

УДК 330.342

## FEATURES OF THE INNOVATIVE DEVELOPMENT INDUSTRY ENTERPRISES IN THE G7 COUNTRIES

**O. N. Boiko**

*PhD in Economics, Senior Researcher,  
Leading Researcher Department of Innovation Policy,  
Economics and Organization of High Technologies  
State Institution «Institute of Economics and Forecasting of the NAS of Ukraine» (Ukraine)*

The food industry is the most important and vital type of economic activity in the international arena, especially in the G7 countries.

In the research process, the main problem is identified, which concerns the imperative of the development of the food industry on an innovative basis.

Peculiarities of innovative activity of the food industry have been highlighted for a long time in the scientific works by outstanding specialists of the world. The problems of the functioning of the food industry on an innovative basis in the G7 countries are identified.

The task setting is to determine the basic principles for the development of innovative activity of food industry sectors; study of the main trends in the innovative development of food industries in the G7 countries.

The aim of the study is to identify innovative aspects of the activity of industrial enterprises of the food industry of the G7 group countries.

The main methods that were used in the process of conducting the study are analysis, statistical, comparisons, legal regulation.

The features of the current state of food industry development in the countries of the G7 group are investigated. The assessment of the main economic indicators of the food industry on an innovative basis in the countries of the G7 group. Positive aspects of development and factors hindering the functioning of the food industry have been identified.

The scope of the research results is socio-economic development.

**Key words:** innovation; investment; variety; index; competitiveness.

## ОСОБЕННОСТИ ИННОВАЦИОННОГО РАЗВИТИЯ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ В СТРАНАХ G7

**Е. Н. Бойко**

*Кандидат экономических наук, старший научный сотрудник,  
ведущий научный сотрудник отдела инновационной политики,  
экономики и организации высоких технологий  
ГУ «Институт экономики и прогнозирования НАН Украины» (Украина)*

Пищевая промышленность является важнейшим и жизненно необходимым видом экономической деятельности на международной арене, особенно в странах группы G7.

В процессе исследования определена основная проблема, которая касается императива развития пищевой промышленности на инновационной основе.

Особенности инновационной деятельности пищевой промышленности длительное время освещают в научных трудах выдающиеся специалисты мира. Определены проблемы функционирования пищевой промышленности на инновационной основе в странах группы G7.

Постановка задач заключается в определении основных принципов развития инновационной деятельности отраслей пищевой промышленности; исследовании основных тенденций инновационного развития отраслей пищевой промышленности в странах G7.

Целью исследования является определение инновационных аспектов деятельности промышленных предприятий пищевой промышленности стран группы G7.

Основными методами, которые использовались в процессе проведения исследования, являются анализ, статистический, сравнения, нормативно-правовое регулирование

Исследованы особенности современного состояния развития пищевой промышленности в странах группы G7. Проведена оценка основных экономических показателей деятельности пищевой промышленности на инновационной основе в странах группы G7. Выявлены положительные аспекты развития и факторы, сдерживающие функционирование сферы пищевой промышленности.

Область применения результатов исследования – социально-экономическое развитие.

**Ключевые слова:** инновации; инвестиции; сорт; индекс; конкурентоспособность.

The G7 group of countries consists of the most developed countries of our planet (United Kingdom, Italy, Canada, United States, France and Japan). According to the rating of the Global Competitiveness Index 4.0 2019 among 141 countries of the world, they took the following positions: United States – 2nd place (83,7), Japan – 6 (82,3), Germany – 7 (81,8), United Kingdom – 9 (81,2), Canada – 14 (79,6), France – 15 (78,8) and Italy – 30th place (71,5). According to the Global Competitiveness Index 4.0, the Innovation Ecosystem group consists of two parts: Business dynamism (Pillar 11) and innovation potential (Pillar 12). In group 11, Business dynamism, the leader is the United States (1 place), Italy (43 place). This group is divided into subgroups: Administrative requirements (United States – 1st place) and Entrepreneurial culture (United States – 2nd place) [1].

In the 12th pillar Innovation capability, the leader is Germany (1st place). If we consider the position of Interaction and diversity, the leader in this group is Germany (4th place). In terms of the Research and development position of the Innovation capability group, the leader is Japan (1st place), and in Commercialization – Germany (5th among the countries of the world).

Consider the features of the development of food industry enterprises of the G7 group countries. In the Canadian food industry, leading positions are held by such industries as the milling industry (the cities of Port Arthur, Montreal, Vancouver); meat; canned fish (employing 90,000 people who produce 60.0 % of fish exports); alcoholic beverage. These food industries have important export value (countries of the European Union, USA, New Zealand).

Of particular importance in Canada is the dairy industry and the production of dairy products. It should be noted that 455 enterprises operate in the industry. Of these, 15.0 % are the largest companies in the country ("Saputo", "Agropur", "Parmalat"). They produce 80.0 % of the milk in the country. Products are of high quality and meet quality standards. The market for liquid milk (table milk and fresh cream) occupies 39.0 % of dairy products, and the market for dairy products (cheese, yogurt, ice cream, etc.) – 61.0 % [2]. These products are diverse. Cheese production in Canada is a fairly young industry. Positive development dynamics are observed in the coming years. Today, Canadian enterprises produce 667 varieties of cheese (goat, sheep, cow) in Quebec, Ontario and other provinces.

There is a High Quality Canadian Milk program that aims to ensure food security for farmers. It was developed by the Dairy Farmers Association of Canada. The aim of the program is to improve the quality of milk produced by farmers. Particular attention should be paid to the fact that the Canadian dairy industry is developing a comprehensive strategy for achieving environmental sustainability. This is directly related to climate change, a reduction in greenhouse gas emissions into the atmosphere.

The food industry in Germany today is able to fully provide the country's population with food. It is mainly based on the work of private farms that grow corn, barley, wheat, beets, oats, potatoes and rice. The grown products go to local processing enterprises. It should also be noted that organic products are in great demand in the country, the cost of which is 20.0–50.0 % higher. Such products are marked with the image "Euro sheet". They are actively being bought up by the country's population. Another feature of the market is the existence of public and private quality standards. The latter include standards developed by manufacturers such as "Bioland", "Demeter", "Naturland".

In Germany, innovative activity in the food industry is actively developing. If we analyze the indicators of innovation in the food industry in Germany, we can see that the main partners for a long time are France (10.5 %), the USA (9.0 %), Great Britain (8.5 %) and Italy (7.0 %). According to Filatov V. about 50.0 % of the country's food industry enterprises brought about 40.0 % of the produced innovative products to the product markets and 45.0 % of the developed innovative processes [3]. These indicators indicate that food industry enterprises are developing on an innovative basis. They focus on increasing the volume of state financing of innovative projects in the food industry. It also focuses on improving the conditions necessary for introducing innovations in the private sector of the food industry. Attention is paid to the issue of stimulating technology transfer at state-owned enterprises in the food industry. The accelerated development of national segments of innovation markets,

in particular in the field of development of high technology, is taking place. The role of the development of public-private partnerships in the food industry in Germany is growing. The processes of technology commercialization in the country's food industry are accelerating.

The food industry in Germany today is able to fully provide the country's population with food. It is mainly based on private farms that grow corn, barley, wheat, beets, oats, potatoes and rice. A feature of the market is the existence of public and private quality standards. The latter include standards developed by manufacturers such as "Bioland", "Demeter", "Naturland".

According to existing statistics, in recent years, the food industry in France produced 1,7 % of gross domestic product (1980 – 2,6 % of France's GDP). The country achieved this level thanks to 98,0 % of French companies engaged in the food industry ("Danone", "Lactalis", "Pernod Ricard", "Sodiaal", "Nestlé France", "Agrial", "Groupe Bigard", "Moët Hennessy", "Cargill France", "Terrena", "Bongrain", "Coca-Cola France", "Unilever France", "Limagrain" and others). They are actively introducing advanced technology and innovation. The development of industrial clusters in Montpellier deserves special attention. 800 enterprises operate here, including food industry enterprises. The number of employees is almost 20 000 people. Created business schools on the effective functioning and innovation in the food industry, in particular in the field of international trade. Business schools attract the attention of talented students from other countries who want to work in this field.

In the Italian food industry, 2550 medium and large enterprises are registered. The number of employees at these enterprises is 390 thousand people [4]. These are mainly enterprises of the milling industry (Naples region), as well as the production of Italian pasta (Italy takes 1st place in the world). 175 enterprises are engaged in the production of pasta, of which 155 specialize in the production of dry pasta and 30 in the production of "fresh". These are enterprises such as "Barilla Alimentaria", "Pastificio Rana", "Agnesi one thousand eight hundred and forty-two", and "De Cecco". Italy has long been famous for the production of cheese. These are fresh cheeses and other types of cheese ("Grana Padana", "Parmigiano Reggiano", "Italico and Crescenza", "Provolone", "Gorgonzola", "Asiago"). Almost the entire dairy industry is concentrated in northern Italy. These are dairy enterprises such as "Galbani Egidio", "Stelilgarda", "Sammontana and others.

There are 36928 food processing enterprises operating in Japan (32352 units – food producing enterprises, 4576 units – drinks producing enterprises). These are enterprises in the food industry such as canning, flour milling ("Nissin Flower Milling", "Nippon Flower Mills"), sugar industry ("Mitsui Shuga"), production of alcoholic and non-alcoholic drinks ("Kirin Brewery", "Santori", "Sapporo Brueriz", "Asahi Brueriz"). In contrast to these food industries, meat ("Itocham Foods", "Nippon Ham", "Nitirai Foods") and dairy ("Meiji Holdings", "Nippon Ham", "Itoham Foods") are underdeveloped.

I would like to note such a feature of the development of the Japanese food industry as the creation of keiretsu. They represent a combination of enterprises in sustainable industrial and financial groups in Japan. The most famous of them "Mitsubishi", "Mitsui", "SUMITOMO CORPORATION", "Sanwa Electric Instrument Co., Ltd.", "Fuyo Group", "Tokaj".

Japan is a world leader in science and technology with a high level of competitiveness of products in the food industry. This is the Tokyo-Yokohama agglomeration (60.0 % of scientific developments and about 40.0 % of the country's high-tech industries). The cities of Osaka, Kyoto and Nagoya also play an important role. The number of small innovative enterprises in the food industry is about 80.0 % of the total number of enterprises employed in the industry. Prerequisites for the development of the innovation market in the food industry of Japan are: the orientation of innovation market entities on the deepening of applied and fundamental research in the food industry; creation and expansion of a network of centers for technological development of the food industry with the participation of business, industry institutions and the government; promoting the results of technological policy on the innovation markets of the sectoral economic system by progressively expanding the complex of external relations of market entities and innovators; participation in international technology exchange programs to provide solutions to the problems of developing an innovation market in the development of the food industry; orientation of innovation market entities on technology development.

The United Kingdom has undergone reforms in recent years, as well as changes in the structure of innovation markets for food industry industrial economies. It has become diversified, which has led to changes in the state structures of the executive branch, which are responsible for conducting innovation activities by innovation market entities on the order of sectoral economic systems. A striking example is the development of one of the country's leading food industry companies, the Grand Metropolitan PLC. The company is the largest dairy producer and soft drink supplier in the United Kingdom. The dairy production network includes 29 enterprises and 130 distribution bases concentrated in the country. It should be noted that 10.0 % of production is exported abroad.

The prerequisites for the development of the innovation market for industrial economic systems in the UK food industry should be considered: purposefulness and effective stimulation of the creation and development of innovative enterprises; development of normative legal acts in the field of innovative activity of food industry enterprises; the formation of competitive local markets for innovative products and technologies of the food industry, consumers, government structures; focus on the creation of innovation and consumption by the market entities of competitive, environmentally friendly, safe innovative products and technologies by the UK food industry; ensuring responsible and effective management of the activities of innovation market entities, the creation and improvement of the infrastructure of the food industry, etc. So, the strategic goal for the future is the development of innovation markets for sectoral economic systems in the UK food industry in the context of globalization.

One of the leading industries in the United States is the food industry. The most economically developed enterprises in the industry are "R.J. Reynolds Industries Inc.", "Dart & Craft Inc.", "Philip Morris Inc.", "Beatris Companies Inc.", "General Foods Corp.", "PepsiCo Inc.", "Coca-Cola Inc.". These food processors adhere to food safety standards. In the United States, food safety control is carried out by government agencies at various levels: federal, state, and local. At the federal level, there are 15 institutions that regulate issues related to food safety. There are also two main federal agencies that are responsible for the safety of the US food system (US Department of Agriculture, Food and Drug Administration, US Department of Health and Human Services).

Among other departments responsible for food safety in the United States, we can distinguish: the US Department of Homeland Security (coordinating the activities of government agencies on food safety, including on US borders); National Marine Fisheries Service (seafood safety and quality inspection services); Environmental Protection Agency (regulates the use of pesticides and the presence of the maximum permissible levels of residues of food products and animal feed); Centers for Disease Control and Prevention. At the state level, food safety regulations are implemented by departments of health, agriculture, or the environment. Their powers include laboratory research of food products; conducting checks in public catering; food retail regulation.

The analysis of the innovative development of the food industry of the G7 group of countries indicates the presence of differences in each country. They favorably influence the development of the country's food industry. The experience of these countries must not only be studied, but also implemented in our stratum, taking into account the regional characteristics of Ukraine.

#### References

1. The Global Competitiveness Report 2019. – [Электронный ресурс]. Режим доступа : [http://3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf). – Дата доступа : 08.02.2020.
2. Взгляд на молочную промышленность Канады [Электронный ресурс]. Режим доступа : [https://www.infolait.gc.ca/pdf/2010\\_at\\_a\\_glance\\_russian.pdf](https://www.infolait.gc.ca/pdf/2010_at_a_glance_russian.pdf).
3. Филатов В. В. Современное состояние и тренды рынков инноваций отраслевых экономических систем в промышленно-развитых странах // Научный журнал НИУ ИТМО. Серия «Экономика и экологический менеджмент». – № 1. – 2015. – С. 247–257.
4. Научно-техническое развитие как инновационный фактор экономического роста. [Текст] : Коллективная монография / Ашальян Л. Н., Женжебир В. Н., Колосова Г. М., Медведев В. М., Паластина И. П., Положенцева И. В., Пшава Т. С., Фадеев А. С., Филатов В. В., Филатов А. В. Издательство : ЦНТБ Пищевой промышленности, Москва: [б. и.], 2014. – 446 с.

УДК 378.147

### INNOVATIVE ACTIVITIES OF INSTITUTIONS OF HIGHER EDUCATION IN THE REALITIES OF MODERN SOCIAL TRANSFORMATIONS

**S. Sliusar**

*PhD of Economics, Associate Professor,  
Department of Finance, Accounting and Taxation,  
Pereiaslav-Khmelnytskyi State Pedagogical University named after Hryhorii Skovoroda (Ukraine)*

At the present stage of social development, education is one of the most important areas of human activity, closely related to all other areas of social life. The ability of the education system to meet the needs of