

Models of entrepreneurial ecosystems

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Abstract. This report presents an analysis of different entrepreneurial ecosystem models. It is found that the theory of the creation and modeling of entrepreneurial ecosystems is insufficiently developed. The purpose of the research is to discover among the wide variety of factors and conditions, those of them that most strongly influence the development of entrepreneurship and to apply them in new economic models. New policies are being formulated to create an enabling environment for business, reaping significant benefits from the development of entrepreneurship and increasing the welfare of society. The development of entrepreneurial ecosystems will encourage innovation and reform in economic zones, regions, and the national and global economy.

1 Introduction

In recent years, in connection with the growing role of entrepreneurship in economic development, the concept of “entrepreneurial ecosystem” (EE) has been increasingly used [1].

The constant evolution of society and its growing needs in all areas of life trigger the need for new forms of integration and involvement of the economy.

Historically, there are various forms of association of entrepreneurs in the world – consortium, holding, association, cluster, tech parks, etc. They all follow the natural course of time, adapt to national economies, develop and evolve.

The creation and development of entrepreneurial ecosystems is associated with promoting high growth and maintaining a stable global economy. The purpose of this study is to explore different models of entrepreneurial ecosystem and the purpose of this ecosystem. The specific constituent elements that interact and build ecosystem patterns are grouped mainly in six areas: policy, finance, culture, support, human capital and markets.

The ecosystem provides a fast and reliable flow of information, resources and talent to help entrepreneurs make the right decisions in their growth phase. A guarantee of success is the inclusiveness of the company, the symbiosis between people and the established corporate culture of trust and co-operation. Entrepreneurial ecosystems are proving their importance and contributing to developing businesses from different economic sectors. Trends are outlined which show that the creation and development of entrepreneurial ecosystem models in the agro-food industry will become increasingly important in stimulating entrepreneurial activity and as an indicator of the sector’s technological and innovative base.

The term ecosystem was originally coined by James Moore in an influential article in Harvard Business Review published during the 1990s. He claimed that businesses

don’t evolve in a ‘vacuum’ and noted the relationally embedded nature of how firms interact with suppliers, customers and financiers [2]. It is argued that in dynamic ecosystems new firms have better opportunities to grow, and create employment, compared with firms created in other locations [3-4].

There are different definitions of the nature of the entrepreneurial ecosystem. The entrepreneurial ecosystem is ‘a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of ‘blockbuster entrepreneurship’, number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment’ [4].

EE can be seen as on-going processes through which resources develop within an ecosystem, flow between entrepreneurs and other actors, and create or attract more resources over time, changing the overall structure of the ecosystem. We predict that ecosystems rich in entrepreneurial resources (strong) and with a structure that facilitates the flow of these resources (well-functioning) will see higher rates of innovative, growth-oriented entrepreneurship that will contribute to resilient economic growth [2].

In general, the entrepreneurial ecosystem is a set of conditions and factors that influence the development of entrepreneurial activity [1].

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2 Materials and models

The creation of any entrepreneurial ecosystem unfolds in

four stages: birth, expansion, leadership, and self-renewal [2] (Fig. 1).

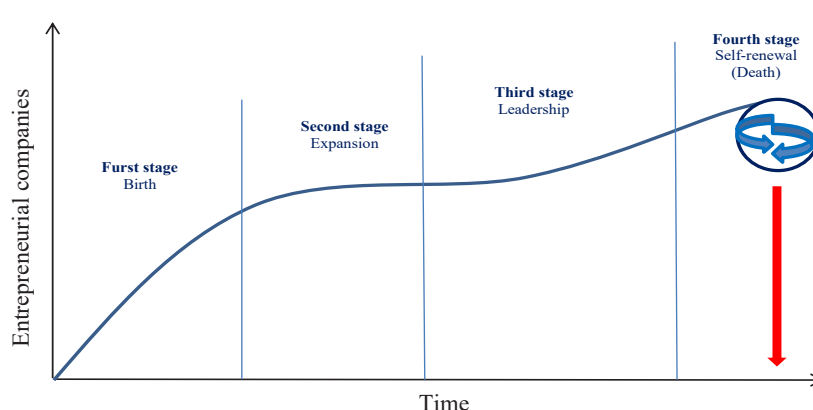


Fig. 1. Stages of the development of the entrepreneurial ecosystem.

The present study analyses three models: Isenberg entrepreneurial ecosystem model [4-6, 8], World Economic Forum's model of entrepreneurial ecosystems – G. Foster, et al. [7-8], and a Conceptual model of an entrepreneurial ecosystem on É. Komlósi, et al. [9].

2.1 Models of entrepreneurial ecosystems

2.1.1 Isenberg Entrepreneurial Ecosystem Model

The entrepreneurial ecosystem in Isenberg's model includes the following six domains (key factors): human capital, policy, finance, markets, support and culture [4, 6, 8].

These areas interact with each other, can be grouped and combined in different ways, and make up the patterns of entrepreneurial ecosystems.

2.1.2 World Economic Forum's model of entrepreneurial ecosystems

The World Economic Forum's model [7-8] of entrepreneurial ecosystems includes eight pillars (key factors): that make up the entrepreneurial ecosystem and its components:

1. Accessible markets.
2. Human capital (Workforce).
3. Funding and finance.
4. Mentors advisors support systems.
5. Regulatory framework and infrastructure.
6. Education and training.
7. Major universities as catalysts.
8. Cultural support.

The model is based on an analysis of entrepreneurial ecosystems. Progress is reported in two areas: firstly, entrepreneurs are systematically surveyed, and secondly, questions are asked of the same entrepreneurs. The key question for entrepreneurs and entrepreneurial ecosystems is: What is most important for growing a business?

The analysis also shows that there are three pillars in an ecosystem around which entrepreneurs around the world unite and which are most important for the growth of their

companies, namely: accessible markets; human capital/workforce; finance and funding.

2.1.3 Conceptual model of an entrepreneurial ecosystem from É. Komlósi, et al.

The presented model is based on the definition of Audretsch and Belitski [10], which highlights the importance of networking in the functioning of an ecosystem and according to which an entrepreneurial ecosystem works as: „a dynamic community of interdependent actors (entrepreneurs, supplies, buyer, government, etc.) and system-level institutional, informational and socioeconomic contexts (...) interact via information technologies and networks to create new ideas and more efficient policies” [9]. Business success is closely linked to the entrepreneur, i.e. to its psychological traits, perceptions, attitudes, networks, experience, learning and knowledge transmission abilities, etc. (...) [9].

The conceptual model of an entrepreneurial ecosystem distinguishes between micro-, meso- and macro-levels:

- The micro-level refers to the personal characteristics, attitudes, perceptions, etc. of entrepreneurs;
- The meso-level refers to the different organisational characteristics of the firms managed by the entrepreneurs;
- The macro-level covers the broader institutional environment surrounding the micro- and meso-levels.

The characteristics of micro-level entrepreneurs are influenced by the meso- and macro-level contexts that surround them. The network between actors and institutions works as a 'cohesive mechanism'. The quality of networks affects the access to resources and their mobilization, determine what social capital and opportunities can be reached, and thus it ultimately determines the quality of the entrepreneurship. [9].

The model presented summarizes the conceptual model that illustrates the logical relationship between entrepreneurs and ecosystem institutions at different levels

and networking as the mechanism that connects all the factors to create an ecosystem [9].

To assess entrepreneurial ecosystems, a set of leading indicators of entrepreneurial vitality needs to be developed. The focus should be mainly on the following areas: entrepreneurial activity; need for investment university funding; financial and engineering education.

The four indicators of entrepreneurial activity and ecosystem vitality are: density, variability, connectivity and diversity [11].

The first indicator of entrepreneurial vibrancy is density, for which three measures are recommended – concentration of new start-ups in a given geographic area (For example, per 1000 people), employment share of start-ups, and sector density, particularly for high-tech startups (high-tech food industries).

The second indicator – fluidity, also includes three dimensions: population flow/continuous movement,

labour market redistribution and high growth firms – number and density.

The third indicator – connectivity, can be viewed in three dimensions: programmatic connectivity, percentage of subsidiaries/ spin-off rate and deal networks.

The fourth indicator – diversity, includes: economic diversification, income mobility and economic migration.

The analyzed baseline indicators and their dimensions are not static and final. They require continuous tracking, collection, updating and testing in order to capture the trends for the evolution of the entrepreneurial ecosystem.

3 Results and discussion

On the basis of the research and analysis carried out, we propose a project of our own model for the creation and development of an entrepreneurial ecosystem in the food industry, in particular for wine producers (Fig. 2).

3.1 Entrepreneurial ecosystem model in the food industry (wine producers)

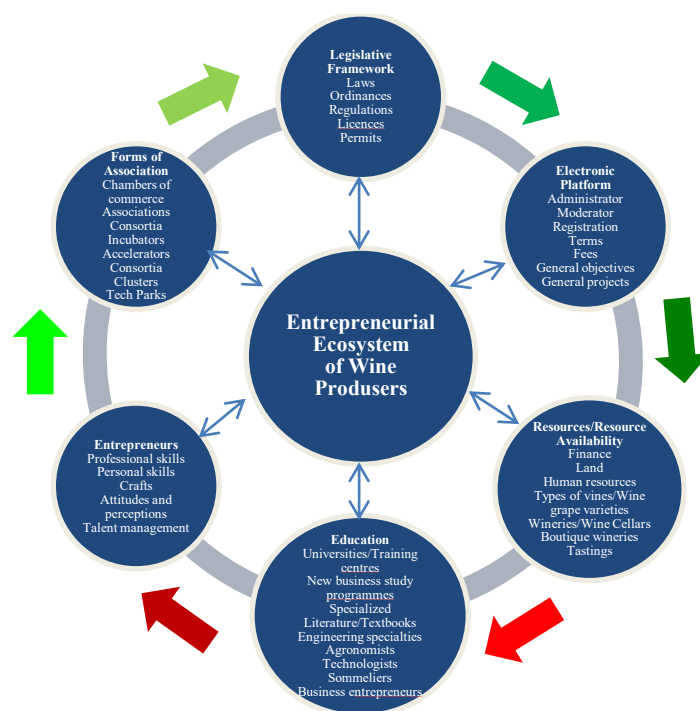


Fig. 2. Entrepreneurial ecosystem model in the food industry (wine producers)

The presented project of an entrepreneurial ecosystem of wine producers includes six related areas: legislative framework; electronic platform; resources; education; entrepreneurs and forms of business and alliance.

Area One: Legislative framework includes various subject areas laws, ordinances, regulations, licenses, permits, etc.

Area Two: The Electronic platform requires an administrator, moderator, registration terms, fees, common goals and projects, etc.

Third area: Resources – in terms of finance, land required that can be purchased or rented; wine grape

varieties; human resources; wineries; boutique wineries; tasting houses and tastings, etc.

The study shows that as a result of overexploitation of natural resources on the one hand and the rapid depletion of natural resources on the other, the biggest problem in the world economy, called “scarcity”, is emerging.

Area Four: The Education area includes universities and other learning centres; the need for new business curricula; specialized educational literature; engineering majors; agronomists; technologists; sommeliers and business entrepreneurs. There are major deficits in training for business and in business-science partnerships. The

analysis shows that, in the new economic conditions, universities need to realign their educational process to fully meet the requirements of the labour market. In this sense, it is necessary to update the curricula with a focus on business and to prepare more engineers with specialisation.

Area Five: Entrepreneurs requires professional skills; personal skills; crafts; attitudes and perceptions; talent management.

Sixth area: Forms of business association of entrepreneurs – chambers of commerce, associations consortia; incubators; accelerators; associations; consortia, clusters etc.

The presented aspects of the entrepreneurial ecosystem demonstrate its cyclical nature and interconnectivity between the various areas and their component elements.

4 Conclusions

The research conducted shows that there is a wide variety of entrepreneurial ecosystems. This creates opportunities for much better communications, business partnerships and development.

Entrepreneurial ecosystems are not static communities. They are constantly renewing and evolving.

The trends and the conclusions that can be drawn on the state and the evolution of the entrepreneurial ecosystems in the wine sector are the following:

1. The COVID-19 crisis has made it difficult for wine producers in all aspects of their activity. On the other hand, sales volumes in the store network almost doubled, as did interest in higher quality wines.
2. The energy crisis has dealt a severe blow to wine producers hard due to increased electricity prices and this has made it difficult for wines to compete on international markets.
3. The wine sector needs serious restructuring in order for wine producers to be efficient, professionally organised and adequate.
4. New legal frameworks and economic policies are needed to create and develop entrepreneurial ecosystems.
5. The integration of technological advancements within entrepreneurial ecosystems facilitates the inception of novel products and services.
6. Virtual entrepreneurial and social networks enable all participants to create new social and professional contacts that provide them with partnerships and useful information.
7. Strengthen the role of social responsibility in entrepreneurial ecosystems towards employees, their families and society by using different formats.
8. Bio wines are no longer just a fashion, but a real and important part of the market. The very high quality, high price range of bio wines are still produced in small quantities, making exports difficult.
9. There is a growing trend and interest in boutique wineries and wine for connoisseurs with special requirements and needs.
10. Due to the expansion of funding opportunities, a system of very well equipped modern wineries is being built.
11. The entrepreneurial ecosystem model for wine producers can be enriched, modernized and adapted continuously, incorporating new industry-specific characteristics.

The trends presented give reason to believe that the creation and development of an entrepreneurial ecosystem for winemakers will be of great importance in provoking entrepreneurial activity in the industry.

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