

**TECHNOLOGY ENTREPRENEURSHIP AND ENTREPRENEURIAL STRATEGIES***Alexandru ROJA<sup>1</sup>**Marian NĂSTASE<sup>2</sup>*

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**ABSTRACT**

*Technical progress and entrepreneurship have become drivers of economic and social stability and progress. Analyzing interdependencies arising between economy, technology and society become useful to identify the most appropriate strategies for competitiveness in the business sectors and supporting entrepreneurial new ventures. Globalization, technical and technological progress and innovation as the main drivers of economic growth leads entrepreneurs to innovate new business models and strategies. Thus there is a need to analyze the most important components that make up information technology entrepreneurial ecosystems, the way in which entrepreneurs relate to them, and especially the entrepreneurial strategic approaches.*

**KEYWORDS:** *entrepreneurship, entrepreneurial strategies, strategic management, entrepreneurial ecosystems*

**JEL CLASSIFICATION:** *M10, M13, L26*

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**1. INTRODUCTION**

Field of information technology is characterized by a very high dynamic, business start-ups emergence, and the opportunity for entrepreneurs to be competitive through a strategic approach. The paper started as a need to understand the reality of startups in information technology operating in the western region of Romania.

The research is based on two main directions as assumptions. The first line of research is based upon analysis of the way that interviewed entrepreneurs relate to business environment, specifically with the components of the technology entrepreneurial ecosystem. We were interested to find entrepreneurs opinions about opportunities provided by entrepreneurial ecosystem and if they found all the components and elements necessary for the development and growth of their information technology startups. The second direction of research was focused on strategic component of the business. We were interested also to analyze the entrepreneurial patterns related to the way that business has evolved and transformed over time. We search to find and to identify patterns that entrepreneurs have chosen, how they put their ideas and strategies in practice and what was the role of strategy in different stages of the business life cycle. For many entrepreneurs the only compass in their entrepreneurial orientation is still intuition and not strategy. When they engage in new ventures in the regional ecosystem, they found few reference points by which to start and grow a startup, a lack of support services to understand the steps and the skills they need in entrepreneurship and business management.

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## 2. TECHNOLOGICAL ENTREPRENEURSHIP

According to Schumpeter, the most important function of entrepreneurs is to reform or to reinvent the pattern of value generation by exploiting inventions. The new economic context characterized by globalization, knowledge, increasing role of innovation in regional innovation systems and the importance of technological entrepreneurship as a factor in the wealth creation generate the emergence of new types of entrepreneurial ecosystems (Camagni, 1995; Feldman, 1994; Porter, 1990). The reason why some regions are more advanced than others lies in successful use of new technologies and technological entrepreneurship fostering.

Related to Therin there are several words and definitions used in scientific articles for technological entrepreneurship as technology entrepreneurship, technical entrepreneurship, techno-entrepreneurship and technology entrepreneurial ecosystems (Therin, 2007).

The most cited authors Dorf and Byers, define technological entrepreneurship as a style of business leadership that involves identification and human resource high-potential capitalization, technology-intensive commercial opportunities, managing accelerated growth and significant risk taking (Dorf and Byers, 2005). In their definition Shane and Venkataraman see technological entrepreneurship as the processes of assembling resources, technical systems and strategies by an entrepreneurial venture to pursue opportunities (Shane and Venkataraman, 2004).

We can analyze technology entrepreneurial ecosystems or technological entrepreneurship at many levels and from interdisciplinary view perspective. We have identified more than nine key elements of technology entrepreneurial ecosystem: new technology venture, communities, universities, corporations, capital and investments, markets, business sectors, government, professionals, advisors and other components like incubators, accelerators and hubs.

The most important component of technology entrepreneurial ecosystem is the entrepreneur itself, and he is the key catalyst in the process of business sectors emergence and start-ups growth. Technology entrepreneurs have more technical skills and competences than non-technical ones, for example business skills. One important step in the new venture success is the transformation of the entrepreneurial mind into managerial one. Technology entrepreneurs have to understand how their businesses will evolve and the importance of managerial skills, and most important strategic oriented mindset. The most important three motivational factors of the technological entrepreneurs are independence, opportunities exploitation and value generation (Oakley, 2003). In information technology industry, the networks between entrepreneurs are enhancers of the first startup life cycle stages.

Universities as components of the entrepreneurial ecosystem are linked with other components of the same ecosystems. The most important role of universities is the educational one as a supplier of qualified workforce. Universities can act as a node in the network between corporations, incubators, research centers, clusters and technology parks. Universities have also an important role of spin-off generators.

At the regional level, collaboration between universities, research centers, start-ups, corporations, small and medium enterprises and other regional entities is very important to foster innovation, know-how transfer and human resource development.

At the regional level, clusters as a form of collaboration between companies can increase competitiveness of start-ups, and have positive effects on innovation and long term development of technology start-ups. The main role of technological parks, incubators, accelerators and hubs is to ensure and enhance collaborative and interconnected environment which increase interaction between communities, resources, ideas and technologies.

Entrepreneurial approaches in information technology industry have become important sources of value generation and growth in Europe due to the dynamics and the value that information technology

brings in our daily life and in business. The developed countries have realized the major role that information technology have in society and economy and developed strategies to encourage, ensure and accelerate the creation of start-ups in information technology field. Currently techno-entrepreneurship promises both high profits and high risks for founders and investors.

For entrepreneurs one of the biggest challenges is to validate and demonstrate the value of opportunity and business idea before its realization. One of the main goals of the entrepreneurial approach is to create and capturing economic value either by developing new technologies or by exploiting them. To achieve these goals, entrepreneurs must develop strategies and business models to recreate new dimensions of socio-economic life beginning from ideas and strategic vision.

The ability to recognize business opportunities is a major skill an entrepreneur should acquire and it will dramatically shape the future of his venture. To our view, despite a thorough understanding of the opportunity recognition process, its determinants of success and failure, quite an important lack of understanding remains as to appropriate anticipative and proactive approaches. The literature in the fields of management and entrepreneurship assumes that entrepreneurs are able to anticipate and to be proactive and to build a credible vision of their business. To act proactively, entrepreneurs need to understand the business environment and the influences of entrepreneurial ecosystem components to new venture strategies. The ability of an entrepreneur to be proactive enables them to understand and exploit the first signs of changes and to develop strategies to minimize risks and maximize competitive advantage in the business sector.

To counteract and minimize specific risks and dynamics of business environment, entrepreneurs have to formulate proactive strategies and deployment plans to make their startups competitive, or to increase the competitiveness of existing ones. On the other hand, the relation between entrepreneurs with entrepreneurial ecosystem is particularly important in the light of opportunities identification, information and knowledge acquired and conceptualization of future business value. Schumpeter in his works put the emphasis on entrepreneurs as those who, in opposition to traditional capitalists, engage in new activities or ventures that did not exist before and in innovative or creative ones (Schumpeter, 1976). In his view, entrepreneurs have to explore new opportunities in order to build a new world order while deconstructing or destructing the old one. Hence, entrepreneurship can be defined as an activity and a process involving the discovery, creation and exploitation of opportunities in order to create value thanks to the introduction of new goods, services, processes and organizations (Therin, 2007).

The way individuals recognize opportunities for business creation is one of the first critical abilities in the early stages of the business development process. Entrepreneurs are those people who sense, create and respond to changes and needs regarding a possible opportunity for profit. In literature we identified different approaches and are still adopted to understand this phenomenon. Davidson argue that in practice we can identify in entrepreneurial ecosystem three main streams of thinking about the nature of an opportunity: the objective approach in which opportunities do exist in the environment so that entrepreneurs can identify them and build a strategy to capitalize them; the subjective objective approach focusing on the ability and individual characteristics of entrepreneurs; and the subjective creative approach where the opportunity is built in the mind of the entrepreneurs using creative thinking (Davidsson, 2004).

If we consider that technology is at the core and origin of the new venture we will refer to technology based-entrepreneurship. We have identified many authors that paid attention to the concept of innovative entrepreneurship related to new technologies development. Gaglio, De Koning, Singh and Therin argue that entrepreneurship and opportunities are a social construct and correlated with entrepreneur values, behavior cognitive capabilities, knowledge, competence, skills and connections with entrepreneurial ecosystem and individual motivations (Gaglio, 1997; De Koning, 1999; Singh, 1999).

Technology based entrepreneurship brings in more novelty, innovations and R&D products on the markets. If technology is involved, entrepreneurship consists in bringing important changes into the traditional markets and new ones compared to the more traditional entrepreneurship.

For an entrepreneur in the field of technology, opportunity recognition starts with the sensing of a need or a change and ends with innovative solutions in which future potential economic value is validated and recognized. The new venture will generate value if the founder will understand the entrepreneurial ecosystem. Information's and knowledge should have been gathered in order to answer key issues regarding business model, new venture and markets.

Techno-entrepreneurs will have to undergo a series of other activities, non-technical ones related to management, including creative thinking, incubating, demonstrating, validating, promoting and sustaining (Jolly, 1997). Entrepreneurs will extend their resources and knowledge about technology, markets, managerial skills and competences through their professional, and all these are limited by their absorptive capacity and ability to understand the components of entrepreneurial ecosystem and relations between them. Techno-entrepreneurs will draft and redraft their vision and strategy linking the opportunities with business contexts and startup capabilities. Proactive entrepreneurs will understand the business environment and will innovate the business model to remain or to become competitive.

Technology parks will have also an important role in entrepreneurial ecosystems and in fostering startups competitiveness. The main role of technological parks is to interconnect components like communities, universities, governmental agencies and institutions, resources and to foster innovation through collaboration. Technology parks incubate startups, provide consulting and support services, infrastructure and serve like interface between academic institutions and organizations. The most important objectives of technological parks are: to generate the emergence of technological companies with high level of innovation based on favorable conditions, to be an interface between science and business environment, to develop regional economy, and to provide technical and business consulting services.

Corporations have also an important role in technological ecosystems. In addition to the innovative character of corporate entrepreneurship initiatives in large, medium and small companies can generate spin-offs when employees decide to use their skills and know-how into a new start-up venture.

## **2. TECHNOLOGY ENTREPRENEURSHIP IN THE WEST REGION OF ROMANIA**

Our research was conducted in the western region of Romania. This research followed two main directions. The first direction of research has examined the perception that entrepreneurs have about information technology regional entrepreneurial ecosystem. We wanted to find out the perception that entrepreneurs have about opportunities and influences that they perceive in the regional entrepreneurial ecosystem.

The second direction of research has focused on business strategic development. Specifically we analyzed the main challenges that entrepreneurs faced before and after business incorporation, the most important factors leading to business development, and most importantly how entrepreneurs have changed their strategic vision in time.

Our research is based on the administration of twenty questionnaires at the most important information technology companies in the region of western Romania. Questionnaires containing thirty questions were administered via interviews. Interviews were conducted during april - may 2014 and respondents were entrepreneurs founders of companies.

## 2.1 Linking entrepreneurs with entrepreneurial ecosystem

The first important objective of our research was to examine how entrepreneurs relate to regional entrepreneurial ecosystem. Entrepreneurial ecosystem through its components should support the emergence and development of startups, internationalization and providing resources for business growth. In this research we will examine the way that entrepreneurial ecosystem influence startups, entrepreneurial thinking and business strategies. The way that entrepreneurs relate to entrepreneurial ecosystem is different and depends heavily on their experience in the business. On the one hand, entrepreneurs with experience deeply understand the entrepreneurial ecosystem components and the links between them. Less experienced entrepreneur's relates differently, being more oriented on the opportunities and the need to validate business ideas, and finding the best source for financing business growth stages.

One of the most important components in the entrepreneurial technology ecosystem is practitioner's communities. We were interested to examine the involvement of entrepreneurs in these professional communities and how they perceive the opportunities provided by ecosystem in western part of Romania.

Most of interviewed entrepreneurs stated that they are actively involved in the professional communities, regularly participating at events conducted by them. Communities are groups of professionals bringing together professionals with a high degree of specialization in different fields of technology. Some interviewed entrepreneurs were drawn from these communities setting up their own start-ups. Participating at events held by communities was an opportunity to find co-founders for new venture, especially access to human resources with high level of specialization.

Most entrepreneurs consider extremely important the role of communities in bringing together professionals with a high degree of specialization in different areas of information technology. An essential role of professional communities in the western region of Romania is to encourage the exchange of information, know-how, access to new technologies and trainings of future specialists. These communities do not encourage competition, but the exchange of information and knowledge through collaboration. There are startups that are part of more extensive networks with a more complex form of organization as Regional Information Technology Cluster which offers many benefits to its members. Five of the twenty entrepreneurs interviewed stated that interaction with regional entrepreneurial ecosystem is limited to qualified human resources and highly specialized professionals. The first negative aspect noted is that the entities of entrepreneurial ecosystem in the Western Region of Romania does not sufficiently promote entrepreneurial culture and does not promote collaboration among ecosystem components. Also the entrepreneurial ecosystem don't help startups to become more competitive in a broader context.

This view was reinforced by other entrepreneurs who find it difficult to conduct business in the current regional entrepreneurial ecosystem. They believe that there are socio cultural aspects which are threats or challenge for entrepreneurs and startups especially for collaboration. Individualism that characterizes entrepreneurs in the region inhibits collaborative relationships and common goals settings. Entrepreneurs who own companies in the growth phase of the life cycle were able to establish relationships with other companies to carry out joint projects. More specifically, for not losing skilled employees, there are companies that work together and collaborate in regional entrepreneurial ecosystem.

Another important aspect to note, linked to regional tech ecosystem is that in the western region there are many large companies that have taken over a part of information technology professionals. These large companies prefer to act independently. One way that might exploit in a greater way the potential and flexibility of innovative startups would be that multinationals acting as nodes in collaborative partnerships and in complex projects where startups are involved.

Most entrepreneurs believe that one of the most important component of the entrepreneurial ecosystem has been the business incubator which host startups and companies operating in the

software industry and whose foundations were laid by the Polytechnic University of Timisoara. Entrepreneurs interviewed claim that the benefits brought by business incubator are of two types. Business incubator provided a range of facilities which cut the operational costs for startups. Another benefit was perceived by entrepreneurs as access to resources and a large business and professional network through which start-ups have become visible in a broader context.

Entrepreneurs who have reached the first growth stage, believes that most of the actions initiated by the major regional entities of the entrepreneurial ecosystem are only likely administrative not strategic. They said that at the regional level are not clearly defined strategies to increase competitiveness of startups in some high specialized fields of information technology.

Entrepreneurs believe that the most successful initiatives that can support the collaborative association of entrepreneurs in the entrepreneurial ecosystem are bottom-up arising from the vision, the will and the involvement of entrepreneurs and not as a consequence of the top level agencies or institutions which are catalyst in the entrepreneurial ecosystem. Entrepreneurs argue that some of top-down initiatives and strategies are useful because creates a common space for interaction between entrepreneurs and businesses. Entrepreneurs said that they would work with other local concurrent startups to benefit from greater opportunities at global level and to minimize risks. We concluded that there is a very large need at ecosystem level for innovation and to conduct joint research and development project aimed to increase competitiveness and international visibility.

Also the first direction of research was focused on the perception of entrepreneurs about the opportunities provided by entrepreneurial ecosystem where startups were initiated and in which they operates. Half of the entrepreneurs interviewed are considering that they don't see opportunities provided by entrepreneurial ecosystem in western region of Romania and they have to look for opportunities abroad. Entrepreneurs say that their companies are contacted more often by large companies from abroad seeking specific skills, especially to outsource a part of larger projects they carry out. The other half of the entrepreneurs interviewed, especially those who administer emergent startups, argue that they benefit from opportunities provided by regional entrepreneurial ecosystem. Competitive startups have support of Information Technology Regional Cluster. About the opportunities offered by regional ecosystem entrepreneurs consider that at the regional level the unique opportunity is the high capacity of universities to provide human resources trained in various fields. Although there many competent human resources in the region, but multinationals employ a large number of professionals, with the possibility of relocation and labor migration. A general view of the interviewed entrepreneurs is that government has developed competitive strategies to increase the dynamic of information technology sectors but the profit margin is very low for startups.

All surveyed entrepreneurs believe that the events organized by the main actors in the entrepreneurial ecosystem are very useful for establishing new contacts, facilitating the know-how transfer, contributes to more easily identification of non tech specialists in the field and identify the most appropriate sources of funding.

Entrepreneurs with experience in the field conclude that in Romania there is no technological entrepreneurship in the true sense of the word, and the regional tech entrepreneurial ecosystem don't have the potential to validate, sustain and develop business ideas in information technology.

Since information technology sector is extremely dynamic it is important for organizations to become or to remain competitive, and entrepreneurs must consider the continued development of professional and personal skills and competencies of its employees. In this respect, entrepreneurs believe it would be useful to organize technical training to obtain qualifications and non-technical to acquire entrepreneurial and managerial skills needed in interaction with other employees. To be credible in front of a strategic client, a company must develop and upgrade skills, competences, know-how and receive certifications in the most advanced technology fields. Trainings and certification programs are considered guarantees for startup competitiveness. Most entrepreneurs believe that their companies could develop competitive strategies that would benefit from leading specialists. We conclude that the entrepreneurial ecosystem need to certify skills acquired in

information technology, and develop entrepreneurial and business management skills. Administered interviews have taken into account the entrepreneurs' perceptions about the lack of vision and strategies to define a technology entrepreneurial ecosystem. Entrepreneurs view was that the lack of education, poor entrepreneurial culture, and lack of business knowledge could be sources of low level competitiveness. All interviewed entrepreneurs agree that it is extremely useful and important to take their businesses to the successive stages of growth.

All interviewed entrepreneurs believe that involvement in the development of entrepreneurial ecosystem is critical, and some of them said they are actively involved. When we asked entrepreneurs how they relate to entrepreneurial ecosystem, they talk about communities and events held by the main actors that aim to generate cohesion between ecosystem individuals and groups, identifying and attracting human resources and in some cases about mentoring.

Entrepreneurs believe that the entrepreneurial ecosystem in general provide a little help in the phase of business emergence. A positive component of ecosystem was the software incubator where most entrepreneurs have started their ventures, but the access criteria were not based on performance or strategic vision. Because entrepreneurial ecosystem does not offer many opportunities, entrepreneur's main purpose was the visibility of their businesses and increasing the potential of business development. They argue that most initiatives from regional actors should establish strategic direction of the ecosystem, and that strategies do not exist in practice, but are merely administrative in nature. The ecosystem don't have a strategy through which start-ups can specialize and provide services and products in areas with high degree of specialization.

That specific information technology entrepreneurial ecosystem in western Romania is one emerging, and components like business accelerator, consultancy services, and synergies between components are missing. Entrepreneurs understand that although their business can become competitive because products and services are demanded by the market, but it is extremely difficult for a start-up to become competitive at a larger scale. For an entrepreneur it is important to validate the business idea before new venture starting and to find the most appropriate ways to scale the business. In this respect, freelancers try to create a large enough customer base to support business development.

### **2.3 Strategic entrepreneurship in information technology**

The second part of our research has focused on strategic approach of investigated startups. One of our goals was to decode the strategic approach and business strategies adopted by entrepreneurs, but especially strategic entrepreneurial patterns.

In the first part of the research we examined challenges as threats or opportunities that entrepreneurs faced before business incorporation. At this question, entrepreneurs who could not raise capital from investment funds believe that one of the biggest challenges has been the financing successive stages from start to grow. Entrepreneurs who opened in Romania subsidiaries of foreign companies were faced with the reluctance of the management board of the parent company and the conditions imposed by investment funds who manage the parent company. For freelance entrepreneurs opportunities to legalize the new venture by incorporating business ideas in a new company has brought many benefits. The most important being the ability to develop new projects, increasing the company visibility and the ability to attract financial resources from investors and investment funds.

Another challenge that entrepreneurs perceived as being important before incorporation of the business idea into a new startup was the lack of networking contacts and professionals. Lack of early identification hampered relations with partners and customers, and business idea validation was difficult. Cohesion components of entrepreneurial ecosystem could generate these links.

All entrepreneurs felt the lack of experience and knowledge of entrepreneurship and business before starting a business. They have no skills in entrepreneurship and business, don't know the steps to set up a start-up, and all these have significantly reduced chances to convince the investors.

Therefore, business knowledge is important, not only to start and grow a business, but to make it more competitive and attract the necessary financial resources to ensure the growth stages.

In our research we were interested to identify the main challenges, namely the opportunities and threats that were perceived by entrepreneurs at the first stage – incorporation of business. Due to the risks generated by business uncertainties, entrepreneurs need to take more calculated decisions. The majority of entrepreneurs interviewed, over time, turned entrepreneurial thinking in managerial thinking more strategically focused on opportunities and increasing business competitiveness. This kind of transformation was more visible at business development phases. Business development has led to the increasing complexity of situations that entrepreneurs faced and their responsibilities have increased over time. In new contexts, entrepreneurs became aware and should act more responsible. Also they have to develop better some skills when they have to take major risks decisions. At the growth and maturity phases, entrepreneurs were willing to risk in a lesser extent. It is known that entrepreneurs have a greater propensity for risky decisions. Business development transforms entrepreneurial thinking because business complexity increases in time.

Another challenge that we deduced is that startups are adapting to the requirements of multinational companies. Although multinationals prefer the stability of contractual relations, entrepreneurs have found that the flexibility and agility of their startup are important conditions for the business to remain competitive.

Most entrepreneurs believe that strategic flexibility is particularly important in relations with major customers due to stiffness and organizational procedures that characterize companies with a high degree of organizational hierarchy verticalization. Therefore, a start-up or an entrepreneur should adopt proactive strategies to understand the behavior of customers and to be flexible in adapting the strategy and in accordance with the client`s procedures and processes.

Cash flow is one of the problems most frequently reported by entrepreneurs. Regardless of the stage of development of their business, entrepreneurs considered that financial strategy is particularly important to ensure the next development stages.

Regarding entrepreneurial ecosystem capacity to provide necessary skills, entrepreneur`s opinions are divided. The skills needed for the optimal functioning of a startup in information technology are manifold, requiring engineers in information technology, and high technical and business skills. Entrepreneurs said that in the field of information technology they can find specialized human resources because of educational component of the entrepreneurial ecosystem, but at the regional level they consider that is a lack of skills in social and economic sciences. Entrepreneurs interviewed said that it is extremely difficult to find qualified human resources in areas such as project management and marketing of information technology products. Ten of entrepreneurs said that it is extremely difficult to identify and attract strategic human resources for business development stages.

From the interview, it appeared that all entrepreneurs, when starting the business were extremely dynamic trying to respond as quickly and efficiently as possible to the business opportunities. They responded to the needs of products with prototype products because they have extremely short time to go to market. This opportunistic behavior such as learning by doing was a good strategy, especially if the entrepreneurs develop a strategy to enter on the new market with new products, and leaving the product improvement for the later stages. Strategic proactivity and adaptability to customer requirements conduct to further competitive advantages of startups that have secured the first stages of growth.

The attitude of entrepreneurs who have a higher tolerance for risk and uncertainty reflects their behavior. More specifically, even if it is risky, it is more appropriate for them to validate a business idea, a product or service directly to the market.

Entrepreneurs also face challenges related to the experience, skills and competencies. In the sample studied, we identified fourteen entrepreneurs who do not have and do not realize the need to develop managerial and leadership soft skills. They experience situations where leadership and



team management knowledge would be useful. Business development multiplied contingencies that entrepreneurs had to manage, and soft skills and abilities are required from the first stage of business development.

In terms of strategic decisions that entrepreneurs have taken we found that the most important moment in the strategic approach was when entrepreneur was forced to rethink their business. Many of the interviewed entrepreneurs said they initially were interested in providing outsourcing services for big companies. More specifically took part in the complex projects carried by other companies. The main challenges in these projects were agility, keeping labor costs low and project management skills. Many entrepreneurs have adopted the strategy of outsourcing at the beginning of their businesses to secure the financial resources necessary for the later stages of growth. Entrepreneurs have realized, however, that outsourcing will not increase the competitiveness of the startup on the medium to long term because the main customers for this kind of projects will quickly redirect to regions with cheaper labor from emerging countries. Thus, entrepreneurs have been forced to make a shift in their strategy and identify ways to be more competitive through innovation, research and development and product development. Over 70% of investigated organizations were involved right after launch in outsourcing projects. Some of them change the strategy, innovate and develop new products for global clients. Other organizations adopted hybrid strategies and create proprietary products and also offer outsourcing services. This change was particularly interesting to study because entrepreneurs changed the business strategies and in some cases the organizational structure. Some organizations have changed the strategic direction of the business, others are still struggling to identify the best place in the business sector where could harness a greater innovative potential.

Strategic vision aim is to set targets to be accomplished in a time frame. The design of the strategy gives clarity on future business actions to be taken. Setting short and medium term objectives contribute to entrepreneur's proactive behavior which is extremely important in a complex and highly dynamic business environment as that of information technology. In the absence of a strategic vision entrepreneurial decisions are based primarily on their intuition, which on the long term can generate some risks. We believe, however, that the entrepreneurs may be disadvantaged by an attitude based only on intuition and the risks that come from the business may affect the competitiveness of the organization. Strategic vision as an essential element of a strategy includes the organization's competitive components that can ensure its competitive position in the business sector.

Entrepreneurs think different when we ask for their strategic vision. To be more rigorous, we divided respondents into two categories. In the first category we included entrepreneurs who have five to ten years' experience in entrepreneurship, and in the second category entrepreneurs who have one to three years of experience. Their views differ significantly. The first category of entrepreneurs said that in the earlier business stages they don't develop strategic plans or have not defined clear objectives. We associate this with entrepreneurs intends to exploit opportunities in the entrepreneurial ecosystem. Entrepreneurs with more than five years' experience in the business field said that at the initiation of the startup they don't consider necessary to define clear goals nor to define a business plan. An interesting conclusion is that currently experienced business entrepreneurs consider extremely important to think strategically. It is important to establish strategic and tactical objectives, to identify those capabilities and market niches where a start-up can be competitive. It reiterates several times the need to understand the business and the entrepreneurial ecosystem before initiating a startup. We conclude that although the entrepreneurs had started to think strategically, while they understand the need to be competitive and to draw strategic objectives for their businesses. We can argue this transformation with the increasing complexity of business, and this confirm other hypotheses that we sought to validate our research, namely the transformation of entrepreneurial thinking in managerial thinking. We noticed a transformation of the strategic mindset of entrepreneurs who have business experience, and the way

that they perceive the business they run. At the beginning of the business, entrepreneurs had no clearly defined the business strategy but during its development and going through the first stage of growth, entrepreneurs have become more concerned with harnessing the capabilities and organizational potential in a strategic manner. We argue this by the fact that increased complexity of activities can change entrepreneur's mindset to a strategic one and they understand that a business can grow only if it is competitive. The need for competitiveness, risks associated with business and experiences, have led entrepreneurs to think strategically. On the other hand, entrepreneurs with experience of up to three years in business and entrepreneurship perceived a real need for a strategy or a business plan to convince investors, and not as a guide in business development. This is due mostly in part to the lack of entrepreneurial support services and underdeveloped entrepreneurial culture. Certainly for an entrepreneur to develop a business strategy he must acquire some knowledge in economics and management, but there is a reluctance to call on the expertise of their consultants. Entrepreneurial ecosystems should provide this kind of services to a higher level of professionalism.

Entrepreneurs with less experience in entrepreneurship partially understand the role of a strategic vision before starting a new venture. They seek to exploit as soon as possible the opportunities. Few of them are considering that to be competitive in this field an entrepreneur need to understand trends in technology and society, and to identify the most appropriate ways to enhance the competitiveness of a startup, but especially to innovate.

#### **4. CONCLUSIONS**

This research had two main research directions. We were interested to identify several important components of the information technology entrepreneurial ecosystems that contribute to the emergence and development of startups. Also, we were interested to find out how entrepreneurs have initiated startups in the western region of Romania, and how this emergence relates to entrepreneurial ecosystem components. From research conducted, we conclude that entrepreneurs relate with entrepreneurial ecosystems in a narrow way. More than that, all entrepreneurs claim that the western region should have a strategy through which all the ecosystem components to be interconnected to support entrepreneurial initiatives. We can also conclude the fact that at the ecosystem level must be developed a strategy that represent a foundation for emergence and development of new startups, and also to increase competitiveness through innovative new venture. Also entrepreneurs with experience and business founders understand the need to change their business vision and look forward in a strategic manner. This transformation is driven by business refocus from outsourcing to product or service innovation. Entrepreneurs with experience in business understood that strategic vision and strategic management are required in high competitive business environment. Ecosystems oriented to high dynamic markets and who owns resources, capabilities and unique potential can become visible at a larger scale or even global. A regional ecosystem with vision and strategy will be competitive and able to exploit the region's resources and entrepreneurial potential. Synergies that occur in the entrepreneurial ecosystem can support emerging and new venture development and can improve competitiveness through uniqueness and distinctiveness.

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