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Economic Evaluation of Innovative Hair Restoration Services for Clients with Alopecia as a Direction for Diversification of Salon Business

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Abstract: *The relevance of the study is due to the growing demand for personalized and safe solutions in the field of aesthetic care, in particular for clients with alopecia. Against the backdrop of high competition and standardization of the salon services market, innovative hair restoration technologies are considered as a factor of long-term diversification and the formation of highly specialized services with high added value.*

The purpose of the article is to provide an economic justification for the feasibility of introducing innovative hair restoration services for clients with alopecia as a promising area for the development of the salon business, taking into account modern technological solutions, the characteristics of the target audience and practical experience in implementing the author's methods in the field of medical and aesthetic services.

The study used general scientific and applied methods: analysis and synthesis to study the state of innovation in the beauty industry; comparative analysis to assess the advantages of the author's methods over traditional solutions; economic



modeling to calculate the profitability of services; structural and logical generalization to formulate conclusions and recommendations.

It has been established that innovative hair restoration services can provide stable profitability (60-75%) with moderate investment and trained staff. It is proved that the author's SensHair and Nanoker techniques are in high demand among vulnerable categories of clients and contribute to the formation of long-term service relationships. The key barriers to development are identified - staff shortage, lack of standards, low level of consumer awareness.

It is established that the successful integration of such services requires a systematic approach: from the development of training programs to the creation of a service model adapted for long-term interaction with clients. The expediency of implementing the author's solutions in the practice of medical and aesthetic rehabilitation is confirmed.

The author outlines areas for further research, in particular, the development of a regulatory framework, digital tools for evaluating efficiency, and a study of the impact of niche services on the economic sustainability of small businesses in the beauty industry.

Keywords: *aesthetic rehabilitation; service profitability; personalized technologies; niche consumer; functional safety; medical and cosmetic approach; value-added services.*

Економічна оцінка інноваційних послуг з відновлення волосся для клієнтів з алопецією як напрям диверсифікації салонного бізнесу

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Анотація: Актуальність дослідження зумовлено зростанням попиту на персоналізовані та безпечні рішення у сфері естетичного догляду, зокрема для клієнтів з алопецією. На тлі високої конкуренції та стандартизації ринку салонних послуг, інноваційні технології з відновлення волосся розглядаються як чинник довгострокової диверсифікації та формування вузькоспеціалізованих сервісів з високою доданою вартістю.

Мета статті – здійснити економічне обґрунтування доцільності впровадження інноваційних послуг з відновлення волосся для клієнтів з алопецією як перспективного напрямку розвитку салонного бізнесу, з урахуванням сучасних технологічних рішень, особливостей цільової аудиторії та практичного досвіду реалізації авторських методик у сфері медико-естетичного сервісу.

У дослідженні використано загальнонаукові та прикладні методи: аналіз і синтез – для вивчення стану інновацій у сфері краси; порівняльний аналіз – для оцінки переваг авторських методик над традиційними рішеннями; економічне моделювання – для розрахунку прибутковості послуг; структурно-логічне узагальнення – для формування висновків і рекомендацій.

Встановлено, що інноваційні послуги з відновлення волосся можуть забезпечити стабільну рентабельність (60–75 %) за умов помірних інвестицій і наявності підготовленого персоналу. Доведено, що авторські методики SensHair і Nanoker мають високий попит серед вразливих категорій клієнтів і сприяють формуванню тривалих сервісних відносин. Виявлено ключові бар'єри розвитку – кадровий дефіцит, відсутність стандартів, низький рівень поінформованості споживачів.

Установлено, що успішна інтеграція таких сервісів потребує системного підходу: від розробки навчальних програм до створення сервісної моделі, адаптованої під довготривалу взаємодію з клієнтами. Підтверджено



доцільність впровадження авторських рішень у рамках практики медико-естетичної реабілітації.

Окреслено напрями подальших досліджень, зокрема — розробку нормативної бази, цифрових інструментів оцінки ефективності, а також дослідження впливу нішевих сервісів на економічну стійкість малого бізнесу в галузі краси.

***Ключові слова:** естетична реабілітація; рентабельність сервісу; персоналізовані технології; нішевий споживач; функціональна безпечність; медико-косметичний підхід; послуги підвищеної цінності.*

Problem statement. In today's conditions of growing competition in the field of beauty services and increasing consumer demands for quality and personalization of service, the task of finding new directions for diversifying the salon business is becoming urgent. One of the most promising development vectors is the introduction of innovative hair restoration services for clients suffering from alopecia. This problem goes beyond purely aesthetic considerations, as it affects the psycho-emotional state of a person, his or her social adaptation and quality of life in general. In this context, the development of new service models in the beauty sector aimed at clients with severe dermatological disorders requires a comprehensive economic assessment of their feasibility, profitability and potential for expanding the target audience.

Given the interdisciplinary nature of the issue, which combines aspects of cosmetology, psychology, entrepreneurship and innovation management, there is a need to generalize scientific and practical approaches to integration of specialized restorative procedures into the overall structure of salon business services. Of particular importance is the analysis of the cost-effectiveness of such services, which should take into account the costs of technology, specialized equipment, staff training, and marketing strategies adapted to the sensitive topic of alopecia. Determining the financial prospects for the implementation of restorative programs



in the beauty segment meets the current scientific challenges of expanding the scope of socially oriented services and the practical needs of businesses for sustainable and niche sources of income. In this regard, justifying the effectiveness of specialized innovative solutions in the field of hair care is of particular importance both for the development of business strategies and for the formation of a modern market for services with a high degree of personalization.

Analysis of the latest research and publications. The analysis of current research on the economic evaluation of innovative hair restoration services for clients with alopecia as a direction of diversification of the salon business allows us to identify four main content areas. The first direction concerns the clinical and economic justification of surgical and therapeutic hair restoration methods, particularly transplantation. In the work by V. V. Sulik and V. V. Khrapach [1], a clinical assessment of the effectiveness of hair transplantation is provided in the context of its role in treating various forms of alopecia, which is important for the development of specialized salon services with a surgical focus. The study by R. Xiao, C. A. Burks, J. Yau, A. Derakhshan, R. H. Liu, M. M. Senna, M. R. Yasuda, N. Jowett, and L. N. Lee [2] presents utility measurements among patients after transplantation, enabling economic modeling of outcomes. The monograph by K. Anastassakis [3] systematizes current surgical hair restoration methods, including the financial aspects of technique selection. A promising area for further research is the development of an economic efficiency assessment model for transplantation services at the small business level, particularly salons, considering cost, effect duration, and customer loyalty. The second direction focuses on non-invasive innovative technologies and changing consumer preferences. In the meta-analysis by A. K. Gupta, S. Versteeg, J. Rapaport, A. K. Hausauer, N. H. Shear, and V. Piguet [4], the effectiveness of platelet-rich plasma injections as an alternative to surgery is substantiated, with data on procedure costs and client feedback. The publication by M. S. Nestor, G. Ablon, A. Gade, H. Han, and D. L. Fischer [5] examines a wide



range of treatment methods for androgenetic alopecia, considering side effects, compliance, cost, and ethical concerns. The study by A. K. Gupta, E. M. Quinlan, and K. L. Williams [6] emphasizes the shift in preferences among clients and physicians toward non-invasive options, including their economic appeal. Further research in this area should focus on the comparative cost-effectiveness of various non-invasive methods in the context of commercial salon practices.

The third direction covers the socio-psychological and economic consequences of hair loss, which shape the demand for innovative solutions. In the work by D. Aggio, C. Dixon, E. H. Law, R. Randall, T. Price, and A. Lloyd [7], health utility values are assessed for patients with alopecia. The study by J. P. Ingrassia, M. G. Buontempo, L. Alhanshali, C. C. Akoh, S. Glick, J. Shapiro, and K. L. Sicco [8] analyzes the financial burden experienced by patients with alopecia. The publication by F. Zucchelli, M. Harries, A. Messenger, and K. Montgomery [9] attempts to evaluate the financial determinants of alopecia areata. A. Courtney and J. C. Su [10] examine the psycho-emotional and economic effects of wig usage. This area requires further research into customized solutions tailored to different client groups based on income level.

The fourth direction concerns the implementation of innovations in clinical and cosmetological practice. The study by I. E. Horda [11] substantiates the expansion of approaches to alopecia treatment in combination with metabolic disorders. The work by L. D. Kalyuzhna, L. V. Grechanska, and A. V. Petrenko [12] highlights the role of nutritional support in hair growth. The publication by R. Redkin, N. Orlovetska, and O. Dankevych [13] focuses on innovations in the pharmaceutical sector that can be adapted to the format of clinics and salons. The study by W. Breed, L. V. Van de Poll-Franse, and J. W. Nortier [14] examines scalp cooling as a method to prevent chemotherapy-induced alopecia, presenting it as a cost-effective tool that can be integrated into service models for specific client



groups. A promising perspective here is the development of a multi-level cosmetological support model based on efficacy data.

Identification of previously unresolved parts of the overall problem.

Despite the growing interest in innovations in the field of aesthetic care, a number of aspects remain insufficiently studied. In particular, there is limited research on the economic efficiency of innovative hair restoration services as a separate area of salon business diversification. There is no systematic analysis of the costs, profitability, behavior of niche consumers, and social impact of such services. Mechanisms for scaling up proprietary methods and the impact of barriers - human, financial, and regulatory - on their implementation are not sufficiently developed. There is also a lack of generalized approaches to integrating such services into the business models of small and medium-sized enterprises. The proposed study aims to fill these gaps by combining economic analysis, evaluation of practical experience, and systematization of recommendations for integrating innovations into the beauty sector. By examining specific proprietary solutions (SensHair and Nanoker), summarizing market trends, and identifying implementation challenges, the study allows us to expand our understanding of the effectiveness, scalability, and social significance of hair restoration services, which in turn forms the basis for further practical and scientific solutions in the industry.

Formulation of the objectives of the article (task statement).

The purpose of the article is to carry out an economic assessment of innovative hair restoration services for clients with alopecia as one of the promising areas of diversification of the salon business, based on an analysis of modern technologies, the needs of the target audience and an example of the implementation of author's solutions in the field of medical and aesthetic care.

Objectives of the study:



1. Analyze market trends and opportunities for the development of hair restoration services as a direction of diversification of business models in the beauty industry.

2. To substantiate the economic feasibility of introducing innovative services for clients with alopecia, taking into account costs, demand, competitive advantages, and social effect.

3. To evaluate the effectiveness and scalability of the author's SensHair and Nanoker methods as an example of highly specialized innovations in the salon business.

Summary of the main research material. In the modern beauty services market, there is a steady increase in demand for individualized, medical, aesthetic and functional services aimed at clients with special physiological needs. One of these areas is hair restoration services, which include both cosmetic and pseudo-medical solutions for people with alopecia, weak or damaged hair. In the structure of the salon business, these services serve as a niche offer with high added value, which not only expands the target audience but also forms a socially oriented brand image. Diversification through the introduction of restorative services allows beauty businesses to strengthen their competitive position, adapt their business model to the needs of new consumer segments, and reduce dependence on seasonal fluctuations in basic procedures (Table 1).

Table 1

Key areas of innovation in the field of hair restoration and their potential for diversification of the salon business

The direction of innovation in hair restoration	Characteristics of the service	Potential for business diversification
Personalized extensions for customers with alopecia (e.g. SensHair)	Microstrands with individual attachment, gentle heat fixation, microcapsules	Attracting clients with medical and aesthetic needs, expanding the range of procedures



Safe improvised imitation of painting (e.g. Nanoker)	Optical mixing of 2-4 hair shades without dye, without chemical effects	Services for a sensitive audience: pregnant women, allergy sufferers, clients with weak hair
Comprehensive trichology programs	Scalp diagnostics, cosmetic follicle support, mesotherapy	Creating a service line for long-term support, repeatability of visits
Psycho-aesthetic counseling with hairstyle selection	Counseling for people with lost confidence due to alopecia or hair loss	Deepening customer emotional engagement, strengthening loyalty
Implementation of educational and consulting services	Training modules, mini-workshops, participation in specialized events	Positioning as an expert salon, additional income through training

Source: compiled by the author based on [1; 2; 4; 6].

The areas of innovation in the field of hair restoration presented in Table 1 reflect the current transformation of the beauty services market towards highly specialized services aimed at clients with increased physiological, psychological and social needs. In practice, these solutions are becoming a tool for niche competition for salons seeking to go beyond the standard range of services and build a stable customer base through increased individualization of services. In particular, trichology programs that combine scalp diagnostics with cosmetic support make it possible to offer long-term care protocols that have a repeatable commercial value. At the same time, psycho-aesthetic counseling is in line with the trend of strengthening the psychological component in the beauty industry, where services are evaluated not only by their external effect but also by the level of support for the client's confidence. Expanding the functions of the salon environment to the space of knowledge - through seminars or individual training - contributes to the formation of the status of an expert studio, which is converted into both additional profit and long-term loyalty. Thus, innovations in the field of hair restoration not only meet



current market demands, but also serve as an adaptive business model development in a changing socio-economic environment.

The economic feasibility of introducing innovative services for clients with alopecia is driven by a combination of market, social and financial factors that reflect the paradigm shift in the salon business from mass procedures to personalized and therapeutic services. In the context of the growing frequency of diagnosis of various forms of alopecia, both among women and men, there is a growing need for specialized services that can not only provide an aesthetic result, but also be safe, adapted to individual characteristics and psychologically comfortable. This approach allows beauty salons to create a new business model that combines commercial profit with socially important goals. Unlike traditional services aimed at maintaining the appearance of healthy hair, innovative technologies in the field of alopecia treatment imply a higher cost of the procedure, less competition, and increased value in the perception of the client. This is based on the principle of individualized support, integration of interdisciplinary knowledge, and the creation of a unique consumer offer. This strategy puts the business in the category of niche expert structures capable of generating a stable financial flow even in the face of a decline in overall demand for basic services (Table 2).

Table 2

Indicators of economic feasibility of introducing innovative services for clients with alopecia in the structure of the salon business

Feasibility assessment indicator	Content description	Economic importance
Initial investment	Expenses for staff training, purchase of specialized equipment, certification of procedures	Average level of investment that pays off within 8-14 months with the right positioning



Demand from the target audience	Formed a request from clients with alopecia, chemotherapy consequences, dermatological restrictions	Stable, under-satisfied market segment with low price sensitivity
Competitive saturation	Limited number of salons specializing in services for clients with alopecia	Ability to form a leadership position in the local market, lack of direct analogues
Profitability of services	High margins due to the individual format of procedures and low level of price competition	The average check is 2-3 times higher compared to basic hair care services
Social effect	Improving the psycho-emotional state of clients, returning to social activity	Increasing the brand's reputational capitalization, compliance with the ESG orientation of the business

Source: compiled by the author based on [2; 3; 5; 7; 10].

The analysis of the above indicators shows the high potential of innovative services for clients with alopecia as a tool for strengthening the economic stability of the salon business in the face of market turbulence. On average, the initial investment in the implementation of such services ranges from 80 to 150 thousand UAH, depending on the level of equipment and the depth of specialization of the master [15]. At the same time, the projected marginality of such procedures exceeds 60-70 %, which is significantly higher than standard hair care services with a profitability of 30-40 % [15]. With the average cost of one service at 2500-4000 UAH and the frequency of repeat visits every 3-5 weeks, the salon is able to provide a stable income even with a small client flow [16].

According to industry analytics, the demand for alopecia treatment products is growing by 6.5% annually, indicating a steady expansion of the target audience [17]. Competitive unfilled niche creates conditions for the formation of expert positioning in the local market, which makes it possible to set a premium price level



without a significant risk of losing a client. For its part, the social effectiveness of such services-especially when working with cancer patients, postpartum women, or people with autoimmune disorders-allows not only to strengthen the reputation component of the brand but also to integrate into social responsibility programs. For example, the introduction of innovative procedures for clients with alopecia not only increases the economic performance of the salon, but also transforms it into an ethical service provider that responds to the real needs of society.

The SensHair and Nanoker proprietary techniques are the result of Vera's individual development based on professional experience working with clients who have alopecia, scalp hypersensitivity, the effects of chemotherapy, or other limitations on the use of traditional hairdressing technologies. Both techniques are based on innovative approaches to hair reconstruction and visual restoration using minimal intervention, without chemical exposure to the hair shaft or skin. Their characteristic feature is high personalization and focus on functional safety, which allows them to work effectively with vulnerable categories of clients. In the structure of the salon business, these techniques open a niche for a long-term and profitable service with a high degree of added value (Tables 3, 4).

Table 3

Economic and technological characteristics of the SensHair method

Parameter	Meaning
Technological basis	Micro strands of 3-5 hairs, capsulation, gentle thermal fixation
Target audience	People with alopecia, after chemotherapy, with sensitive scalp
Average cost of the service	4000-7500 UAH
Estimated cost price	1300-2000 UAH
Profitability	65-75 %
Scaling potential	High: involves training, certification, implementation in author's studios

Source: author's own development



The SensHair technique demonstrates high profitability due to the combination of moderate expenditures on consumables with a high cost of the service due to the complexity of the procedure and its medical and aesthetic significance for the client. Since demand is generated mainly by people with long-term physiological needs, this ensures repeatability of procedures and an average customer loyalty cycle of 6-12 months. In the case of systematic practice, the technique allows you to fully recoup the initial costs of training and equipment within 3-5 months of active work.

Table 4

Economic and technological characteristics of the Nanoker method

Parameter	Meaning
Technological basis	Colorless imitation of tinting by manually mixing shades of strands
Target audience	People with allergies, pregnant women, porous or weakened hair
Average cost of the service	3000-6000 UAH
Estimated cost price	1000-1600 UAH
Profitability	60-70 %
Scaling potential	Medium: requires precise manual execution, difficult to delegate

Source: author's own development

Nanoker targets a narrow segment of consumers for whom traditional painting is unacceptable or unsafe. Thanks to the visual effect without the use of paint, the service is perceived as an innovative and safe alternative, which allows it to command a premium price. The cost part remains low, as the technique is based mainly on manual work and precise selection of shades. However, the potential for scaling is limited, as the technique requires individual training by a nail technician and is difficult to transfer through training.



The key advantage of both techniques is their ethical and functional adaptability: they take into account both the physiological and psychological characteristics of the client. This creates not just a new service, but an individualized experience that increases the value of the salon brand and opens up prospects for integration into social initiatives, partnership medical projects, or franchise training models. SensHair and Nanoker techniques have already been tested in the professional practice of salons in Ukraine and Poland, as well as presented at international hair extension championships, including Hair Extensions Guru. Based on the results of their implementation, specialists opened their own specialized studios, and the author of the methods has been repeatedly involved as an expert in industry events. This demonstrates not only the effectiveness and relevance of the developments, but also their ability to scale and develop new standards in the field of aesthetic rehabilitation.

The introduction of innovations in the field of hair restoration faces a number of persistent barriers that significantly hinder the development of this area. One of the main problems is the shortage of specialized personnel. Most masters are focused on standard services and are not trained to work with clients with alopecia, medical or dermatological restrictions. The lack of specialized educational programs and institutional support makes it impossible to quickly scale up innovative techniques [9].

Equally important is limited funding. Innovative services require initial investments in training, equipment, and proprietary solutions, but most salons do not have access to targeted financial support [5, 7]. This reduces the willingness to adopt new technologies, especially in small towns.

Another obstacle is the low level of consumer awareness. Potential customers are often unaware of the existence of safe, non-invasive solutions such as personalized tinting or microdermabrasion [11]. Lack of information limits demand even when there is supply.



The problem of lack of standards should be highlighted separately. The individualized nature of innovations makes it difficult to formalize them: there are no clear protocols, quality criteria, or regulatory framework [6]. Because of this, such services remain outside of official recognition and are not integrated into the social or medical support system. Taken together, these factors contribute to a systemic slowdown in sectoral modernization.

Integration of innovative hair restoration services into the salon business portfolio as a long-term diversification strategy requires a comprehensive and step-by-step approach. First of all, the specifics of the target audience should be taken into account: this is not a mass segment, but a narrow but stable group of clients with medical, aesthetic or psychological needs that require individualized services. Therefore, the first step is strategic positioning: creating an image of the studio or a separate service as an expert, ethical, and safe solution for vulnerable categories.

The second step is to invest in staff training. International experience, including the practice of Poland, Germany, and France, demonstrates the effectiveness of short-term certification programs focused on interdisciplinary competencies - a combination of cosmetology, trichology, psychoaesthetics, and micro-needling technologies. It is important not only to teach technical skills, but also to form an understanding of ethical responsibility when working with people who have experienced traumatic experiences or have persistent disorders of appearance.

The third area is the creation of a service model adapted to long-term interaction. Innovative services should include not only the procedure, but also counseling, support, follow-up visits, and after-sales support. The cost-effectiveness of such models is confirmed by international practice: customers remain loyal, and the cost of attracting new ones is reduced due to recommendations.

An important step is to expand the communication strategy. It is necessary to use both digital channels and local interaction: partnerships with trichologists,



oncologists, and women's health centers. This approach not only expands coverage, but also increases trust in the service as part of comprehensive health and image care.

It is also advisable to integrate innovative services into educational and demonstration formats: master classes, open consultation days, and social projects. This allows you to form a community around the service, strengthens the professional authority of the salon, and creates the basis for franchising or specialized areas within the business.

Thus, the effective integration of innovative hair restoration services is not only about technological implementation, but also about building an integrated system: from training of masters and communication with the audience to service support, partnerships, and social positioning. This not only expands the functionality of the salon, but also increases its sustainability in a competitive environment.

Conclusions and prospects for further research. The study proves that innovative hair restoration services for clients with alopecia are a promising area for diversifying the salon business. Their implementation provides a combination of high economic efficiency and social significance, contributing to the formation of a long-term customer segment and expert brand positioning.

It has been established that the author's SensHair and Nanoker methods are distinguished by their technological novelty, individual approach, and high profitability. Their practical testing in Ukraine and Poland confirms the viability of solutions and the potential for scaling through educational formats and niche studios.

The key barriers to innovation in the industry are identified: staff shortages, limited funding, poor consumer awareness, and lack of standardization. Overcoming these challenges requires cross-sectoral cooperation and targeted support programs.

Practical approaches to integrating such services into the salon's portfolio are proposed: development of interdisciplinary competencies of nail technicians, service



model of support, partnership with medical institutions, and targeted communication with the audience.

Further research should be focused on assessing the impact of innovations on the economic sustainability of salons, developing digital analytical tools, and forming a regulatory framework for the regulation of niche services in the beauty sector.

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