



Bio-Entrepreneurship: The New Innovative Gateway

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Abstract

In this study, the risk, challenges and cost of bio-entrepreneurship has been explained in detailed with examples. In the past, it can be observed that biological companies may have difficulty finding resources when conducting research due to high costs. But in the post-pandemic period, it is clear that there are new alternatives that can replace high health expenditures. Therefore, especially in the near future, biological entrepreneurship will be the most needed field in the world and it will find opportunity to develop with the help of artificial intelligence and deep learning machines.

Keywords: Biotechnology; High Cost; Artificial Intelligence

Introduction

Bio-entrepreneurship includes two different disciplines science and business which are based on innovation. Bio-entrepreneurs require a good laboratory environment and instruments for creating business models and alternative related strategies. Networking is also important to share ideas and to find cost reducing policies.

Biotechnology is a sector based on science and deals with biology to produce and/or develop health-related products, tools and applications, especially related with food, agriculture, medicine, and chemistry. Biotechnology has applications in different economic sectors, especially in environmental fields [1].

Initiative, the market size or how many defects will be eliminated, should be determined before the work starts. Otherwise, the large research expenses before the failure of the business plan will not be recovered. The well-known bio-entrepreneur, Meyers (cancer research centre, 2021) [2,3], believes that whether in the private sector or in academia, people have basic ideas behind the adoption of

bio-entrepreneurship. They analyse their shortcomings and begin to develop bio-entrepreneurship. These considerations are the main reasons why most bio-entrepreneurs enter the industry.

It could be observed that no one did it well before biomedical and health concepts entered the market. In other words, if you have an idea, if you do not put this idea into practice in your daily work in the company, then the idea will be sent out.

As we all know, currently biotechnology has evolved in the world. Today, artificial intelligence (AI) are used effectively and efficiently in diagnosing the health problems. For diagnosis, helpful health applications can be found in the market Matteo C, et al. [4] such as Buoy Health, Mandarin, and One drop. AI helps the practitioners to reduce the time spent on routine check-up and administrative issues. It can pool up all the necessary and comparative data to help the healthcare practitioner to diagnose the health problem in a more qualified and successful way Combi C, et al. [5]. AI will allow the doctors to reduce the medical errors.

Literature Review

Entrepreneurship, at the beginning of human history, started from meeting people's own needs, and then developed to provide solutions for the needs of others and to generate income, and created the concept of trade, GEM [6]. The history of biotechnology are related with the original civilization. The first recognized application of biotechnology was the development of baker's yeast. Currently, innovative biotechnological products and systems have an important impact on the development of biological findings in the areas of agriculture, animal sector, gene therapy etc. Biotechnology products; from personalized biotechnology drugs to gene therapy, from CRISPR gene surgery to biofuels; from biosensors to artificial intelligence and bio computers.

Biotech products resulting from long and costly research especially done at the research centres of the universities and development processes have high economic value. In recent years, the economy created by such products has become a development model for some countries. This is called 'bio development'. Biotechnology is one of the priority areas for the countries, and it has become almost a necessity to establish a strong bio development strategy.

The total turnover of the global biotechnology industry exceeded 60 Billion USD in 2005 for the first time in its 30-year history SPO [7]. When this knowledge is compared with the income of 9.1 Billion USD in 1996, it is understood how high the growth rate of the sector is. Production areas established to produce in the field of biotechnology attract attention with their high costs. For example, in the United States, a facility with 100 employees on an area of 7000 m² resulted in a cost of 10 million dollars in 2005 (European Commission Report) [8]. The same is true for production facilities in Europe. Biotechnology companies try to establish facilities in lower cost regions. Apart from this, it is seen that they lease an existing biotechnology facility. Production costs make it necessary to use different production methods in productions in an important field such as biotechnology.

Production capacity facilitates the production of high value-added and technological products. With the ability acquired in the production field, it can produce marketable products, that is, products with universal competitiveness. The high cost of production facilities in the biotechnology sector also requires the correct marketing of the planned products. In recent years, it has been observed that production facilities have been established in countries that allow facilities to be established at lower costs to avoid high costs to a certain extent. There are also state-sponsored production facilities around the world to carry out research and development activities and realize production in the field of biotechnology. In these areas, there are enough equipment

for various productions that are the subject of biological production. Instead of establishing different production facilities, it is more advantageous to establish production areas that can support each production.

Conclusion

As we all know, biological research has gained more importance during the pandemic. In this process, the new biological enterprise will have a great advantage. They may not experience the troubles of surviving a company established a long time ago. It is important to have right alternatives in the crisis. In the long run, health-related sectors all over the world will gain value. This is a general inference.

Some health practitioners may try to make innovative investment after gaining experience with the routine clinical treatments. Especially doctors who are familiar with the clinic's problem-solving ability has also been improved. In this case, the companies established by doctors in health-related fields often aim to fill the huge gaps in the clinics. In short, for a person from a company, creating innovation and bio-entrepreneurship related to the company is as important as in all other fields.

In the past years, it can be observed that biological companies may have difficulty finding resources when conducting research due to high costs. But in the post-pandemic period, it is clear that there are new alternatives that can replace high health expenditures. Therefore, especially in the near future, biological entrepreneurship will be the most needed field in the world and it will find opportunity to develop with the help of artificial intelligence and deep learning machines.

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