

Promoting Rural Innovation In The Mediterranean Through The Development Of Entrepreneurial Culture in Favor Of Young People

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The theme of innovation is a priority. The new international division of labour, competition from new emerging markets on the traditionally manufactured products, shifts the objectives of the production in the industrialized countries more and more towards high-tech products, and makes the ability to make technological innovation a key element in international competition. In this context, and with regard to this issue, the Mediterranean basin, considered as a whole, seems to have accumulated over the years a significant delay.

The United Nation Development Programme, in the first year of publication of his Arab Human Development Report (2002), identified the lack of acquisition, absorption and use of knowledge as one of the three main problems that limit human development in Mediterranean countries. The report also stressed that it is "now accepted that the differences in terms of knowledge, rather than in terms of income, that determine the prospects of a country in the current world economy" and that "a growing consensus is emerging on the idea that the jump between developed countries and developing countries lies in the differences in terms of capacity to produce knowledge rather than in differences in terms of knowledge itself." Feed ideas and minds, means fighting the waste of knowledge and cultivate, literally, a generation able to manage the rural innovation processes in the territory. For these reasons, one of the five flagship initiatives of the CIHEAM Action Plan for the Mediterranean 2025 (CAPMED 2025) is dedicated to the "Mediterranean Empowerment Action for the Young and Women in Rural Areas", (CIHEAM Strategic Agenda 2025, 2016).

Most of the Mediterranean countries are characterized by the presence of many small and medium-sized enterprises (SMEs) which are the main source of jobs in the private sector, absorbing over 30% of the population employed in the private sector and between 4% and 16 % of total employment, including the public sector and non-governmental organizations (NGOs) (Nasr and Pearce, 2012). Most of the companies in many countries of the southern Mediterranean are micro-enterprises rather than small and medium-sized enterprises. The percentage of small and medium-sized companies on the total of enterprises is less than 4% in Egypt, Morocco, Lebanon and Yemen (Nasr and Pearce, 2012). For example, in Lebanon, SMEs account for 8% of all enterprises, while micro enterprises account for almost 90%. Micro-enterprises employ 54% of all the committed work in the private sector (IFAD, 2011).

In light of this situation and to recent events related to the Arab Spring, the development of the private sector has become a top priority for national governments to ensure stability, better economic and competitive conditions on the international markets.

Countries have realized that technology adoption alone is no longer sufficient to maintain a high-growth scenario; rather innovation is now crucial for catching up to high-income countries. As a result, many of the countries with medium and low incomes, are developing a national innovation policy programs with the goal of making economies more competitive, increase employment opportunities especially for the younger generations, stimulating greater entrepreneurial activity and get a better public appreciation of the role of science and innovation. In fact, in these programs there is a focus on the creation of a 'culture of innovation' aimed not only to companies but also to young people, students and the society in general.

The goal is to foster innovation processes in enterprises and increase youth employment. Unfortunately, the level of innovation in the Mediterranean countries is low, particularly in the southern shore countries, as shown for example by the Global Innovation Index¹.

Table 1
Global Innovation Index rankings

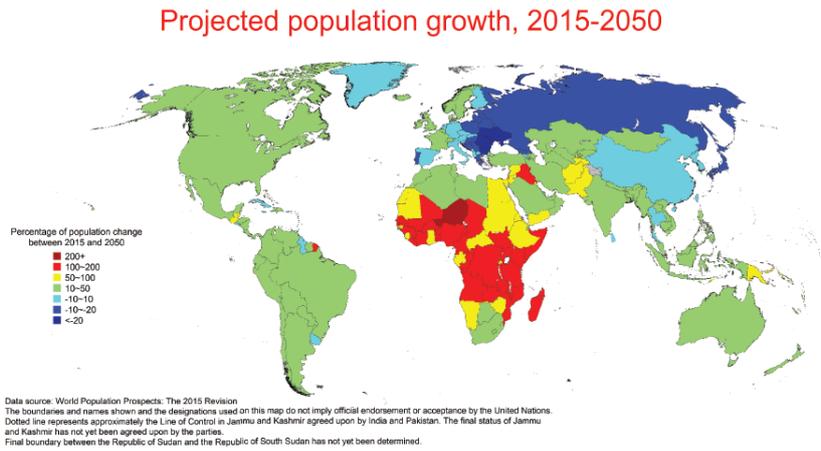
Country	Rank (out of 128)	Region	Regional Rank
France	18	EUR	11
Spain	28	EUR	18
Italy	29	EUR	19
Portugal	30	EUR	20
Greece	40	EUR	28
Macedonia	58	EUR	35
Croatia	47	EUR	31
Serbia	65	EUR	36
Bosnia & Herz	87	EUR	38
Turkey	42	NAWA	4
Lebanon	70	NAWA	11
Morocco	72	NAWA	12
Tunisia	77	NAWA	14
Jordan	82	NAWA	15
Egypt	107	NAWA	17
Algeria	113	NAWA	18
Albania	92	EUR	39
Palestine	> 128	NAWA	

Source: *The Global Innovation Index 2016 - Winning with Global Innovation*

Another critical problem is youth employment. Compared to a growing population in the southern shore of the Mediterranean countries and in general in Africa (fig. 1), there is the further problem of high youth unemployment rate. Youth unemployment is an urgent issue in many countries across the Mediterranean region, where 25.4 million people are unemployed, of whom 7-8 million are aged between 15 and 24 (Boot et al., 2016). It is a well-known fact that in all Mediterranean countries (comprising France, Greece, Italy, Portugal and Spain) the current youth unemployment rates are at an alarmingly high level (fig. 2). Even before the economic crisis of 2008, each of those countries already had higher unemployment rates than the EU average.

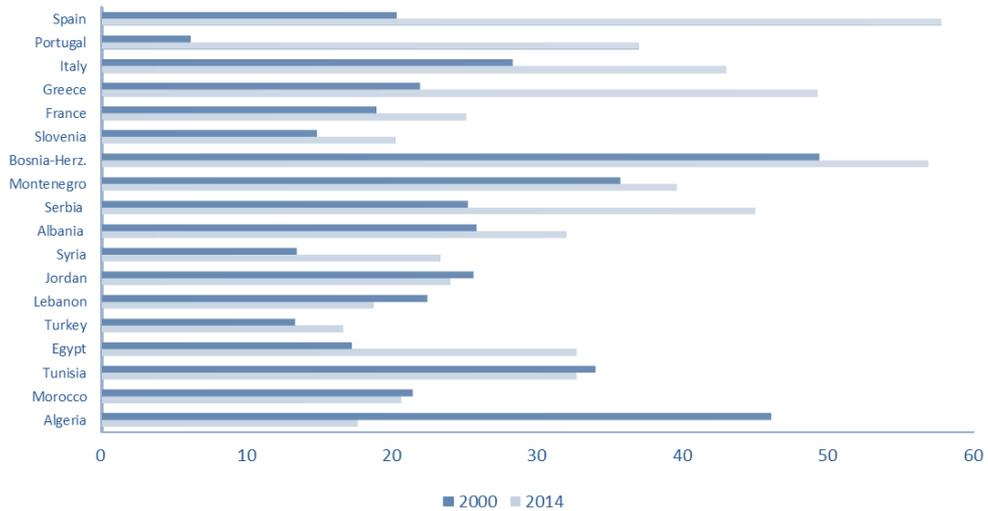
¹ Global Innovation Index 2016 (GII) is the result of a collaboration between Johnson Cornell University, the Business School for the World (INSEAD) and the World Intellectual Property Organization (WIPO). It covers 128 countries around the world and uses 79 indicators to draw up a ranking of innovation dividing countries into geographical areas and income levels (low, medium and low). The full report is available at: <https://www.globalinnovationindex.org/gii-2016-report>

Figure 1
Project population growth, 2015-2050



Source: - World Population 2015 United Nations - Department of Economic and Social Affairs - Population Division
(https://esa.un.org/unpd/wpp/Publications/Files/World_Population_2015_Wallchart.pdf)

Figure 2
Youth unemployment (% of male labor force ages 15-24)



Source: IRBD-IDA- World Bank 2014

The challenge in the coming years is the identification and design of systems able to support the processes of business creation and (rural) innovation in the Mediterranean to enhance growth opportunities and youth entrepreneurship development. In this regard, the CIHEAM BARI has developed a model of incubator for young companies in the agro-food sector (Mediterranean Incubator for business creation and change in the agro-food sector - MEDAB) and is expanding and sharing with other Mediterranean countries this experience through the creation of an international network: Mediterranean Innovation Partnership (MIP) for youth entrepreneurship and technological transfer in the agro-food sector. One of the first studies carried out by the MIP was a preliminary investigation on the innovation system in the Mediterranean and on innovation support tools present in the countries.

The MEDAB, a model of Mediterranean incubator for the creation of agri-food enterprises

MEDAB is the Mediterranean Incubator for business creation and change in the agro-food sector promoted by CIHEAM Bari since 2015 with the aim of transferring knowledge and skills on the entrepreneurial culture to young innovators of the agro-food sector through "accompanying paths" aimed at creating and developing a prototype of product/service of enterprise to be launched on the market starting from an innovative idea.

MEDAB was created within the Fooding Project, co-funded by the Interreg Program Italy-Greece in the CIHEAM Bari, located in Apulia Region, where accompanying paths on entrepreneurial culture dedicated to startup of the agro-food sector were completely absent. Thanks to the Fooding Project, it was possible to respond to this regional needs through the creation of a Mediterranean incubator model for agro-food startup finalizing other experiences carried out starting from 2015.

MEDAB incubator model is based on a strong co-design of the accompanying program dedicated to young innovators and on a strong integration with the territorial system represented by the different actors of the innovation chain (companies, research organizations, public institutions, etc.).

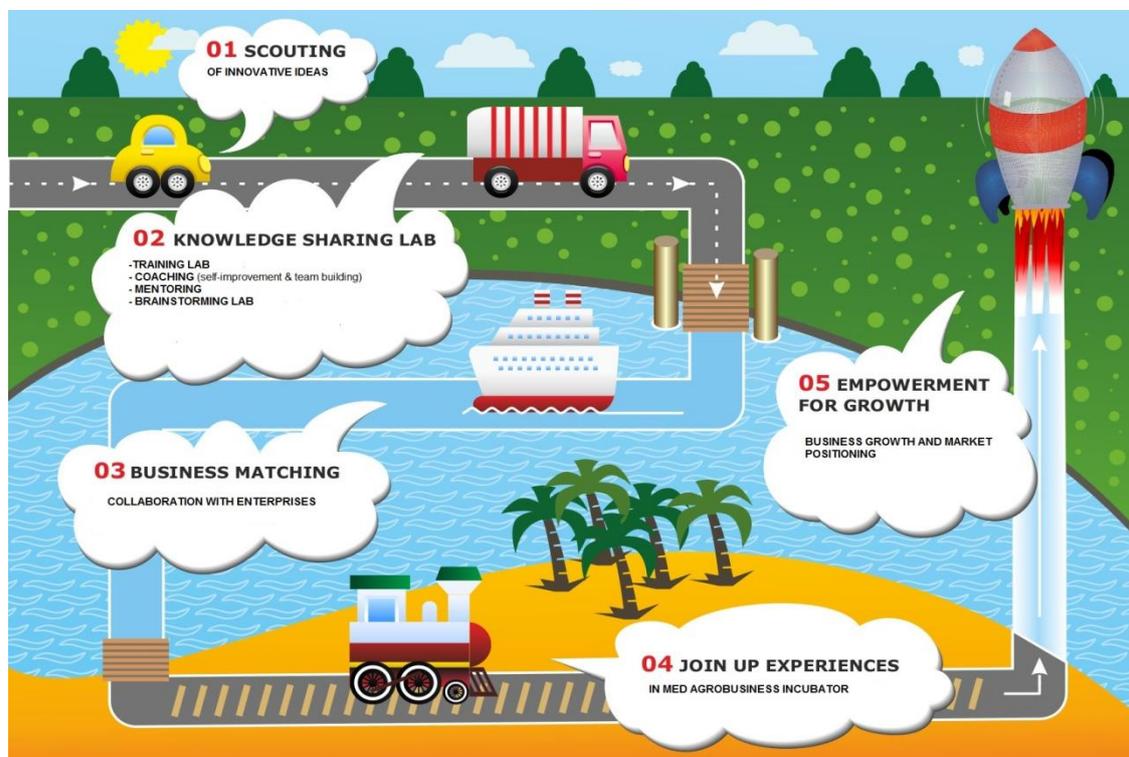
The path was structured into collective moments and individual interventions starting from the needs of knowledge and competence of young innovators mapped by coaches. This allowed to realize the training as knowledge shared labs, aimed at responding to the needs of young innovators who met experts, researchers and entrepreneurs in the daily sessions of traditional lectures followed by practical applications on their projects, even through co-working.

A mentor, an expert in charge to develop a specific need connected to the product/process innovative idea, followed each project. Three experienced coaches, committed to fostering self-improvement and team building as well as the achievement of individual learning goals, accompanied the whole path continuously.

MEDAB constantly dialogues with the business community, which is a primary component of the accompanying path through the Community of Innovative Companies that joined the initiative. It concerns consolidated companies that decided to support the young start-upper through mentoring activities and business matching.

The "Business Matching" are brainstorming meetings between the teams of aspiring entrepreneurs and senior enterprises aimed at evaluating the stages of development of business idea and to encourage the creation of possible collaborations between the business world and the world of innovation. The paths end with several meetings with investors in order to identify possible forms of financial support to start-ups (INVESTOR DAY). To date, the MEDAB has "accompanied" about 120 young innovators representatives of 40 business projects.

Figure 3
The steps of MEDAB accompanying paths



The Mediterranean Innovation Partnership (MIP) for youth entrepreneurship and technological transfer in the agro-food sector

Mediterranean culture was formed along the centuries in a basin of continuous innovation. It comes from a history of economic, environmental and cultural exchanges in which contamination, dialogue and comparison among different experiences and visions representing a cultural capital of crucial importance. Linking experiences, best practices, skills and knowledge means fight against knowledge waste and favour the development of an innovation culture going beyond the regional borders.

CIHEAM Bari has got the Mediterranean need of having an organized innovation ecosystem in the agro-food sector through the establishment of the Mediterranean Innovation Partnership (MIP) for youth entrepreneurship and technological transfer in the agro-food sector; a network among public institutions of 10 Mediterranean countries working together to promote innovation in the agro-food sector to foster knowledge sharing, cogeneration and transfer for entrepreneurship creation and innovation.

The Network aims at developing activities in connection with training, knowledge sharing and cooperation in order to favour the growth of an entrepreneurial culture among young people, entrepreneurship creation and innovation, the development and search of methods, tools and practices for knowledge sharing, transfer and cogeneration and for the reinforcement of institutions and Innovation Support Organisations (ISO) involved in the innovation process. To this end, this Network is working to:

- Support training actions targeted to public institutions' managers and aiming at developing innovation policies of the agro-food sector; to young innovators and start-ups aiming at developing an entrepreneurship culture; to innovation chain managers and ISO;
- Support actions to share knowledge, such as the creation of tools and practices to exchange and share innovative knowledge, the collection of good practices and information on ISO (e.g. technology parks, business incubators, technology transfer offices, seed accelerators, business angels and early stage investors) and innovative start-ups, the carrying out of studies and surveys and organization of events and meetings. In accordance to this purpose, within MIP activities a collaborative platform is going to be realized in order to share information, figures and best practices together with a survey on innovation in agro-food sector, with a specific focus on the relation between young people and enterprises (start-ups);
- Support cooperation actions in order to reinforce the relations among institutions, universities, research centres and ISOs; to develop joint local institutional reinforcement initiatives; to favour the participation in programs of national and international funding.

Innovation and enterprise creation in the Mediterranean: the MIP-CIHEAM-Bari Survey

Innovation and competitiveness of small and medium enterprises in rural context need the design and planning of tools and systems favouring the transfer of knowledge and skills, able to spread the innovation culture, the development of tools and models supporting the youth entrepreneurship and to build up "environments" putting in relation the different actors of the innovation chain. One of the central element of this "forming environment" is represented by the ISO (clusters, technology parks, business incubators, technology transfer offices, seed accelerators, business angels and early stage investors, etc.), where young aspiring entrepreneurs, innovators, public institutions, private investors, research and training centers meet to share knowledge, experiences and best practices in order to build up an "enterprise culture".

In order to draw up a map of the innovation processes related to rural and agro-food sector in the Mediterranean basin, a research study was launched in 2015 , covering 15 countries : Algeria, Egypt, Jordan, Lebanon, Palestine, Morocco, SWG countries, Tunisia, and Turkey (Fig.4).

Figure 4
Map of the Mediterranean countries covered by the survey



The research methodology followed two different approaches: a deep desk analysis and a direct survey listening key actors of the innovation chain in each country through a specific questionnaire.

The ISO identified in the Mediterranean region are more than 160. However, the outcomes of this research were not limited to ISO related to agriculture but they result in an overview of the innovation support organizations, especially the business incubators. The survey put in evidence strong differences among the involved countries: in fact, the number of ISO identified, vary from 6 organizations in Balkan countries & Palestine to 32 and 39 in Turkey and Tunisia respectively (Table 2). The main common objectives among the identified ISO are:

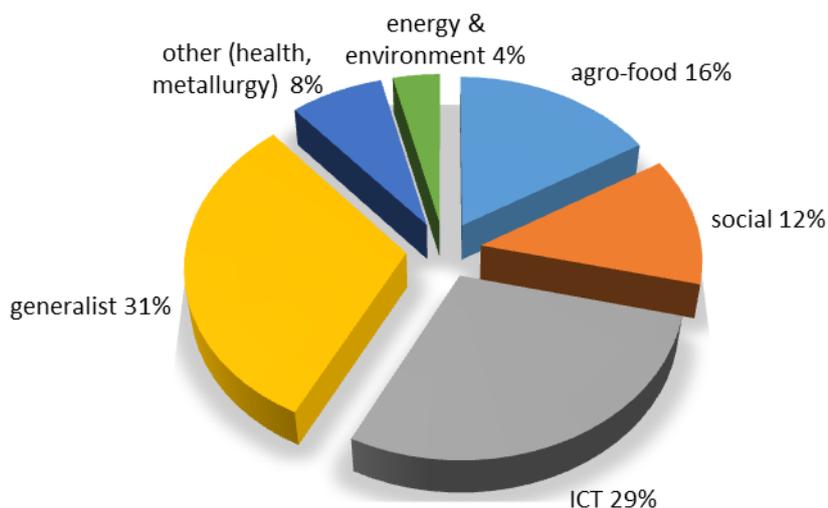
- Job creation,
- Promoting the entrepreneurship culture among young people,
- Development of the culture of innovation and promotion of research results,
- Strengthening collaboration between academic institutions and economic stakeholders,
- Accelerating the creation of profitable enterprises.

Table 2
N. of ISO per country and their characteristics

Country	N. ISO/country	Goals	Services	Target
Albania	10	1. Job creation	1. Assistance in project identification and Administration	1.Small projects (< than 2 years)
Algeria	11	2. Promoting the Entrepreneurship culture among young people	2. Shared office services, training, technology support and equipment	2. Youth
Egypt	18	3. Development of the culture of innovation and promotion of Research Results	3. Assistance in obtaining the financing necessary for business growth.	
Jordan	11	4. Strengthening collaboration between Academic institutions and economic stakeholders	4. Consultancy in financial, marketing, legal, tax, and Technical issues	
Lebanon	13	5. Accelerating the creation of Profitable enterprises		
Palestine	6			
Morocco	14			
SWG	6			
Tunisia	39			
Turkey	32			
TOTAL	160			

The identified ISO are distributed in 6 sectors: 29% are in Information and Communication Technology (ICT), 31% are generalist or mixed, 16% are specialized in agriculture and related sectors and 12% in social innovation and entrepreneurship, 4% in Energy & Environment and 8% in other sectors such as Education, Economy and health (Fig. 5).

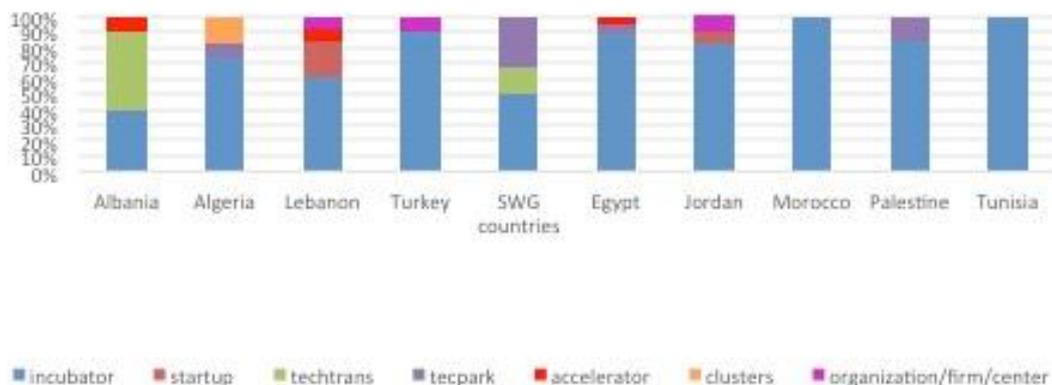
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They are housed mostly in research institutes or State Universities, especially in Tunisia, Morocco and Algeria and the main target are young people. They are commonly called incubators, (more than 86%): in fact a low number of structures are classified as accelerators, technology parks, technology transfer, clusters or start-ups.

Furthermore, in almost all the surveyed countries more than 40% of ISO are classified as incubators, until Morocco and Tunisia where 100% of the identified ISO are incubators (fig. 6).

Figure 6
Percentage of ISO per country



This survey is the first step of a process that the new born network MIP intends to pursue: it aims at becoming a reference point in the innovation scenario of the Mediterranean Basin, feeding a gap of knowledge about actors, initiatives, figures and relevant issues concerning the innovation chain in agro-food sector existing in the area.

In conclusion, agro-food chain cannot ignore ICT and digital world. The experience of MEDAB incubator shows that young talents develop innovative ideas based almost on ICT: from sensor technology applied to farm production (precision farming, collection of agro-environmental data) to origin certification, traceability of products and advanced forms of market of agro-food products. In the same way, data gathered in our analysis at Mediterranean level, show a more and more important contamination of digital technology in agro-food, given by the importance of ISO combining ICT with agro-food, above all incubators (29% of ISO).

For these reasons, CIHEAM Strategic Agenda 2025 put together the CAPMED initiative of “Mediterranean Empowerment Action for the Young and Women in Rural Area” with the development of networks and open and collaborative technological platform finalized to scientific knowledge sharing and co-development.

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