

## **Innovative technologies in ensuring the competitiveness of the regional market of medical tourism**

*In the article the features of implementation of innovative technologies in various spheres of economic activity are considered. The typology of innovations at the regional market of medical tourism (RMMT) is done, which provides selection of innovations by the content, time (reason) of entering the market, the subject of development. On this basis the priorities of their implementation in such a market are substantiated and detailed by the stages of the provision of services (stages of attracting tourists, servicing tourists, provision of medical services and provision of additional tourist services). The schematic representation of the priority of innovations generating at the RMMT is outlined, which will allow it to be established and developed in the regions of Ukraine. The process of creation and commercialization of innovations in the medical sphere at the RMMT is given.*

**Keywords:** *innovations, innovative technologies, regional market, medical tourism, medical sphere, tourist services.*

**Problem statement.** One of the main requirements for the establishment and development of regional markets of medical tourism in Ukraine is to ensure their competitiveness. World trends in the development of the tourist market indicate increase in the competition among leading tourist networks in attracting tourist flows. The leadership in such competitive struggle in globalized economy belongs to companies that focus their activity not only on the mandatory attributes of safety, service, comfort, interest, but also implement innovative technologies in the provision of travel services, allowing them to keep competitive positions in tourism market.

In this regard, at the present stage of the formation of regional tourist markets, including the RMMT, the introduction of innovative technologies is essential for the establishment and development of RMMT in Ukraine. Moreover, it is precisely in the case of the RMMT when the use of innovative processes is an obligatory prerequisite for its formation and development. This is due to the specifics of the market, because ensuring incoming tourist flows for the purpose of obtaining competitive medical services requires the provision of such services, first of all, the use of innovative technologies for the effective solution of medical problems of tourists that will serve as the reason for visiting a certain region.

Therefore, conducting activities based on the use of innovations in the field of medicine is the basic requirement for the formation of regional markets of medical tourism in Ukraine.

**Analysis of recent research.** The problems of applying the innovative technologies in various spheres of economic activity to ensure their competitiveness are fundamental in the economic theories of leading world scholars and practitioners, in particular J. Hobson, C. Freeman, P. Drucker, D. Clark, M. Porter, J. Schumpeter, M. Tugan-Baranovsky and others whose works are supplemented by new ideas, hypotheses and practical implementation.

English economist J. Hobson has added the special fourth factor to the traditional factors of production – land, labor, and capital, – the progressive talent, meaning the sphere of progressive economy based on new ideas, knowledge, etc. However, Austrian scientist J. Schumpeter is considered to be the founder of the theory of innovations in the world science, who, revealing the content of innovation, understood it as an essential form of changing the functions of the product, which is made by using new materials and components, the introduction of new processes, the opening of new markets and the introduction of new organizational forms [1, p. 53]. According to the famous American scientist B. Tveiss, innovation is a process in which an invention or

an idea gains economic content [2]. That is, the founders of the theory of innovation emphasize the commercial component of a new idea that can stimulate demand.

Consideration of the issues related to the study of development problems and prospects of the markets of the latest tourism forms, including medical tourism, and innovative mechanisms of their implementation are the subject of research of domestic and foreign researchers, in particular V. Byrkovich, O. Grom, M. Hudz, O. Dudkina, V. Yevdokimenko, V. Kyfyak, S. Kuzyk, O. Klimenko, M. Malska, C. Melnichenko, N. Sveleby, T. Tkachenko, P. Putsentylo, V. Fedorova, N. Fomenko, M. Furmanek, V. Sibuch, O. Shablii and others. The issues of the development of the regional market of medical services are reflected in the works of Z. Gerasimchuk, I. Shevchuk and others.

**Outlining the unsolved aspects of the problem.** Numerous approaches to the research of innovations and analysis of existing statistical materials reflecting innovation activity in the regions of Ukraine allow us to conclude that, mainly, the attention of modern studies focuses on the need to apply innovative technologies in the field of material production, while innovations are related indirectly with service industries, and in particular, tourism. Not well studied this scientific problem has caused a significant lagging of development of the tourism industry of Ukraine in comparison with world trends. Therefore, there is an important scientific task of problem analysis and the search for mechanisms to intensify the use of innovative technologies in the field of tourism and, in particular, in the formation of regional markets of medical tourism in Ukraine.

**Paper objective.** The purpose of the article is to substantiate theoretical and methodological principles of application of innovative technologies in ensuring the competitiveness of regional markets of medical tourism in Ukraine.

**Major research findings.** In the Law of Ukraine «On Innovation Activity» innovations are interpreted as newly created (applied) and / or improved competitive technologies, products or services, as well as organizational and technical decisions of industrial, administrative, commercial or other nature that significantly improve the structure and quality of production and / or social sphere [3]. The issue of innovation activity stimulation in the regions of Ukraine relies not only on entrepreneurial structures, but also on the bodies of regional power and local self-government that is determined by the Constitution of Ukraine, the Law of Ukraine «On Local Self-Government in Ukraine», the Law of Ukraine «On Innovation Activity in Ukraine», etc.

According to the Law of Ukraine «On Innovation Activity in Ukraine», the functions of the regional authorities are in fact reduced to the development and sequential implementation of innovative development programs, which include scientific and technical developments that do not solve a number of problems related to the increase of the economic development of the region in the long term.

The reasons for this situation are under-funding of regional and local innovation development programs; inclusion of non-innovation projects in the programs; focusing on projects that are not strategic for the region; not formed market of financial and credit institutions for the financing of innovation projects; bureaucratic obstacles to the inclusion of innovative projects in the program of innovation development of the region; the imperfection of inter-budgetary relations, that, due to lack of funds, blocks the ability of local authorities to establish tax incentives to stimulate entrepreneurial structures to innovate activity; low investment attractiveness of regions, cities, settlements that hinders the financing of local innovation projects; low level of cooperation between private structures and authorities in the implementation of regional innovation policy; the lack of innovation infrastructure in the regions of Ukraine as a prerequisite for the activation of innovation processes, etc.

Obstacles to the introduction of innovations in the tourism sector are complicated due to the inconsistency of the tourism infrastructure with international standards;

insufficient level of tourism financing; insufficient development of transport infrastructure; outdated material and technical base of tourism sphere; insufficiently developed network of accommodation, food, entertainment industry; lack of highly skilled specialists in introducing innovative forms of tourism; orientation of travel companies at outbound tourism, etc.

In addition to the above, innovations in the regional market of medical tourism, in our opinion, should be directed towards the use of advanced innovative medical technologies for the diagnosis and treatment of various diseases. Taking into account all of the above, innovations at the RMMT should be considered by various features, the main ones are such as the essence of innovation, the time (reason) of entering the market, the subject of development. All of them allow defining their typology and outlining the main directions of implementation (Table 1). Having summarized the given typology of innovations, it is possible to distinguish such areas of innovation activity at the RMMT, based on J. Schumpeter's research as the implementation of new medical tourism services with new characteristics; the use of new technology in the provision of medical tourism services; new forms of organization of providing medical tourism services; the use of new tourist resources that has not been used before; identification and attraction of new markets of medical tourism services. Implementation of innovations at the RMMT should be systemic, since the application of innovative technologies in only one of the market segments will not allow to ensure the competitiveness of the market as a whole. At the same time, at the stage of formation of such a market, it is necessary to distinguish the priorities of the implementation of innovative technologies, which can vary at different stages of the RMMT development.

Thus, at the initial stage, i.e. at the stage of market formation, in order to ensure the inflow of tourists, innovative technologies should be aimed at ensuring the high quality of medical services and be provided at negligible prices. As such market is new for the regions of Ukraine, which are not yet players at the world market of medical tourism, medical innovations should be the priorities. They will allow providing incoming tourist flows to regions of the market concentration.

Figure 1 shows a schematic representation of the priority of generating innovations at the RMMT, which will allow it to be established and developed in the regions of Ukraine.

Innovations in the medical sphere are fundamental to the emergence of such a market, because the main reason for visiting the region for a medical tourist is the improvement of health.

Innovations in the process of attraction of tourists are in the second place, because even the high quality of the provided medical services in the early stages of the market formation does not guarantee the growth of the tourist flow without appropriate advertising tools, active agitation of potential clients and other advanced technologies of attracting tourists.

Innovations in the medical sphere and in the process of attracting tourists should be considered as primary to the RMMT, while innovations in tourist services and in the provision of additional tourist services should be considered as secondary. Secondary innovations are not obligatory for the establishment of the RMMT, because the high quality of services of living, feeding, and transporting medical tourists does not necessarily require innovative approaches to its provision.

However, at the next stages of the development of the RMMT, secondary innovations play more important role providing a positive image of the RMMT.

The process of creating innovations at the RMMT involves several stages, each of which involves other market participants.

Since at the stage of the development of the RMMT in Ukraine the main emphasis should be placed on innovations in the development of the medical sphere, the Figure 2, formed according to the data [4, p. 261; 5, p. 684] provides a schematic

Table 1

Typology of innovations in the regional markets of medical tourism		Detailing of the stages of service provision				
		At the stage of attracting tourists	At the stage of tourist service (transfer, accommodation, food)	At the stage of provision of medical services	At the stage of providing additional tourist services	
Feature of typology	1	Essence of innovations	4	5	6	7
	By essence	2	3			
		Product	Creation of new medical tourism services	The familiarization with new segments of the tourist market	Creating new tourism products	Mastering new medical services
	Technological	Aimed at creation and development of new technologies, equipment modernization, reconstruction of buildings, implementation of measures on environmental protection	Implementation of Internet technologies, creation of interactive multilingual version of web site of the tourist potential of the region	Modernization, refurbishment of accommodation and catering for tourists, innovations in the system of transport services, which will be aimed at improving the comfort and reducing the time of transfer	Implementation of new medical technologies for the diagnosis and treatment of tourists, modernization of equipment, reconstruction of medical institutions, etc.	Promotion of the tourist potential of the region on the Internet, attracting new types of resources to the tourism segment
	Economic	Aimed at changing the methods of planning all types of production and economic activity, reducing production costs, improving incentives, rationalizing the accounting system	Accession to the world's leading information retrieval systems, booking and reservation systems (for example, World hotel, ABC Travel Center, Voyage Office Pro, etc.)	Using logistic approaches in the formation of transfer routes, optimization of the diet of tourists (e.g. optional buffet), etc.	Optimization of the commodity-material values, optimization of the number of tourists	Development of new routes, formation of new conditions in contractual relations with providers of tourist services
	Commercial	Using new methods of pricing policy, new forms of relationship with suppliers and customers, the provision or receipt of financial resources in the form of loans, etc.	Development and implementation of new approaches of providing discounts for regular customers, with prepayment, etc.	Development and implementation of new approaches to providing discounts for long stay, meal discounts, etc.	Development and implementation of new approaches to proposing a system of discounts when receiving a wide range of medical services	Inclusion of the cost of additional tourist services, etc. in the cost of the tour

Continued table 1

1	2	3	4	5	6	7
	Managerial	Aimed at improving the organizational structure, style and methods of decision-making	New methods of realization of the marketing cycle in tourism, new means of information processing and documentation	Formation of the cluster of the RMMT, the implementation of private-public partnership in the process of organization of medical tourism in the region	Electronic accounting of tourists, using the cluster approach to the formation of the RMMT	New methods and forms of management of subjects of tourist and recreational activity
By time of entering the market	Innovations - leaders (strategic innovations)	Innovations, the implementation of which is of a forward-looking nature in order to achieve decisive competitive advantages in the future	Development of new system of attracting tourists	Implementation of new approaches to the maintenance of tourists	Implementation of new treatments	Providing fundamentally new types of travel services
	Innovations followers (jet innovations)	Innovations that ensure survival and competitiveness, appearing as a reaction to new transformations of main competitors	Improvement of existing methods of attracting tourists	Improvement of existing market methods of tourist services	Improvement of existing market methods of treatment of tourists	Improvement of existing market methods of providing additional tourist services
By subject of development	Endogenous	Developed on one's own	Development of new information system for attracting tourists on one's own	Own development of new approaches to the organization of tourists service, the implementation of a national model of service	Development of new methods of diagnosis and treatment directly by medical staff	Developing new approaches to providing tourist services directly by travel agencies
	Exogenous	Developed on order	Purchase of new information system for attracting tourists	Borrowing of new methods of organization of tourist services	Purchase of new methods of diagnosis and treatment	Borrowing of new approaches to providing tourist services

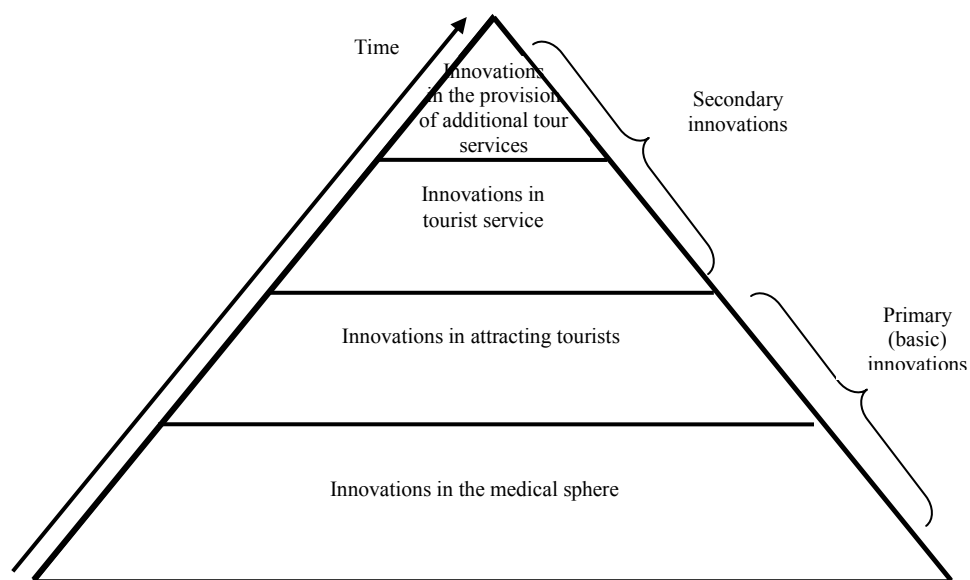


Fig. 1. Priorities of implementing innovations at the RMMT

representation of the process of creation and commercialization of innovations in the medical sphere at the RMMT, dividing it by stages and cycles, which form the system of ensuring the innovations generation.

The process of creating innovations in the RMMT has four stages, which can be divided into two cycles such as research cycle and production-commercial cycle. The research cycle involves two stages such as preparation and growth.

The preparatory stage is aimed at carrying out research and research-design work, resulting in the implementation of the process of providing healthcare services in the RMMT.

This stage is the most capital intensive, when medical business structures do not receive financial revenues from innovation.

In fact, this is the stage of creating an innovation, when the developed service is only introduced to the market.

In the graph (Figure 2), the unprofitability of the medical structures activity in the result of innovations development is shown by a curve line below the zero starting point, and the loss-making zone is singled out, which ends at the stage of the growth of the research cycle.

The stage of growth as a component of the research cycle is characterized by the gradual release of innovation on the market. At this stage, medical structures move from the loss-making zone to the profit zone, increasing the volume of realization of innovative medical services. This stage can be called the stage of diffusion of innovations, which indicates an increase of the volume of their realization.

The production-commercial cycle of innovations consists of two stages of innovations generation: maturity and decline. The stage of maturity is characterized by the maximum effect for the medical structures of the region from the implementation of innovations, which will be reflected in the volumes and profits from the implementation of innovative services. The duration of this phase depends on the innovation value of the service and the activities of competitors.

In order to ensure the maximum duration of this stage, intellectual protection of innovation development should be provided at the research stage. The graph shows that in order to prevent the loss-making zone from repeating in the near future, the

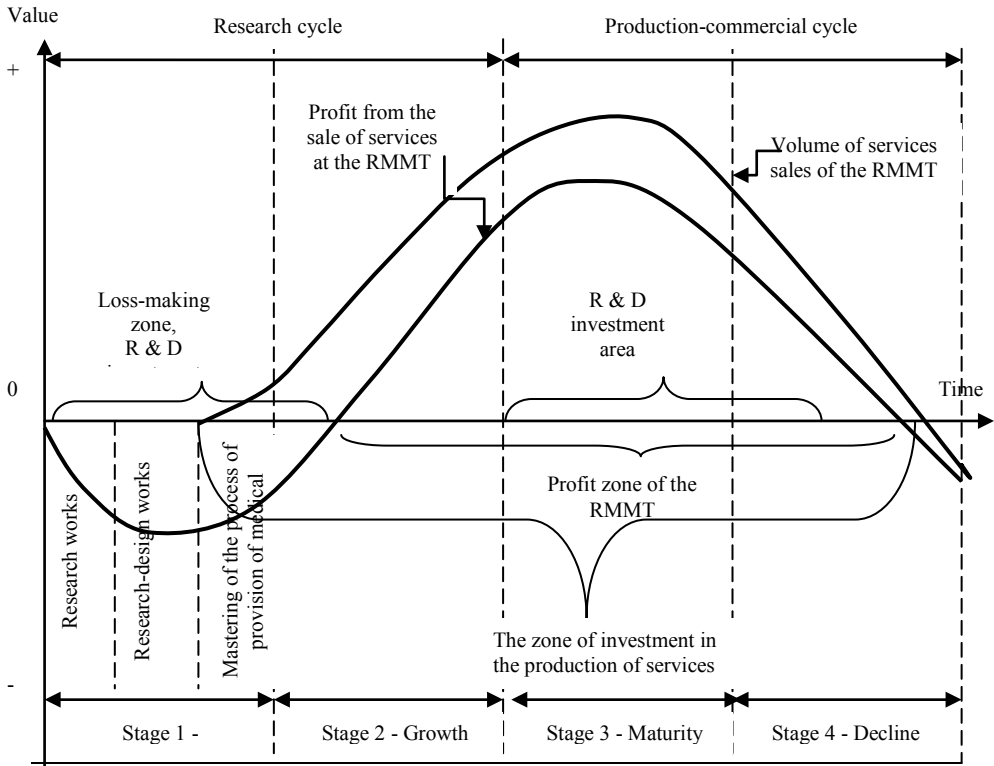


Fig. 2. The graph of the life cycle of innovation at the RMMT

medical institution at this stage should focus on updating the services offered, that is, introducing new innovative offers.

In this case, at the next stage, the previous innovations will fall into the stage of decline in sales, which involves the loss of profit of a medical institution, and new developments allow ensuring its break-even.

**Conclusions.** Thus, in order to ensure the profitability of the medical institution as the basic institution of the RMMT, the production of innovations should be a continuous process that will ensure the competitiveness of medical services and increase incoming tourist flows to the region. The implementation of this process requires the involvement and effective use of intellectual, financial, personnel, material and technical resources, which together constitute the system of provision of RMMT innovative development.

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**Вахович І. М., Забедюк М. С., Малімон В. В. Інноваційні технології у забезпеченні конкурентоспроможності регіонального ринку медичного туризму.**

*Однією з основних вимог становлення та розвитку регіональних ринків медичного туризму (РРМТ) в Україні є забезпечення їх конкурентоспроможності. Перемога у конкурентній боротьбі у глобалізаційній економіці належить компаніям, які акцентують увагу у своїй діяльності не лише на обов'язкових атрибутах безпеки, сервісу, комфорту, інтересу, а й застосуванні інноваційних технологій при наданні турпослуг, що дозволяє зайняти конкурентну позицію у ринковому туристичному просторі. Тому на цьому етапі становлення регіональних туристичних ринків актуальним є запровадження інноваційних технологій для забезпечення становлення та розвитку РРМТ в Україні. Це зумовлено специфікою ринку, адже забезпечення вхідних туристичних потоків, метою яких є отримання конкурентоспроможних медичних послуг, вимагає від надавачів таких послуг передусім використання інноваційних технологій для ефективного вирішення медичних проблем туристів, що і слугуватиме причиною відвідання ними того чи іншого регіону. Тому ведення діяльності на основі використання інновацій у сфері медицини є базовою вимогою формування регіональних ринків медичного туризму в Україні як таких. Численні підходи до дослідження інновацій, аналіз наявних статистичних матеріалів, що відображають інноваційну діяльність у регіонах України, дозволяють зробити висновок, що здебільшого увага сучасних досліджень зосереджується на необхідності застосування інноваційних технологій у сфері матеріального виробництва, тоді як сфери послуг, зокрема туризму, розробки стосуються опосередковано. Виникає важливе наукове завдання аналізу проблем та пошуку механізмів активізації використання інноваційних технологій у сфері туризму та, зокрема, при формуванні регіональних ринків медичного туризму в Україні. У статті розглянуто особливості застосування інноваційних технологій у різних сферах економічної діяльності. Здійснено типологію інновацій на регіональному ринку медичного туризму, яка передбачає їх виокремлення за змістом, часом (причиною) виходу на ринок, суб'єктом розробки, що дозволило обґрунтувати пріоритети їх запровадження на такому ринку та деталізувати за стадіями надання послуг (стадіями залучення туристів, обслуговування туристів, надання медичних послуг і надання додаткових туристичних послуг). Подано схематичне зображення пріоритетності генерування інновацій на РРМТ, що дозволить забезпечити його становлення та розвиток у регіонах України. Відображено процес створення та комерціалізації інновацій медичної сфери на РРМТ.*

**Ключові слова:** інновації, інноваційні технології, регіональний ринок, медичний туризм, медична сфера, туристичні послуги.

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