

Report on
*innovation ecosystems and start-ups in the Mediterranean as drivers
of socio-economic recovery, digital transformation and sustainable
development following the COVID-19 crisis*

This report was drawn up by Juan Manuel Moreno Bonilla, president of the Region of Andalusia, representing the Association of European Border Regions. It was revised after discussion at the 7th meeting of the ARLEM Commission for Sustainable Territorial Development and adopted *by consensus* at the 13th ARLEM plenary session, held in Izmir (Türkiye) on 8 November 2022.

Introduction

Entrepreneurship, innovation and investment ecosystems are made up of a wide range of stakeholders (start-ups, business angels, public-private funds and programmes, universities, centres of technological excellence, incubators/accelerators, venture builders, technology parks, innovation centres and laboratories, R&D&I and demonstration centres, clusters, public administrations, etc.), which are all interrelated and whose number, quality and interlinkages determine their growth and potential for boosting employment, development and shared wealth.

This thematic report aims to provide an analysis of the various entrepreneurship systems in the Mediterranean and to examine the COVID-19 pandemic's impact on them, with the aim of identifying the main problems and opportunities arising from the ensuing economic crisis, identifying best practices and successful experiences noted in the Mediterranean area, or those seen in another geographical area, which would be exportable to the Mediterranean, and drawing up a number of recommendations.

I. The entrepreneurship system in the Mediterranean

Generally speaking, the main obstacles the entrepreneurship system has faced in the Mediterranean since before the outbreak of the pandemic are difficulties in finding adequate financing to meet entrepreneurs' needs, excessive bureaucracy and administrative procedures, a lack of skilled workers and fear of failure.

While **access to finance** for innovation is a global problem that has worsened following the pandemic, meeting the financial needs of a business project is a major challenge in the Mediterranean area, given the limited government support, the very limited venture capital industry and the difficulty in accessing global investors.

In terms of **knowledge and the development of human capital**, employers in the region struggle to find staff with the necessary training and practical experience. 2022 is the European Year of Youth, and it would be relevant to raise the issue of brain drain: young talent from the South shore of the Mediterranean migrates systematically to the North and beyond, and much young talent from Northern Mediterranean countries has also flown to more Northern destinations or other continents in the last 15 years. In some countries, these demographic movements somehow balance the local demand, but countries which are net emitters of migrants, especially the youngest generations, are particularly challenged.

Part of the problem is the underutilisation of the potential of women in the region. In fact, only 14% of Arab SMEs are owned by women, compared to one in three on average globally (IMF 2019). With regard to inclusion, entrepreneurship in the Mediterranean region should therefore consider aiming to encourage more women to get involved in innovation practices.

One aspect of this issue is the **lack of an innovation-friendly culture** among many public authorities. With this in mind, many governments in the region have made spreading a culture of innovation and entrepreneurship part of their national innovation strategies. A further issue is the poor regulation of intellectual property rights, which prevents the results of research from being applied in the real world.

It should also be stressed that political and economic instability in parts of the Mediterranean is a key factor hampering entrepreneurship, as is the underdevelopment of **infrastructure**, especially as regards energy supply and ICT infrastructure.

II. Impact of the COVID-19 pandemic

Despite the fact that many countries have adopted immediate fiscal and monetary policy measures to mitigate the adverse impact of COVID-19 on SMEs, COVID-19 has had a significant impact on SMEs and start-ups in the southern Mediterranean, with many of them having to shut down or suspend their activities.

In this regard, the COVID-19 pandemic has had a disparate impact on the sectors dominated by SMEs, namely tourism, trade and services.

Furthermore, the impact of COVID-19 has shown entrepreneurs that the new challenges and opportunities they face include: the need for more flexible, agile and resilient businesses capable of coming up with sound responses to changing environments; the need to embrace change or diversify their activities by introducing new services or products; and the need to boost e-commerce and online sales.

An example of how COVID-19 and digitalisation have influenced entrepreneurship ecosystems can be seen in the many small entrepreneurial ecosystems made up of just a few dozen public and private players from all fields of entrepreneurship.

This pattern, which can be found right along the Mediterranean, has come about thanks to two fundamental facts: on the one hand, awareness of the economic emergency and, on the other hand, up-take of digitalisation.

III. Recommendations

As shown, despite the progress made, many obstacles still persist and the governments of the ARLEM countries still have a lot of work ahead of them to turn their countries' innovation ecosystems into truly prosperous systems. In this regard, public administrations have a vital role to play in speeding up administrative procedures, facilitating access to finance and developing policies on skilled training.

The following recommendations should be viewed as a menu of options to choose from, given the different situations ARLEM countries find themselves in. The role of local and regional authorities should be to guide each country in this selection process. To draft these recommendations the rapporteur took into account the findings of the study *Innovation ecosystems and start-ups in the Mediterranean as a means of recovering from the COVID-19 crisis*¹ produced by CASE in support of this report.

1. Updating the legislative framework

It is necessary to reform existing legislative and legal frameworks to create a more innovation-friendly environment, for example by relaxing regulations and requirements for business start-ups, which was

¹ Katarzyna Sidło (CASE) (2021), [Innovation ecosystems and start-ups in the Mediterranean as a means of recovering from the COVID-19 crisis](#).

one of the preferred means of government support in the context of the pandemic for one in five entrepreneurs².

Other urgent issues include:

- simplifying the procedures needed to set up, run and shut down a business;
- updating arrangements for intellectual property rights;
- creating public procurement policies that are favourable to SMEs and start-ups, for example by creating e-procurement portals, splitting large tenders up into smaller lots, or introducing the possibility of collective tendering. Similarly, it is necessary to facilitate and incentivise the use of innovation procurement;
- improving legislative and legal frameworks and incentives for creating public-private partnerships;
- creating an enabling environment for e-commerce;
- developing mechanisms to provide social protection to workers in the collaborative economy and to individual entrepreneurs working online, without imposing excessive taxes on their activities;
- facilitating market access for SMEs and start-ups, for example by eliminating protectionist policies that favour state-owned enterprises and large incumbents;
- designing tailor-made policies specifically targeting different types of entrepreneurs.

2. **Improving access to finance**

Facilitating access to finance for SMEs and start-ups is a crucial means of supporting entrepreneurship and innovation ecosystems.

It is necessary, among other things, to reduce the time it takes to award funding to start-ups, to simplify the procedures for applying for non-financial support, to support the ecosystem with grants, loans, deferrals, exemptions from payments, and tax relief in order to help entrepreneurs survive the pandemic, to create tax incentives for companies to invest in R&D, to amend legislation and to create supportive policies to facilitate and encourage financing by business angels and crowdfunding.

It is also necessary to increase R&D spending and improve access to information on the funding available to entrepreneurs by keeping websites up to date with functioning links. Governments should also create environments that attract foreign investors, which calls for legal certainty, political stability and safeguards for the rule of law, as well as the application of investment-friendly rules.

In the EU, many regions have already developed such strategies; examples include "Invest Andalucía"³ and "Invest Catalonia"⁴ in Spain and the "Invest in Tuscany"⁵ campaign in Italy; another example of this is the Portuguese initiative "Bono Startup", which seeks to stimulate the development of creative entrepreneurial projects led by young people aged 18-35 through various financing tools.

A special mention also goes to "Andalucía Open Future" and "Programa Minerva", which are both start-up acceleration programmes that share the goal of supporting entrepreneurship by intervening in the

² Wamda & Arabnet (2020). *The impact of the Covid-19 outbreak on the entrepreneurship ecosystem*. Available at: <http://backend.wamda.com/api/v1/downloads/publications/impact-covid-19-outbreak-entrepreneurship-ecosystem-mena>.

³ <https://www.investinandalucia.es/>.

⁴ <http://catalonia.com/invest-in-catalonia/>.

⁵ <https://www.investintuscany.com>.

early stages of these businesses' development, offering a range of services including mentoring, intensive training, tutoring and access to finance.

Also worthy of note in this connection is an interesting initiative which involves setting up an online finance observatory aimed at bringing all opportunities available to business people in Palestine together on a single website (<https://fundingobservatory.org/>).

Finally, various projects in Turkey are working to increase the innovation capability of start-ups and SMEs, technology and innovation-oriented investments in coordination with the EU.

In attracting investments, one should take into account the special problems that islands face due to their insularity, a recent study carried out by the Region of Sicily shows that these costs could be quantified to up EUR 6 billion per year.

3. Improving coordination and cooperation between different innovation stakeholders

It is widely recognised that the innovation ecosystem is too fragmented. At national government level, the ideal thing would be for one ministry in charge of innovation to take responsibility for the country's innovation policies.

Examples of good practice in this area include the Living Labs in Turkey, which are open innovation ecosystems centred on users and on a systematic co-creation approach led by the user, integrating research and innovation processes in communities. Additionally, also in Turkey, the "High Technology Platforms Support" and "Industry Innovation Networks Mechanism (SAYEM)" were created to promote co-creation in the innovation ecosystem, targeting the creation of Specialised Technology Hubs and Innovation Hubs, already tested during the pandemic, they helped to mobilise all STI actors towards the aim of developing vaccines and drugs for COVID-19 in Turkey. A specialised technology was created, namely "COVID-19 Turkey Platform", which comprised of 436 researchers from universities and private sectors dedicated to developing drugs and vaccines for COVID-19. Other examples of improved coordination between businesses and other stakeholders in the innovation ecosystem include the so-called "cities of innovation" in Morocco, the aim of which is to create networks of stakeholders in the research and innovation ecosystem around universities in selected cities, and the Corallia Clusters in Greece.

Also worthy of mention are MIDE (the Madrid Innovation Driven Ecosystem), a not-for-profit initiative consisting of a multi-disciplinary team which aims to develop the entrepreneurial and innovation ecosystem of the Community of Madrid with a global focus, and Andalusia Roadshow, which in its first year enabled 12 selected companies to make contact with venture capital funds, and which will accompany five selected companies to international investment forums and events. Elevate Greece, an initiative launched by the Greek government to identify the most promising start-ups and support their growth, thereby fostering a strong innovation ecosystem, is another good practice that should be mentioned.

The digital platform SEMED (<https://semed.eu/>) could prove very useful as it offers a single access point for innovation ecosystem in the Mediterranean, helping to connect the different ecosystems.

4. **Investing in entrepreneurial education**

Entrepreneurial education should be promoted at all levels, both in schools and among adults. In this connection, special programmes for young people and women from various backgrounds should be developed. Examples of these efforts include the European Commission-sponsored project on social innovation in the agri-food sector to empower women in the Mediterranean Sea Basin (InnovAgroWoMed)⁶, and the Heya Raeda⁷ programme for female entrepreneurs in the start-up phase, funded by the Egyptian Information Technology Industry Development Agency.

5. **Building a culture of entrepreneurship**

Authorities at national and sub-national level should invest more effort in promoting innovation and entrepreneurship, as well as in raising awareness of the benefits of becoming an entrepreneur. Special campaigns should be targeted at women in the region in order to harness their potential, as well as at academic staff working in universities and research institutions in their regions. An example of this type of initiative is the EU-funded STARTED project set up by MSMEs, higher education institutions and non-profit institutions from different EU regions in order to help researchers capitalise on their research innovation and become entrepreneurs.

This includes awards such as the ARLEM Award, which has been awarded annually since 2019 and celebrates both the work of entrepreneurs under the age of 35 and the efforts of local authorities to promote business-friendly policies.

6. **Promoting mobility and the exchange of technical know-how**

While brain drain is a serious problem for ARLEM countries, the mobility of researchers and innovators, allowing interaction and exchange of ideas with their foreign counterparts, plays a crucial role in boosting know-how and technology transfer.

It should therefore be easy for researchers and entrepreneurs to be granted visas so that they can travel both within the region and to the EU. Participation in programmes such as Erasmus+ and Erasmus Mundus could also be beneficial in this connection, as could support to help universities participate in international R&D projects, for example the new Horizon Europe framework. A specific Erasmus-like programme for researchers and innovative entrepreneurs in the Mediterranean could be explored.

Also noteworthy are initiatives such as PRIMA (Partnership for Research and Innovation in the Mediterranean Area), a joint programme between EU Member States, Horizon 2020 partner countries and Mediterranean partner countries, under which funds are awarded for R&D projects in the fields of water management, and agricultural and agri-food systems. Open innovation platforms to march international start-ups using 4.0 industry technologies with regional corporations in the Basque Country (Bind 4.0) have been a very successful experience for industry, energy, health and food-tech sectors. Business and Innovation Centres (BIC) support and boost innovation in many European regions, which could be strengthened and extended in the Mediterranean from BICs like *Euronova* in Málaga and many more in most EU Mediterranean regions. All-Mediterranean partnerships should be promoted to boost interregional and inter-municipal initiatives on common issues of interest.

⁶ <http://www.enicbcmed.eu/projects/innovagrowomed>.

⁷ <https://www.insme.org/the-egyptian-heya-raeda-programme/>.

7. **Fostering collaboration between universities/vocational training institutions and business**

It is very important to strengthen cooperation between universities and vocational training institutions on the one hand and the private sector on the other. One of the ways in which local research authorities could contribute is by supporting the creation of local traineeship programmes where students from local universities and vocational training institutions can gain practical experience. Another idea would be to collaborate with universities to design doctoral positions. Special mention should be made of the PhD programme sponsored by Rolls-Royce at the University of Nottingham. Also worthy of note are the synergies created through the HOMER project between chambers of commerce, business associations, higher education institutions and associations of limited liability entrepreneurs in the Mediterranean region to help high-performing students find jobs in their home countries.

8. **Building smart cities**

ARLEM should use innovative approaches to solve its local problems. Across the world there are different versions of urban innovation hubs, and a version of this approach, adapted to the local environment, could also be applied to ARLEM countries. In this regard, mention should be made of the planned creation of Smart Cities Innovation Centres in Fez (Morocco) and Tunis (Tunisia).

9. **Stepping up evaluation**

Few countries in the region carry out national innovation surveys, which are an important part of monitoring, evaluating and helping to collect statistical data relevant to measures for boosting innovation and entrepreneurship. A rare example of a regularly published indicator system is the one produced by the Science and Technology Observatory of the University of Montreal (<https://www.ost.uqam.ca/>).

10. **Investing in infrastructure**

Authorities should also step up their efforts to improve physical and technological infrastructure. Supporting the creation of online marketplaces can help SMEs and start-ups reach and offer their products to more potential customers.

Implementing holistic approaches that cover all these aspects or a vast majority of them, such as the ones being developed by the Algerian Government through different instruments to incentivise innovation and the creation of start-ups, business angels of which many of them micro and small enterprises created by young people are particularly welcomed.