

Sustainability and Innovation in the Romanian Entrepreneurial Ecosystem

AN EXPLORATORY STUDY

UEfiscali

Sustainability and Innovation in the Romanian Entrepreneurial Ecosystem

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An exploratory study

Introductory remarks

The present report provides an up-to-date account of the latest data and assessments regarding the Romanian entrepreneurial ecosystem (henceforth, REE) and innovation development. It offers an inside-out perspective provided by interviews with entrepreneurs, innovators, professionals, consultants and various experts and an outside-in perspective by comparatively analysing country indicators. Specific recommendations, with particular relevance for policy action are drawn.

This time marked the beginning of a growing interest for supporting social and economic entrepreneurship worldwide. In 2015, efforts to support social and economic entrepreneurship at the national level were in their infancy and some exploratory researches appeared (Herman and Szabo, 2014; Curaj et al, 2016). Until now, efforts have been made but much remains to be done in terms of the capacity to analyse and develop the (innovative) entrepreneurial ecosystem (Radauer and Roman, 2016; Andrez et al., 2017; Chioncel, 2019).

After 5 years, the follow-up study on the REE looks at the extent to which Romania has succeeded in building a more conducive environment for entrepreneurship, and it seeks a better understanding of the facilitators and obstacles with regard to innovation and the development of business expansion.

The overview of the Romanian entrepreneurial ecosystem is neither evident nor intuitive. Its Index grew with 30% in the last 5 years due to the more mature behaviour of its participants and due to the support offered by the government for start-up activities. Though, comparative to other ecosystems, this maturity is counterbalanced by the lowering of the country performance in innovation for the last decade, coupled with the lowering in international rankings with respect to governance and corruption.

This maturity existent at the level of the ecosystem should be supported adequately through creating the sustainability of the entrepreneurial activities and laying the foundation for innovation. Hence, specific recommendations, relevant for the future public policies are offered.

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Key Findings for the Entrepreneurship Development

Today, resilience and innovativeness bring high-performance to the country's entrepreneurial ecosystems. High-performant national entrepreneurial ecosystems are to be observed in countries of small dimensions, because they more easily facilitate strong collaboration between the ecosystem's actors and support businesses to go international, as has happened in Denmark, Switzerland, Estonia, Israel or South Korea.

The purpose of this study is to provide an analysis of the Romanian entrepreneurial ecosystem and formulate a series of recommendations aiming to boost its performance in innovation and sustainability. The study brings together, in an original way, the recommendations of the country reports (e.g. GEDI, 2020; PSF, 2017) and those formulated by the participants into the ecosystem. In this way, the entrepreneurial ecosystem is viewed both from the outside, compared to other ecosystems, and from the inside, as understood by entrepreneurs, innovators, business consultants, researchers or policy makers.

The Romanian Entrepreneurial Ecosystem Index 2020 (REEI) shows an increasing trend since 2015 - it has increased by 30%, from 4.5 to 5.8 in 2020, on a scale from 1 to 10. The index is a tool for analysing and was created in 2015. It helps the understanding of the degree of the ecosystem maturity. It emphasizes the capacity of the entrepreneurial ecosystem to create, grow and provide support for entrepreneurs.

There is evidence of a significant progress having been made in creating a functioning and successful environment for entrepreneurship, according to the REEI. However, this growth is limited by legislative complexities, lack of access to information and poor identification of opportunities (Small Business Act, 2019; PSF, 2017). Removing the limiting factors would increase the attractiveness of the ecosystem for those with a higher education and an orientation of consulting and mentoring services from business to development, thus creating a more resilient ecosystem.

Previous policies have aimed to increase the number of companies and jobs and, thereby, to increase the ecosystem's dimension. Further on, policy efforts and support programs need to come together in a coherent manner in order to increase ecosystem quality, sustainability and, above all, the development and exploitation of its innovation capacity. In time, the number of successful companies and the number of new jobs will increase as a result of a performant entrepreneurial ecosystem.

The study opens with three key recommendations for developing the sustainability of the entrepreneurial ecosystem:

- 1) Supporting the development of opportunity-based entrepreneurship;
- 2) Fostering networking and knowledge exchange among the ecosystem's participants and facilitators;
- 3) Developing a Data Ecosystem as the first premise for making relevant and evidence-based decisions to increase ecosystem performance.

Supporting opportunity-based entrepreneurship involves orienting support programs towards: 1) businesses that have tested ideas and not just a business plan, thus aiming to increase the number of businesses that exploit market opportunities and 2) developing specific programme support for business internationalization.

Growing networking is a top priority as today, cross-sectoral and international collaborations lead to innovation and business internationalization, which also improve the entrepreneurial ecosystem (Interviews, 2020; GEDI 2020).

Creating a data ecosystem to support entrepreneurship is the first prerequisite for evidence-based decision-making and actions prioritization.

The present study reconfirms that the entrepreneurial environment is insufficiently attractive for those with higher education (Own survey, 2015; 2020). The current entrepreneurial environment discourages them to start and develop businesses, and the innovation potential stays poorly exploited (Romania ranks 96 out of 137 countries), and the degree of sophistication of the business environment is very low (Romania ranks 116 out of 137 countries) (Global Competitiveness Index, 2018).

Strengthening an entrepreneurial ecosystem through innovation employs interventions that would lead to:

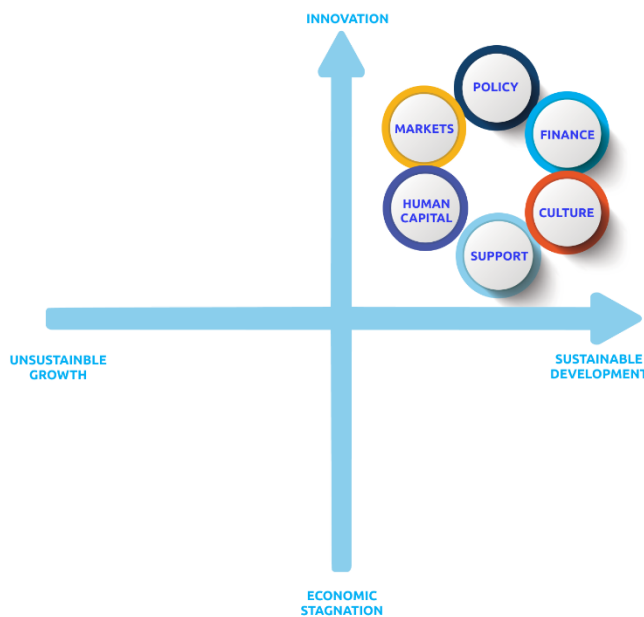
- 1) collecting research needs from practice;
- 2) the protection of intellectual property rights in the internationalization process;
- 3) creating an environment conducive to trust and collaboration within universities and public research organizations (Own survey, 2020);
- 4) strengthening collaborations communities across sectors and internationally in order to exploit research results.

For advancing the understanding of the entrepreneurial ecosystem and its innovativeness and sustainability, *The Innovative Entrepreneurship Spectrum* (henceforth, IES) has been designed. This spectrum is a useful tool as it can convey information that would be difficult to convey with words alone. These types of

representations encourage haptic and visual thinking which support the design of policy thinking and communication of the vision for bringing change into the entrepreneurial ecosystem.

This spectrum classifies entrepreneurial ecosystems based on the issues of sustainability and innovation. Entrepreneurial ecosystem is seen through the performance of the 6 pillars: policy, support, human capital, culture, finance and markets. It is relevant if the entrepreneurial ecosystem is placed on the axes of sustainability and innovation and it is less relevant for the overall picture which pillar is on the sustainability and which on the innovation axis. That is because each ecosystem has its own specificities.

Figure 1 The Innovative Entrepreneurship Spectrum. The Ideal-Type of the Innovative Entrepreneurial Ecosystem



1. The Entrepreneurship Ecosystem Index

In 2015, 'The Entrepreneurship Ecosystem Index' was conceived to assess the robustness of the entrepreneurial ecosystem in Romania, in the paper "The Romanian Entrepreneurial Ecosystem. An Exploratory Study". After 5 years, a new analysis has been conducted in order to assess the entrepreneurial ecosystem situation, see how it has changed since 2015, and formulate recommendations.

Compared with 2015, the development of the entrepreneurial ecosystem increased by 30%, from 4.5 to 5.8 in 2020, on a scale of 1 to 10, and it is evidence of an increase in the development and robustness of the ecosystem.

The maturity of the entrepreneurial ecosystem is apparent in the tendency of detachment from a model where the entrepreneur is acting independently within the ecosystem towards a model where the entrepreneur often finds him/herself in a network, with various resources and communities:



Figure 2 Romanian Entrepreneurship Index

1) Today, entrepreneurs are inspired by success stories more than family and friends,

2) Financial programmes for start-ups have increased in number, comparative to the family and personal financial support, that is available,

3) More and more consultancy advice is being accepted,

4) More financial and non-financial support programmes are developing and

5) The investments in other entrepreneurial activities have increased.

Compared to 2015, the inspiration sources for becoming an entrepreneur are more diversified: sources other than family and friends inspire entrepreneurship, among which the most frequent are previous work experience in other organizations (23%) and other entrepreneurs (18%). There are some differences in the diversification of the financial sources to start a business as well, much more in the sense that bank loans and grants are used along with personal or family savings. More, many new entrepreneurs ask for consultancy and they are willing to invest and these add value to the present ecosystem.

2. Key Recommendations for the entrepreneurial ecosystem

2.1. Support entrepreneurship out from opportunity

Small Business Act (2019) shows that early-stage entrepreneurship, along societal norms, media attention and entrepreneurship education, scores high for the case of Romania.

The studies focused on the entrepreneurial ecosystems introduced the distinction between the entrepreneurship based on opportunity and entrepreneurship based on necessity. The working definition introduced by the Global Entrepreneurship Monitor (GEM) is: opportunity denotes the drive to bring an idea to the market, while, in opposition, entrepreneurship based on necessity is understood as entrepreneurship born of the lack of alternatives on the labour market. The first is more likely to increase the value of the ecosystem in general as research shows necessity entrepreneurship does not contribute to technological change and economic development (Kontolaimou and Giotopoulos 2015; Acs and Varga, 2005; Acs, 2006). More, 'opportunity' conveys something different from the ideas of making money or being your own boss (interviewee, innovator, 2020).

In Romania, opportunity driven entrepreneurship is much lower than the European average. But when dealing with concepts used in various international settings, one needs to be careful how they resonate in the Romanian national environment. Entrepreneurship programs are seen by many as an 'opportunity' for their financial and mentorship support. Though, there is not sufficient evidence to assess the impact of these programs on the general development and productivity of the entrepreneurial ecosystem. One of the interviewees emphasized that in the case of Romania, many competent persons choose entrepreneurship not because of an opportunity identification, but because of being unsatisfied with the employee environment. These entrepreneurs are an asset and they should be nurtured, as they exhibit a high standard of drive and initiative, and will positively contribute to the ecosystem (informer, business consultancy, 2020).

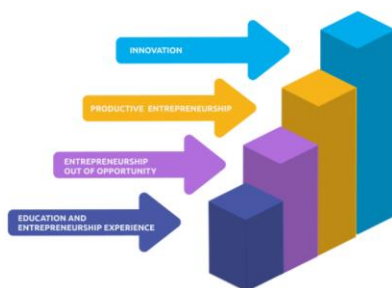


Figure 3 The importance of education and experience in opportunity based entrepreneurship and innovation

‘Opportunity’ as a term, has a peculiar connotation in the Romanian language, which heavily resonates with opportunism, clientelism and favouritism. The wild market conditions after 1990s affected the Romanian society morale, and any way of making money came to be seen as an opportunity. ‘Opportunity’ in Romania also has the connotation of ‘making money’ which might be destructive to the ecosystem.

Today, in Romania, many continue to prefer the comfort of employee status not because of the lack of opportunities, but because the time and procedures required for maintaining a business dissipate the effort on exploiting the market opportunity. Thus, the entrepreneurial ecosystem grows too little through the contribution of people with higher education who do not survive in the current business environment (interviewee, business consulting, 2020) and, therefore, value-added entrepreneurship and innovation are prevented from entering into the ecosystem.

2.2. Growing networking

Romania ranks 46 out of 137 countries according to The Global Entrepreneurship Index, the most comprehensive tool for assessing entrepreneurship. GEDI offers guiding for policy makers to address weaknesses in order to strengthen the entrepreneurial ecosystem. Risk acceptance aside (as it is linked to the high unpredictability of the political agenda and the instability of the business environment and, more, due to the pandemic context), focus should be oriented towards networking, along opportunity perception, start-ups, competition and innovation product and process.

According to GEDI, the networking pillar is a top priority and refers to: 1) a proxy of the ability of potential and active entrepreneurs to access and mobilize opportunities and resources and (2) the ease of access to reach each other and other relevant stakeholders, such as governmental organizations.

Recommendation 1: The development of the *Accelerate Romania* hub, as a facilitation platform for the integration and promotion of the Romanian entrepreneurial ecosystem, its start-ups and scale-ups, in accordance with the report P.S.F. (2017).

Recommendation 2: Creating a community of those who support the entrepreneurial ecosystem, bringing together successful entrepreneurs, representatives of public organizations that provide entrepreneurial support, representatives of large companies, business consultants and investors, in order to harmonize their efforts to support sustainability and innovation in the ecosystem and to inform policy makers.

Recommendation 3: Developing networking with professionals from international innovation ecosystems, especially where the Romanian diaspora is strong: Europe, USA and Israel.

2.3. Developing a Data Ecosystem, as a first premise

Entrepreneurs and innovators, public and private organizations who support the development of entrepreneurial and innovative activities, make and consume data. The dynamics of conducive ecosystems depends on the volume and flow of available information. With this in place, Romania may unlock her ecosystem's potential, encourage informed decisions and collaboration, by retrieving and collecting data and master their analysis.

This study highlights a larger gap than expected in the generation and availability of data coupled with scarce qualitative analyses on entrepreneurship, for informing evidence-based decisions. (Even if the public awareness and support for entrepreneurship throughout the country were to increase considerably.)

Currently, qualitative evaluations and impact studies of programmes that support entrepreneurship are lacking. Deficiencies in the data collection, difficulties in public access, lack of interoperational capacity, as well as the lack of analyses and studies derived from that data, limit the positive effects of open data.

Evaluation should not be the exclusive task of public institutions. Expertise existing at the level of public authorities should be complemented by that of private professionals and non-governmental organizations. Today, most of the entrepreneurship support programmes collect insufficient relevant information which are, however, difficult to be accessed.

Recommendation 4: It is recommended to implement procedures for collecting, publishing and communicating quantitative and qualitative data at international standards for each public financial and non-financial mechanism related to entrepreneurship.

Recommendation 5: To introduce independent professionals and non-governmental organizations to participate in the design and implementation of the actual evaluation and monitoring process for national and European programs relevant to the entrepreneurial ecosystem and to innovation.

Recommendation 6: The development of evidence-based public policies to provide decision-makers with policy options to stimulate entrepreneurship.

3. How to strengthen the sustainability of the entrepreneurial ecosystem

The entrepreneurs who have participating in the study are at different stages of developing their businesses. They have discussed the resources, needs and challenges they encountered in their efforts to grow in the business environment, while maintaining their values and having a positive impact on the social level. Some profiles of entrepreneurs, created as a result of these discussions are presented in the following.

3.1. Starting the entrepreneurial journey

In 2018, Lucian started a business in the field of recycling, in Bucharest. To start the business, he needed lots of information and resources to maintain and develop his professionalism and to maintain his own values. The resources of knowledge and skills needed to start a business with a positive impact on society are considerable. The effort to gather the information needed to meet standards are hampered by the dispersion of information and lack of direct access to standards and knowledge that should be facilitated primarily by institutions.

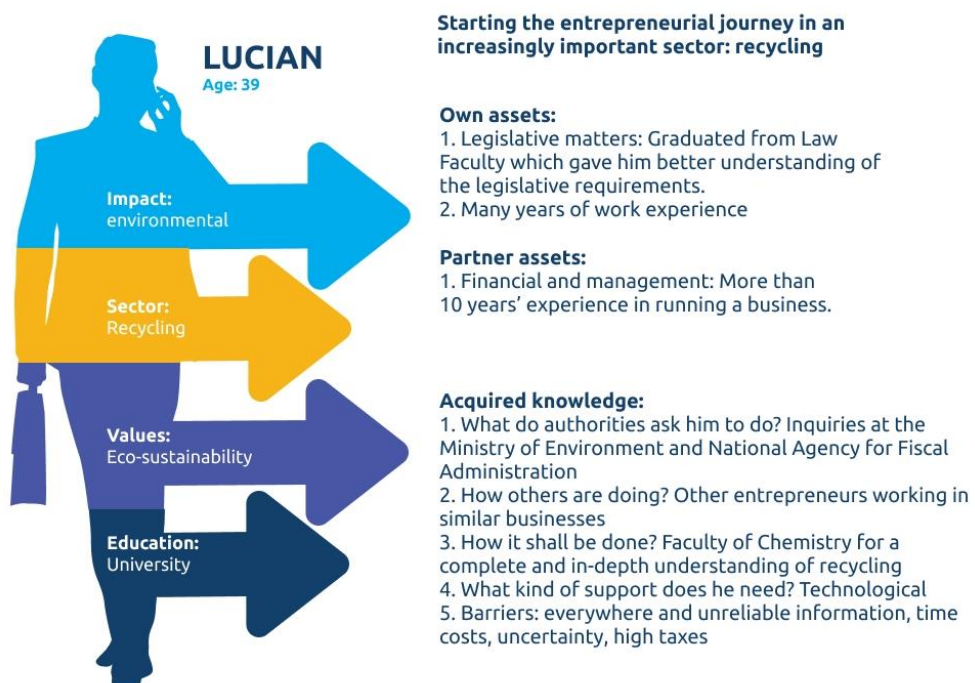


Figure 4 Starting the entrepreneurial journey

Recommendation 7: Create a ‘one-stop-shop’ digital service centre for entrepreneurs offering specific integrated e-Government services, in line with the recommendation received from the document ‘Specific Support to Romania, Start-ups, Scale-ups and Entrepreneurship in Romania’ (PSF, 2017).

Recommendation 8: Each institution should post on its website ‘information relevant to entrepreneurs’: relevant guiding information, standards, case-studies, and opportunities for collaboration.

Recommendation 9: To create good models of common business practices which support the ecosystem through their values, i.e. circular economy and education, and that include references to relevant information, time, resources and finance. They should be published and made available to all entrepreneurs.

The growth of entrepreneurship programs which offered mentorship has led to an increase in the demand for business consulting. However, the consultancy was mainly used to deal with tax controls and less for business development. In Romania, tax audits aim to penalize the entrepreneur, unlike the European Union, where tax audits serve to inform and assist entrepreneurs (interviewee, business consulting, 2020).

Recommendation 10: Financial controls should have an educative purpose and not a punishing character. That could be done by providing entrepreneurs with educative material and training, open data and easing the access to information.

Recommendation 11: Each public institution, starting with the National Agency for Fiscal Administration (NAFA), should set up offices through the country that offer professional advice to entrepreneurs.

3.2. Mentoring and scaling up a business

“One can blame the gazelle for not having six legs when being chased by a flock of lions, though that would be unfair. Likewise, it is unfair blaming owners for not being equipped for confronting the state bureaucracy megalith” (interviewee, business consultancy, 2020).



The importance of mentoring in scaling and social involvement

Oana received financial and mentoring support for business scaling. The mentorship was particularly important here because it offered the 'know-how'. And she succeeded in scaling it up.

When the pandemic started, she used a part of the business resources for creating medical protective clothing which were distributed through an informal network. Encouraging entrepreneurs with relevant values to the overall community is more important than encouraging any type of entrepreneurship..

Figure 5 Mentoring and scaling up a business

Small businesses are the backbone of the entrepreneurial ecosystem. They are the first victims of public bureaucracy and their significant administrative burden has to be eased.

Data shows (Global Entrepreneurship Development Index. Romania, 2020) that when it comes to supporting the entrepreneurial ecosystem, institutions score lower than the private sector, and that was also the case in 2015. Internet usage and Business strategy are to be addressed immediately by public authorities while support services for strengthening the potential of gazelles, export, informal investment and new tech should be provided.

According to most of the interviewees, the lack of management capacity is the key limiting factor for the inefficiency and weak value recorded across all domains. Weak performance in management in national government administration and local administration impact on the business sector while weak performance of management in business sector is also remarked.

Professionals in management and marketing and European (Union) funds absorption are needed (most interviewees' emphasis). As there is a lack of these professionals, Romania should bring them from outside while also developing

capacity building programs. A massive import of 'know-how' and of 'how to do' from European Union will bring the much-desired change.

Recommendation 12: Consult entrepreneurs and consider models of good practice at international level for establishing and implementing measures aimed to stimulate the survival of companies.

Recommendation 13: To offer support programmes to local governments in cities that want to develop sustainable and innovation-based local business ecosystems.

Recommendation 14: To ensure increased interoperability of relevant data at the level of governmental institutions, in order to simplify and increase the performance of entrepreneurial activities.

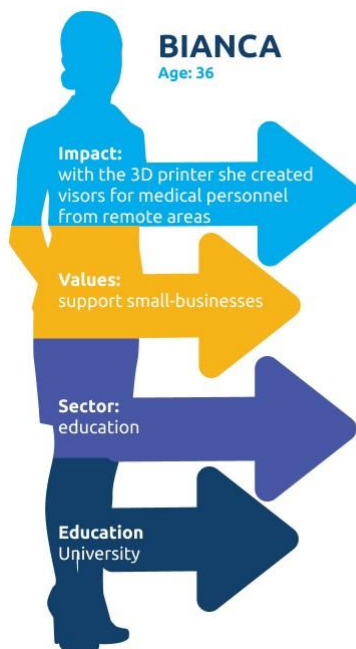
3.3. The importance of community building for entrepreneurs

The percentage of adults who intend to start a business within 3 years is the highest in the EU, exponentially growing from 6% in 2009 to 29% in 2016 (Small Business Act, 2019).

State financial support for increasing the number of new small compaines on the basis of a business plan has led to "copy-paste entrepreneurship". Due to the lack of data, the contribution of these entrepreneurial activities in adding value in and outside the entrepreneurial ecosystem is unknown. Moreover, the perception of entrepreneurs and experienced investors is that financial and non-financial support should be offered after testing the idea in the market and not solely on a business plan (interviewee, entrepreneur, 2020).

Recommendation 15: Public financial and non-financial support should be offered to businesses that validated their idea on the market, through a proof of concept, and not just with a business plan. Entrepreneurship through innovation should be supported based on a minimum viable product (MVP).

Recommendation 16: Boost collaboration between all relevant actors of the entrepreneurial ecosystem through innovation, by creating an inclusive and non-hierarchical community, following the model developed by Brad Feld (2015, 2018). The community would harmonize the interests and collaborations between entrepreneurs and innovators, investors and patent holders, representatives of universities and government organizations, in order to create a sustainable ecosystem through innovation.



The importance of building a community for entrepreneurs socially involved and responsible

Bianca started a business without any previous business knowledge and experience in entrepreneurship. She obtained financial support from a European Union's entrepreneurship programme for innovation. The advice received from the entrepreneurial community, more than the mentorship received, strongly supported her endeavour.

Her business in innovative education was 'frozen' in the pandemic context because it was based on close interaction with children. Adapting the business to the new pandemic requirements could compromise some of her initial core values. "Am I a (true) entrepreneur?" How important are the core values for a company?

She used the 3D printer to print visors for doctors from disadvantaged areas. In the end, this example shows that small businesses are those which provide sustainability to the ecosystem. Encouraging entrepreneurs with relevant values to the overall community is more important than encouraging any type of entrepreneurship.

Figure 6 The entrepreneur socially involved and responsible

4. Key findings from the Innovation Entrepreneurial Ecosystem

Increasing Romania's competitiveness through innovation is difficult to achieve in the context of the continuous exodus of skilled labor. Romania ranks last in innovation in the U.E. and the country's performance in innovation continues to decline (e.g. EU Innovation Scoreboard, 2020)

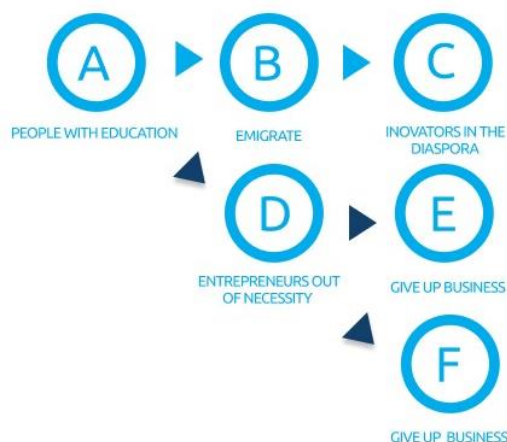


Figure 7 Brain drain and the low attractiveness of the business ecosystem

Romania's innovative entrepreneurial ecosystem is insufficiently attractive compared to other countries that offer adequate support, including significant tax exemptions. The Romanian market is still poorly sophisticated for innovative products and services. The buyer sophistication indicator shows that Romania marks 3.07 on a scale from 1 to 7, below the global median value (World Bank, 2019).

The lack of sophistication of the national market, the weak public procurement of innovation, along with other factors, impede the scaleup and internationalization, and stay as root causes for export of innovative businesses.

Recommendation 17: Representatives of UiPath, Emag, TypingDNA, FintechOS, TeleportHQ, Questo, Elrond, CyberSwarm, SmartDreamers, NiftyLearning, TalentBrowse, XVision are mediatised as successful stories. Consult them on how to stimulate other innovators and how to meet the very top problems of the public administration to better serve the needs of entrepreneurs.

4.1. Romanians who innovate in Romania

Generally, the age of the individual applicants in Romania is over 50. That dramatically emphasizes the brain drain phenomenon and the unfriendly environment for innovation: Romanian youth innovates outside Romania. In the year 2015, Romanians were the authors or co-authors of over 200 patents registered by enterprises from USA, according to international data base (Bechir, 2016).

Romanian researchers and innovators claim that there is generally an increased level of suspicion and mistrust which affects collaboration and lead to trusting more the intellectual property rights system of other countries more than that of their own (Own survey, 2020). It is recommended that measures be put in place to recognize the contribution of innovators whose impact is stronger than current practices that discourage collaboration and innovation.

An expert in intellectual property rights stressed that there is often the case of many inventors in Romania, for whom the costs of registering their innovation, in any form, is a barrier to innovation. Therefore, similar to the situation of stimulating entrepreneurship where global measures for eliminating or diminishing at minimum the costs of starting a business have been taken, recommendations for a country which needs to stimulate massively innovation goes for eliminating these costs for individuals.

4.2. Private enterprises who innovate in Romania

The number of patents awarded to individuals is higher than those awarded to businesses. This may be, because of the IPR regulations from 2014, as mentioned below as the legislation discourages enterprises and individuals to innovate (interviewee, IPR consultancy, 2020).

The assertion - 'there is no compelling reason to innovate' is the most frequent answer both for the case of Romania and neighbouring and Baltic countries, when explaining poor innovation performance.

The Law 83/2014 is favourable for individuals who invent within universities and public research organizations, but not for those from independent enterprises. Each enterprise, according to the internal regulations, would compensate the inventor, though, most often the retribution is not incentivizing.

According to the data from Eurostat, the most frequent reason for enterprises not to innovate is that there is no compelling reason to do so. 21,697 enterprises from Romania gave this reason. The second most frequent cause of not innovating, though to a lesser degree is that barriers to innovation are seen as very high. The situation of barriers for innovation in Romania is similar to some extent to the situation of many other countries in the region, and even to Estonia (Eurostat, 2016; Varblane et al, 2010).

4.3. Research in public research organizations

Many of the barriers identified to innovation are common to the Eastern European area. The lack of vision on the exploitation and commercialization of market research results is the most important barrier.

IP consultants insist that the education of researchers in general needs to be developed in order to have a more accurate understanding of the process of transferring research results to the market. This involves requesting and providing professional support on how to publish their research results and, to obtain, maintain and exploit an internationally patentable idea (interviewees, IP consulting, 2020).

However, researchers in universities and research public organizations consider that there is insufficient support in exploiting research results in order to bring their innovations into the market and that there is an environment hostile to the development of trust and collaboration to lead to commercial exploitation (Own survey, 2020).

The main limiting factors in the innovation process perceived by entrepreneurs, researchers and innovators participating in the survey are: brain drain, support policies and poor funding. We meet the same limiting factors to collaborations, along the cultural factors, such as lack of trust.

The process of commercialization of innovation is also limited by cultural factors, such as lack of trust in Romanian products, but also by the insufficiently sophisticated national market, which also hinders the commercialization of innovation, including pre-competitive innovation procurement (Own survey, 2020).

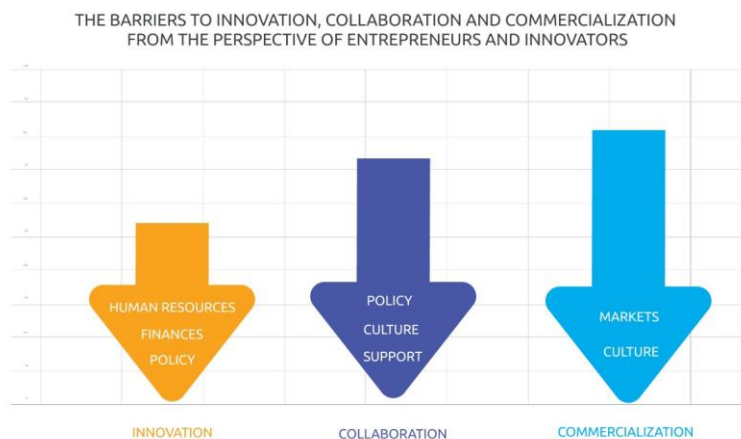


Figure 8 The barriers to innovation, collaboration and commercialization from the perspective of entrepreneurs and innovators

societal context and
earch and innovation

and for the very few patents which reach market.

The interviewees emphasized that the university curriculum is not correlated with the current needs of the market (interviews, 2020). Research or patentable ideas often have the same problem of lack of relevance to market needs (interviewees, IP consulting, university researchers, 2020, and own survey, 2020). Close contact with the business ecosystem, networking and collaboration should be set prior to any undertaking of a research project. Strategic basic research significantly increases the chances of bringing an idea to market. There is a large consensus of opinion that many patentable ideas are not relevant for today challenges and that is the prime reason why they do not reach markets (interviewees, IP consultancy, university researchers, 2020; own survey, 2020).

There is no data showing that those from academia economically exploit the result of their work, following a trajectory from the university into the market (Curaj et al, 2016).

Recommendation 18: Applied research projects must prove their real impact and contribution to society. The unique value proposition of projects must be clearly mentioned in terms of relevance, novelty and interdisciplinarity.

Recommendation 19: Build mechanisms to encourage, on the one hand, academia's contribution to the professionalization of public debates and the exploitation in economics of the knowledge and professional experience of those in academia, including those in the fields of social sciences and humanities.

Recommendation 20: The creation and stimulation of networks for the exploitation of ideas and their applicability in industry and economics will be considered together with certified professionals in IP consulting, innovators and experienced entrepreneurs and professionals in management and marketing.

Recommendation 21: Prior consultation of accredited independent laboratories, which have a key role in innovation, to identify appropriate support methods necessary for their optimal functioning.

Recommendation 22: The patent application to OSIM should be made exclusively electronically. At present, digital documents must be accompanied by physical ones, which discourages the completion of electronic application.

Recommendation 23: A line of support for innovation should be IP Consultancy for economically priority areas and for social innovation.

Recommendation 24: The qualitative monitoring and evaluation (and not only administrative) of governmental funded projects from the impact perspective, including results exploitation in the market.

Recommendation 25: Adopt and cultivate a proactive approach from the research environment in relation to policy makers and the business environment.

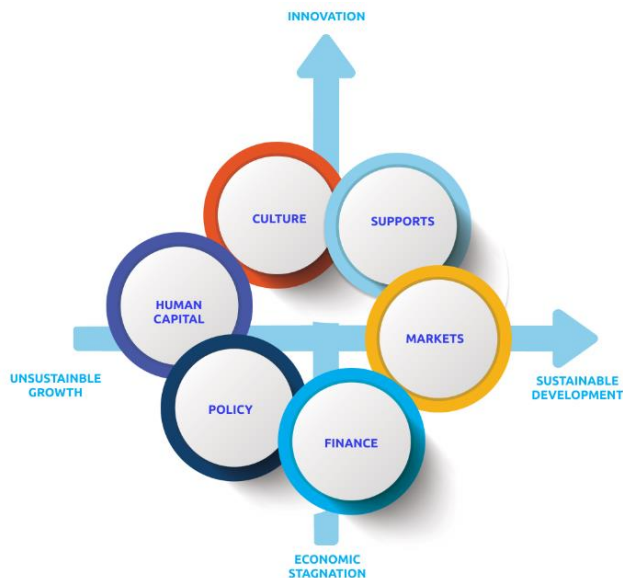
Recommendation 26: Mapping talents in the diaspora, inviting and encouraging Romanian innovators from abroad to participate in supporting the Romanian innovation ecosystem, in accordance with the recommendations received from the document 'Specific Support to Romania, Start-ups, Scale-ups and Entrepreneurship in Romania' (2017).

5. The Innovative Entrepreneurship Spectrum

For advancing the understanding of the entrepreneurial ecosystem and its innovativeness and sustainability, *The Innovative Entrepreneurship Spectrum* (henceforth, IES) has been designed. This spectrum is a useful tool as it can convey information that would be difficult to convey with words alone. These types of

representations encourage haptic and visual thinking which support the design of policy thinking and communication of the vision for bringing change into the entrepreneurial ecosystem.

Figure 9 The Innovative Entrepreneurial Ecosystem in the current perspective



This spectrum classifies entrepreneurial ecosystems based on the issues of sustainability and innovation. Entrepreneurial ecosystem is seen through the performance of the 6 pillars: policy, support, human capital, culture, finance and markets.

It is relevant if the entrepreneurial ecosystem is placed on the axes of sustainability and innovation and it is less relevant for the overall picture which pillar is on the sustainability and which on the innovation axis. That is because each ecosystem has its own specificities.

It is recommended to use this tool to 1) monitor the entrepreneurial innovation ecosystem, 2) evaluate measures and programs to support (innovative) entrepreneurship and 3) to assess the degree of sustainability and innovation of a business.

The analysis of publicly available data and the results of the survey (own survey, 2020) shows that public policies and financial support mechanisms for entrepreneurship are oriented towards stagnation rather than innovation and do not provide ecosystem sustainability.

For example, in the representation of the ecosystem in terms of the above spectrum it is observed that human capital and public policies are on the axis of unsustainability. That is due to the exodus of skilled labour and to the governmental support for increasing the number of start-ups based exclusively on a business plan. This explains why Romania continues its downward trend in innovation.

It is recommended to take measures to increase the sustainability of human capital and public policies based on evidence, while targeting financial support mechanisms towards innovation and not just entrepreneurship. At the same time, measures are recommended to encourage collaboration with the diaspora in entrepreneurship, research and innovation.

6. Future research directions and policy implications: ‘The other entrepreneurs’

The literature discusses the new trend of supporting the entrepreneurial spirit in unconventional fields. Other types of entrepreneurs can contribute to the development of the ecosystem: the social, public, institutional, cultural, urban entrepreneur, and last but not least, the political entrepreneur (Capano and Galanti, 2020; Paina, 2018; Istudor, 2018; Gheorghe, 2016; Cohen, 2016).

Recommendation 27: A special financial award should be created for the nurture and support of Institutional Entrepreneurs.

Recommendation 28: Find adequate ways to support creative industries by initiating public consultations and an open dialogue with various sectors to identify specific needs.

Recommendation 29: Romania should support and assist its city entrepreneurs by providing ease of access to local information programmes. A networking culture that is readily available as and when required by all entrepreneurs. Grants for R&D for specific city needs.

7. Conclusions

Forming a community of those actively involved and supporting the development of the entrepreneurial ecosystem and innovation is of primary importance to create an innovative entrepreneurial ecosystem. As a community they would be better able to coordinate efforts, the potency of experience and knowledge, and to inform and persuade decision-makers of the measures needed for entrepreneurs, innovators and those who contribute to the development of this ecosystem.

The consolidation of an innovation-friendly business ecosystem in Romania will depend in the coming years mainly on being able to attract innovators from research public institutions and universities to the entrepreneurial ecosystem and on developing support mechanisms to ensure that innovation is primarily assimilated by the state, including to demonstrate the potential of reaching the international market. To do this, three requirements must be pursued together at a pragmatic level:

- 1) Facilitating the conditions for the development of entrepreneurship in general;
- 2) Coordination and strengthening of innovation support mechanisms;
- 3) Focus innovation support on developing qualitative networking and bringing research results to the market.

Studies (Curaj et al., 2016; Nicolau and Forris's 2018) show that entrepreneurs with higher education have a greater impact on the growth of the ecosystem that subsequently leads to social elevation. By properly supporting people with higher education and experience, the prerequisites for an innovative entrepreneurial ecosystem will be strengthened. In general, those with higher education are less motivated by financial aspects and more likely to make a positive social contribution (interviewee, innovation, 2020), in particular appreciating the impact of innovation on society (own survey, 2020).

- 1) Attracting people with higher education to the ecosystem requires facilitating the conditions for developing entrepreneurship. This involves 3 interconnected items: 1) simplified and direct access to information on the initiation, maintenance and development of a business, 2) increased interoperability and digitalisation at the level of state institutions, and 3) developing opportunities by increasing the capacity of the state to assimilate innovation and technology transfer and internationalization of entrepreneurship.

In a world where many countries use public procurement to stimulate innovation and development (i.e. Estonia or Israel), Romania continues not to have specific instruments such as pre-competitive procurement, to contribute to the acceleration of an innovative entrepreneurship. Entrepreneurship will change Romania's face when public procurement is used for development and innovation, in parallel monitored by civil society and other independent actors. Otherwise, Romania will continue to decline in international rankings on corruption, good governance and innovation, while the general trust of citizens will continue to decrease.

- 2) In order to coordinate and leverage support mechanisms in entrepreneurship and innovation, a data ecosystem needs to be strengthened. This will provide useful information to participants and will be based on records. The lack of qualitative and impact assessments of entrepreneurship support programs hampers coordinated action, coherence and overall confidence in the ecosystem.

Government funding programs to support entrepreneurs need to be geared toward innovation and sustainability and focus on developed regions. Currently, support is targeted at underdeveloped regions where there is weak capacity for innovation, low business sophistication and low survival rates. Instead, focusing programs where there is a capacity to build sustainable business activities will lead to a positive impact on society at large.

- 3) The development of quality networking between researchers and entrepreneurs is of the highest relevance to the current business ecosystem. This also requires the connection of the business actors with Romanian innovators in the diaspora and the strengthening of international collaboration.

It is recommended to investigate in depth the factors limiting entrepreneurship in universities and public research institutions. Focusing research on need and impact is imperative. It is necessary to foster the openness of research to market needs (interviews, research and entrepreneurship, 2020) and to encourage innovative business projects based on a minimum viable product and not just a business plan.

It is recommended that entrepreneurship education should focus in the future on the development of entrepreneurial meta-skills, such as collaboration and creativity, rather than on just accumulating a theoretical vocabulary about business leadership.

It is recommended that special programs be developed to support social, public, institutional, cultural, urban and political entrepreneurs in Romania. For there are those who could contribute substantially to the transformation of communities in

Romania where there is capacity, expectations and goodwill to bring about necessary changes for making Romania competitive.

8. Sources



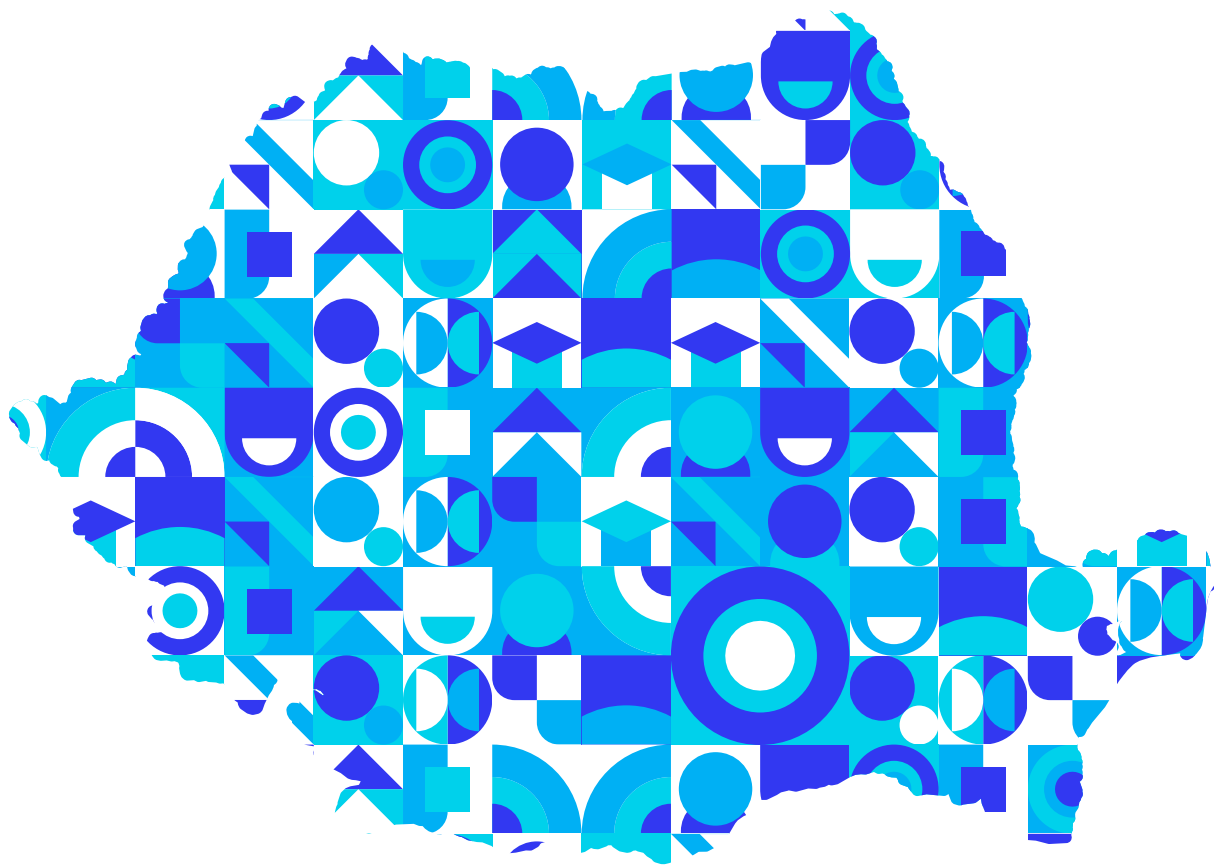
Figure 10 Methodological framework

23 interviews were conducted with professionals in the following areas of expertise: entrepreneurship; innovation; policy makers; university; business consultancy; management; non-governmental organization; IP consultancy; creative industry; cultural industry; social policy; European funds absorption. The Survey included 161 participants and took place between February and March, 2020.

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