Anti-crisis policy of bio-enterprises in conditions of COVID 19 through innovation

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Abstract: The COVID-19 pandemic is one of the biggest challenges facing modern society and business. In a dynamic crisis situation such as the current one, the forecasts for the impact of COVID-19 on the world economy and the development of individual business structures are changing. Business is facing more and more difficulties, and uncertainty and uncertainty are increasingly taking over global and economic life. The implementation of an anti-crisis policy based on innovation is becoming key to tackling the pandemic. The main objective of this study was to demonstrate the challenges of bio-enterprises during corona virus pandemic in Bulgaria and the opportunities they can draw to create innovation. A number of research methods and techniques for the tertiary and empirical part of the work were applied in the aim of realizing the objects and goals of the research – economical, statistical, mathematical, descriptive, comparative, monographic, graphical, questionnaire survey, etc. Initial contact and other basic information about all organic producers are collected from the official register of the Ministry of Agriculture and Food of the Republic of Bulgaria - a database of producers, processors and traders of organic products and food produced in organic production in a way that maintains such an up-to-date database. The analysis is based on data processing by 234 surveyed representatives of bio-enterprises from all sectors of the bioeconomy in Bulgaria. The data analysis result shows that many small and large businesses are suffering challenges and this unprecedented coronavirus crisis has caused destruction for many businesses in the globe and it is challenging to survive with reduced revenue, jobs lost and life slowing down and weak marketing performance even difficult to keep a calm head and their business alive. To support these businesses the government should use different mechanisms by cooperating with wealthy peoples and other non-governmental organizations. Besides, the bio-business owners should manage expectations and communicate with staff, suppliers, banks, and customers throughout this coronavirus frightening. Reduce expenses, be open to their employees about their finances and keep marketing, use different alternatives to deliver their product and recover from the crisis. The changes in the production and economic activity as a result of the imposed measures for limiting the infection have been studied; the main risks threatening future development and the type of anti-crisis innovative decisions taken by management. 

KEYWORDS: ANTI-CRISIS POLICY, CRISIS, BIO-SECTOR, INNOVATION

1. Introduction

The bio-sector in the Republic of Bulgaria has a very high economic and social significance, since it has a substantial share in creating the gross domestic product and employing a large number of people [1]. In 2018, bioeconomy accounted for 11.9% of the GDP, which is largely the result of a fertile soil and quality natural conditions for agricultural production. According to the National Statistical Institute of the Republic of Bulgaria, 680,000 people are employed in bioeconomy, or 21% of the total workforce in the country[2].In 2018, bio-production accounted for 19.4% of Bulgaria’s total exports and generated a surplus of $1.4 billion, $130 million more than in 2017 (mainly due to increased exports of processed fruit and vegetables).

The successful bio-business depends on a large number of factors, but the following are the most significant: the yield and quality of their products, the prices of their products, and, of course, the decisions made in order to manage the bio-companies more efficiently [3,4].

Nowadays, consumers of bio-products around the world are demanding a better quality of products, which represents a major market challenge. Achieving quality in today’s conditions requires the development of a competitiveness strategy that is based on innovation and quality [5].

The subject of research is the analysis of the impact of innovation and product quality on anti-crisis success of bio-companies in the Republic of Bulgaria. The main goal is the need to provide new knowledge in the field of innovations and quality of bio-based companies with the aim of achieving sustainable success.

2. Literature review

In the modern scientific literature there is a great variety of definitions of the concept of politics, but as Fotev G. notes, “none of them is satisfactory.” life:
1. According to the target spheres of the societies, the policy finds application in the economic, social, scientific-technical, military, etc. areas;
2. According to the direction or scale, as internal and external;
3. According to the content and character, as progressive, reactionary, scientifically substantiated;
4. According to the subjects, such as the policy of the global society, the state, the enterprises, etc.

In the field of economics, politics is associated with a certain course of action, adopted and followed by a government, political party, organization or enterprise, relating to the production, distribution and use of income, wealth and goods [1,5].

From the enterprise’s point of view, the policy reflects the management’s idea of its goals, strategy and culture, expressed in written or unwritten rules for managing the activity, which are shared by both the company’s staff and its business partners. A well-formulated policy predetermines to the greatest extent all the subsequent actions and behavior of the enterprise - from the overall corporate strategy to the actions of an operational nature.

Crisis is an inevitable phenomenon in a market economy and a globalized world. In 2020, we witnessed an unprecedented health crisis affecting all economic sectors. Organic enterprises have not been spared the global problem [6,7,8].

The implementation of anti-crisis policy, as part of corporate policy in enterprises involves the analysis of certain key issues related to the specifics of the crisis, the content of anti-crisis programs, the role of experts in implementing anti-crisis policy and defining thematic fields to study anti-crisis policy in the specific enterprise or industry [9,10, 11].

A crisis in an enterprise is a condition caused by factors that have the potential to cause urgent problems in its economic, social and financial development, requiring immediate intervention to solve them.

For the individual enterprise, the crisis situation is defined as a complex set of problems, which is interpreted as a threat to its survival or as a potential opportunity for its future development. It has the following features:
• Disturbance of the balance of the enterprise due to the influence of direct and indirect factors, which in the conditions of crisis are stimulating, limiting or holding back its development [12,13].
• Weak or no possibility for the enterprise to adapt to the new conditions caused by the crisis, ie it operates in conditions of high risk and uncertainty.
• Continuous increase of unresolved problems and various accidental events that disrupt the normal functioning of the enterprise.
• Increasing the insecurity, dissatisfaction, worries and fears of various employees, customers, consumers, shareholders and others, business partners of the enterprise and the formation on this basis of negative and neutral perceptions about it.
• Introducing additional difficulties in collecting, processing and analyzing information. On the one hand, there is a constant increase
The stability of the enterprise is violated. The crisis is maturing, but not yet manifested externally. The time for immediate communication reaction, research and planning is short, and the risk of anti-crisis management to deteriorate the company's image is high. Need to control the situation from the very beginning by adapting, controlling and regulating, i.e. to increase the influence of development stimulating factors and to reduce the restraining and limiting factors of development.

Public relations (PR) specialists occupy leading positions in crisis management, especially for companies in high-risk industries (food, chemical, pharmaceutical, etc.). They develop specific communication programs for the sensitive environment of employees, consumers, shareholders, distributors and the media, especially if the crisis arouses lasting interest. PR is an important tool for protecting the interests of the company's business through the two main strategic assets - reputation management and marketing PR.

In its development, the crisis, as a phenomenon in the enterprise, goes through several stages: 1. Latent (hidden) period. At this stage, the preconditions for a crisis are maturing, but not yet manifested externally. 2. Crash period. During this period, all contradictions quickly escalated, as a result of which the dynamics deteriorated sharply. The stability of the enterprise is violated. 3. Period of crisis mitigation. At this stage, prerequisites are created for overcoming the crisis, providing a temporary balance in the enterprise. 4. Period of exit from the crisis. Every corporate crisis has an end.

The prospect of mitigating its negative impact, overcoming the crisis and even using it as an incentive for development depends on the timely anticipation of the crisis and its adequate management.

Of particular importance for increasing the effectiveness of the anti-crisis policy of bio-enterprises is the development of sound concepts related to the nature, features, goals and objectives of crisis management. The most important of them that address these issues are the following:

- **First concept** - considers anti-crisis management as "management of the enterprise in a financial crisis." It reduces anti-crisis management to the adaptation of traditional principles and methods of enterprise management in the conditions of financial crisis.

- **Second concept** - considers anti-crisis management as a system of measures aimed at bringing the company out of its crisis.33 This understanding of anti-crisis management of enterprises is one of its main functions, but not complex enough. The reason is that it does not include functions such as development of means for monitoring and prevention to prevent the causes that led to the crisis, as well as measures to limit and eliminate the negative consequences of it.

- **Third concept** - defines anti-crisis management "as the elimination of its insolvency (or recovery of its solvency)."34 This wording is too narrowly defined and reduces the definition to one of the main tasks of anti-crisis management - restoring the solvency of the enterprise. It should be noted that this is a priority, but also a major goal.

- **Fourth concept** - formulates as the main goal of anti-crisis management bankruptcy prevention.35 In its economic and legal sense, bankruptcy is the final and irreversible phase of liquidation of the enterprise. In our opinion, not all forms of crisis generate bankruptcy.

- **Fifth concept** - considers the system of anti-crisis management of enterprises as a special type of strategy - 'anti-crisis management strategy' [16,17]. Reducing anti-crisis management to a functional strategy in the system of its strategic management makes the principle of its complex nature meaningless [18].

The presented characteristics and analysis of the basic concepts show that in its content, anti-crisis management of enterprises is a process of preparation, adoption and implementation of management decisions to prevent financial crises, their successful resolution and minimization of their consequences [19].

Effective crisis management requires an active corporate innovation policy. It is implemented through innovation strategies including the development of innovation programs and projects.

From the point of view of bio-enterprises, the policy reflects the management's idea of its goals, strategy and culture, expressed in written or unwritten rules for managing the activity, which are shared by both the company's staff and its business partners. A well-formulated policy predetermines to the greatest extent all subsequent actions and behavior of the enterprise - from the overall corporate strategy to the actions of an operational nature.

In this regard, the anti-crisis policy of bio-enterprises can be defined as a system of rules, principles and frameworks (restrictions) for crisis management. The main goal is to choose a risk management mechanism that has the potential to cause a crisis in order to maintain a balanced economic situation of each business unit in the bio-sector. In order to undertake an adequate anti-crisis policy, an up-to-date review and assessment of the situation is required at both macro and sectoral levels.

The environment in which the bio-sector operates can be represented by the data of the IMD World Competitiveness Yearbook 2020. The data show that the Bulgarian economy continues to grow, but is far from developing its full potential. In 2020, Bulgaria remains in 48th place out of 63 countries, as it was in 2019. This is an improvement of seven positions compared to 2015, but worsening compared to 2009 (38th place). The Bulgarian economy continues to be among the most uncompetitive in Europe, and the long-term factors that determine competitiveness remain underdeveloped (see fig. 1).

According to the National Statistical Institute, after the large decline in the overall business climate indicator in the country for 2020, in January 2021 the data show an increase of 6.9 points compared to December 2020. The growth of the indicator is registered in all monitored sectors - construction, retail and services industry, including bio-industry. (Fig. 2)
3. Methodology, research and discussions

The analysis was prepared mainly on the basis of survey, discussions and interviews with experts and organic producers from Bulgaria. Initial contact and other basic information about all organic producers are collected from the official register of the Ministry of Agriculture and Food of the Republic of Bulgaria - a database of producers, processors and traders of organic products and food produced in organic production in a way that maintains such an up-to-date database. A total of 234 organic producers from different sectors of the bio-economy were surveyed during the period of April - December 2020.

A questionnaire was made based on the experience of the 35 experts from the above fields to determine which issues are important for further research. Based on the findings presented in the literature review, based on the available literature (domestic and foreign), and based on specialized works in this field a selection of questions for the poll have been selected.

The questions were created and in accordance to the ISO 9001:2005 and ISO 9004:2009 standards in cooperation with the mentor. Based on the analysis of the previous theoretical analysis a Basic system model has been created, “Impact of innovation and quality in agriculture on the sustainable success of agriculture” (figure 4).

![Fig. 3. Share of respondents from bio-sector in Bulgaria](image)

Some hypotheses have been set on the basis of theoretical research. A general or zero research hypothesis has been set, which reads as follows:

- H00 - The level of innovations and quality of bio-products significantly affects the level of anti-crisis success of bio-based enterprises.

The general – zero hypothesis will be proven by analyzing the auxiliary hypotheses, as follows:

- H11 - The level of innovations of bio-products significantly affects the level of quality of bio-products.
- H21 - The level of innovations of bio-products significantly affects the level of anti-crisis success of bio-enterprises.
- H22 - The quality level of bio-products significantly affects the level of anti-crisis success of bio-based enterprises.

Expert research was conducted on a sample of 35 experts on the territory of the Republic of Bulgaria (university professors, colleges, employees in public administrations at the position of bio-advisers, staff employed at institutes relevant to the field of research) in the period from 1 April to 1 December, 2020. An analysis of the profile of the respondents was carried out, the reliability of the elements of the set system model was established, and the benefits and justification of the research, the factor analysis of the model, and the correlation and regression analysis of the model were calculated.

Following the analysis we can conclude that the level of innovation of bio-products related to the innovative behavior and innovative business practice of an bio-enterprises as well as the quality of customer relations and quality of the bio-product of an bio-enterprises itself affects the development of possibilities of anti-crisis success.

A study regarding the changes in the activity of enterprises after the introduction of emergency measures to overcome the Covid crisis is presented in fig. 5.

![Fig. 5. Influence of Covid 19 on the activity of the bio-sector](image)

The data show that in 53% of the respondents, the income from the activity has sharply decreased. Revenues decreased by 22% to some extent. At 6% there is an increase in demand for company products / services. 2% of the respondents had to reorient themselves in offering other goods / services. In 17% of the respondents there are no changes in the activity before and during the crisis.

In Fig. 6 the biggest risks for 2020 that the bio-sector shares are presented. As the biggest risk for the activity, the bio-enterprises point out - problems with the working environment, caused by the health crisis.

World and Bulgarian economic history teaches that companies that continue to invest in innovation during a crisis do better and outperform their competitors in the post-crisis recovery period.

The study showed that in the last year nearly 50% of bio-enterprises in Bulgaria have invested in the implementation of innovations. Just over 25% of respondents have refrained from innovation, but plan to launch an innovation project next year. If everyone succeeds in realizing their intentions, this means that for the period 2020-2021, nearly 75% of bio-enterprises in the country will innovate.

![Fig. 6. Main risks for the bio-sector in 2020](image)
The share distribution of the types of anti-crisis innovative solutions, which were implemented in 2020 by the bio-sector in Bulgaria, is presented in fig. 7.

The share of organizational and managerial innovations prevails, expressed in changes in the organization of work in 48% of respondents.

9% of the respondents introduced product anti-crisis innovations.

The share of marketing anti-crisis innovation solutions is large - in 40% of the respondents. They are expressed in introduced online sales (at 13%), changes in sales (at 15%) and introduction of new marketing approaches in the activity.

Only 3% of the surveyed organic companies have managed to automate the production process.

Fig. 7. Anti-crisis innovation solutions

4. Conclusion

Based on the research we can conclude that there exists a big influence of innovation and quality on an anti-crisis success of bio-based enterprises in the Republic of Bulgaria. In order to achieve a sustainable level of success of bio-enterprises in the Republic of Bulgaria it is necessary to conduct constant education programs about the importance of innovation as well as encourage the aspiration for innovative behavior and business practice and the importance of investing in innovation and improving the process of production. The support of the state and the department ministry has a crucial role, through the support for introducing new technologies in enterprises from bio-sector, subsidizing the necessary materials for bio-enterprises, providing the necessary funding for constant education of bio-entrepreneurs and owners and exchanging the practices with bio-companies from the surrounding countries.

Innovative behavior of bio-enterprises could also be achieved through the support for new ideas, collecting ideas from external sources through encouraging business partners to create innovations and through a clearly defined strategy of introducing innovations and innovative management practices.

Analysis of the set research models has shown that sustainable success of an agricultural holding could be achieved through the development of cultural behavior which supports creation and development of new ideas, funding innovative activities, through learning and mastering production practices, with a flexible strategy and encouragement of business partners to participate in creating innovation. Besides the previously stated, by setting the goals and politics of quality, determining and understanding the demands of the customer, fulfilling their demands and establishing communication with them with the goal of achieving feedback about the quality of the product we could, without a doubt, achieve the sustainability of holdings in the R. Serbia. Innovative business of individual agricultural holdings could be achieved by following the modern solutions in agriculture through the improvement of production by using innovation. Innovative behavior and business of individual agricultural holdings through the establishment of a quality customer relationship and the development of quality also affects the achievement of sustainable success of individual agricultural holdings by fulfilling the expectations coming from its surroundings and through the establishment of strategies based on the needs if interested parties.

To ensuring business continuity and providing stability to the stakeholders who rely on us has been a priority since day one of the crisis. This implied offering flexibility and reliable development platforms, so that technical bodies could continue their standardization work online, in a safe, responsive and well-integrated working environment. While the agility and resilience demonstrated by the staff and technical experts has been impressive, the crisis has clearly increased the need for flexible and responsive standardization processes. Bulgarian Ministry of Agriculture, Food and Forestry will therefore invest more in the development of user-friendly digital platforms for the efficient, collaborative authoring of standards online, making the best use of modern technologies to enable virtual standards development, while increasing the speed of development. These measures embrace similar initiatives undertaken at the international level at ISO and IEC and reflect Bulgarian policy commitment to fully embrace digital standardization.

It is also necessary to raise the interest in innovative activities of those bio-companies owners not overly open for innovation. This could be achieved through establishing the bio-business centers whose priority would be to inform the owners about the modern production methods, invitations and fund allocation or donation programs, tax stimulations, invitations for cooperation with other participants, educational programs, interregional cooperation and cross-border projects and other actions which would benefit the local bio-enterprises.

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References:


[2]. Семов, М., Теория на политиката, С., 2000, с. 274, 488

[3]. Беляева С., В. Кошкина, Теория и практика антикризисного управления, Закон и право, М., 1996 г.


[5]. Фетев, Г., Събитията на политиката, АИ “М. Дринов“, С., 1999, с. 9

[6]. Плисъв, Н. и колектив, Антикризисно управление на индустриалните фирми, Авангард Прима, С., 2011 г.

[7]. Клейнер Г., Л. Тамбовцев, Р. Качалов, Предприятие в нестабилной экономической среде: риски, стратегии, безопасность, Экономика, М., 1997 г.


[9]. Грачев А., анализ и управление финансовой устойчивостью предприятия, Финипресс, М., 2002 г.

[10]. Холт Р., Основы финансового менеджмента/перевод с английского, М., Дело, 1993 г.


[12]. Луканов К., К. Луканов, Финансово управление на предприятието, Издательство „ЛНМ“, Пловдив, 2007 г.


