entrepreneurship. Therefore, and as indicated at the beginning of this study, the financial system of North African countries does not motivate entrepreneurship, which negatively affects the probability of being a social entrepreneur.

For a more detailed analysis, we conducted the same approach to analyze the influence of the four groups of variables in each country. Table 5 illustrates the results:

Table (5): Results of analysis in each country – Model B.1, Model B.2, and Model B.3

Variables	Not Soc_Entrp	Soc_Entrp	VIF	β	Sig
Egypt – Model B.1					
Gender	0.894**	0.827**	1.238	-.097	.423
Age	0.913**	1.046*	1.387	-0.37	0.167
Education	1.433*	1.884**	2.094	1.219	<.001
Entrepreneurial network	1.954**	1.872**	1.406	0.869	<.001
Perceptions of opportunities	1.603**	1.614**	1.315	0.735	<.001
Skills	3.989**	1.971**	1.089	0.207	<.001
Fear of Failure	0.769**	0840**	1.211	0.091	0.613
Measures	1.108**	1.188**	1.369	0.107	0.118
Ease of starting a business	0.819**	1.031**	1.246	0.137	<.001
Getting credit	0.847*	0.582**	1.074	-1.112	0.315
Financial system	0.817**	0.684**	1116	-0.911	0.427
Nbr of Observation = 2512		*R^2=0.130*			
** *0.01 Significance level* / * *0.05 Significance level*					
Morocco – Model B.2					
Gender	0.802**	0.959**	1.183	-.104	.357
Age	0.473**	0.814	2.081	-0.29	0.164
Education	1.774**	3.975**	1.312	1.223	<.001
Entrepreneurial network	2.627**	2.049**	1.022	0.811	<.001
Perceptions of opportunities	1.831**	1.692**	1.201	0.537	<.001
Skills	4.112**	2.140**	1.187	0.217	<.001
Fear of Failure	0.506**	0.724**	1.007	0.112	0.511
Measures	0.978**	0.971**	2.003	0.128	0.105
Ease of starting a business	0.989**	1.163**	1.489	0.124	<.001
Getting credit	0.912**	0.647**	1.712	-1.106	0.367
Financial system	0.872**	0.636**	1.045	-0.903	0.398

Nbr of Observation = 2061		*R^2=0.145*			
*** 0.01 Significance level / * 0.05 Significance level*					
Tunisia – Model B.3					
Gender	0.882**	0.897**	1.207	-.092	.379
Age	0.513**	0.843*	1.017	-0.046	0.203
Education	1.675**	3.812**	1.401	1.237	<.001
Entrepreneurial network	2.304**	2.107**	1.092	0.824	<.001
Perceptions of opportunities	1.943**	1.702**	1.233	0.498	<.001
Skills	3.116**	2.038**	1.112	0.273	<.001
Fear of Failure	0.476**	0.733**	1.378	0.084	0.624
Measures	1.314**	1.219**	1.315	0.116	<.001
Ease of starting a business	1.101**	1.155**	1.247	0.201	<.001
Getting credit	0.811**	0.549**	1.241	-1.087	0.541
Financial system	0.742**	0.631**	1.165	-0.931	0.414
Nbr of Observation = 2002		*R^2=0.128*			
*** 0.01 Significance level / * 0.05 Significance level*					

Source: Authors' elaboration based on SPSS outputs

The results indicate that the variables that motivate individuals to be social entrepreneurs in each country follow the same order as in the global analysis (the three countries combined).

This is to say that educational level, the entrepreneurial network, the perception of opportunities, skills, and the ease of starting a business influence both types of entrepreneurship. The effect of these variables is significant, especially for non-social entrepreneurship, except for the level of education, in which the significant effect is for social entrepreneurship.

The analysis by country shows similar results to those previously discussed in the analysis of the three countries combined, particularly for the Tunisian case, where the main results coincide in all variables. However, there is a distinction between Egypt and Morocco because the adopted measures variable is not significant.

The gender variable negatively affects the involvement in a social entrepreneurship activity at the national level. In addition, the three countries do not differ from each other.

In the analysis of the influence of the different factors on social Entrepreneurship by countries, some differences can be observed only in the case of Egypt and Morocco. These discrepancies are found in the development of the different measures adopted because, even though the influence continues to be negative, a more significant effect is not observed for a specific type of enterprise. Therefore, the difference in the effect of the development of these measures is not significant in these two countries.

The financial context negatively influences social entrepreneurs. Similarly, the development of the financial system has a negative influence on the two types of entrepreneurship and, social entrepreneurship is affected to a greater extent by this variable.

Therefore, based on the results indicated in table 4 and table 5, only H1c, H2a, H2b, H2c, H3a, and H3b can be accepted. Globally, we can illustrate these hypotheses in the following table:

Table (6): Results of research hypothesis for the different models

Hypothesis		Models			
		Model A *Global*	**Model B.1** *Egypt*	**Model B.2** *Morocco*	**Model B.3** *Tunisia*
Hypothesis 1	*H1a*	Rejected	Rejected	Rejected	Rejected
	H1b	Rejected	Rejected	Rejected	Rejected
	H1c	Accepted	Accepted	Accepted	Accepted
Hypothesis 2	*H2a*	Accepted	Accepted	Accepted	Accepted
	H2b	Accepted	Accepted	Accepted	Accepted
	H2c	Accepted	Accepted	Accepted	Accepted
	H2d	Rejected	Rejected	Rejected	Rejected
Hypothesis 3	*H3a*	Accepted	Rejected	Rejected	Accepted
	H3b	Accepted	Accepted	Accepted	Accepted
Hypothesis 4	*H4a*	Rejected	Rejected	Rejected	Rejected
	H4b	Rejected	Rejected	Rejected	Rejected

Source: Authors' elaboration based on the result of analysis

The results obtained point to a significant influence of most of the factors on social entrepreneurship activity in the analyzed countries.

Conclusion:

Social entrepreneurship can be defined as processes or outcomes that seek to improve the well-being of individuals and societies in general through initiatives that value social inclusion and the appreciation of people and activities that have been overlooked by the market (Eurostat, 2018). Social entrepreneurship is emerging as an alternative to addressing our society's current social and environmental problems.

Although this type of entrepreneurship's social and solidarity goal is distinct from the business entrepreneur's economic objective, other factors, such as the entrepreneur's values and personal characteristics, entrepreneurial context, and financial supports, condition the social entrepreneur's behavior. However, the impact of these conditioning factors may differ depending on the country's level of development.

This study is interested in analyzing these factors and examining their influence on social entrepreneurship activity in North African countries. The research used the GEM data (2015) and using a logistic regression model to analyze this influence at the global level (Egypt, Morocco, and Tunisia combined) and national level (by country). As mentioned at the beginning of this study, data about social entrepreneurship in Algeria is not included in the GEM report.

This study shows that the entrepreneur's attitudes do not show relevant differences between the global and national and positively affect social entrepreneurship activity. Likewise, gender, age, and the fear of failure negatively influence social entrepreneurs without any difference in the country's national analysis.

Furthermore, the positive effect of higher education, which is significant in both types of analysis, is primarily justified by a value of relative risk ratio for the social entrepreneur. The

reason for pursuing this higher-level training could be related to the skills, knowledge, confidence, and security that the process of forming a company necessitates.

The entrepreneurial context category of variables presents a relevant difference in the study, both on the global and national analysis. The general analysis results indicate a positive influence on social entrepreneurship. However, this effect on the social entrepreneur is not significant in Egypt and Morocco, contrary to the case of Tunisia. In addition, the facilities to launch a new business activity seem to benefit the social entrepreneur in both levels of analysis.

Regarding the financial context, results indicate that this factor is a disadvantage for the social entrepreneur in the North African countries, both in global and national analysis. This factor includes credit availability and the financial system development crucial to this type of entrepreneurial activity.

Finally, this research makes it possible to open future lines of research, for example, to incorporate a greater number of countries from the Arabic world to examine other social and economic realities with much more diversity. The extension of this study to the case of Algeria can also be considered. It could allow understanding of what the country is experiencing in this field.

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-Appendices:

Pyramid of age / Gender