

УДК 332.012.2

JEL Classification Code: D11, D46, L19, O10, R58

К. Andreeva

К. Андрєєва

THE DIRECTION OF INNOVATION THEORY DEVELOPMENT IN THE SYSTEM OF KNOWLEDGE OF NATIONAL ECONOMY AND REGIONAL MANAGEMENT**СПРЯМОВАНІСТЬ РОЗВИТКУ ТЕОРІЇ ІННОВАЦІЙ В СИСТЕМІ ЗНАНЬ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ ТА РЕГІОНАЛЬНОГО МЕНЕДЖМЕНТУ**

Theoretical achievements of "innovative economy" are considered and systematized. Topical issues of innovation theory development in the system of knowledge of national economy and regional management are investigated. System vision of doctrinal characteristics of innovations in the development of progress and stimulation of territories progress is provided. The evolution of scientific researches of innovation theory, their orientation are systematized, vectors of the development and prospects of a scientific thought, urgent for modern national, branch, regional economy, demanding its development, are substantiated. The introduction of national innovative model on the basis of modern technologies of knowledge management and information openness is recommended for Ukrainian economy.

Keywords: *innovation, scientific and technological progress, national economy, branch economy, regional economy, knowledge.*

Relevance. In modern management theory, in the system of factors and preconditions for effective development of the competitiveness of national, regional and sectoral economy, innovation should be recognized as a priority – markets, projects, programs, products, labor. Focusing on key global trends and forms of the development in the context of the formation of a post-industrial economy, the model of "innovative economy" is given priority, as it is innovative model of the economy that provides maximum use and optimal returns from the whole complex of vital resources: intellectual, informational, material, financial ones. In innovation model it assumes efficient use, versatile development and qualitative improvement of all factors of production on the basis of scientific and technical progress.

In the countries where orientation towards a conceptual model of the development of innovative economy takes priority, first of all, there is a tendency to increase the role of education, knowledge, which forms innovative orientation in economic and social progress of territories. This consistency can be reflected in relational paradigm: "knowledge" – "science and technology progress" – "innovation" – "innovative processes and technology" – "innovative industry and production" – "innovative economy" – "innovative social progress" – "social and economic progress of territories".

It is a common vision and a concise reflection of innovative models of modern highly developed economic systems, which include USA, Japan, Canada, several European Union countries – Germany, Norway. Accordingly, these countries have formed the mechanisms for advancing development of innovative sector of economy, social sphere, and knowledge is a priority resource in management technologies of the future.

Tasks. To study topical issues of the development of innovation theory in the system of knowledge of national economy and regional management.

The main material. On the basis of modern theory and methodology of innovative model of economic development of countries and territories effective economic complexes, innovative production, innovative cluster associations are created, high-quality products are produced, innovational services are provided, the basis of innovation work is formed, innovational culture is spread. As a result, the whole system of management is changed – from industrial and branch to regional and state one. As a result, innovation activity gives the main part of the increase of labor productivity and GDP. The modern world model of relations within the framework of innovation activity accumulates and extends the process of creating new technologies (Fig. 1).

Innovations, inventions and the latest technologies in human activity accompany and predetermine evolution. The theory of innovations reflects in its section of knowledge economic theory, forms a vision of management, actively explores and distributes marketing. Starting the development and prerequisites for scientific apparatus, the study of the phenomenon of innovation and in the future the whole innovation activity are reflected in fundamental works of the scientists M. Kondratiev, J. Schumpeter and others.

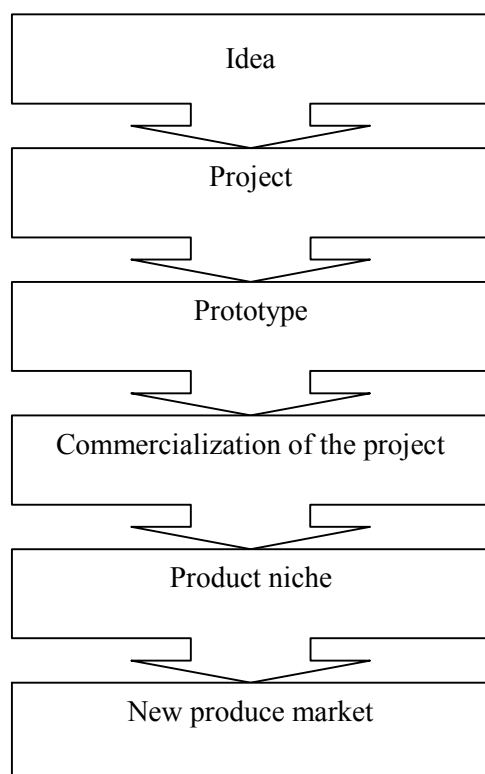


Fig. 1. A generalized paradigm for creating new products and new markets

In the work of M. Kondratiev "Business cycles" (1939) the issues of cyclical development of the market and economic activity are systemically considered. The phenomenon of the cycle suggests, according to scientists, the presence of a key push factor in the emergence of stabilization and the possibility of further growth of a new product – innovation.

J. Schumpeter, world-renowned scholar, the founder of the theory of entrepreneurial activity, adhered to the relevant scientific thought. His contribution to scientific instrumentation of the analysis of innovation process to understand and explain the phases of business development "revival, decline and stagnation of production" is very important. It is recognized that the works of this outstanding scholar became the foundation of the theory of innovation (fundamental work – the monograph "The theory of economic development", published in 1911).

Outstanding scholar reviewed and analyzed the following provisions:

- the emergence of a fundamentally new product or service, its positioning in the market;
- technological process in the system of moving innovations;
- introduction of a new product into commercial turnover;
- the formation of new market niches or the emergence of a new market, depending on the scale of production;
- the formation of a resourcing system of new production;
- industry positioning of a new product and changes in the structure of monopolies, oligopolies and general structure of the industry.

In scientific literature, the concept of "innovation" appeared in the early twentieth century, initially it meant the penetration of some elements of one culture into another. It is believed that this term was introduced into scientific circulation by J. Schumpeter. The basis for reasoning about socio-economic nature of innovation is classical definition of this category, proposed by the scientist in the "Theory of economic development", given in Table 1.

The given and systematized provisions on the formation of a categorical apparatus, the key provisions of the theory and methodology were developed by such scholars as I. Ansoff, P. Drucker, M. Castells, E. Toffler and others. In modern scientific research, new categories and definitions reflecting the processes of institutionalization of innovative economy are being substantiated. Actual are: innovative culture, innova-

tive management technologies, innovative work, innovative markets, innovative clusters, innovation environment and others.

Table 1

Terminological definition of the essence of the concept of "innovation"

Author	Definition
J. Schumpeter	Innovation – "non-permanent" carrying out of "new combinations" in five typical cases of changes: - the introduction of a new product, i.e. the product that consumers still do not know or a new kind of product; - the introduction of a new production method, i.e. the method has not yet been tested practically in the field of production; - the opening of a new market, i.e. the market in which the certain sphere of economic activities of the country was not previously attended, regardless of whether there was previously this market or not; - the acquisition of a new source of raw materials or semifinished products irrespective of there was this source or just created; - the implementation of a new industrial organization, such as the conquest of the position of a monopolist or its loss [1].
M. Khuchek	Active implementation of changes in technique, technology, organization, ecology, economy, social environment of the enterprise [2].
D. Kokurin	Innovation is the result of the activity of updating, transforming the previous activity, leading to the replacement of some elements by others or to the addition of existing ones – new ones [3].
V. Medinsky	Understood the object, introduced in the production as a result of a scientific study or the discovery, qualitatively different from the previous counterpart [4].
R. Minnikhanov, V. Alekseev, D. Faizrakhmanov, M. Sagdiyev	Innovation is understood as the end result of scientific research or discovery, qualitatively different from previous analogue and introduced into production [5].
Y. Morozov, A. Gavrilov, A. Horodkov	Innovation is the process of developing, acquisition, exploiting and exhausting the productive, economic and social potential that underlies innovations [6].
A. Kulagin	Innovation – new improved products (goods, work, service), the way of its production or use, innovation or improvement in the organization and economy of production and sales of products that provides economic benefits, creates conditions for such benefits or improves the consumer properties of products (goods, work, services) [7].

The theory of innovations in its development has formed its categorical apparatus, which is formalized and actively used in specific subject areas of the economy, management. The categories: "innovation", "introduction", "novation", "new product", "innovative technology", "innovation market", "innovation theory", etc. have wide application in theory and practice. A particular and secured unity in the definition of these categories does not exist and cannot exist. A large spread is determined by the fact that semantic load has no clear disciplinary bindings. This is the result of synergistic interdisciplinary interaction of unique opportunities and purposeful use of the author's vision from the standpoint of sectoral load, etc. So, management treats these categories in close cooperation with the implementation of functions and management technologies; economists have noted systematic relationship with the industry economy.

In the world practice of management, the international standard introduced the concept of "innovation" as a well-defined managerial category. It is set out in documents known as the "Frascati manual". The concept of innovation adopted in these documents is followed by most theorists and practitioners in the field of management. According to the international standard, innovation (introduction) is the final result of creative activity, realized in the form of new or improved products, which is realized on the market, or new or improved technological process used in practical activity.

In the author's understanding, innovation is a complex process of structural changes in the system of reproduction – enterprises, industry, economic complex – with the introduction and support of innovation. Characteristics of innovations are: the relevance vector of the development of scientific and technological progress; the availability of innovative management support; market recognition of new qualities of a product (service); the availability of changes in managerial providing.

Such a logical representation of the category of innovation has a definite universal understanding and development perspective. It is the prospect of the development that provides new opportunities for the association of various agents of market relations, the aggregate of which is reduced to the effect of the laws of synergy, integration and provides an opportunity to consider the process of innovation development as a structural management process. The spread of such a methodology in the study of innovation development forms the foundation for enterprises unification of various forms of ownership, scientific and educational organizations, market infrastructure, state and regional authorities in the process of realization of certain market functions, entered into the target vectority of cluster initiatives.

The innovation process is the stages of creation, implementation and dissemination of introductions (innovations). In general, the scheme of the innovation process can be represented as a series of stages with the following main results:

- getting innovations, i.e. feature results of completed scientific research (fundamental and applied), experimental development, other scientific and technical results;
- introduction of innovations in the product, technology or service, i.e. introduction or innovation;
- diffusion of innovation, which means a distribution already once the acquisition, implemented innovations, i.e. the use of innovative products, services or technologies in new places and conditions [8].

In modern scientific developments and in various scientific studies:

- the description of innovation process;
- the identifying and reflecting of market manifestation of innovation;
- characteristic features of innovation process as a source and background of scientific and technological progress;
- the development of technologies creation and the implementation of new intelligent and innovative products;
- the improvement and development of innovative technologies;
- the formation of scientific bases for the organization of innovative production;
- the evaluation and diagnostics of new markets outlets and sources of raw materials for innovation–have special scientific recognition.

In continued development of innovation theory in the world of science the following subject areas of research: innovation theory, innovation economy, innovation management, innovative entrepreneurship, innovation marketing, innovation project management and others were formed and received its recognition. This recognition has theoretical and practical significance for innovation theory in modern economy, for the study of the needs and interests in changes and scientific, technical, economic and social progress. The theory of innovations has a special demand from a position of the formation of information society and information economy today.

Economic theory and management consider NTP and innovations in the system of the transformation tools of social development and real tools of the formation of a postindustrial (informational) society.

So, according to O. Mostova, most clearly NTP affects the structure of economic space and the nature of economic activity. Firstly, the nature of the general social division of labor is changing: the agrarian sphere disappears, the industrial one is shrinking and the information one is growing. Secondly, there is a transformation of social division of labor: old branches of production disappear, new ones appear and grow. Thirdly, deep transformations take place in the unitary social division of labor: the nature of simple labor radically changes and becomes predominantly mental (purpose-setting, controlling, regulating) [9].

Scientists distinguish the following stages of scientific and technological progress: economic theory of innovation in market economy; economic doctrines and economic theory of innovations of unregulated market relations; economic doctrine of the innovations in the period of a communicative, socially oriented economy [9].

In the period of pre-market economy, the innovation was characterized as a form of appropriation of the substance of nature for satisfying human's needs. Here the innovation was becoming an economic tradition of the society. The world of economy became the subject of reflection of ancient preachers, rulers and

philosophers, whose ideas constituted the original ideological context of the birth of scientific systems of economic knowledge. During this period, the birth of the first theoretical concept of innovation processes and research, which was reflected in the systematic study of mercantilism, has chosen as the object of innovation in the introduction of new relations, hereinafter referred to as "market" [10].

In the knowledge system of market (capitalist) period of the development of the economy and its management systems, innovations gradually turn into a unique factor for increasing competitiveness. They determine the leadership of industries, territories, national economies, corporations and enterprises. The importance and priority of innovation activity, the effectiveness of innovation policy can not be underestimated from the point of view of economic, scientific, technical and social progress.

The leading countries in the world in science and innovation are characterized by key parameters: high level and quality of human capital and high investments in its development; efficiently organized business environment (high level of assessment of business environment institutions – social capital, the activities of transnational groups, processes of socialization, etc.); priority of the law, high level of personal security of citizens and businesses; high quality of life; social stability; active and competent elite; high indexes of the development of human capital and economic freedom; high level of education and fundamental science development; high level of the development of applied sciences; the presence of a powerful intellectual centers of technological development – technology parks, business incubators and accelerators; a significant sector of the economy knowledge; powerful synergistic effects in all spheres of intellectual activity of a person; the presence of developed and effective innovation systems supported by the states; the presence of developed and effective venture systems supported by the states; attractive investment climate and high investment ratings; favorable business climate and a modern, progressive business environment; competitive products on world markets; effective state regulation of the economy; balanced development of labor market; low inflation (usually below 3 %) [11; 13].

A special place in the system of innovation activity throughout the world is given to the education as an instrument of distribution: intellectual capital; information potential of the nation; technological and information science centers.

The following areas of knowledge, such as innovation, innovative management, innovative design, forecasting and planning, are becoming popular.

The theory and practice of innovations are based on indicated directions of the movement of economic science. A systemic vision of doctrinal characteristics of innovation in accordance with the provisions of modern economic theory and management is provided (Fig. 2).

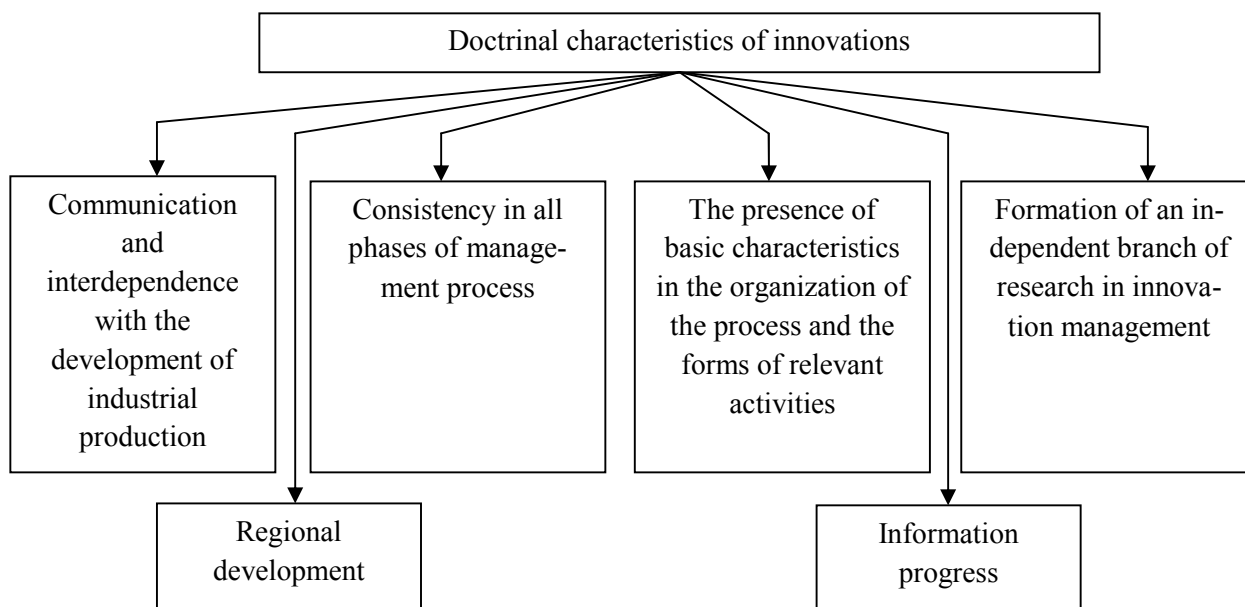


Fig. 2. Systemic vision of doctrinal characteristics of innovations in the development of progress and the promotion of the progress of territories

By studying and systematizing the evolution of scientific researches of innovation theory, their focus and definition become popular and relevant for a modern national, sectoral and regional economy development vectors and prospects of scientific thought, demanding of its development. This is systematization in the following directions (Fig. 3).

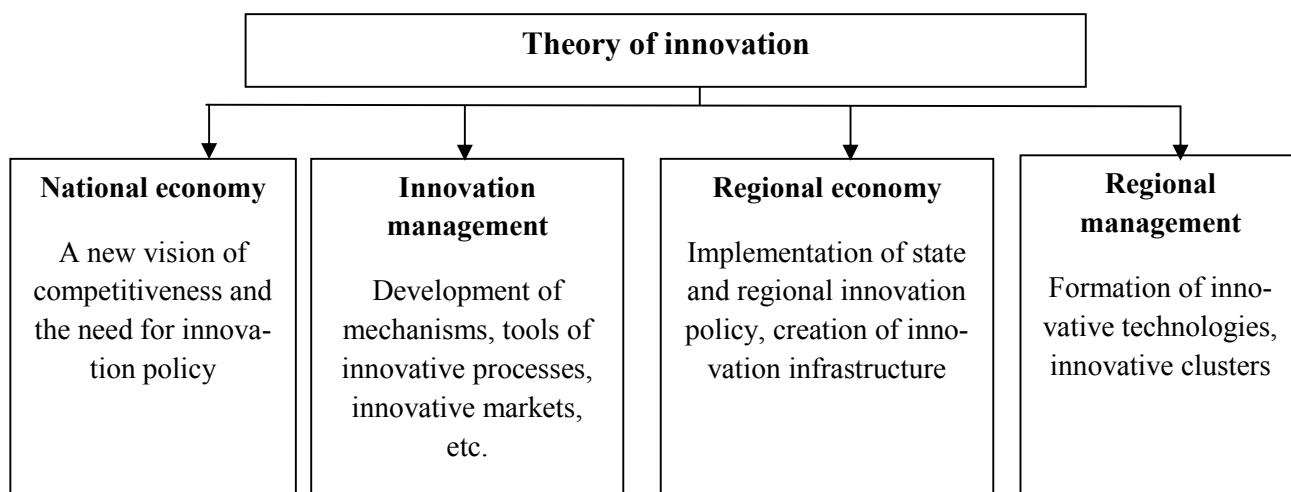


Fig. 3. Directions of the development and spread of innovation theory (macrolevel and mesolevel)

In the system of corresponding knowledge, the evolution of scientific researches of innovation theory aimed at the level of entrepreneurial activity of an enterprise is distinguished. There is also demand for special knowledge, relevant managerial developments that have a branch direction and need in the development. Here is a systematization in the appropriate key (Fig. 4).

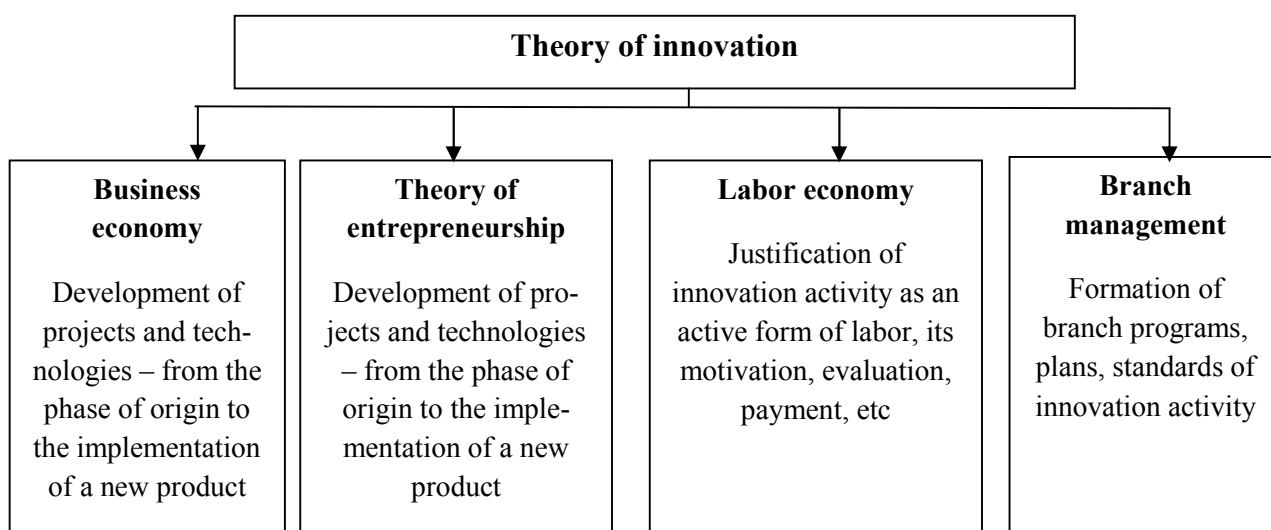


Fig. 4. Direction of the development and spread of the innovation theory (microlevel and mesolevel)

The expansion of the boundaries of innovation activities contributes to the integration of knowledge, the accumulation of new opportunities in the economy, management, entrepreneurship, active cluster formation. As a result of the development of the theory and methodology of innovation, integration processes and new quality of information provision, a new model of the economy – a cluster economy – has been formed and is being recognized.

That is, cluster economy creates new vision of the potential of knowledge associated with innovation in all sectors and fields of activity. The identification and evaluation of innovation cluster economy become possible in the conditions of the formation of terminology apparatus, the definition and introduction into management activity the indicators of the evaluation of innovative clusters activity. Such accumulated and

proven theory must be implemented in the activities of government, education, business in order to unify definitions and assessments, common platforms for diagnostics and monitoring.

The features of innovative economy are denoted and completed, a vision of the basic characteristics that are relevant today: high index of economic freedom; high level of the development of education and science; active commercialization of scientific developments; system knowledge management; high and competitive quality of life; high quality of human capital in its broad definition; high proportion of innovative enterprises (over 60-80 %) and innovative products; substitution of capital; the spread of new forms of competition (cluster form, etc.); the competition and high demand for innovation; the redundancy of innovation and, as a consequence, ensuring the effectiveness of some of them through competition; the initiation of new markets and active production of new segments; expansion of innovative clusters on social sector – is provided [11; 13].

Conclusions. In the framework of national economies and their unique diversity innovation systems of the countries focused on the potential opportunities of labor, capital, and intelligence, receive their development and implementation. Internal and external characteristics of innovation systems, communications, infrastructure support, institutional reflection of innovation, state and regional innovation policies, activities and the corresponding policies of corporations and clusters form a combination of a specific national innovation model.

For Ukrainian economy, the issue of research and the substantiation of innovation model from the standpoint of active knowledge management and information openness is a topical issue.

References

1. Shumpeter, Y. A. (2011) *Teoriya ekonomichnoho rozvytku: Doslidzhennya prybutkiv, kapitalu, kredytu, vidsotka ta ekonomichnoho tsyklu*. Per. z angl. V. Starka. Kyiv: Vydavnychyy dim «Kyievo-Mohylyanska akademiya», 242 s.
2. Huchek, M. (2001) *Innovatsiyi na predpriyatiyah i ih vnedrenie*. Moscow: Luch, 283 s.
3. Kokurin, D. I. (2001) *Innovatsionnaya deyatel'nost*. Moscow: EKZAMEN, 575 s.
4. Medynskiy, V. G. (2005) *Innovatsiya. Innovatsionnyy menedzhment*. Moscow: INFRA-M, 295 s.
5. Minnikhanov, R. N., Alekseev, V. V., Fayzrahmanov, D. I., Sagdiev, M. A. (2003) *Innovatsionnyy menedzhment v APK*. Moscow: Izd-vo MSHA, 432 s.
6. Morozov, Yu. P., Gavrillov, A. I., Gorodnov, A. G. (2003) *Innovatsionnyy menedzhment*. 2-e izd., pererab. i dop. Moscow: YUNITI-DANA, 471 s.
7. Kulagin, A. S. (2004) Немного о термине «инновация». *Инновации*, №7, с. 56–59.
8. *Upravlinnya innovatsiyinimi proektami* (2009). Za red. prof. V. L. Popova. Moscow: INFRA-M, 336 s.
9. Mostova, E. B. (1997) *Osnovy ekonomicheskoyi teorii*. Moscow: Infra-M., Novosibirsk: NGAeIU, 496 s.
10. Valinurova, L. S., Kazakova, O. B., Mazur, N. Z. (2012) *Teoriya innovatsiy i innovatsionnoy deyatel'nosti*. Ufa: Bags, 62 s.
11. Rozhkov, G. V. (2009) *Genezis innovatsiyinoyi ekonomiki v Rosiyi*. Moscow: MAKS Press, 269 s.
12. Finagina, O. V., Zhurba, I. O. (2015) *Rozvytok zasad klasternoyi polityky: rehionalni ta haluzevi perspektyvy. Teoretychni ta prykladni aspekty staloho rozvytku*. Kyiv: Kondor-Vydavnytstvo, 316 s.
13. Finagina, O. V., Bilan, O. V., Rudenko, O. V. (2016) *Forsayt-prognozuvannya v systemi pidtrymky biznesu ta rozvytku natsionalnoho ta regionalnoho rynku pratsi. Teoretyko-metodologichni ta prykladni osnovy upravlinnya lyudskymy resursamy*. ISMA University, Riga, Latvia, 234 s.

Список використаної літератури

1. Шумпетер Й. А. Теория экономического развития: Дослідження прибутків, капіталу, кредиту, відсотка та економічного циклу. Пер. з англ. В. Старка. Київ: Видавничий дім «Києво-Могилянська академія», 2011. 242 с.
2. Хучек М. Инновации на предприятиях и их внедрение. Москва: Луч, 2001. 283 с.
3. Кокурин Д. И. Инновационная деятельность. Москва: ЭКЗАМЕН, 2001. 575 с.
4. Мединский В. Г. Инновация. Инновационный менеджмент: учебник. Москва: ИНФРА-М, 2005. 295 с.
5. Минниханов Р. Н., Алексеев В. В., Файзрахманов Д. И., Сагдиев М. А. Инновационный менеджмент в АПК. Москва: Изд-во МСХА, 2003. 432 с.
6. Морозов Ю. П., Гаврилов А. И., Городнов А. Г. Инновационный менеджмент: учеб. пособие для вузов. 2-е изд., перераб. и доп. Москва: ЮНИТИ-ДАНА, 2003. 471 с.
7. Кулагин А. С. Немного о термине «инновация». *Инновации*. 2004. №7. С. 56–59.
8. Управление инновационными проектами: учеб. пособие. Под ред. проф. В. Л. Попова. Москва: ИНФРА-М., 2009. 336 с.

9. Мостова Е. Б. Основы экономической теории: курс лекций. Москва: Инфра-М., Новосибирск : НГАЕиУ, 1997. 496 с.
10. Валинурова Л. С., Казакова О. Б., Мазур Н. З. Теория инноваций и инновационной деятельности : учебно-метод. пособие для подготовки магистров. Уфа: Багс, 2012. 62 с.
11. Рожков Г. В. Генезис инновационной экономики в России. Москва: МАКС Пресс, 2009. 269 с.
12. Фінагіна О. В., Журба І. О. Розвиток засад кластерної політики: регіональні та галузеві перспективи. *Теоретичні та прикладні аспекти сталого розвитку*: кол. монографія. Київ: Кондор, 2015. 316 с.
13. Фінагіна О. В., Білан О. В., Руденко О. В. Форсайт-прогнозування в системі підтримки бізнесу та розвитку національного та регіонального ринку праці. *Теоретико-методологічні та прикладні основи управління людськими ресурсами*: кол. монографія. ISMA University, Riga, Latvia, 2016. 234 с.

К. Андрєєва

СПРЯМОВАНІСТЬ РОЗВИТКУ ТЕОРІЇ ІННОВАЦІЙ В СИСТЕМІ ЗНАНЬ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ ТА РЕГІОНАЛЬНОГО МЕНЕДЖМЕНТУ

Розглянуто та систематизовано теоретичні надбання «інноваційної економіки». Досліджено актуальні питання розвитку теорії інновацій в системі знань національної економіки та регіонального менеджменту. Надано системне бачення доктринальних характеристик інновацій у розвитку прогресу і стимулюванні прогресу територій. Систематизовано еволюцію наукових досліджень теорії інновацій, їх спрямованість, обґрунтовано затребувані й актуальні для сучасної національної, галузевої, регіональної економіки вектори розвитку та перспективи наукової думки, що потребують свого розвитку. Рекомендовано для української економіки впровадження національної інноваційної моделі на засадах сучасних технологій управління знаннями та інформаційної відкритості.

Ключові слова: *інновації, науково-технічний прогрес, національна економіка, галузева економіка, регіональна економіка, знання.*