

The entrepreneurial ecosystem in MENA countries: A temporal and spatial comparison

C.B. Slaoui¹, B. Mouline ²

¹Chaimae Bahi Slaoui: Full Time Professor at ESLSCA Business School Paris – campus Rabat

bahislaouichaimae@gmail.com

²Boubker Mouline: Full Time professor at ESLSCA Business School Paris

ABSTRACT:

This paper attempts to provide a comprehensive understanding of the entrepreneurial ecosystem in which entrepreneurs, SMEs, and startups operate in selected MENA countries, highlighting the beneficial and detrimental characteristics of the MENA entrepreneurial ecosystem. We will also seek to provide insights into how to stimulate and enrich the culture of entrepreneurship in the region. We used temporal and spatial comparisons between a set of countries in the MENA region and over the years for each one of them. The study was conducted based on the National expert survey (NES) led by the Global Entrepreneurship Monitor (GEM) between 2015 and 2018 in countries of the MENA region. The results allowed us to link experts' given assessment of a specific framework condition to some decision-making actor's actions. The results also show that the overall expert's perceptions about entrepreneurial Framework Conditions in the MENA region remain weak and show some disparities between the countries studied. This study enabled us to finger-point actions that could impact the entrepreneurial ecosystem.

Keywords: MENA region; entrepreneurship; entrepreneurial ecosystem; Entrepreneurial Framework Conditions, Institutions,

1. INTRODUCTION

Promoting entrepreneurship has become a key feature in the policy agenda and economic development of many countries. In fact, several scientific research and statistical reports clearly show the positive effect of entrepreneurship on economic growth (Brown & Mason, 2017). Moreover, the success of Silicon Valley in the United States has not only captured the imagination of the public, but also the curiosity of several governments concerned with creating an entrepreneurial sphere conducive to business creation. As a result, governments and researchers have embarked on an all-out effort to understand and emulate this model within their borders (Audretsch, 2019).

In most countries today, entrepreneurship represents an alternative to work that, in most cases, gives more freedom of choice and economic opportunity to the entrepreneur compared to other careers. This assessment is especially true for developing MENA countries, where many face challenges including high youth unemployment and widespread poverty. Furthermore, a lack of good governance, high levels of corruption, and a flawed legal system result in a poor institutional structure, which negatively affects the development of the economy in general and the entrepreneurial ecosystem in particular (World Bank 2016). This provides a rudimentary explanation for the low rates of entrepreneurship in the MENA region today compared to other parts of the world. However, the exact reasons for this situation remain unclear. In the light of this constant, and in order to better understand this situation, we will try to provide an element of response to the following question: What are both the beneficial and detrimental characteristics of the MENA entrepreneurial ecosystem?

To do so, we first develop a comprehensive literature review aiming to define concepts and highlight divergences in their interpretation. Then, we state the methodology and data source and share results of both spatial and temporal comparisons between entrepreneurial ecosystems in MENA countries. Those results are then analyzed and discussed based on contextual facts in each country.

2. LITERATURE REVIEW :

2.1. The entrepreneurial ecosystem approach :

The literature on entrepreneurial ecosystems has a variety of definitions. This abundance of definitions highlights both the importance and the complexity of the concept. The first component of the term is "entrepreneurial" and refers to entrepreneurship, a process in which "human action, supported by the surrounding environment, generates value in the marketplace through the creation or development of economic activity, evolving with that value to ultimately affect the economy, with the aim of better meeting the individual and collective needs of an area" (Julien et Cadieux 2010). The entrepreneurial ecosystem approach frequently refers only to 'high-growth start-ups', claiming that this type of entrepreneurship is an important source of innovation, productivity growth and employment (Mason & Brown, 2014). This statement seems exclusive from a purely factual perspective: conventional enterprises or self-employed entrepreneurs can also be productive forms of entrepreneurship (Baumol,

1996) and in that way the source of the aforementioned welfare outcomes. But it is clear that the entrepreneurial ecosystem approach does not, by definition, include the traditional statistical indicators of entrepreneurship such as “self-employment” or “small businesses.” This distinction between the traditional measures and the conceptually more adequate measures of entrepreneurship, such as innovation and growth, is increasingly emphasized in the existing literature (Henrekson & Sanandaji, 2014).

The second component of the term is “ecosystem”. The term ecosystem dates back to 1935 and was coined by the British botanist Arthur George Tansley. This researcher used this term to designate the basic ecological unit made up of the environment and the organisms living in it. He defined it as "a bounded ecological system consisting of all the organisms (biocenosis) that are found within the boundaries and the physical environment with which they interact". This work has been the basis of much research in the science of ecology.

Since then, this biological term has been extended to many other disciplinary fields in general, and to economics and management in particular, through the work of James Moore in 1993. He considers the business ecosystem to be similar to the biological ecosystem, emphasizing the rationally embodied nature of the way firms interact with their stakeholders, thus constituting a bipartite, made up of a core and a periphery. In other words, one or several companies acting as leaders and organizations orbiting around them (Oruezabala, 2017). Several other authors have discussed and revisited this notion. Koenig's work in 2012 suggests that a business ecosystem can be analyzed as a modular arrangement of positions and links. It is therefore a dynamic interconnected organization that integrates all populations of organizations such as small firms, large firms, universities, research centers, public sector organizations and other stakeholders that influence the system (Peltoniemi and Vuori, 2004). A business ecosystem goes beyond the traditional industry framework to consider, in terms of strategic actions, the set of relationships that a company develops in order to create a community of heterogeneous allies (Gueguen, 2016).

With regard to these definitions, we can retain that a business ecosystem is a form of organization that brings together a set of actors who are interconnected with each other. It therefore belongs to these networked forms of organization, whether they are territorial, intra-organisational or inter-organisational. Cohen (2006) was the first to use the concept of entrepreneurial ecosystem, defining it as a diverse set of interdependent actors within a geographical region, committed to sustainable development through the support and facilitation of sustainable new ventures, which influence the shape and pathways of the entire group of actors and ultimately the economy as a whole. The current definition of an entrepreneurial ecosystem is widely shared. However, it still lacks both conceptual and empirical precision (O'Connor et al., 2018; Scaringella & Radziwon, 2018).

2.2. The entrepreneurial ecosystem: from theoretical divergence to empirical diversity

Research focusing on the entrepreneurial ecosystem specifically identifies its main components and analyzes the characteristics that are conducive to the development of entrepreneurship. As a result,

several factors have been identified in different contexts that constitute entrepreneurial ecosystems. These factors vary from one context to another (Isenberg, 2010). The entrepreneurial ecosystem is a network community of different actors and institutional and socio-economic contextual factors that support the development and growth of innovative firms and encourage nascent entrepreneurs and other actors to take the risk of starting, financing and sustaining high-risk firms (Isenberg, 2010 and Spigel, 2015). For Isenberg (2010), an entrepreneurial ecosystem is a combination of elements that support entrepreneurship. These interacting elements are individually diverse and specific to a geographical region committed to sustainable development and the growth of innovative businesses (Vogel, 2013). In light of the literature, Cohen (2006) proposes a conceptual model of seven components: an informal network (friends and family relationships of the entrepreneur), a formal network, universities, professional and support services, government, access to capital, and skilled labour. Following the work of Spilling (1996), Isenberg (2010) suggests a model of the entrepreneurial ecosystem with thirteen components: leadership, government, success stories, culture, human capital, financial capital, entrepreneurial organization, education, infrastructure, economic clusters, networks, support services, and first customers. Suresh and Ramraj (2012) also develop a case-based framework of the different factors of the entrepreneurial ecosystem. Their theoretical model is tested with thirty potential entrepreneurs in India. It identifies eight factors which the authors present as follows: technological support (from universities, incubators, human capital, etc.), market support, network support, government support, environmental support (which are the local conditions available, weather conditions...), moral support, financial support and finally social support (acceptance of failure, media exposure, etc. which is the same as culture). Similarly, the World Economic Forum (2013), in a survey of 1,000 entrepreneurs in 23 countries, highlights eight pillars of ecosystem design: accessible market, human capital, finance, support systems, government and regulatory system, education and training, universities and cultural support. Note that these pillars overlap with the characteristics identified by Isenberg (2010). In a similar vein, Spigel (2015), in his theoretical framework, points out that not all elements are necessary for the development of a thriving entrepreneurial ecosystem. The author admits the heterogeneity hypothesis, which suggests the consideration of local specificities when discussing entrepreneurial ecosystems.

As we have observed throughout this literature review, there are several cases of successful ecosystems where the pillars traditionally put forward as ecosystem components were missing. Hence the idea that an entrepreneurial ecosystem can be configured in different ways depending on the context. In general, most models of entrepreneurial ecosystems emphasize the role of five components, namely university, human capital, culture, support organizations, policy and market (Isenberg, 2010; Foster et al., 2013). Furthermore, it seems that countries have different entrepreneurial dynamics depending on the institutional context and the level of economic development. Therefore, it is important to understand the strengths and weaknesses of a region in order to foster ecosystem development around local specificities (Soto-Rodriguez, 2014).

3. METHODOLOGY AND RESULTS :

3.1. Methodology:

We use data from the National Expert Survey (NES) of the Global Entrepreneurship Monitor (GEM) to describe the entrepreneurial ecosystem in the MENA region. GEM is the only international organization that has provided comprehensive coverage of the entrepreneurial ecosystem since 1999.

As part of our exploratory study on the framework conditions of entrepreneurship in MENA countries, we select the following constructs:

- Financial environment related to entrepreneurship
- Concrete policies, government priority, and support
- Government policies, bureaucracy, and taxes.
- Government programs
- Level of entrepreneurship education in primary and secondary education
- Entrepreneurial level of education at Vocational, Professional, College, and University
- Level of research and development transfer
- Internal market constraints
- Cultural, and social norms and support of the society

Each of the blocks of the NES questionnaire mentioned above was designed based on a structure to measure the state of a framework condition related to entrepreneurship among a sample of experts (a minimum of 36 experts by country).

The items forming the original variables are all qualified by the experts from 0 (completely false) to 5 (entirely true), plus the codes of "don't know" (97), "not applicable" (98), or "missing" (99).

The NES blocks were designed, therefore, to be summarized into a single latent variable that represents the average state of each entrepreneurship-related framework condition.

To do this, the GEM teams use Cronbach's alpha to measure the strength of the relationship between the different items in the block and then perform a PCA from which the scores are reported in a new variable.

This allows researchers and teams to make diagnoses about the state of national entrepreneurial conditions and various types of international comparisons.

3.2. Results:

The results will be presented from two perspectives. First, we will describe the data in the context of a spatial comparison, then in the context of temporal comparison.

3.2.1. Results of the spatial comparison of the entrepreneurial ecosystem in MENA countries:

Following our spatial comparison of the different framework conditions in the MENA countries [Appendix 1], we present the following table to synthesize the results. Thus, the table below gives us by

the year and by framework condition, the country that had the best appreciation from the experts.

Table 1 : Best Framework Condition of the Entrepreneurial Ecosystem in the MENA Region by Year

| Entrepreneurial ecosystem variable | 2015 | 2016 | 2017 | 2018 |
|--|--------------------|--------------|------|--------------|
| Financial environment related to entrepreneurship | Tunisia Morocco | Qatar UAE | UAE | Qatar |
| Concrete government policies, priority and support | Tunisia | UAE | EAU | Qatar UAE |
| Government policies, bureaucracy and taxes | Morocco | UAE | UAE | Qatar |
| Government programs | Morocco | Qatar UAE | UAE | Qatar |
| Entrepreneurial level of education at Primary and Secondary schools | Iran | Qatar UAE | UAE | Qatar |
| Entrepreneurial level of education at Vocational, Professional, College and University | Tunisia | Qatar | UAE | Qatar |
| R&D level of transfer | Morocco | Qatar | UAE | Qatar |
| Internal market burdens | Morocco Egypt | UAE | UAE | Qatar |
| Cultural, social norms and society support | Tunisia | UAE | UAE | Qatar UAE |

Source: Authors.

Table 1 shows that Qatar and the United Arab Emirates have the highest expert appreciation of the entrepreneurial ecosystem among the MENA countries in question.

3.2.2. Results of the time comparison by country in the MENA region:

Below, we present the level of the entrepreneurial ecosystem in each MENA country included in our study over the years in which data is available between 2015 and 2018.

The objective of the present temporal comparison [Appendix 2] is to shed light on the evolutions of the entrepreneurial framework conditions in an attempt to find explanations as to why the experts gave a better rating to a framework condition or the overall entrepreneurial ecosystem during a year in each of the countries. Thus, we present the table below in which we try to highlight the year when the country or the framework condition was rated the highest by the experts.

Table 2: The best entrepreneurial ecosystem by year, country and/or framework condition

| Country | | Year |
|--------------|--|------|
| Egypt | | 2018 |
| Iran | | 2018 |
| Saudi Arabia | | 2018 |
| UAE | | 2017 |
| Qatar | | 2018 |
| Country | Variables | |
| Morocco | Government policies | 2016 |
| | Cultural, social norms and society support | 2016 |
| | Entrepreneurial level of education at Vocational, Professional, College and University | 2018 |

Source : Authors.

Unlike Morocco, all other countries had a year during which all framework conditions improved.

4. ANALYSIS AND DISCUSSION:

To justify the results obtained, we present in what follows a set of "good" entrepreneurial practices, which could have contributed to the improvement of the appreciation of the entrepreneurial ecosystem in the MENA countries concerned by our study.

We will attempt to find the reasons behind expert's assessments of the National Framework conditions in the MENA region countries studied.

In 2015, Morocco introduced the auto-entrepreneur status, which facilitated business creation, reduced taxes, and made the entrepreneur's main residence unseizable. This status made it possible, among other things, to restructure the activity of entrepreneurs operating in the informal sector and expand formal entrepreneurship.

Credit guarantees have also been growing in Morocco, the loan guarantee program "MOUWAKABA" established in 2014 by the Central Guarantee Fund (CCG) is part of it and comes in addition to the programs "Damane Express", in order to guarantee the bank loans and "Damane Venture Capital" to guarantee venture capital funds established earlier.

Morocco has also been through the implementation of the "Plan d'Accélération Industrielle 2014-2020".

In this context, the agency Maroc PME signed a new contractual framework with the state to strengthen the competitiveness of the entrepreneurial ecosystem, especially that of SMEs in 2015.

The industrial development and investment fund has also grown considerably in 2015 ("Industrial

Development and Investment Fund", 2021)¹ facilitating the financing of strategic and structuring projects for companies whose investment exceeds 20MAD HT.

In terms of R&D transfer, the Scientific Research and Innovation Directorate aimed to open the university to its environment and valorize the results of research and innovation, with a timetable for 2015-2016 ("National Strategy for the Development of Scientific Research to 2025")².

All these initiatives may have influenced the assessment made by Moroccan experts regarding the financial environment for entrepreneurship in 2015, giving Morocco a better appreciation of the financial environment, government policies, bureaucracy and taxes, government programs, the level of transfer of research and development, and domestic market constraints related to entrepreneurship compared to Egypt, Iran, and Tunisia during that year.

In terms of social and cultural norms as well as government policies, bureaucracy, and taxes, we believe that communication about the auto-entrepreneur status allowed for general awareness of entrepreneurship among the population, leading to a better appreciation of the status of the entrepreneur in society in general and, as a result, an improvement in social and cultural norms related to entrepreneurship in 2016 as well as the removal of some of the administrative burdens and impositions.

Entrepreneurship education has also seen an increased appreciation from experts in 2018. This year, the high level of interest shown by the government regarding entrepreneurship education resulted in the conclusion of a partnership with INJAZ to introduce entrepreneurship education in Morocco³ in schools, high schools, and universities in 2018. This could explain the positive appreciation of experts on entrepreneurship education in Morocco during this year.

Based on our results, Tunisia does not present a significantly different entrepreneurial ecosystem than that of Morocco but is still ahead of it in terms of entrepreneurship education in 2015. Thus, we believe that the assessment of concrete policies, government priority and support, and social and cultural norms related to entrepreneurship may be related to the introduction of the auto-entrepreneur status this year in Tunisia. However, unlike in Morocco, entrepreneurship education has been a priority for much longer in Tunisia. Indeed, the number of universities offering entrepreneurship programs has been increasing over the years (Aloulou, 2006; Taktak-Kallel, 2005) since 2000. Therefore, we believe that the experts' appreciation results from this observation also explains the experts' appreciation of the social and cultural norms related to entrepreneurship during this year. This may also suggest the existence of an impact of educational institutions on the social and cultural norms of the country.

Egypt experienced the conclusion of the Trade and Internal Market Strengthening Program,

¹ Fonds de Développement Industriel et de l'Investissement. (2021). Accessed January 5, 2021. <https://www.casainvest.ma/fr/j%3Finvestis/kit-de-linvestisseur/incitations-a-linvestissement/fonds-de-developpement-industriel-et>

² Stratégie nationale pour le développement de la recherche scientifique à l'horizon 2025. Accessed January 5, 2021. https://www.enssup.gov.ma/sites/default/files/PAGES/168/Strategie_nationale_recherche2025.pdf

³ Education : Le Maroc intègre l'entrepreneuriat dans ses écoles - Infomédiaire. (2018). Accessed 06 March 2019. <https://www.infomediaire.net/education-le-maroc-integre-lentrepreneuriat-dans-ses-ecoles/>

funded by the European Union in collaboration with the Ministry of Trade and Industry in 2015⁴, which therefore may have impacted the experts' assessment of the internal market constraints in the country.

In 2018, Egypt established an Entrepreneurship Development Project⁵ aimed at assisting potential and existing entrepreneurs in the establishment, management, and operation of innovation-based businesses. This project aimed to improve employability through job creation and thus led to a competitive economy.

Iran does not have a particularly good entrepreneurial ecosystem that would allow it to benefit from its experience but shows a better appreciation of the general entrepreneurial ecosystem in 2018. But, for what reason was this so?

In 2015, Iran experienced the signing of the nuclear agreement more commonly known as the Joint Comprehensive Plan of Action⁶ (JCPOA) with the five permanent members of the UN Security Council (China, France, Russia, the United Kingdom, and the United States) and Germany known as the P5+1 with the participation of the European Union.

As a result of this agreement, Iran accepted to dissolve a large part of its nuclear program and to accept international inspections in order to benefit from sanctions reduction in the country. Given the sanctions applicable to Iran at that time, not only did the entrepreneurship experience a recession but also the economy as a whole. However, the easing of sanctions between 2016 and 2018 allowed the country to recover economically and used this to boost its entrepreneurial ecosystem. This, therefore, may have led to a better assessment of the entrepreneurial ecosystem in 2018 by experts in this country.

In 2018, women have won the right to become entrepreneurs without a male tutor in Saudi Arabia⁷, which may have had an impact on the expert's assessment of the country's entrepreneurial ecosystem as being more inclusive.

Another potential factor was the 2030 Vision⁸ Plan released by Saudi Arabia in 2016. The reforms conveyed through this vision considered the specific characteristics of the Saudi population and focused on youth, women, and people with disabilities, for whom it provided an enabling ecosystem for the development of their skills, their access to the labor market, along with an accessibility to entrepreneurship.

Saudi Arabia intends to enable this accessibility through business-friendly regulations, easier access to finance, international partnerships, and a greater share of domestically accessible public procurement. The 2030 vision includes strengthening entrepreneurial values, access to digital platforms and social media to enable more marketing opportunities, and the presence of microfinance as a means

⁴ Égypte : l'Union européenne salue les réalisations du programme de renforcement du commerce et du marché intérieur, mené en partenariat avec le ministère du Commerce et de l'Industrie | EU Neighbours. (2019). Accessed 08 December 2019. <https://www.euneighbours.eu/fr/south/stay-informed/news/egypte-lunion-europeenne-salue-les-realisation-du-programme-de>

⁵ Egypt: Entrepreneurship Development Project. (2021). Accessed January 8, 2021. <https://projectsportal.afdb.org/dataportal/VProject/show/G-EG-KZ0-ZZZ-004?lang=fr>

⁶ What Is the Iran Nuclear Deal? (2021). Accessed January 6, 2021. <https://www.cfr.org/backgrounder/what-iran-nuclear-deal>

⁷ Belgique, R. En Arabie Saoudite, les femmes peuvent désormais devenir entrepreneures. (2018). Accessed December 15, 2020. <https://parismatch.be/actualites/societe/118152/en-arabie-saoudite-les-femmes-peuvent-desormais-devenir-entrepreneures-sans-tuteur-masculin>

⁸ Programs | Saudi Vision 2030. Accessed January 15, 2021. <https://www.vision2030.gov.sa/en/programs/NCEP>

of financing. Such a plan puts education and training/job matching at the heart of its concerns through the launch of the National Labor Gateway (TAQAT) and sector councils aimed at identifying the skills needed for future jobs (working closely with the private sector) as well as a focus on innovation, entrepreneurship and strategic partnerships with educational institutions.

In this sense, Saudi Arabia affirms through the 2030 vision, its deep commitment to stimulating small businesses through:

- Encouraging privatization and investment in new industries.
- Encouraging financial institutions to allocate up to 20% of overall financing to SMEs and allowing them to adjust their products to the needs of each sector.
- Reviewing laws and regulations to remove obstacles to business start-ups and coordinating with legislative authorities in reviewing regulations to improve the business environment and contract compliance.
- Establishing new incubators, specialized training institutions, and venture capital funds.
- Supporting SMEs to successfully market and export their products
- The search for public-private partnerships.
- Facilitating private investment and accelerating administrative procedures.
- Application of international legal and commercial regulations to allow long-term investment.
- Facilitating the movement of people and goods and simplifying customs procedures.

Thus, it appears that thanks to all of these measures which were put in place in 2016 and which mainly focused on training, entrepreneurial ecosystem, and inclusion, Saudi experts had a better appreciation of the overall entrepreneurial ecosystem in 2018.

Between 2016 and 2018, Qatar and the United Arab Emirates ranked the highest in terms of expert assessment of the entrepreneurial ecosystem, which was not surprising given the resources that these countries were able to allocate to such development. In order to further develop our analysis, we will try to detail the practices that may have contributed to the appreciation given by experts to each of these countries.

Prior to 2016, the UAE already had an enabling environment for business except when it came to rules related to corporate liquidation. To address this issue, new laws were introduced in 2016 to redress this constraint. It was due to this business-friendly environment, an advantageous taxation system, free zones, and numerous government policies to assist SMEs that placed the UAE at the top of the entrepreneurial ecosystems in the MENA region. Entrepreneurship is a top priority for the UAE and it still continues to do everything possible to encourage it.

In fact, 2015 was declared to be the year of innovation in the UAE and huge budgets were allocated for the cause. The exceptional support for startups in the UAE included the provision of co-working spaces, incubators offering advice, funding, and workplaces, accelerators offering funding, contacts, training, and coaching, and several institutions working in collaboration with universities to

encourage entrepreneurship and innovation in the country. Several events and competitions for startups were also carried out in the UAE. Finally, the country took advantage of several resources that allowed startups to get in touch with each other, to be informed of events that could be of interest to them, in order to increase their visibility, or to get in touch with investors, advisors, and co-founders ("The UAE'S startup ecosystem and opportunities for US investors")⁹.

In Qatar, it was probably due to the country's position in the field of information and communication technologies¹⁰, the increase in support programs and fundraising, the rise of FinTech, and the opening up to new business partners that the entrepreneurial ecosystem was well appreciated by experts in 2018.

Also, like Saudi Arabia, Qatar has developed a national development strategy for the time frame of 2011-2016 as well as for the period from 2018 to 2022.

The 2011-2016 strategy set out three objectives to strengthen the private sector and promote entrepreneurship, namely:

- Activation of the Qatar Enterprises work program
- The proposal of new products by the Qatar Development Bank
- Reforming public procurement legislation in favor of SMEs

These objectives were achieved through the merger of Qatar Enterprises with Qatar Development Bank and the adoption of a public procurement law in 2016.

Also, the blockade that Qatar faced in 2017 allowed for the expansion of entrepreneurship among youth through their motivation to participate in the economic growth of their country (Abdellatif Khalil, 2018). Training and better communication remain to be the best way for youth to better seize the available opportunities.

However, Qatar still faces barriers to entrepreneurship. Indeed, access to information and communication technologies remains very expensive, entrepreneurs continue to face difficulties in accessing financing, and the business environment seems to discourage new entrants in favor of existing operators.

Thus, while Qatar has made good progress in developing its entrepreneurial ecosystem and has one of the best ecosystems in the MENA region, there are still several challenges to overcome. These include market failures that prevent the development of the private sector and catalyze the role it could play in Qatar, as well as the coordination and harmonization of the business sector which still leads to failures today.

More measures are therefore needed to enable Qatar to join a knowledge-based economy that is characterized by innovation, entrepreneurship, and educational excellence, among other elements.

All of this provides us with an approximate and rationale picture, of the state of the framework conditions of the entrepreneurial ecosystem in the MENA countries. This allows us to understand the factors that may have influenced the experts' ratings.

⁹ The UAE'S startup ecosystem and opportunities for US investors (2017). Accessed December 16, 2020. http://usuaebusiness.org/wp-content/uploads/2017/03/Invest-UAE_EE_digital.pdf

¹⁰ Lowering production costs, increasing contractor performance and facilitating entry into new markets.

5. CONCLUSION :

In conclusion, this paper attempts to contribute to the study of the entrepreneurial ecosystem in the MENA region through a descriptive approach with an exploratory purpose. The results of this study are based on comparisons of the different factors of the entrepreneurial ecosystem on a spatial and temporal level.

The spatial comparison allows us to relate the different factors of the entrepreneurial ecosystem in the MENA countries and takes the year of the study as the comparison angle. This comparison enabled us to highlight the country that had the best expert rating for a factor of the entrepreneurial ecosystem in a given year.

On the other hand, the temporal comparison allows us to compare each MENA country with itself over the years, using the country under study as a comparison angle. This results in a comparison of the evolution of experts' opinions on each of the factors of the entrepreneurial ecosystem by country between 2015 and 2018.

These comparisons helped us to connect the ratings given by the experts with events that may have shaped their perception of the entrepreneurial ecosystem factors' status.

But like any other research study, this paper has certain limitations that should be highlighted. The very nature of the data used in this chapter represents a limitation to the study. The data used is based on the subjective perception of experts regarding the framework conditions of the entrepreneurial ecosystem.

Secondly, the method of data collection of the GEM in the NES survey is more consistent with a qualitative study than a quantitative one, due to the choice of a reduced panel of experts to answer the questionnaire. Also, the change in the proportion of experts each year removes the longitudinal character of the study, which might otherwise have been of great use to our analysis. Finally, experts in a given field seem to have a sharper eye for its evaluation compared to other factors.

Also, the fact that the number of experts in a field is not the same per country and per year is a limitation to the statistical analysis of the data, even though it enables extremely interesting comparisons between countries.

To ascertain the results of this paper, it is necessary to compare them with objective measures of the components of the entrepreneurial ecosystem, as well as to continually assess the impact of programs and policies put in place to improve them. Other studies may therefore take this paper as a starting point for an explanatory study of the causes and consequences observed in the entrepreneurial ecosystem by analyzing the measures and policies put in place.

Once this is done, our study of the entrepreneurial ecosystem, based on the opinions of experts, can only gain legitimacy.

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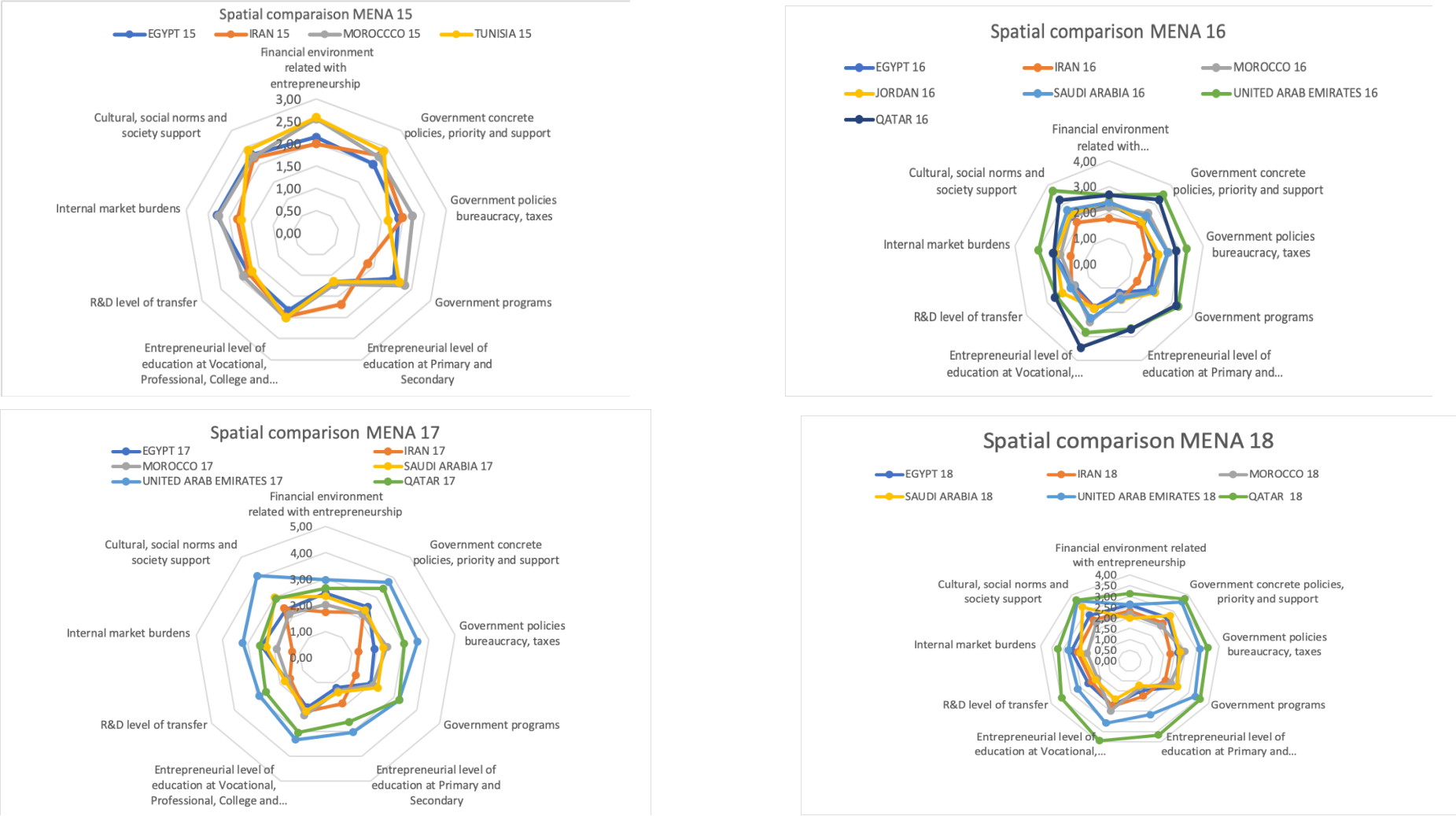
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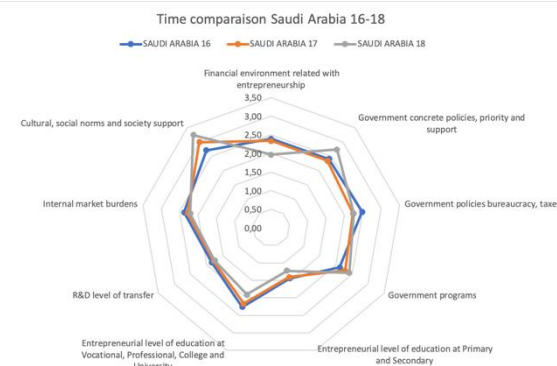
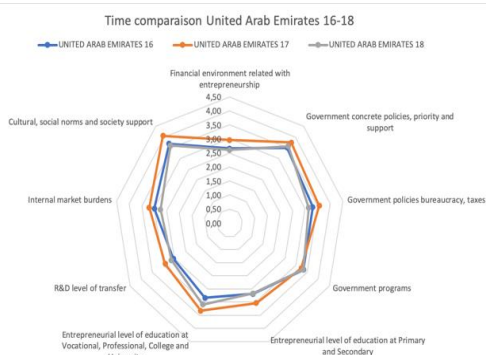
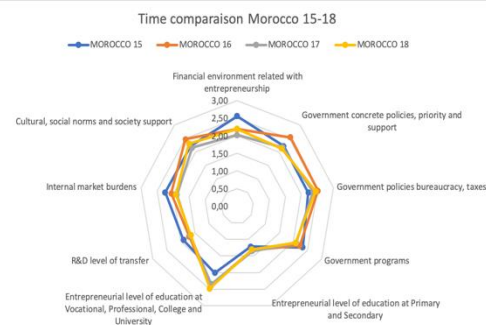
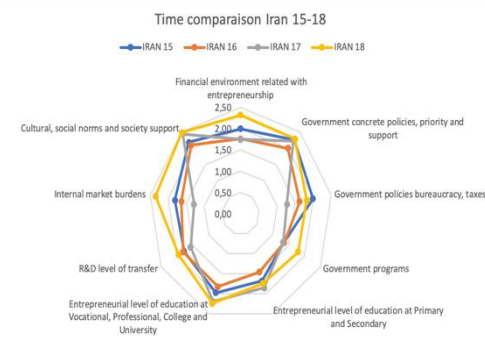
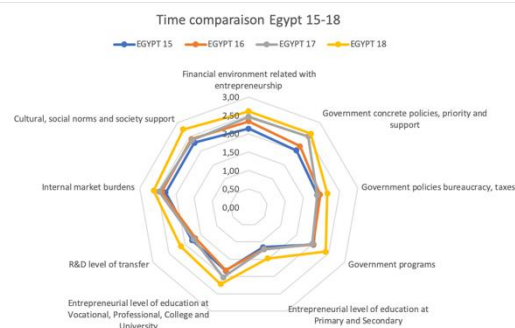
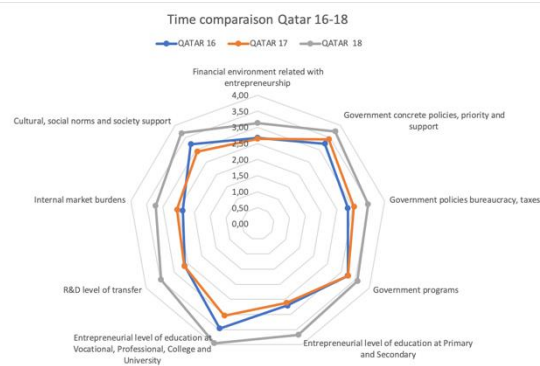
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Appendix 1: Spatial comparison of the entrepreneurial ecosystem in MENA countries



Source: Authors.

Appendix 2: Time comparison by country in the MENA region



Source: Authors.