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## DEVELOPMENT OF THE INNOVATIVE FOOD INDUSTRY IN THE CONDITIONS OF ENSURING FOOD SECURITY

## РАЗВИТИЕ ИННОВАЦИОННОЙ ПИЩЕВОЙ ПРОМЫШЛЕННОСТИ В УСЛОВИЯХ ОБЕСПЕЧЕНИЯ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ

©Berdiev S.

Tashkent State University of Economics  
Tashkent, Uzbekistan, bsamaridin@mail.ru

©Бердиев С. З.

Ташкентский государственный экономический университет  
г. Ташкент, Узбекистан, bsamaridin@mail.ru

*Abstract.* The purpose of this article is to ensure the safety of food and through the development of innovative food industry and learning to increase the production of food. Work to ensure food security of the Republic of Uzbekistan has its own characteristics and analysis of trends and problems identified in this area. As well as ensuring the safety of food and food industry offer based on the priority directions of scientific and practical recommendations developed.

*Аннотация.* Цель этой статьи состоит в том, чтобы обеспечить безопасность еды и посредством развития инновационной пищевой промышленности и обучения увеличить производство еды. Для гарантирования продовольственной безопасности Республики Узбекистан есть свои собственные особенности, и в статье проанализированы определенные тенденции и проблемы в этой области. Также в статью включены предложения по обеспечению безопасности пищевой и пищевой промышленности на основе приоритетных направлений научных и практических рекомендаций.

*Keywords:* food safety, food industry, innovative directions, technological, stimulation principles of innovations, innovation management, enterprises of food industry

*Ключевые слова:* безопасность пищевых продуктов, пищевая промышленность, инновационные направления, технологические, принципы стимуляции инноваций, инновационного управления, предприятий пищевой промышленности.

Uzbekistan has one of Central Asia's most dynamically developing economies. The Government is introducing new reforms to accelerate development of the country socially and economically, including measures to improve the business environment for SMEs. Along with one of the best transport networks in Central Asia and an increasing demand for food and food production technologies, Uzbekistan has a favourable investment climate.

The independence of the Republic of Uzbekistan, which is one of the global problem to ensure the safety. Nowadays, the number of the country's population about 32.5 million and this indicate will be approximately 50 million in 2050 (1–2). Indeed, growth of population is a good result but this can lead to food shortages. As we know, the land and resources is limited, but human needs will continually increase. We should use effectively existing resources in new and innovative ideas and technologies to create the primary needs of the people, the food products to expanding the quantity and quality of production [1]. This article focused attention to describes the innovative development of the country's food industry.

The economic stability in Uzbekistan of raw materials and processing industries to provide the optimal balance between efficient to be able to go into the world economy and it is important to form a diversified industrial complex. The resolution of the President of the Republic of Uzbekistan of February 18, 2016 No. PP-2492 “About measures for further improvement of the organization of management of the food industry of the republic” on the basis of the offer of Department of Economic Affairs, the State committee of the Republic of Uzbekistan on privatization, demonopolization and development of the competition and founders of Association of the enterprises of the food industry abolished Association of the enterprises of the food industry and the Uzbekozikovkatholding holding company is formed (3).

The food processing industry is typically described as a relatively mature and slow-growing area of business, which displays a relatively low level of R&D investment and is quite conservative in the type of innovations it introduces to the market. This sector perceives its end-customers to be, to a large extent, wary of radically new products and changes in consumption patterns. Such perceived wariness, together with the necessary stringency of legal requirements related to safety, transforms food product and process innovation in a highly complex, time-consuming and risky endeavour, and hence one not to be lightly undertaken. However, recent important changes in the nature of both food demand and supply, coupled with an ever-increasing level of competitiveness, have rendered innovation not only an unavoidable corporate activity, but also one that is increasingly vital for overall agribusiness profitability [2].

#### *Literature review*

Innovation is the commercialization of an innovative idea. Firms will produce innovations when they have the ability to commercialize, to sell a product or service at a profit. The profitability of an innovation depends on the degree to which firms are able to capture the rents generated by their innovations [3–5], introduced the concept of an “appropriability regime” as the degree to which firms are able to capture the rents generated by their innovations. According to this notion, in a tight appropriability regime, firms can retain the profits they earn from their proprietary resources, while in a loose regime, these profits are subject to involuntary leakage or spillovers to other firms. The strength of the appropriability regime of an industry is related to patent strength, the value of first-mover advantage, and the ability to maintain the secrecy of an innovation [4, 6–7]. The study of innovation from an organizational view point has its roots in the work of Schumpeter (1943). There are two main conjectures that come out of this work. First, middle-size and large firms are central to innovation. Such firms have the capital base to be capable of conducting the research and bringing the new products or processes to the market. Second, how firms are organized is the key to understanding the innovation process [8]. Innovation is a process that is linked with different divisions within the firm or between firms — that makes the organization the critical variable. We focus on firm size as well as how the firm is organized in terms of vertical integration, contractual arrangements, relationship to foreign investment, ownership, market power, and other sector specific variables.

To date, open innovation has been commonly associated with fast-growing, technology-intensive industries, like the information and communication technology sector or the pharmaceutical industry. There is, however, increasing evidence that this concept and associated strategies may also prevail in more traditional and mature industries [9], particularly when certain sets of circumstances arise. Among such circumstances is a high dependence on other entities be them other firms, public research institutions or end-user communities for the supply, development and/or commercialisation of new technologies [10–11].

#### *Methodology*

The food safety supervision can be defined as: the government in accordance with the laws and regulations, giving standardized supervision and management for information production

operators, in order to protect the public health and life safety. This regulation is in an effort to protect sanitation, health and safety of citizens and prevent the loss of property, with the government intervention for the purpose of ensuring the national security; its essence is to improve the social welfare (4).

The definition of innovation theory: Innovation means establishing a new production factor or provision function and brings a new and unprecedented combination of production factor and production condition into production system. This combination includes to:

- introduce new products;
- introduce new processes;
- exploit new markets;
- control the source of supply of raw material;
- establish the new organization of the company.

Innovation literally means to create new things. It is made up of two factors: One is innovative subject, here we refer to human beings. In other words, new things are created by human beings. New things created by interaction in natural world are not what we discuss. The other is that things must be unprecedented and fresh new, or it cannot be called innovation. In this sense, the essence of innovation is to dissatisfy the achievement of predecessor, to doubt and criticize what has owned. It is to break through what exists now. It is also a kind of dialectical negation to create new things which didn't exist in the past [12].

The priority of the structural changes in this area of industry and import-substituting production of strategically important areas of basic support measures for the development and implementation of the food industry has a key role.

Food industry to sustainable economic and social development efficiency as well as environmental efficiency a key role. However, the standard of living, health directly depends on the quality and variety of products. To address the issues of food production, storage, processing, and delivery of the population to increase innovative activity involves. In this context, the introduction of innovative processes, above all, to create for them the purpose of efficient use of system.

### *Main part*

Today, all of the food industry is not a high level of innovative activity. It is the quality of their products in the market, the investment attractiveness of the lowest. Therefore, the food industry should be developed to encourage the development of innovative methods.

For the introduction of innovation in the food industry, primarily in the sector to determine the main directions of development of innovative and targeted (Table 1). Today, globally-tested and innovative food (different types), technological, marketing and organizational types, and through them alone to ensure the balanced development of bilateral food needs of the population can be achieved by ensuring a regular basis.

Increase in various types of food, technological products, save energy and raw materials and waste production, the introduction of marketing activities, ecological packaging and product knowledge, and involves the development of the brand. The organizational innovation to create favorable conditions for the realization of the potential of innovative enterprises, the development of economic relations, shaping the food industry, including the strengthening of the integration of agriculture with farmers and farms, and they are the basis of the establishment of small enterprises. Development and innovation in the food industry view, they are important incentives. However, economic entities to promote innovative rehabilitated functional-driven products to improve the quality and competitiveness of imports and reduction of food (different types), technological, marketing and organizational innovations to create conditions that encourage.

Table 1.

THE INNOVATIVE DIRECTIONS TO DEVELOP OF FOOD INDUSTRY

№	The types of innovation	The directions of development innovative
1	Food (Various types)	1.1. Healthy food products 1.2. Factories, which require less processing and production of finished products. 1.3. Separate categories of the population, to create products for children and the disabled.
2	Technological	2.1. The create production without waste 2.2. At all stages of the production and conservation of energy and resource-saving technologies.
3	Marketing	3.1. The use of biological disappear packaging. 3.2. Create eaten packaging. 3.3. Goods for sale, promotion and marketing of development of modern technologies
4	Organizational	4.1. Application of modern quality control and system of certification. 4.2. To create a cooperation mechanism between producers of food and consumers. 4.3. Development of small business. 4.4. Increase in innovative activity of employees on regular

Source: Development of the author on the basis of data of (3).

From this point of view, to encourage innovation through the development of methods of classification can systematize this process. Incentives for innovation in the implementation of these methods ultimately improve the competitiveness of the local food industry and serves as an important factor in ensuring a quality product.

But the introduction of innovation in the sustainable development of the industry to determine the principles of the development of methods to encourage them. Because the results of the implementation of these principles directly to the food industry is one of the main sources of increasing the effectiveness of innovation. In our opinion, now we can use the principles which are available in the world (Table 2).

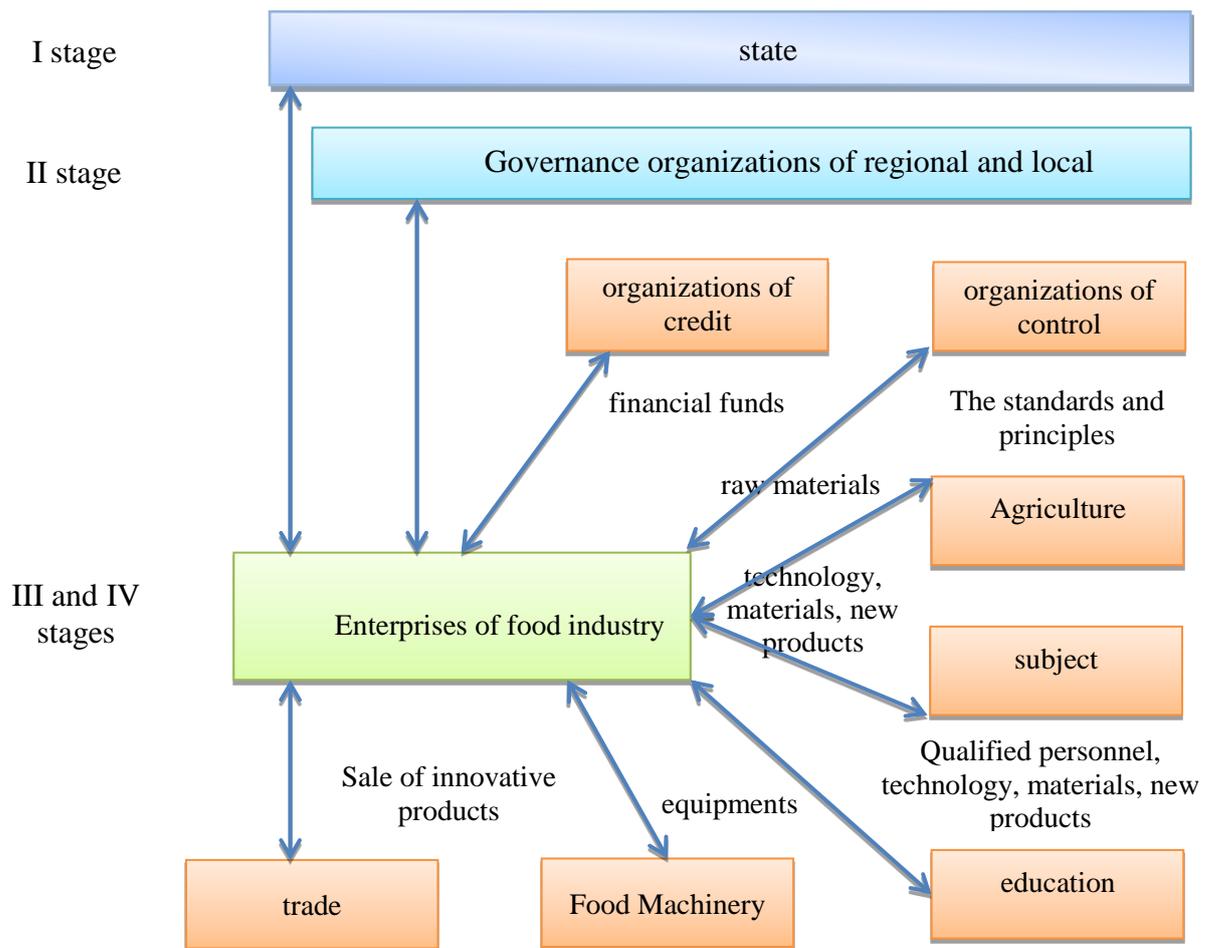
Table 2.

STIMULATION PRINCIPLES OF INNOVATIONS

№	Principles	The contents
1	The available access of use	All participants of the market equal rights to use of methods and means of assistance to innovations
2	Complexity	To ensure stable efficiency the integration of technological and organizational innovation of products
3	Mayors	Not conflict with each other ways to stimulate innovation
4	Education	Selecting the methods to stimulate innovation in processes and decision-making and support the creation of information-analytical system
5	Elasticity	Incentives for innovative activities aimed at improving the efficiency of the primary methods of business to create value forces
6	Operatively	To make quick decisions the establish of innovations
7	Effectiveness	To use innovation with achieve the desired goal through the use of control

Source: Development of the author on the basis of data of (3).

Imbalanced problems in the development of innovation in the food industry and the government, the level of the enterprise network and the development of multi-level management system in accordance with the principles of the market involves. From this point of view, the food industry, mechanisms of innovation management, organizational and economic the following recommended system conditions in Uzbekistan (Figure).



Source: Made by author.

Figure. Organizational and economic mechanisms to innovation manage in food industry

The state level to develop innovative food industry in the medium and long-term strategy is required. The demand for innovation in all sectors of the food industry, problems, challenges, and factors, the priority projects to be implemented, would participate in the creation of new jobs, products, costs, sales, social, economic and environmental consequences of the implementation of a wide range of mechanisms should be reflected.

Network products to the consumer at the level of the main options for the introduction of innovations in processes and outcomes should focus on.

#### Conclusion

–A general conclusion, it should be noted that these innovations to the level of the network to enable innovative processes in accordance with the purpose of stimulating all areas of its organization;

–Food production, storage, processing and delivery of innovative activity in the population increase involves. In this context, the introduction of innovative processes, above all, to create for them the purpose of efficient use of system;

–Processing enterprises, modernization and re-equipment of modern enterprises of innovative technologies for the implementation of information services, training, reestablishment of an effective system of training and professional development;

–Of course these measures, ultimately, food security, the network will serve as an important factor to achieve sustainable development. Uzbekistan is one of the Central Asian countries having the most rapidly developing economy.

*Sources:*

- (1). Islam Karimov. The threshold of independence. Tashkent. 2011.
- (2). Islam Karimov. Program of food reserves. Keynote speech at the opening ceremony of the international conference. Samarkand. 2014.
- (3). Data of the Uzbekozikovkatholding. Holding Company. (25/06/2017). <http://oziq-ovqat.uz/post/view/47>.
- (4). FAO/WHO, 2003. Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems. FAO, Rome.

*References:*

1. Abulkosimov, H. P., & Rasulov, T. S. (2015). Ensure the safety of food. Tashkent
2. Soumodip, S., & Ana, I. A. (2008). Dynamics of open innovation in the food industry. *CostaTrends in Food Science & Technology*, 19, 574-580
3. Arrow, K. (1994). The production and distribution of knowledge. Silverberg, G., Soete, L. (Eds.), *The Economics of Growth and Technical Change*. Aldershot, 9-19
4. Teece, D. J. (1986). Profiting from technological innovation. *Research Policy*, 15, 285-305
5. Teece, D. J. (2006). Reflections on profiting from innovation. *Research Policy*, 35, 1131-1146
6. Levin, R. C., Klevorick, A., Nelson, R. R., & Winter, S. G., (1987). Appropriating the returns from industrial research and development. *Brookings Papers on Economic Activity*, 3, 783-820
7. Gulati, R., & Singh, H. (1998). The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly*, 43, 781-814
8. Coriat, B., & Weinstein, O. (2002). Organizations, firms and institutions in the generation of innovation. *Research Policy*, 31, (2), 273-290
9. Huston, L., & Sakkab, N. (2006). Connect and develop: inside Procter and Gamble's new model for innovation. *Harvard Business Review*, 84, 58-66
10. Maula, M., Keil, T., & Salmenkaita, J.-P. (2006). Open innovation in systemic innovation contexts. In H. W. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), *Open innovation: Researching a new paradigm*. Oxford, Oxford University Press, 241-257
11. Vanhaverbeke, W., & Cloudt, M. (2006). Open innovation in value networks. In H. W. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), *Open innovation: Researching a new paradigm*. Oxford, Oxford University Press, 258-281.
12. Zhang, Q. (2016). Reform and Innovation on the Organization Pattern of Food Safety in Sports Training and Sports Events. *Advance Journal of Food Science and Technology*, 12, (3), 107-110. doi:10.19026/ajfst.12.2865

*Список литературы:*

1. Abulkosimov H. P., Rasulov T. S. Ensure the safety of food. Tashkent, 2015.
2. Soumodip S., Ana I. A. Dynamics of open innovation in the food industry // *CostaTrends in Food Science & Technology*. 2008. V. 19. P. 574-580.
3. Arrow K. The production and distribution of knowledge // *The Economics of Growth and Technical Change* / Silverberg G., Soete L. (Eds.). Aldershot, 1994. P. 9-19.

4. Teece D. J. Profiting from technological innovation // *Research Policy*. 1986. V. 15. P. 285-305.
5. Teece D. J. Reflections on profiting from innovation // *Research Policy*. 2006. V. 35. P. 1131-1146.
6. Levin R. C., Klevorick A., Nelson R. R., Winter S. G. Appropriating the returns from industrial research and development // *Brookings Papers on Economic Activity*. 1987. V. 3. 783-820.
7. Gulati R., Singh H. The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances // *Administrative Science Quarterly*. 1998. V. 43. P. 781-814.
8. Coriat B., Weinstein O. Organizations, firms and institutions in the generation of innovation // *Research Policy*. 2002. V. 31. №2. P. 273-290.
9. Huston L., Sakkab N. Connect and develop: inside Procter and Gamble's new model for innovation // *Harvard Business Review*. 2006. V. 84. P. 58-66.
10. Maula M., Keil T., Salmenkaita J.-P. Open innovation in systemic innovation contexts // *Open innovation: Researching a new paradigm* / Chesbrough H. W., Vanhaverbeke W., West J. (Eds.). Oxford: Oxford University Press, 2006. P. 241-257.
11. Vanhaverbeke W., Cloudt M. Open innovation in value networks // *Open innovation: Researching a new paradigm* / Chesbrough H. W., Vanhaverbeke W., West J. (Eds.). Oxford: Oxford University Press, 2006. P. 258-281.
12. Zhang Q. Reform and Innovation on the Organization Pattern of Food Safety in Sports Training and Sports Events // *Advance Journal of Food Science and Technology*. 2016. V. 12. №3. P. 107-110. DOI: 10.19026/ajfst.12.2865.

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