

A STUDY ON THE ROMANIAN BIOTECH ENTREPRENEURS PROFILE AND CHALLENGES

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Abstract

The present study was trying to profile the Romanian Biotech Entrepreneur skills, knowledge and competencies adapted to the national environment in the European context. The study is based on a questionnaire survey applied on a panel of 30 Romanian entrepreneurs or top-management persons in the field of biotechnology. The set of 50 questions have covered different topics, respectively the general profile of the respondents and their companies, entrepreneurial profiling from the respondents' point of view or the entrepreneurial societal context. It was concluded that the intervention areas would be the following: much more measures to support young entrepreneurs, less bureaucracy and taxes, changes in work legislation, professionalism in funding agencies, more training opportunities and written guides, changes of the negative society's perception about the entrepreneurship. An important conclusion of the study was that the training, especially the high-education, is an important factor for starting and running a business in the biotech field.

Key words: biotechnology, entrepreneurship, top management, profiling, skills, competences

INTRODUCTION

A biotech entrepreneur is unique from all other entrepreneurs; a too cautious, too analytical and too practical person will never start a business in biotech [8]. Apart of being independent, confident, having willingness to take risks, having passion for its work and ability to work long hours, the biotech entrepreneur is usually an accomplished scientist, bioengineer, physician or business person capable to identify problems but not focusing too long time on, finding lots of solutions to any situation. Concluding, it takes a certain type of personality to work out independently, but there is also a range of skills needed to find success.

As reported by the European Commission experts [3], in 2015 were registered about 450,000 SMEs in Romania and the Romanian SME sector provided about 67.5 % of

employment in the private sector, slightly above the EU average in 2015. About 60% of such SMEs have one or two employees. To understand the context, the country was hit by the economic crisis which spread across Europe in 2008. The private sector played a vital role in economic recovery and, by 2011, the Romanian economy had returned to a path of growth, but despite reaching a promising dynamic with 4.8% GDP growth in 2016, the country has yet to recover fully from the crisis (EC, 2017).

During the implementation of the Erasmus+ project 2017-1-RO01-KA203-037304 [11], the authors have conducted a survey among Romanian biotech business persons trying to profile the national biotech entrepreneur skills, knowledge and competencies in the national context.

MATERIALS AND METHODS

During 2018 the team has developed a survey, on both printable and digital (on-line) format, and sent to about 200 potential respondents via e-mails or on paper support. The study was based on a questionnaire of 50 questions covering different topics, respectively the general profile of the respondents and their companies, entrepreneurial profiling from the respondents' point of view or the entrepreneurial societal context.

The questions and answered have been grouped as following: (1) general information on the responded; (2) respondents' companies profile; (3) respondents profile; (4) biotech entrepreneur profile through entrepreneurs' eyes; (5) biotech entrepreneur in the societal context.

RESULTS AND DISCUSSIONS

Comprehensive data and statistics about Romanian biotech SMEs couldn't be found. However, the Romanian Biotech Database [7] has registered only 28 companies in the Life Sciences sector in the sector of which 28% where in pharma industry, 39% offering medical services and only 25% were dedicated to biotech research & innovation or services.

After repeated attempts of spreading the questionnaire, towards more than 200 targeted persons, have been received answers from a panel of 30 Romanian entrepreneurs or top-management persons in the field of biotechnology. Considering the fact that that entrepreneurial initiatives in Romania are rather limited, and in the Biotech field is even more limited, the panel was considered as representative.

General information on the respondents

Form the total respondents only 30% were shareholders of the companies, while 33% were employers with management responsibilities. All respondents have graduated university programs of different levels: 23% finalized bachelor studies, 37% hold a master degree, 20% graduated other post-university studies and only 20% hold a

PhD diploma. From all this higher education graduation, 73% have followed other trainings in different topics (Fig. 1). It can be noticed that 43% have followed economic training of which 5% followed entrepreneurship classes. Our results are in line with results reported by other authors [4, 10] which emphasize the demand in biotech companies for staff with a high level training (PhD and postdoctoral graduates), instead of high-school or bachelor graduates.

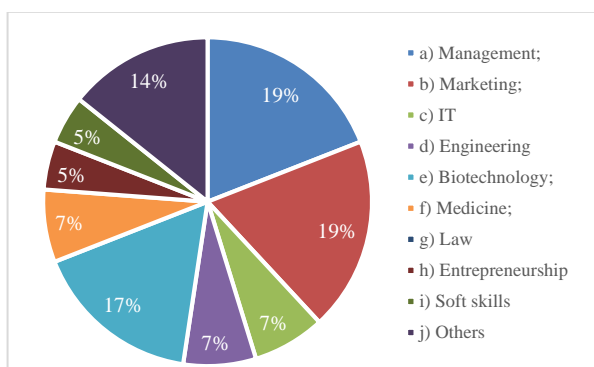


Fig.1. Distribution of the training courses followed by Romanian biotech entrepreneurs
 Source: own analysis.

In terms of income, over half (57%) of the respondents have a modest income comparing with other biotech employed people in Europe [2], respectively maximum 1,000 euro/month; 23% have an income between 1,000 and 2,000 euro; 10% between 2,000 euro and 3,000 euro and only 10% over 3,000 euro/month.

One third of the respondents (33%) declared that they are over 45 years old and only 17% are still in there teen (most probably recently graduated). However, as gender distribution, it was scored equally 50% men- 50% women.

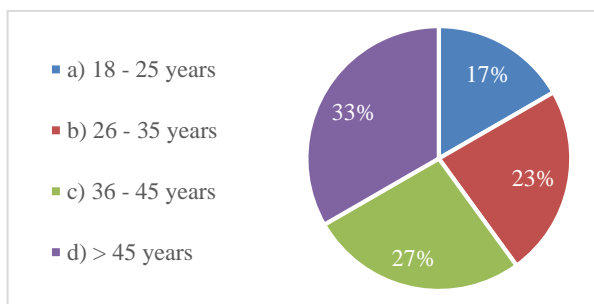


Fig. 2. Age distribution among Romanian Biotech entrepreneurs
 Source: own analysis.

Respondents' companies profile

When asked about their companies' profile (Fig.3) almost half (43%) are in pharma and medical sector, 16% in food industry and 13% in agricultural biotech companies. According to their statements, over 55% of their companies have been set on the market 10 years ago, while only 17% are "young companies" (1 to 5 years old).

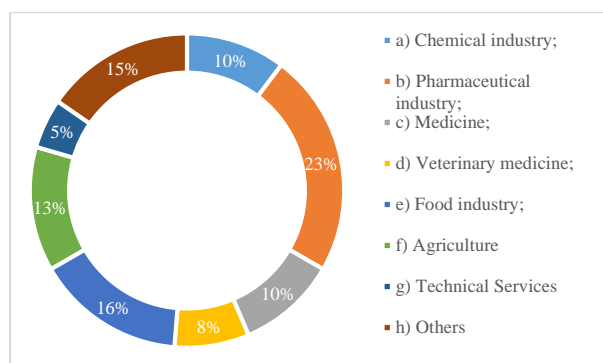


Fig. 3. Companies' profile of the respondents employed in biotech field

Source: own analysis.

In terms of the **size** of their companies, half of them have over 50 employees, while only 20% are of small size (2-4 employees). Of all these companies, over 63.3% are acting on international market, 20% are active on national market and the rest on local/regional level. Correlated with this, only 20% has declared that they have a family business.

Respondents' profile

The respondents have been asked about their attitude on risk in business. Almost half (44.5%) declared that they are caution persons and prefers small, but safe gains; the rest (65.5%) declared that they are not afraid of taking risks, assuming the idea that gaining and losing are part of the business.

The understand the respondents' choice for their job or initiative, some questions have been connected to their families, background and beliefs. One of such question was related to their family background in entrepreneurship; surprisingly, or not, almost half of the respondents (47%) answer that in their families were taken entrepreneurial initiatives and 79% of such initiatives are considered as successful.

An interesting answer was that 75% of the respondents are on their first entrepreneurial attempt, while the rest on the second attempt and they haven't lost their confidence in success. As inspirational sources for starting their business 34% declared that university studies were their running support, while 18% from former job or project research in which they were involved.

When asked what made them to start their business, almost half of the respondents (45%) have chosen the answer "I am passionate and I think I can add value in this field making use of my knowledge and expertise", 25% declared that the desire of being independent was the driven thought, while 20% are sure that a biotech company has stability on the market and is a sure job.

To see how dedicated are to their jobs, the respondents have been asked about daily allocated time to their work; looks like being biotech entrepreneur is demanding, because over 60% declared they are working over 10 hours a day.

In terms of financial resources, the answers distribution was not very surprising. When started the business 50% declared as source their own funds and 30% from families or friends. Nowadays, when the business is running, the 87% of the respondents declared that the company profit is the main source of funding. Only 6.7% are accessing non-refundable funding from national or European programs. This may be correlated with studies of [2] which reported that a survey conducted by the Romanian Council of SMEs shows that over 81% of SMEs do not intend to access structural funds in the future. One of the reason may be linked to the rate of success which is very low; according to the same survey, only 0.18% of the companies that try to access funding obtained an approval of their project.

On their start or during the company development the entrepreneurs have faced different challenges. When starting the business, the respondents said equally that finding financial sources (25%) and obtaining authorizations and approvals (25%) were the main challenging issues; other issues were

related to find experienced personnel (18%) and the high taxes (18%). Our data is in agreement with data reported for the period 2009-2014 by other authors, after the last economic crisis [12]. During the business development, the first challenging issue is linked to bureaucracy (34%) and difficulties in accessing new sources of funding (23%); high taxes (13%) are still an issue.

An important image on the respondents' profile was their happiness in relation to their actual working status; less than expected, only 56% declared to be in different degrees of happiness, while the other 44% are not happy at all and have to change something in their working situation.

The most important values that have supported the Romanian respondents in their decision of becoming an entrepreneur or helped them to make the career choice were the following: creativity, independence, flexible working program, being recognised as specialist in the field, honesty and cooperation.

From a scale of 1 to 5, the respondents placed their managerial skills at 3.7; in the same scale, other valences of the respondents were, in order, the following: team working and capable to solve problems; creative thinking; communication skills; negotiation and conflict resolution; networking, time management, leadership attitude. Among the respondents, 71% declared that they have good and very good technical skills.

Some free style questions have been proposed to the respondents. When asked about what is the most important principle / rule that guides them in their personal life the answers varied a lot, from honesty and fair-play to being empathic, stay close to the family, modesty and kindness.

Meanwhile, they have been asked what is the most important principle / rule for guiding in business and the answers varied again: action, dynamism, competences, professionalism, fair play, respect, take risks, invest and develop, innovate, passion.

Also, the respondents have been asked if they have entrepreneurial models and very diverse examples have been chosen, of national or

international interest. The nominated Romanian models of international recognition were Ion Tiriac (automotive and insurance), Ana Aslan (health and pharmacy services and produces), Sorin Minea (food industry), while international nominated were mainly IT titans (Bill Gates, Steve Jobs) and Andrew Carnegie (steel industry).

Biotech entrepreneur profile through respondents' eyes

After looking on their insight and answering on issues related to their status and companies, the respondents were asked about what would they believe to be the "ideal" in biotech entrepreneurship.

On the respondents' belief, to be a successful biotech entrepreneur you need to have managerial skills (97%), to have interpersonal skills like communication, negotiation, teamwork, time management, networking (85%), to have a large social network (almost 76%), which is agreement with what was reported by [9]. Only 58% of the respondents consider that having technical skills in the field is a request for success.

Meanwhile, 86% agreed that innovation is a key quality of the biotechnology entrepreneurship, while 71% considered that entrepreneurial skills can be gained through education.

Asked about which expertise may have the highest impact on the biotech business success, the Romanian entrepreneurs believe that equal contribution have the following (about 3.3 each, as value on a scale from 1 to 5): leadership, communication, innovation capacity for creating new products / services, building / integrating into a strong professional network, rapid and effective adjustment to environmental progress; marketing skills, using modern management methods and techniques, identifying new business opportunities. Actually, leadership is considered all over the world one of the most important driving experience in biotech entrepreneurship [6].

Biotech entrepreneur in the societal context

The biotech entrepreneurs' beliefs in relation to the societal context are somehow concerning. Over half of them (62%) do not

agree with the idea that they have a good image in the society and media attention spotted on them. In contrast, almost 76% of the respondents agree with the idea that entrepreneurship is considered a valuable professional choice for both the entrepreneur and society.

Also, attention has been given to the potential reasons for the business failure. Business failure was considered by 64% of the respondents the result of lack of managerial skills, while the rest agreed that failure is due to the lack of technical skills in the field. As a good point, almost 72% considered that failure is not a reason to don't start a new entrepreneurial initiative and such failure doesn't influence negative the society perception on starting a business.

When asked about what is the most common way to access information / acquire skills and knowledge for business development, the answers were somehow equally distributed (Figure 4); more importance are given to attending courses and to networking (discussions with other entrepreneurs).

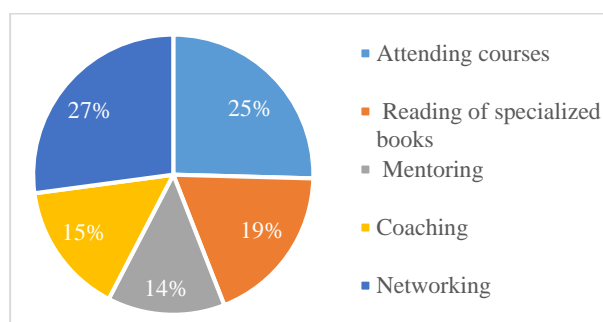


Fig.4. Answers distribution on ways to access information or acquire skills and knowledge for business development

Source: own analysis.

Asked about the national societal context, only 24% of the respondent biotech entrepreneurs agreed that the national culture encourage the entrepreneurial initiatives. Solutions have been proposed in the last time; high trust and large network of the entrepreneurial ecosystem may accelerate the knowledge and innovation process and universities may play a major role in this direction [5]. As a regional study in Timis

county emphasized, changing culture can be done through education [1].

A challenging free question addressed was if they have had the power to make a change in Romania, what would they change to encourage entrepreneurship. The answers were: less bureaucracy, less corruption, special funds and financial facilities for young entrepreneurs, easy access for funding, create and maintain a competition context, develop guidance tools and trainings, changes in the society negative perception on the people having entrepreneurial initiatives.

In the very end, the biotech entrepreneurs have been asked to provide some advices to the young people eager to start a business in biotechnology field. Here are some responses: in the category TO BE were include professional, patient, creative, hardworking, optimist, perseverant; have courage; updated skills and competences; any idea should be tested, even if it fails; biotechnology has vast applications, take one; access the existent know-how.

CONCLUSIONS

Our survey on a representative panel of Romanian entrepreneurs or top-management persons in the field of biotechnology lead to a series of conclusions, much or more correlated to the entrepreneurial context in the country.

In biotech companies there is a high demand for tertiary level graduates (master, PhD) and these graduates have to continuously improve their technical and managerial knowledge and skills following training courses.

Among Romanian biotech entrepreneurs, only 17% are recently university graduates, of maximum 25 years old. On gender level the distribution is equal among men and women.

Most of the biotech companies in Romania have a health/pharma profile, followed by food industry and agricultural goods and services and only 20% of all are of small size (2-4 employees). Over half of the respondents belongs to companies active on international level.

Regarding the Romanian entrepreneur profile here are some conclusions on the surveyed panel: 65.5% are not afraid of taking risks, assuming the idea that gaining and losing are part of the business; the main inspirational sources of starting the business were university studies and former job or involvement in a research project. They have identified own valences the team working and capability to solve problems; creative thinking; communication skills; negotiation and conflict resolution; networking, time management, leadership attitude.

In terms of challenges, when starting the business, the respondents indicated equally as most challenging, to find financial sources and to obtain authorizations and approvals, followed by finding experienced personnel and the high taxes. During the business development, the first challenging issue is linked to bureaucracy and difficulties in accessing new sources of funding, while high taxes are still an issue.

On an ideal vision, the respondents indicated that to be a successful biotech entrepreneur you need to have managerial /leadership skills, to have interpersonal skills like communication, negotiation, teamwork, time management, to have a large social network. They have all agree that innovation is a key quality of the biotechnology entrepreneurship. An important conclusion of the study was that the training, especially the high-education, is an important factor for starting and running a business in the biotech field

When asked about the national societal context, most of the Romanian biotech entrepreneurs agreed that the national culture doesn't encourage the entrepreneurial initiatives. In return, when asked if they have had the power to make a change in Romanian entrepreneurial environment, what would they change, answers were linked to less bureaucracy, less corruption, special funds and financial facilities for young entrepreneurs, create and maintain a competition context.

Instead of ending with our conclusions, we choose to put here conclusions from our interviewed biotech entrepreneurs. The most

important said the biotechnology business is an extremely beautiful business, even if is challenging; there are plenty of opportunities, importantly is to take the chance.

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