

**The CAP and national priorities
within the EU budget
after 2020**



INSTITUTE OF AGRICULTURAL
AND FOOD ECONOMICS
NATIONAL RESEARCH INSTITUTE

The CAP and national priorities within the EU budget after 2020

Editors:

dr Marek Wigier

prof. dr hab. Andrzej Kowalski

Proceedings of the International Scientific Conference

"The CAP and national priorities within the EU budget after 2020"

Multi-Annual Programme 2015-2019

"The Polish and the EU agricultures 2020+. Challenges, chances, threats, proposals"

11-13 June 2018

Lidzbark Warmiński, Poland



THE POLISH AND THE EU AGRICULTURES 2020+
CHALLENGES, CHANCES, THREATS, PROPOSALS

Warsaw 2018

This monograph was prepared under the Multi-Annual Programme 2015-2019
“The Polish and the EU agricultures 2020+. Challenges, chances, threats, proposals”.

The publication is a collection of selected papers delivered at the 23rd edition of the International Scientific Conference organized by the Institute of Agricultural and Food Economics - National Research Institute. The theme of the conference was “The CAP and national priorities within the EU budget after 2020”. The conference was placed on 11-13 June 2018 in Lidzbark Warmiński in Poland.

In the Scientific Committee of the Conference was participated: Prof. Andrzej Kowalski (IAFE-NRI, Poland), Prof. Drago Cvijanović (University of Kragujevac, Serbia), Prof. Thomas Doucha (IAEI, Czech Republic), Nouredin Driouech, PhD (CIHEAM, Italy), Prof. Szczepan Figiel (IAFE-NRI, Poland), Prof. Masahiko Gemma (Waseda University, Japan), Prof. Wojciech Józwiak (IAFE-NRI, Poland), Prof. Jacek Kulawik (IAFE-NRI, Poland), Prof. Yuriy Oleksiyovych Lupenko (IAE, Ukraina), Prof. Věra Majerová (CULS, Prague), Prof. Dimitre Nikolov (IAE, Bulgaria), Maire Nurmet, PhD (EMÜ, Estonia), Prof. Gabriel Popescu (ASE, Romania), Norbert Potori, PhD (AKI, Hungary), Prof. Włodzimierz Rembisz (IAFE-NRI, Poland), Piotr Szajner, PhD (IAFE-NRI, Poland), Prof. Alina Sikorska (IAFE-NRI, Poland), Prof. Jonel Subić (IAE, Serbia), Prof. Samuele Trestini (UNIPD, Italy), Prof. Olga Varchenko (Bila Tserkva National Agrarian University, Ukraine), Dipl.-Ing. Klaus Wagner (AWI, Austria), Marek Wigier, PhD (IAFE-NRI, Poland), Prof. Józef St. Zegar (IAFE-NRI, Poland)

In the Organising Committee of the Conference was participated: Małgorzata Bułkowska (IAFE-NRI, Poland), Anna Hankiewicz (IAFE-NRI, Poland), Joanna Jaroszewska (IAFE-NRI, Poland), Joanna Korczak (IAFE-NRI, Poland), Krzysztof Kossakowski (IAFE-NRI, Poland), Irena Mikiwicz (IAFE-NRI, Poland), Małgorzata Mikołajczyk (IAFE-NRI, Poland), Lech Parzuchowski (IAFE-NRI, Poland), Ewa Sierakowska (IAFE-NRI, Poland), Paulina Smakosz (IAFE-NRI, Poland), Leszek Ślipiński (IAFE-NRI, Poland), Marek Wigier, PhD (IAFE-NRI, Poland).

Reviewers:

Professor Dimitre Nikolov, Institute of Agricultural Economics, Sofia, Bulgaria

Professor Gabriel Popescu, The Bucharest University of Economic Studies, Bucharest, Romania

Proofreaders:

Joanna Gozdera

Katarzyna Mikulska

Technical editors:

Krzysztof Kossakowski, Katarzyna Mikulska, Barbara Pawłowska, Ewa Sierakowska, Leszek Ślipiński, Kamila Tomaszewska, Barbara Walkiewicz

Translated by

Summa Linguae S.A.

Cover Project

Leszek Ślipiński

ISBN 978-83-7658-751-6

DOI: 10.30858/pw/9788376587516

Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej

– Państwowy Instytut Badawczy

ul. Świętokrzyska 20, 00-002 Warszawa

tel.: (22) 50 54 444

faks: (22) 50 54 636

e-mail: dw@ierigz.waw.pl

<http://www.ierigz.waw.pl>

Contents

The CAP and national priorities within the EU budget after 2020	11
<i>Dr Marek Wigier</i>	
1. CAP between 2020 and 2027 – legislative proposals of the European Commission.....	19
<i>Prof. dr hab. Andrzej Kowalski</i>	
1.1. CAP financing	19
1.2. Market regulations	21
1.3. Direct payments	23
1.4. Rural monitoring.....	26
References:	26
2. Holistic risk management as a response to budgetary constraints	27
<i>Prof. dr hab. Jacek Kulawik, mgr Grzegorz Konat, dr Michał Soliwoda, dr Joanna Pawłowska-Tyszko</i>	
2.1. Introduction	27
2.2. The holistic risk management concept.....	28
2.3. Holistic risk management in agriculture – key issues of concern	31
2.4. Holistic risk management in agriculture on the example of the United States of America	35
2.5. Summary and conclusions	38
References.....	38
3. Economic and social features of contemporary development of the Czech agriculture and rural areas	40
<i>Prof. Věra Majerová, Ing. Jiří Sálus, Ing. Tereza Směkalová</i>	
3.1. Introduction	40
3.2. Globalisation and its effects (consequences)	41
3.3. Characteristic features of contemporary development	42
3.4. Change of food autarchy concept	43
3.5. Consumer behaviour of households	44
3.6. Dual quality of food.....	45
3.7. Social farming	46
3.8. Summary and conclusions	47
References.....	48
4. To whom belongs the future of rural prosperity 2020+?	50
<i>PhD Rita Vilké, PhD Živilė Gedminaitė-Raudonė</i>	
4.1. Introduction	50
4.2. Theoretical assumptions for rural prosperity	51

4.3.	Methodology	54
4.4.	Results and discussion.....	56
4.5.	Summary and conclusions	60
	References.....	60
5.	The specificity of economic integration processes in agriculture	63
	<i>Prof. Julian Krzyżanowski</i>	
5.1.	Introduction	63
5.2.	Objectives and methods	65
5.3.	Research results and discussion	65
5.4.	Summary and conclusions	69
	References.....	70
6.	The Common Agricultural Policy of the European Union – main challenges for a new budget	72
	<i>PhD Justyna Góral, Prof. Anatolii Pilyavskyy</i>	
6.1.	Introduction	72
6.2.	Agricultural policy post-2020	76
6.3.	Summary and conclusions	81
	References.....	82
7.	Problems and risks linked with investment supports in agrarian sector – the Czech experience	85
	<i>PhD Marie Šimpachová Pechrová, Prof. Tomáš Doucha, MSc Ondřej Chaloupka</i>	
7.1.	Introduction	85
7.2.	Material and methods	87
7.3.	The assessment model for application of farms for investment supports	89
7.4.	Summary and conclusions	91
	References.....	91
8.	The adoption of agricultural insurance to manage farm risk: preliminary evidences from a field survey among Italian and Polish farmers.....	93
	<i>Prof. Samuele Trestini, PhD Elisa Giampietri, PhD Magdalena Śmiglak-Krajewska</i>	
8.1.	Introduction	94
8.2.	Data and methodology	95
8.3.	Results	97
8.4.	Summary and conclusions	99
	References.....	100
9.	The Common Agricultural Policy and the farm households' off-farm labour supply	102
	<i>PhD Jason Loughrey, Prof. Thia Hennessy</i>	
9.1.	Introduction	103

9.2.	Theoretical framework.....	103
9.3.	Methodology	105
9.4.	Data.....	108
9.5.	Results – farm operator.....	110
9.6.	Results – farm operator and spouse.....	114
9.7.	Summary and conclusions	115
	References.....	116
10.	Comparison of potential effects on the profitability of the US MPP application on dairy farms in Veneto (Italy) and Wielkopolska (Poland)	117
	<i>MSc Federico Vaona, PhD Cristian Bolzonella, Prof. Martino Cassandro, Prof. Tomasz Szwaczkowski</i>	
10.1.	Introduction	118
10.2.	Materials and methods	119
10.3.	The situation in Veneto.....	120
10.4.	The situation in Wielkopolska	121
10.5.	Summary and conclusions	123
	References.....	124
11.	The risk management and the insurance of agricultural production	125
	<i>Prof. Drago Cvijanović, PhD Željko Vojinović, Prof. Otilija Sedlak, PhD Dejan Sekulić</i>	
11.1.	Introduction	125
11.2.	Theoretical basis	126
11.3.	Characteristics of the plant production insurance in Serbia.....	128
11.4.	The position of farmers in the system.....	132
11.5.	Research results.....	133
11.6.	Summary and conclusions	138
	References.....	142
12.	Distribution of interventions of the Rural Development Programme and Regional Operational Programmes in 2007-2013 in the context of territorial development	144
	<i>Dr Paweł Chmieliński, Dr hab. Marcin Gospodarowicz, prof. IERiGŻ-PIB</i>	
12.1.	Introduction	144
12.2.	Types of intervention of the RDP and 16 ROPs.....	145
12.3.	Support for local development in the rural and regional policy between 2007 and 2013	151
12.4.	Discussion and summary	155
	References.....	156

13. The role of organic farming in the CAP, the rural development programme, with particular regard to subsidies.....	158
---	-----

PhD Gábor Gyarmati

13.1. Introduction	158
13.2. Organic farming's characteristics.....	159
References.....	171

14. Agricultural policy in the servitized economy.....	173
--	-----

PhD Dalia Vidickiene, PhD Zivile Gedminaitė-Raudonė

14.1. Introduction	173
14.2. Reasons to use servitized business model in agriculture.....	174
14.3. Summary and conclusions	178
References.....	179

15. The Model of Innovative Rural Entrepreneurship Development

Designing.....	181
----------------	-----

Prof. Lesia Zaburanna, PhD, Associate Professor Tetiana Lutska

15.1. Introduction	181
15.2. The aim and methodology of the research	184
15.3. The research results	186
15.4. Summary and conclusions	200
References.....	200

16. Smart Manufacturing – potential of new digital technologies and big data in the food industry	202
---	-----

PhD Katarzyna Kosior

16.1. Introduction	202
16.2. Smart manufacturing.....	203
16.3. Big data analyses – basis for the development of smart enterprises.....	204
16.4. Digital twin paradigm.....	206
16.5. Smart manufacturing in the food industry in Poland.....	207
16.6. Summary and conclusions	211
References.....	211

17. A paradigmatic view on the possibility of applying the provisions of the Common Agricultural and Fisheries Policy of the EU in the agrarian sector of the economy in Ukraine.....	214
---	-----

DSc (Econ) Vasyl D. Zalizk, Prof. DSc (Econ) Nataliia M. Vdovenko, Sergiy S. Shepeliev

17.1. Introduction	214
17.2. The development of the EU Common Agricultural Policy and Common Fisheries Policy and its impact on the competitiveness of the fisheries sector	215

17.3.	Components of the Common Fisheries Policy of the EU in the context of the conservation system and sustainable usage of fisheries resources.....	218
17.4.	Fundamental principles of CFP reforms.....	219
17.5.	Results of aquaculture producers activities on the possibilities of provisions' implementation of the Common Agricultural and Fisheries Policy of the EU in fisheries during AGRO-2018.....	223
17.6.	Summary and conclusions	229
	References.....	229
18.	Direct producer support measures and level of harmonization with Common Agricultural Policy in Bosnia and Herzegovina	232
	<i>MSc Alen Mujčinović, Merima Makaš, Prof. dr Sabahudin Bajramović</i>	
18.1.	Introduction	232
18.2.	Materials and methods	234
18.3.	Economic and agricultural development of the country.....	235
18.4.	Budgetary support to the agricultural sector	236
18.5.	Direct producer support measures	239
18.6.	Direct payments	241
18.7.	Summary and conclusions	242
	References.....	243
19.	The Hungarian and Polish agricultural trade in the light of CAP budgetary restrictions	245
	<i>PhD Tamás Mizik</i>	
19.1.	Introduction	245
19.2.	Methodology and data sources.....	247
19.3.	Importance of the agriculture	247
19.4.	Trade characteristics of the Hungarian agriculture	250
19.5.	Trade characteristics of the Polish agriculture.....	253
19.6.	Comparison of the Hungarian-Polish agricultural trade.....	255
19.7.	The future of the Hungarian-Polish agricultural trade in the light of the possible budgetary changes	256
19.8.	Summary and conclusions	258
	References.....	259
20.	Implementation of innovation projects in the context of agribusiness 4.0 in Ukraine	262
	<i>Prof. Lesia Kucher</i>	
20.1.	Introduction	262
20.2.	Methodology	264
20.3.	Implementation of the most important innovation projects in agribusiness in Ukrainian regions: current state and problems of their financing sources	265

20.4.	Cluster analysis of the implementation of investment and innovative projects in agribusiness in Ukrainian regions	269
20.5.	Summary and conclusions	275
	References.....	276
21.	The impact of globalization on farmers income. Evidence from Poland and Romanian agriculture	279
	<i>MSc Călin Henriette Cristiana, MSc Izvoranu Anca Marina, MSc Todirica Ioana Claudia</i>	
21.1.	Introduction	279
21.2.	Literature review	280
21.3.	Globalization impact on rural areas.....	282
21.4.	Globalization impact on small farmers – foreign investment in Romania and Poland.....	288
21.5.	Summary and conclusions	290
	References.....	291
22.	Land concentration and competitiveness of agricultural enterprises in Ukraine	292
	<i>PhD Anatolii Kucher</i>	
22.1.	Introduction	292
22.2.	Methodology	294
22.3.	Status and trends of land concentration in agricultural enterprises of Ukraine	294
22.4.	The level of concentration and the intensity of competition in the land rental market: the case of Ukrainian agroholdings	300
22.5.	Impact of the level of land concentration on the competitiveness of agricultural enterprises.....	303
22.6.	Summary and conclusions	309
	References.....	310
	Instead of a summary	312
	Annex I	314

15. The Model of Innovative Rural Entrepreneurship Development Designing

¹Prof. Lesia Zaburanna, ²PhD, Associate Professor Tetiana Lutska
¹National University of Life and Environmental Sciences of Ukraine
²University of Food Technologies of Ukraine
alesenka2003@ukr.net, valerieivna_@ukr.net

DOI: 10.30858/pw/9788376587516.15

Abstract

The article is devoted to the necessity of introduction and diagnostics of opportunities for sustainable development of rural areas. The main criterion for the sustainable development of the agrarian sector is to improve the farmers' and rural residents' quality of life, which should be built on preservation of basic life support systems. Therefore, for diversification of the rural economy, promising directions of economic activity in rural areas were identified, namely, the development of organic agriculture and rural tourism. There have been formed the theoretical foundations of designing a model of innovative rural entrepreneurship development in the conditions of market transformation and European integration. There was identified the essence of the concept of "innovative rural entrepreneurship", which should be based on the principles of systemicity, riskiness, science, energy and resource conservation, economic, social and environmental responsibility.

Taking into account the leading foreign experience, there have been identified several new and promising directions for the functioning of the business development innovative model in rural areas, namely the development of organic farming, family farming, cooperation and non-agrarian employment of rural inhabitants.

Keywords: rural entrepreneurship, model of development, rural tourism, organic agriculture, innovative development

JEL codes: A10, B41, C30, O13, Q13

15.1. Introduction

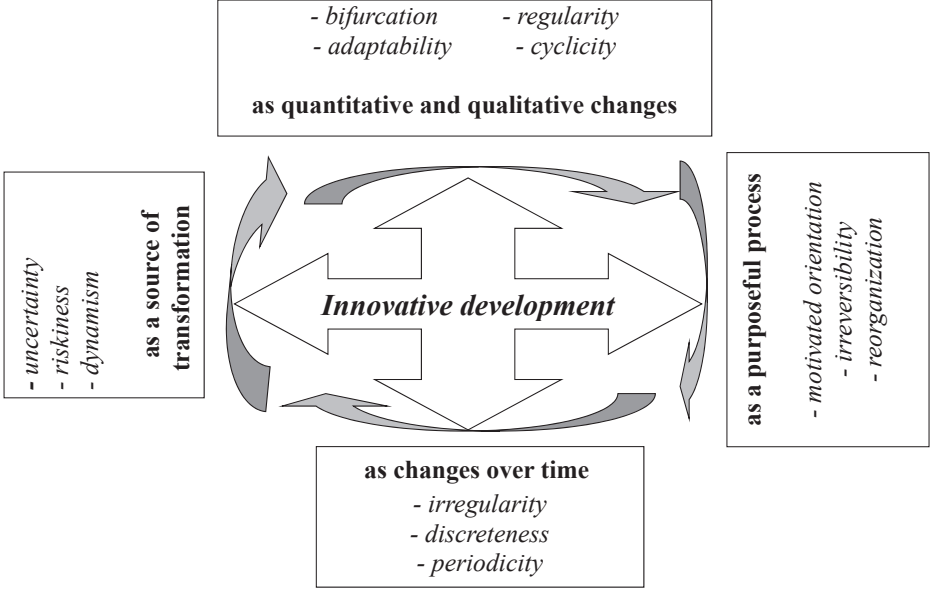
In the conditions of Ukraine's strategic orientation towards an innovative type of development, the adaptation of rural entrepreneurship to the new conditions of a market economy and its active reform are closely linked to innovation as the driving force of economic growth.

Provided and justified in the twentieth century, J. Schumpeter’s innovative development as a factor in economic growth is, in our time, a necessary and determining condition for sustainable development and competitive entrepreneurial activity, including in the rural areas. The top countries in the global competitiveness ratings of the national economies are the countries whose outstanding achievements are attributable to the innovation itself: Finland, the United Kingdom, the Netherlands, Singapore, Japan, the USA, South Korea, Ireland [Ivchenko, 2006].

Ukraine’s chosen path for integration into the European Union requires the maximum approximation of the national economic system to the systems of the EU countries, which outlined their strategic development goals in March 2000, based on the innovative model of development as the main vector of the unified European economic system formation and confirming the chosen direction adopted in 2002 in the Lisbon Protocol “Innovative Policies: Modern Approaches” [Communication from the Commission to the Council, the European Economic and Social Committee and the Committee of the Regions, 2003].

Innovative development as a component of economic development should include the features of this category (Figure 1).

Figure 1. Features of innovative development (developed by the authors)



We identify innovative rural entrepreneurship as an initiative, systematic, carried out at its own risk, economic activity, which covers economic relations in the development of innovations, their testing and verification, reproduction,

as well as the introduction into practical activities, and is a decisive factor in the development of the rural economy through more rational use of resources, increase of activity efficiency and provision of competitive advantages. At the same time, innovative entrepreneurship should be based on the principles of systematic, risky, scientific, energy and resource conservation, economic, social and environmental responsibility. To construct an effective innovation model of rural entrepreneurship development, we have developed an appropriate holistic system, which has the ability to self-healing, adaptation to changes in the external environment and the generation of scientific and technological progress, which is amplified or inhibited under the influence of appropriate reformation and state regulation, which allows a reasonable adjustment of the application of achievements of science and technology in agricultural enterprises. They have significant influence on economic processes in rural area.

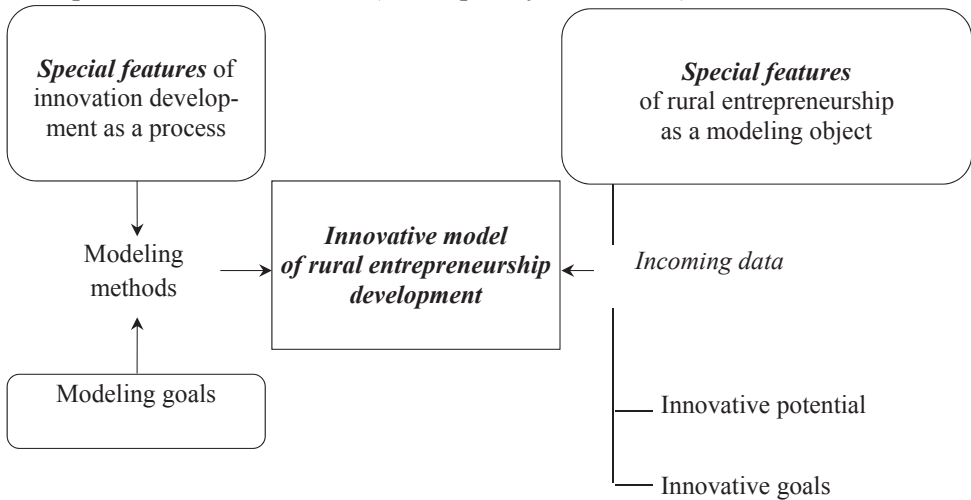
The model plays the role of a substitute of the research object, the correspondence with which allows obtaining new knowledge about it [Katrenko, 2000]; a sample that reproduces the construction and operation of an object; an imaginary or conditional image of an object, process or phenomenon used as its representative [Osetskiy, 2003]. In addition to the source of new knowledge, the model is a pragmatic means of management, the organization of practical actions, a way to present exemplary actions and their result, that is, a working presentation of goals. Simulation allows to evaluate the influence of exogenous and endogenous factors on future business results, to identify possible risks, to analyse and evaluate the contribution of each element from the chosen direction to the overall result, and therefore, solves the problem of choosing an effective strategy for innovation development from the point of view of the selected complex indicator or indicators group.

Models related to entrepreneurial activities in rural areas are a formal representation of a simulation object properties, research conditions, available research tools [Dorman, 2007]. Therefore, to the formation and choice of rural business innovative model impact (Figure 2):

- Modelling purposes as a factor in selecting simulation methods and vision of results.
- Features of innovative development of rural entrepreneurship as an integral part of economic development of rural areas, the presence of a significant subjective component in its composition and the problematic use of statistical methods and approaches, have a significant impact on the nature and flow of innovative processes.
- The specifics studied by them types of rural entrepreneurship as an design objects that combines individual sets of goals and resources and generates input data of the research [Fedulova, 2004]: accumulated potential; differen-

tiated and specific competencies that determine the direction and scope of possible and potentially effective innovations; forecasting of the economic situation; flexible organizational forms that combine decentralization of management, necessary for the effective development of innovations and centralization, which is necessary for the use of key technologies and constant control over the implementation of innovations; analysis of external factors and phenomena; methods of resources allocating that meet the needs of profitable investment at the moment and creating opportunities for those in the future; peculiarities of mutual relations of Strategic and Innovative Management Strategies that need to be taken into account in order to ensure the systemic links between the objects of the research and their individual elements in the simulation process.

Figure 2. The system of factors influencing formation of a rural entrepreneurship development innovative model (developed by the authors)



15.2. The aim and methodology of the research

The research aims to determine the theoretical, methodological and practical foundation of assessment of the modern directions of the innovative activity of agricultural enterprises and develop strategic alternatives for innovation growth of the enterprises under research.

We believe that the formation of rural entrepreneurship innovative model requires a complex and integrated approach, since the use of formal mathematical model and a single method to the entire mechanism is impossible due to large dimension systems, lack of prior information, vague evaluation criteria. Mathematical modelling of a complex system consisting of elements mathematical models

and between elements interdependencies mathematical models requires the use of an entire system of economic and mathematical models represented by a set of interrelated models that reflect within mathematical form the existing patterns of the functioning of an economic object in real environmental conditions.

In general, the innovative model of rural entrepreneurship development is a multicriteria task of the multiple objective functions simultaneous optimization for a given set of innovative goals:

$$y_n = f_k(x) \rightarrow opt, k = \overline{1, m}, x \in X, \quad (1)$$

where m – number of target functions to be optimized;

f_k – separate k – functions from the set ($k = \overline{1, m}$);

X – the totality of planned innovations, the individual element of which is marked through x .

Using the first approach to building a system model allows us to form a common design from the stages of innovative development, which, on the one hand, as elements of the model can provide in the general form an optimal number of steps and measures for the introduction of innovations. On the other hand, each of the stages acts as a separate subsystem with a set of autonomous properties and is characterized by a set of innovations x_i^j , the impact of which is associated with the formation of local criteria for further optimization of the system.

Thus, the overall innovative model of rural entrepreneurship development generated by the system of diverse target functions in the modelling process requires passing through a series of steps that can solve a set of strategic objectives of the innovation entrepreneurship process optimization in rural areas:

- From the formulation of innovative goals to the creation of a hierarchical structure of strategic innovation transformations. At this stage, possible innovative transformations are outlined and their structuring takes place in corresponding directions, which in future will form the stages of the innovation strategy. Since the main task of this stage is the formation of hierarchy goals, the main methods of its implementation through modelling are methods of structuring and methods of expert assessments. The inputs of the target models form the set of innovative goals of entrepreneurship in the rural areas.
- From the planning of the main directions of transformation to the formation of an optimal strategy as a set of its stages. The main criterion for choosing at this stage is the expected efficiency of each direction, the analysis of which allows you to choose the optimal set of innovation strategy stages. Obtaining an optimal solution is achieved by selecting from the set of possible solutions the solution that provides maximum efficiency, and therefore, the main methods are graphical ones that allow explicitly to present the structure of further actions.

- From the analysis of the planned innovation transformations according to the developed criteria to determine their priority. Analysing the essence of innovative goals, in the process of modelling, it becomes necessary to use methods of fuzzy sets, such as those that allow to describe risk factors and uncertainties.
- From the formation of the overall structure of the innovation strategy system to the definition of rules for the distribution of authorities and resources that will be involved in providing innovative transformations. Re-checking of potential compliance to planned destinations. It is advisable to use optimization methods when solving the problems of efficient allocation.

Consequently, methodological support for the process of innovative development modelling of rural entrepreneurship consists of: the theory of graphs – the construction of scenarios for the innovative processes implementation and the structure of the rural entrepreneurship innovative strategy; expert evaluations – formation of necessary resources, selection of innovative goals, directions of innovative development, assessments of the innovative transformations efficiency in entrepreneurial activity in rural areas; the theory of fuzzy sets – the analysis of the innovation goals priority in conditions of uncertainty, structuring of innovative projects; the theory of optimization methods is an effective distribution of the provisioning component based on the selected innovation goals, the formation of the optimal structure of the rural entrepreneurship innovative strategy. At the same time, the offered methods are oriented on the use of modern information technologies, which allow to make decisions in conditions of poorly structured problem and insufficient information provision.

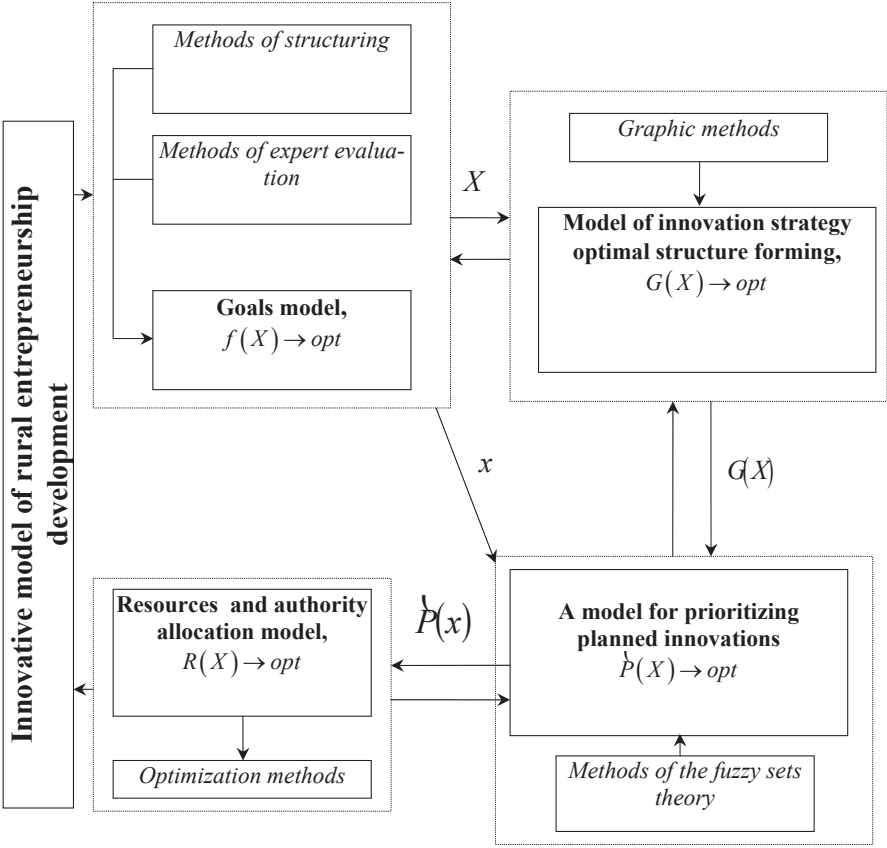
Filed on Figure 3 schematic representation corresponds to the above-mentioned stages of rural entrepreneurship innovation development modelling and allows to split the modelling process into several models related to the resulting indicators. The content of such a breakdown is that it is easier to solve the task, with its allocation of subtasks with a structure not inherent to a generalized problem. In addition, building local criteria and conducting calculations on individual subsystems at different levels simplifies the process of global optimization of the formation process of strategic innovative development. Each subsystem optimizes its target function, and the upper level coordinates the solution of the subsystems of the lower levels in such a way that the optimum of the overall target function is achieved.

15.3. The research results

We have previously established that the basis of socio-economic development of economically developed countries of the West mostly is the innovative model of rural entrepreneurship. It is based on the information method of

agrarian production and the corresponding economic system – the “new economy”. The main resource of the latter is the creative abilities of people who form the intellectual capital. The traditional exhaustion is not typical for this resource. It provides economic growth without a proportional increase in the total cost of raw materials. Therefore, the most effective are investments in the workers themselves, in improving the creative potential of the human personality, which in fact is inseparable from personal consumption. In this way, is created a self-regulated mechanism which allows investments that stimulate economic growth by maximizing personal consumption.

Figure 3. System innovation model of rural entrepreneurship development (developed by the authors)



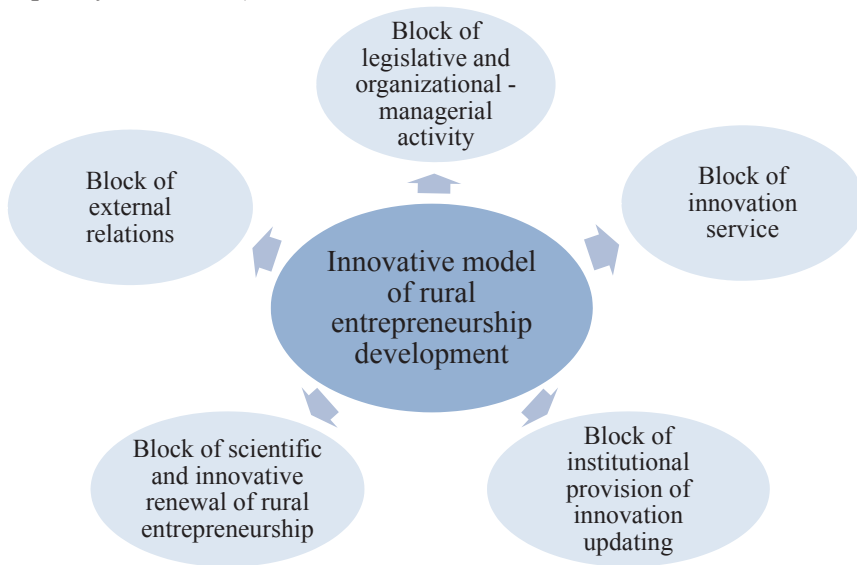
An innovative model of rural entrepreneurship development involves combining the interests of business entities among themselves, as well as with the state through the implementation of state policy in the field of entrepreneurship, the parameters of which must be based on a program-targeted approach that allows the

effective use of available bioclimatic and production potential, financial capital, to realize the multi-level interests of both the state and the particular subject of entrepreneurship in the rural area, creation of an effective system of the agrarian market state regulation involves the development of a number of national, interregional and regional development programs for agrarian industry and rural areas.

For today, the innovative way of developing rural entrepreneurship is urgently needed. To overcome the negative situation that has developed in the rural areas and in rural entrepreneurship, it is possible only by developing and consistently implementing a long-term strategy of innovation renewal.

In our opinion, it can include five main blocks, which provides the main directions of innovation development of rural entrepreneurship (Figure 4).

Figure 4. Components of an innovative model of rural entrepreneurship development (developed by the authors)



The block of legislative and organizational-managerial activity:

- adoption of the legal acts at the state system, regional and interstate levels;
- scientific support and use in domestic developments and inventions to stimulate entrepreneurial activity in rural areas;
- information provision on scientific and technical achievements and innovations in agriculture of Ukraine and the world;
- staffing (target training and retraining of specialists, integration of agricultural educational institutions, scientific organizations and experienced entrepreneurs in the village, organization of internships in advanced domestic and foreign farms).

Innovation service block:

- development of fundamental, applied research and inventive activity in agrarian sphere;
- creation of new generations of agricultural machinery, including systems of machines for private and farm enterprises, new equipment for processing agricultural products;
- provision of agriculture with new types of mineral fertilizers, fuel, energy, materials;
- development of innovative technologies for transportation, storage and processing of agricultural products;
- control of the quality and ecological purity of agricultural products and foodstuffs.

The block of institutional provision of innovation updating:

- development and innovative renewal of households and farms;
- development of cooperation, small innovative enterprises to improve the technological level and competitiveness of households and farms;
- development of state seed and tribal scientific and practical centres in the field of plant growing, animal husbandry, horticulture, gardening, processing;
- support of small business, development of innovation infrastructure in the rural area.

Block of scientific and innovative renewal of rural entrepreneurship:

- innovative renewal of crop production;
- innovative livestock breeding;
- biotechnological methods for the selection of plants and animals;
- new technologies for conservation and enhancement of soil fertility and environmental protection.

External relations block:

- analysis and forecast of the innovation renewal trends in the world agrarian sphere and the place of Ukraine in it;
- gradual substitution of imports by domestic agricultural products by improving its competitiveness in the WTO;
- adaptation of Ukraine's agriculture to the European agro-food system;
- attraction of foreign investments and technologies in the agricultural sector of Ukraine.

The main strategic priority of the rural entrepreneurship innovative development is the improvement of the investment process, which helps to improve the testing, implementation, reproduction and use of innovations. Among reasons hampering innovation activity of business entities in rural areas (BERA) can outline the following:

- a narrow scope of the created innovations application, lack of technology objects production in which innovations could be used;
- lack of technical documentation, design and experimental base;
- shortage of necessary raw materials, materials, components, equipment;
- the expectation of a positive effect from innovation is not justified;
- change of the entrepreneurship direction of activity;
- identification or creation of a new, more advanced technical solution;
- necessity of innovation approbation;
- belonging the invention to “perspective innovations”, which are ahead of the modern technical level of production, the use of which is possible in the future;
- other reasons: organizational, insufficient information, etc.

To minimize the influence of the presented reasons it is necessary to form the concept of the management system for innovation and investment activities of business entities in rural areas. The main objectives of this concept development are:

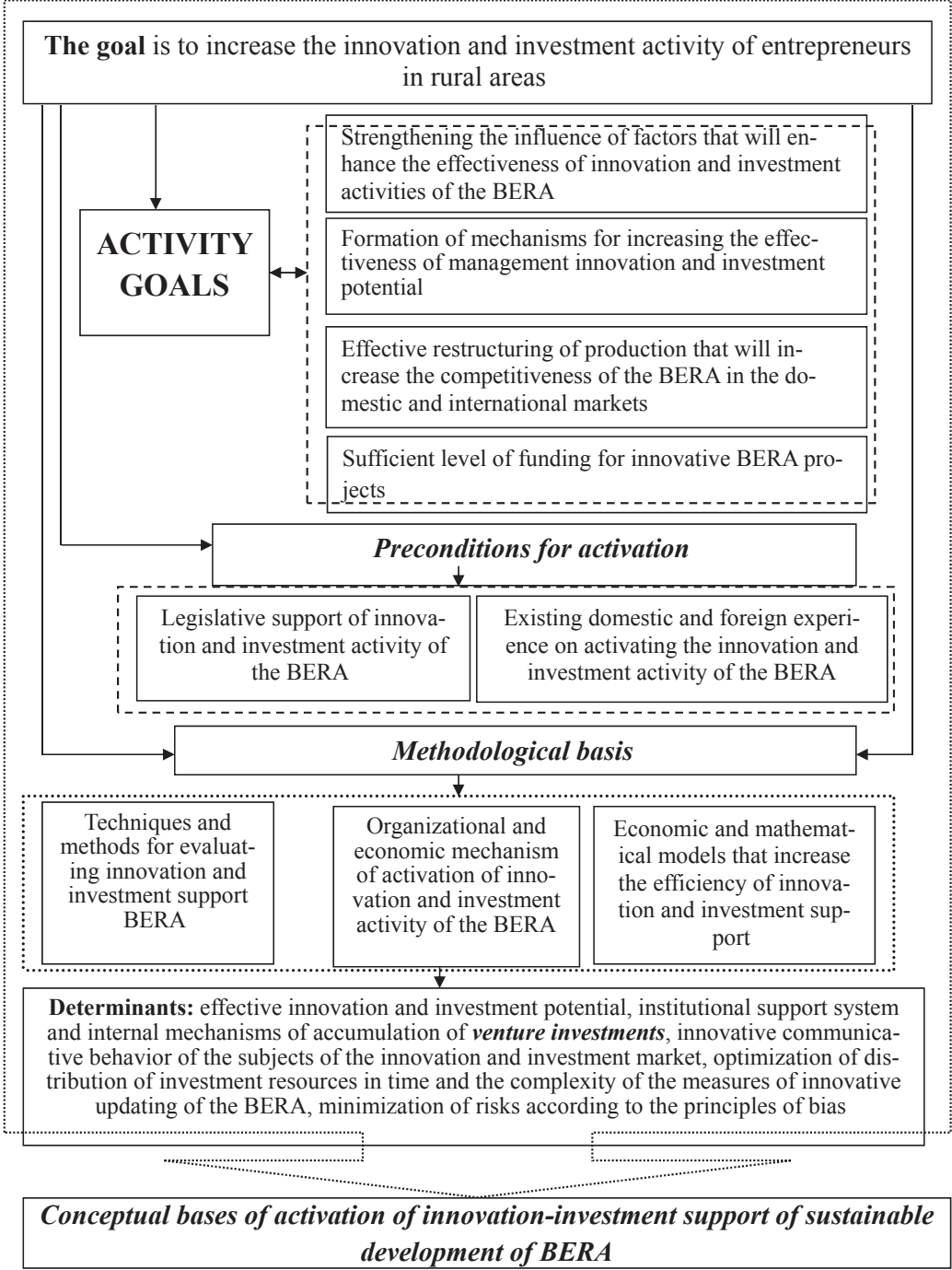
1. increasing the influence of scientific and technological factors that will promote the economic growth of entrepreneurs in rural areas;
2. the formation of mechanisms for increasing the innovation and investment potential of entrepreneurs in rural areas;
3. an effective restructuring of production, which will increase the competitiveness of entrepreneurs in rural areas in the domestic and international markets;
4. sufficient level of innovative projects financing (Figure 5).

The prerequisites for activation are the regulatory and legal framework for innovation and investment activities of business entities in rural areas and existing domestic and foreign experience, as well as its activation.

Regarding the methodological basis, it is based on the methodology and methods for assessing innovation and investment support, the organizational and economic mechanism of its activation and on the economic and mathematical models.

The combination of these components will allow entrepreneurs in rural areas to achieve such key determinants as: capable innovation and investment potential, institutional support system and internal mechanisms for the accumulation of venture capital investment, innovative communicativeness of the innovation and investment market subjects, optimization of the investment resources distribution in time and complexity management innovation of business entities in rural areas, minimizing risks on the principles of prejudice.

Figure 5. Conceptual provisions for intensification of innovation and investment activities of business entities in rural areas (BERA) (developed by the authors)



From the proposed conceptual provisions of activating innovation and investment activity of agricultural enterprises, it is possible to achieve their sustainable development by activating innovation and investment support on determinants, creating preconditions and using the methodical basis.

Cooperation plays a significant role in increasing the economic sustainability of agricultural production, as well as provides social support and social protection of the population. We believe that cooperation is effective and extremely important element of the innovative model of rural entrepreneurship development. The cooperative movement builds on a new principle – the growth of the economy from the bottom up – and creates the effect of sustainable development for local communities. This is the path to the revival of the Ukrainian rural areas.

According to M. Tugan-Baranovsky, cooperative enterprises are, in essence, the only form of economic organization that arose as a result of deliberate efforts of the peasants, and as a production structure capable not only to protect their economic interests, but also to achieve their goal. The attractiveness of the cooperative idea is that its implementation is not connected with violence, it is based on high ethical standards of people, mutual assistance and solidarity. A cooperative enterprise is created as a result of conscious efforts of its members and because of this “there is no coercive power and no violence in the cooperative” [Tugan-Baranovsky, 1994].

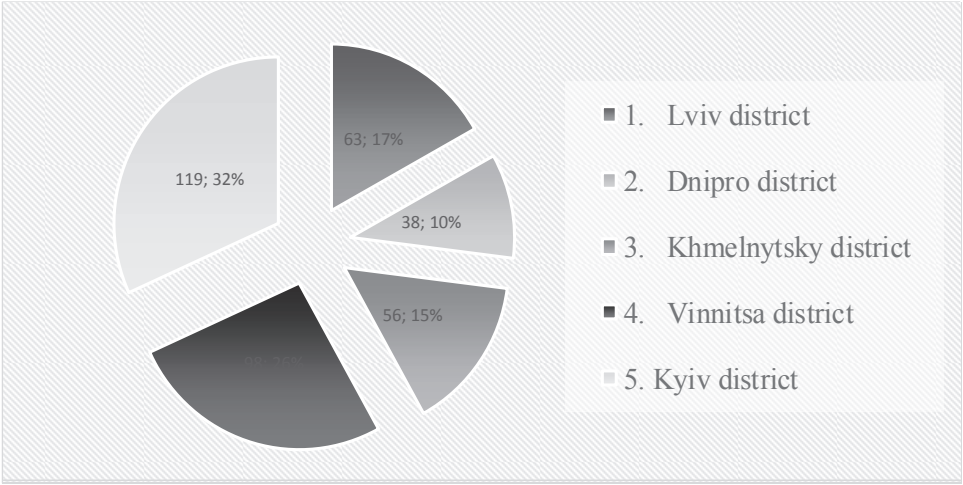
The purpose of the survey conducted by us in May-June 2017 in rural entrepreneurs was to identify the peculiarities of the entrepreneurial activity development in the agrarian sector on the basis of cooperation. The survey covered 374 respondents (rural entrepreneurs) from Lviv, Dnipro, Khmelnytsky, Vinnytsia and Kyiv district.

The sample was formed randomly, but it reflects the overall structure of the participants in agricultural service cooperatives. When compiling the sample, data was collected from regional state administrations and region state administrations, advisory services, personal contacts.

For a more detailed study of the entrepreneurial activity development peculiarities in the agrarian sector on the basis of cooperation with a view to gender equality, we analysed the number of questionnaires received from rural entrepreneurs from 5 districts of Ukraine (Figure 6):

1. Lviv district;
2. Dnipro district;
3. Khmelnytsky district;
4. Vinnitsa district;
5. Kyiv district.

Figure 6. Division of respondents according to districts of Ukraine, persons (developed by the authors)



The results of the analysis indicate that the largest number of respondents live in Kyiv, Vinnitsia and Lviv, which corresponds to the data of the State Statistics Committee regarding the prevailing number of rural population in these areas.

For the development of the cooperative movement, it is very important for peasants to understand the possible positive changes that will occur when the cooperative movement in the entrepreneurial activity in the village of Ukraine is spread (Table 1). 49% of the surveyed rural entrepreneurs believe that the main positive change that will occur due to distributing the cooperative movement in entrepreneurship in the rural area in Ukraine is the social, economic and ecological balance and the development of entrepreneurship in the rural area. And 21% of the polled as positive changes in the development of cooperative activities in the rural area see strengthening of food security and public health, increasing labour activity.

It should be noted that the revival of the cooperative movement in the agrarian sector of the economy is very slow. The main deterrent factor is the unfavourable economic environment due to the lack of price parity for agricultural and industrial products and deep crisis in past years. The lack of scientific and methodological developments regarding the advantages of the cooperative way of agricultural development, the principles of cooperative structures, as well as the lack of experience of cooperative management and the construction of economic relations in a market environment affects negatively.

There are quite a few examples of effective cooperative formations in Ukraine that require a thorough study and generalization for practical purposes. The main reason for this is the need to mobilize the internal potential of the co-

operative idea to improve the financial and economic position of commodity producers, the advantages of the cooperative development direction, as well as optimal construction of the organizational structure and economic relations in cooperatives of different directions.

Table 1. Understanding of possible changes, with the expansion of the cooperative movement in the rural areas in Ukraine

No.	Positive changes	Rank	Percentage of respondents
1.	Strengthening food security and public health, increasing labour activity	2	21
2.	Careful attitude to the environment, rational consumption and use of natural resources	3	15
3.	Social, economic and ecological balance and the development of entrepreneurship in the rural areas	1	49
4.	High ranking of Ukraine regarding the investment attractiveness of the agrarian sector in international comparisons	4	9
5.	The formation of a coherent system of Ukrainian society's values, the spiritual and cultural development of human society	5	5
6.	Another option	-	1

Source: developed by the authors.

Only agricultural production and agricultural employment are not able to provide an adequate level of income as a basis for creating quality living conditions for peasants, therefore there is an objective need for diversification of the rural economy, based on the choice of the agricultural farms new to agriculture, the strategic direction of development – diversification of its activities that do not require significant investment from the outside, in particular, state-owned, but guarantees high final results as for the private sector, and society in the face of the state.

Diversification is an innovative process aimed at achieving general, strategic and tactical goals of enterprise development by implementing selected strategies (active, passive, adaptive). The analysis of scientific publications of domestic and foreign scientists testifies that diversification is viewed as one of the implemented innovation form.

Based on the scientific works research devoted to the process of diversification, we have identified certain differences in the notion of “diversification”. We believe that diversification is an innovative strategy for reducing business risk and increasing income through expanding the business activity of a business entity by redistributing available resources into other areas of activity that are significantly different from the previous ones.

Diversification of activities through innovative directions also applies to small forms of agricultural production. They can help to expand the scope of employment in the rural area. As noted by scientists M.Ya. Malik and V.A. Pulim, the degradation of the rural economy (reducing its share of agricultural production in its structure) represents a significant step towards the effective development of rural areas and the prerequisites for the formation of private initiative and entrepreneurship in rural areas [Malik, 2007].

A classic example here may be tourism in the agrarian sector, in which the human, material, land resources of farmers or personal peasant farms, produced in them products used to provide services for accommodation, food and other forms of services for tourists and vacationers. However, it is not necessary that farms provide the full range of these services in the world specialization is practiced on individual or several of them.

At present, there is no well-established system of tourist services for tourism entrepreneurship in rural areas. As M.Y. Rutinsky and Yu.V. Zinco [Rutinsky, 2008] note, the services of business entities in the sphere of rural tourism are divided into basic and additional.

Basic unite the services of the organization:

- transportation of tourists;
- accommodation of tourists;
- catering for tourists.

Additional services include:

- to organize excursions;
- attracting tourists to agricultural and folk crafts;
- services of guides, guides-translators;
- services for attracting tourists to participate in folk rituals and cult events, as well as village festivals, fairs, carnival and other mass actions;
- car rental services, boats, tourist equipment;
- household services;
- right to use private recreational areas.

The proposed by the authors division is quite arbitrary, since there is no significant difference in terms of consumer properties between them. Services included in the basic program of staying a tourist in the village, usually referred to the main. Additional tourist services are purchased independently at the place of stay and they are not included in the value of the tour package. In addition, as non-material services, tourists can be offered other goods or material services. For example, maps of the area, folk souvenirs, tourist equipment, etc. Based on the analysis of the tourist services features in rural tourism, we have formed the most detailed system of rural tourism services (Figure 7).

Successful examples of rural tourism initiatives that are advisable to use in Ukraine can be found in many countries around the world on different continents – Argentina, Belgium, France, the Netherlands, Ireland, Canada, Germany, New Zealand, Poland, Russia, Switzerland, Uruguay, USA, UK, Italy and Zanzibar. Among such initiatives can be highlighted:

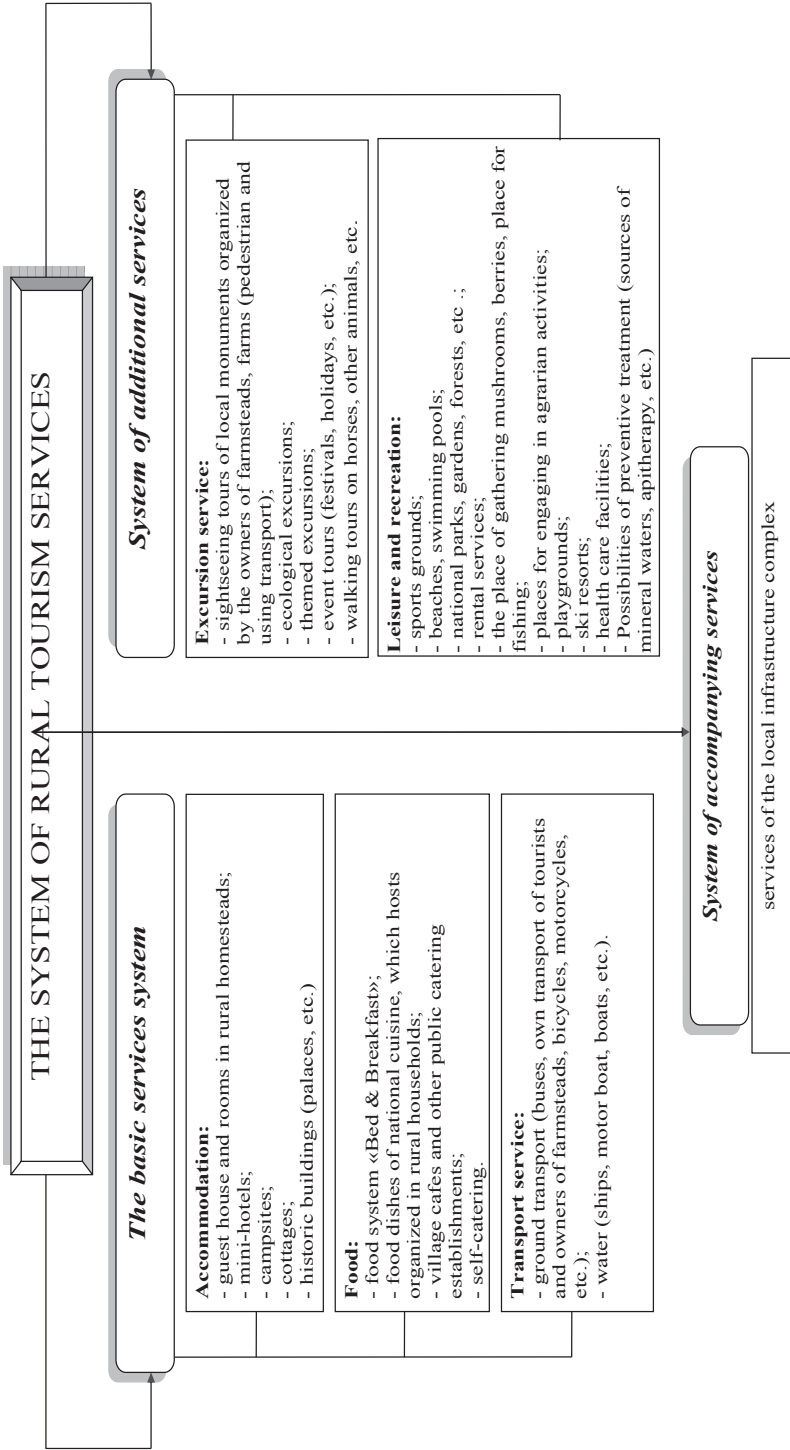
1. farmhouse for children;
2. agro-tourism farms for fattening of wild animals;
3. cheese production agro-tourism farms;
4. agritourist restaurants.

Farmhouse for children. Small children need direct contact with animals that satisfy many of their emotional needs. Contacting children with animals should be monitored. Marshal Animal Park is an example of a farm that has gone from sheep breeding, the area has been transformed into a park of animals that tourists can inspect. Owners did not focus on the placement of a large number of animal species on a relatively small (about 30 hectares) area. Their purpose is to ensure the maximum contact of tourists with animals. For some pastures tourists can enter freely, instead, on pasture with dangerous animals (e.g. yak), entry is prohibited. Tourists can visit the park on foot or bypass it [Rutinsky, 2010].

When traveling in rural areas, tourists should be able to visit farms that feed wildlife. In the world, for economic purposes, many species of non-domesticated animals are fed, including ostriches, deer, crocodiles, snakes, etc. In the south of France, as in Spain, they organize a bullfight. Feeding bulls is a lucrative affair for peasants in the south of France, as well as a spectacle for tourists. To visit the farms that are fattening cattle for bulls, you have to pay for the entrance. Bulls for fighting for a certain period of time are grown in farms in the Rodan delta, in the autumn-winter period, they are in the Central Massif, where they have plenty of space and pashas, ripen and strengthen. In the spring they are again transported to farms in the Rodan delta. The territory of farms is protected by two grids under electric voltage, so that these dangerous animals do not rush on other animals [Majewski, 2000].

Activity of some agro-tourism farms is based on cheese production. Cheese is one of the most “grateful” agricultural products, which is great for agritourism. There are many types of cheeses worldwide; only in France their number reaches 1000 species. Most often peasants are interested in attracting tourists to a specific cheese, its production, and purchase. Cheese of goats, sheep and buffalo is offered as special product. As an agro-tourism product, cheeses well combined with other products, especially with wine. Such agro-tourism farms are in the UK, Switzerland, Germany, Italy, France and other countries. All farms have a different organization, but are mainly located in mountainous regions. The production of cheese is also combined with a restaurant or shop where the main product is cheese.

Figure 7. The system of rural tourism services (developed by the authors)



Usually farms offer cheeses, waiting for tourists who stay there for not very long – at most 2-3 hours. The agritourist program is typical: getting acquainted with the production process, tasting and buying cheese. Peasants can also expect tourists to eat at a restaurant on the farm. Extras in the cheese can be decorations that illustrate the fragments of cheese production that visitors cannot see directly. Farms and enterprises focused on agritourism, organize short performances with colourful stories and even musical accompaniment [Sznajder, 2006].

Agritourist restaurants have become an integral part of modern rural tourism. They differ from traditional ones because the owner is a peasant who offers local dishes that are often prepared from products produced in their own household. Farmhouse restaurants can also offer products from local agricultural firms. An example of the use of traditions related to the Lithuanian minority in Poland for agro-tourist purposes is the Sodas farm, which is located in Trakishki, in the territory of the Seinensk region. This county is home to a large group of people who attribute themselves to the Lithuanian national minority. The Sodas farm which is located in the ethnically Lithuanian area of 11 hectares, was engaged in the cultivation of grain and fattening cattle. The owner decided to switch to agro-tourism activities and subordinate the entire household for this. The farm opened in the Punska restaurant “Sodas” with Lithuanian national dishes. The restaurant also offers traditional Lithuanian pastries. Plans to introduce also the sale of traditional Lithuanian products. In addition, the farm itself was re-qualified for agritourism for families who want to spend their free time in the Lithuanian style. Sodas receives profits from sources such as: restaurant with Lithuanian menu, sale of regional Lithuanian products and reception of agro-tourists [Yeoman, 2000].

The use of world experience in introducing innovative forms and new initiatives in the service of tourists is very relevant for its attachment to the tourist services market. Further scientific and practical developments regarding the introduction of new tourist products and services in rural areas are necessary, taking into account the natural, historical and cultural, economic characteristics of the Ukrainian rural area.

An important direction of diversification of the rural economy on an innovative basis for achieving its sustainable development is also the application of organic farming, which can adapt agrarian production to climate change and positively affect the socio-economic development of rural areas. Due to the fact that only organic materials (fertilizers, plant protection products, etc.) are used in organic farming, the content of organic substances in the soil increases. As a result, much more moisture is in the soil due to the effect of natural factors, than when using the traditional agricultural system. Thus, when using the organic

farming system, it is possible to some extent to neutralize the effect of natural factors, which is especially important in the context of global climate change. Another positive moment in using the organic farming system is that, when producing certified products, the prices for it are almost twice higher, than on the usual agricultural products. And this, in turn, allows farms to receive higher incomes and cover production costs, even with insignificant crops.

Priority development of organic production declared in the State target program of development of Ukrainian rural areas until 2015, which justified the need to “renewal soil fertility and preserving the environment, rural development, improving the efficiency of agricultural production, providing the consumer market healthy quality products, strengthening export potential, ensuring food security and improving the well-being of citizens” [Balmann, 2014]. The trend of market growth is observed in all countries of the world, with demand far exceeding the supply even at high prices (Table 2).

Table 2. Development of organic products market in European countries

	<i>Market volume, million euros</i>					
	2006	2010	2012	2014	2016	deviation 2016 to 2006, %
<i>Germany</i>	4600	6050	6590	7040	7550	164.13
<i>Sweden</i>	605	860	885	905	1018	168.26
<i>Estonia</i>	3.2	12.1	18.7	20	22	687.50
<i>Czech Republic</i>	28.7	59	66.2	70	71.3	248.43
<i>Latvia</i>	1.1	3.6	4	4.7	5.3	481.82
<i>Italy</i>	970	1580	1720	1885	2020	208.25
<i>Great Britain</i>	1240	1680	1882	1950	2065	166.53
<i>Poland</i>	58	111	120	127	138	237.93
<i>Ukraine</i>	0.5	2.5	5.1	9.3	12.0	2400.00
<i>Russia</i>	56	109	115	120	123	219.64

Source: developed by the authors.

An analysis of trends in the development of the organic products market in European countries indicates that there are significant positive results. The largest volume of the market belongs to Germany, Great Britain and Italy. These tables also indicate the growth of the organic farming market in Ukraine, but in comparison with other European countries, it is only at the beginning of its development, and therefore small entrepreneurial structures in the rural areas can play a significant role in the development of this trend of innovative agriculture.

For the consumption of organic food per capita, the leaders are Germany and Sweden, where one resident buys them at an average of 93 and 106 euros per year, respectively, in Ukraine, this indicator is only 3 cents per capita per year. Despite the rapid increase in the volume of organic products sales in the

EU, there are certain barriers to their production, namely, poor soils and massive intensification of agricultural production [Dimitri and Oberholtzer, 2009]. In view of this, further growth of organic products markets opens up opportunities for new producers from developing countries, including from Ukraine.

In addition, the feasibility of introducing organic farming in Ukraine is conditioned by the following:

- the need to reproduce the soil fertility and preserve the environment;
- the need to develop rural areas and raise the living standards of the rural population;
- the need to increase the efficiency and profitability of agricultural production;
- the need to provide the consumer market with healthy, high-quality products;
- the need to strengthen the export potential of the state;
- the need to improve the image of Ukraine as a producer and exporter of high-quality healthy organic products;
- to ensure food security in Ukraine;
- welfare improvement of the Ukraine's citizens.

15.4. Summary and conclusions

The research allowed drawing a set of conclusions. The directions of innovative development of rural entrepreneurship are not exhaustive, but their implementation will promote the processes of the output of small and medium-sized rural entrepreneurship of Ukraine to the European level of development, improvement of the business climate, strengthening of the positions of rural small and medium-sized rural entrepreneurs in the general structure of the national economy, modernization in the field of rural small and medium rural entrepreneurship, aimed at increasing its contribution to the socio-economic development of the country, increasing SMEs effectiveness, including an increase in its domestic component in the volume of agricultural production, pumping up the state and local budgets.

References

1. Balmann, A. (2014). 25 Years of Transition: The Structural Development of Eastern German and Eastern European Agriculture. Vortrag präsentiert auf Sino-Germany Academic Exchange Lecture Series, Chengdu/China, 11.11.2014 - 13.11.2014.
2. Communication from the Commission to the Council, the European Parliament, the European economic and social committee and the committee

- of the regions „Innovation policy: updating the Union's approach in the context of the Lisbon strategy” (Brussels, 11.3.2003 COM (2003) 112 final; Innovation Policy: updating the Union's approach in the context of the Lisbon strategy. Communication from the Commission to the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels. 11.03.2003.
3. Dimitri, C., Oberholtzer, L. (2009). Expanding demand for organic foods brings changes in marketing. *Markets and Trade*, March, 3.
 4. Dorman, V.N., Danilenko, D.N. (2007). Economic model of the enterprise – the basis of strategic planning *Vestnik USTU*. No. 4.
 5. Fedulova, L.I., Sokirnyk, I.V., Stadnik, V.V. and others (2004). *Management of organizations: a textbook for students* - K.: Lybid.
 6. Ivchenko, V. (2007). Formation and development of the national innovation system of Ukraine as a prerequisite for building a competitive state economy. *Strategy of development of Ukraine*. No. 1/2.
 7. Katrenko, A.V. (2000). *System analysis of objects and processes of computerization: teaching manual*. Lviv: New World.
 8. Majewski, J. (2000). *Agroturystyka to też biznes*. Warszawa: Fundacja Wspomagania Wsi.
 9. Malik, M.Ya., Pulim, V.A. (2007). *Conceptual Principles of the Development of Rural Territories. The role of social capital and local initiatives in ensuring rural development: additional*. International Symposium. Zhytomyr: View of State University of Agricultural and Environmental Sciences.
 10. Osetskiy, V.L. (2003). *Investments and innovations: problems of theory and practice: monograph*. Kyiv.
 11. Rutinsky, M.Ya., Zinko, Yu.V. (2010). *International experience of organization of rural tourism*. Geography and Tourism. Kyiv: AlterPres.
 12. Rutinsky, M.Ya., Zinko, Yu.V. (2008). *Rural Tourism: Educational manual*. Kyiv: Knowledge.
 13. Sznajder, M., Przezbyrska, L. (2006). *Agroturystyka*. Warszawa: Polskie Wydawnictwo Ekonomiczne.
 14. Tugan-Baranovsky, M.I. (1994). *Political Economy: The Popular Course*. Kyiv: Scientific Opinion.
 15. Yeoman, J. (2000). *The Importance of Rural Tourism and Agritourism in Rural Development*. *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu*.
 16. Zaburanna, L.V. (2015). *Diversification of business activities in rural areas according to the concept of sustainable development [Text]: Actual Problems of Economics*. Vol. 10, pp. 129-140.