

2. Varnaliy Z.S., Vasylytsiv T.G., Pokryshka D.S., 2014. The priorities of improving government policy of small business in Ukraine. Strategic priorities, 2, pp.49-54.

3. Melnyk A.F., Vasina A.Y., Zhelyuk T.L., Popovich T.M., 2011. National economic. Tutorial. Kyiv: Znannya, 463 p. Retrieved from: http://pidruchniki.com/1601101341816/ekonomika/mechanizm_derzhavnoyi_pidtrimki_pidpriyemnikskoyi_diyalnosti

4. Treaty establishing the European Community (consolidated version On 1 January 2005) – Retrieved from: http://zakon4.rada.gov.ua/laws/show/994_017

5. Consolidated version of the Treaty on the Functioning of the European Union (TFEU, 2007) – Retrieved from: https://en.wikisource.org/wiki/Consolidated_version_of_the_Treaty_on_the_Functioning_of_the_European_Union/Title_VII:_Common_Rules_on_Competition,_Taxation_and_Approximation_of_Laws#SECTION_2:_AIDS_GRANTED_BY_STATES

6. Styuart U., Tsemnolonskis S., 2014. Report on Draft Law of Ukraine "On Government Aid for Business Entities" – retrieved from: <http://eupublicprocurement.org.ua/wp-content/uploads/2014/09/Report-on-Draft-Law-on-State-Aid-to-Undertakings-UKR.pdf>

7. What is state aid? – Retrieved from: <http://europeanfundingnetwork.eu/policy/eu-state-aid>

8. Slivka Y. State support for small and medium businesses. German experience. Retrieved from: <http://lib.chdu.edu.ua/pdf/naukstud/5/19.pdf>

9. What state aid is and how public authorities can make sure they comply with the rules. Retrieved from: <https://www.gov.uk/guidance/state-aid>

10. Handbook on State aid rules for SMEs, Update of 25.02.2009. – Retrieved from: http://ec.europa.eu/competition/state_aid/studies_reports/sme_handbook.pdf

11. Monitoring of state aid as a tool to fight corruption. Retrieved from: <http://eupublicprocurement.org.ua/state-aid-monitoring-as-an-anticorruption-tool.html?lang=UK>

12. Law of Ukraine "On the development and state support of small and medium enterprises", 2013. Bulletin of Verkhovna Rada, 3, c. 23.

13. Law of Ukraine "On Government Aid for Business Entities", 2014. Bulletin of Verkhovna Rada, 34, c.1173.

14. Tunali C.B., Fidrmuc J., 2015. State Aid Policy in the European Union. Journal of Common Market Studies, Volume 53, Issue 5, pp. 1143–1162. DOI: <http://dx.doi.org/10.1111/jcms.12247>

Надійшла до редколегії 15.01.2016

Л. Кот, канд. екон. наук, асист.

Київський національний університет імені Тараса Шевченка, Київ, Україна

ДЕРЖАВНА ДОПОМОГА ЯК ДІЄВИЙ МЕХАНІЗМ ДЕРЖАВНОГО РЕГУЛЮВАННЯ І ПІДТРИМКИ МАЛОГО І СЕРЕДНЬОГО БІЗНЕСУ

У статті проаналізовано основні підходи до визначення державної допомоги, зокрема нормативними документами Європейського Союзу такими як, наприклад, Договір про Заснування Європейського Співтовариства та Договір про функціонування Європейського Союзу. Також проаналізовані роль і значення державної допомоги у забезпеченні ефективного функціонування механізму державного регулювання і підтримки малого і середнього бізнесу. Проаналізовано досвід державної підтримки у вигляді державної допомоги ряду європейських країн та законодавче врегулювання надання державної допомоги в Україні.

Ключові слова: підприємництво; державне регулювання; державна допомога, гранти, податкові пільги, субсидювання.

Л. Кот, канд. екон. наук, асист.

Київський національний університет імені Тараса Шевченка, Київ, Україна

ГОСУДАРСТВЕННАЯ ПОМОЩЬ КАК ДЕЙСТВЕННЫЙ МЕХАНИЗМ ГОСУДАРСТВЕННОГО РЕГУЛИРОВАНИЯ И ПОДДЕРЖКИ МАЛОГО И СРЕДНЕГО БИЗНЕСА

В статье проанализированы основные подходы к определению государственной помощи, в частности нормативными документами Европейского Союза такими как, например, Договор о Создании Европейского Сообщества и Договор о функционировании Европейского Союза. Также проанализированы роль и значение государственной помощи при обеспечении эффективного функционирования механизма государственного регулирования и поддержки малого и среднего бизнеса. Проанализирован опыт государственной поддержки в виде государственной помощи ряда европейских стран и законодательное урегулирование предоставления государственной помощи в Украине.

Ключові слова: підприємництво; державне регулювання; державна допомога, гранти, податкові пільги, субсидювання.

Bulletin of Taras Shevchenko National University of Kyiv. Economics, 2016; 2(179): 32-38

УДК [330.4:338.5]:338.48

JEL D890; D400; L830

DOI: <http://dx.doi.org/10.17721/1728-2667.2016/179-2/5>

N. Sagalakova, PhD in Economics, Associate Professor
Kyiv National University of Trade and Economics, Kyiv, Ukraine

TARGET CONTROLLING METHOD OF THE PRICING PROCESS IN THE TOURISM ENTERPRISES

Key stages of the pricing process in the tourism enterprises are investigated: subprocess of establishing of nominal value of the new tourism product price and subprocess of adjustment of the established price depending on a situation in the tourism market. For establishing of nominal value of the price it is offered by use of optimizing model, which maximizes the usefulness function of structural parts of the tourism product price. For adjustment of the tourism product price under change of external conditions procedure of installation of the target with use of the process behavior charts of the pricing process is applied.

The new methodology of the pricing process controlling in the tourism enterprises, which based on complex application of methods of the statistical processes control and a method of dynamic programming, is presented in article and fully considers one of key features of the tourism sphere – seasonal fluctuations of the tourism product price.

Keywords: tourism product; pricing process; process target; process behavior chart; method of dynamic programming.

Setting of the problem. Formation and establishing of the tourism product price is one of the major administrative decisions at the level of the tourism enterprise. The price is a main factor of formation of the consumers demand, his stabilization or growth [6, 7, 14, 20, 22]. Correctly created price policy, the proved, consistently realized price strategy

and tactics are necessary components of effective activity of the tourism enterprise. The price is a source of commercial success of the tourism enterprise, is reflected in volumes of realization of a tourism product, profitability and competitiveness, promotes successful activity of the enterprise in the tourism market.

The insufficient attention to pricing can cost very much for the tourist enterprise. Situational approach to pricing is absolutely inapplicable.

The most important principle in pricing is the principle of scientific character, which is based on use of positive tendencies in operation of objective economic laws. This principle demands scientific validity of the prices, it has to consider economic laws and real values of market factors which are available at present. The deep scientific analysis of the market and all his factors has to precede pricing of a tourism product: current legislation, technology of creation of a tourism product and providing tourism services, possibility of their change. Implementation this principle assumes existence of sufficient information base, first of all concerning an economic situation, and also external and internal environment.

Analysis of the last researches and publications.

Process of price formation for a tourism product is an object of research of many scientists in the pricing sphere [16, 17, 21]. However, results of such researches, are generally directed to development of the general, universal methods of pricing. Unlike them, in this article the method which considers specifics of tourism industry [1, 12, 13, 15], first of all – seasonality of the change in price for a tourism product is offered [2, 5, 8].

Methodology. Theoretical and methodological basis are scientific articles of domestic and foreign scientists in the field of pricing, tourism, the general theory of management, the theory of modeling, the theory of decision-making, the theory of programming. The following general scientific and special methods of research are applied to achievement of the purpose of article: methods of theoretical generalization and a method of classification – for the choice of a way of correction of target value of the tourism product price; methods of the analytical and comparative analysis – for research of a seasonality factor of consumption of tourism services; a method of the system and structural analysis and a graphic method – for creating algorithm of methodology of management of the pricing process in the tourist enterprises.

Scientific basis of researches are methods of statistical process control [10, 18, 19, 23-25] and a method of dynamic programming [3, 4, 9, 11].

The progressive methodology of statistical process control (SPC) provides a possibility of optimization of management of processes and adoptions of operational administrative decisions taking into account variability of real processes in difficult social and economic systems.

Methods of statistical process control are a powerful tool for monitoring and analysis of the process variability, for search of reasons and ways of reduction. Unlike expert methods of an assessment of process parameters, statistical methods are objective. Origin of the SPC theory connected with the famous American expert scientist Walter Shukhart who has for the first time allocated two types of variability – the general and special. He has offered the simple and effective instrument of statistical regulation of quality of processes, which has received the name "Shukhart's control card" or "process behavior chart" [23].

In figure 1 it is shown one and classical examples of the of process behavior chart. There is an average line $CL = \bar{x}$; LPL , UPL – respectively the lower and upper limits of an indicator which are set in a directive way: lower natural limit of an indicator $LNPL = \bar{x} - 3\sigma$, and upper natural limit $UNPL = \bar{x} + 3\sigma$, where \bar{x} – average value of an indicator, σ – mean square deviation of an indicator.

The process behavior chart and other visual SPC tools are a simple and effective method of the solution of the problems, which arising in the organization at implementation a management by the process approach. The main idea of use of control cards for management of the pricing process in the tourism enterprises consists a differentiation of the general and special reasons of the process variability. In other words, if values of the tourism product price do not go beyond certain limits or do not show other signs of instability, then intervention in such process will only damage to him. Only in case of the special reasons of variability, it is necessary to interfere with pricing process for destruction of these reasons.

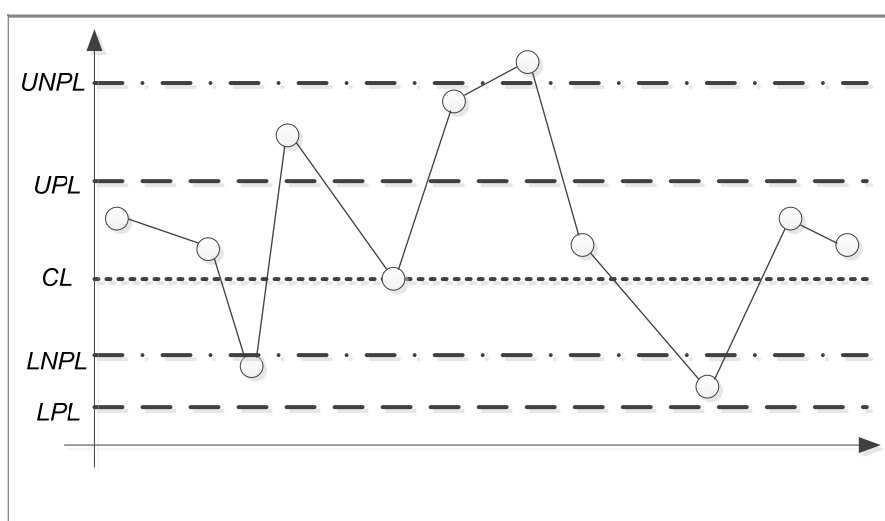


Fig. 1. The general structure of the process behavior chart

Source: authors' assessment

Dynamic programming method is as follows [3]. Suppose that the system S is operated and is in a state $S_0 \in \bar{S}_0$,

where \bar{S}_0 – set of initial states. Under the influence of some

control U the system passes from an initial state S_0 in the state $S_k \in \bar{S}_k$, where \bar{S}_k – set of final states. Quality of each of certain controls U is characterized by the corresponding value of function $W(U)$. The task is as follows: it is necessary to find from a set of possible controls such U^* , at which the function $W(U)$ accepts extreme (minimum and maximum) value $W(U^*)$. The system S is called dynamic system, and tasks, which are stated in this model, are called problems of dynamic programming. For implementation a method of dynamic programming performance of such two conditions is necessary. The state of dynamic system S on step k ($k=1 \dots n$) is defined by set of numbers $X^{(k)} = (x_1^{(k)}, x_2^{(k)}, \dots, x_n^{(k)})$, which are received as a result of realization of $c u_k$, and they provide transition of system S from a state $X^{(k-1)}$ to state $X^{(k)}$.

1. At the same time we consider that the state $X^{(k)}$, into which the system S has passed depends on this state $X^{(k-1)}$ and the chosen control u_k and does not depend on how the system S has come to a state $X^{(k-1)}$. This condition carries the name "condition of lack of an after-effect".

2. If as a result of realization of k step a certain prize of $W_k(X^{(k-1)}, u_k)$, which depends on a state $X^{(k-1)}$ and the chosen control u_k , then total income for n of steps:

$$F = \sum_{k=1}^n W_k(X^{(k-1)}, u_k).$$

This condition carries the name "condition of additive of criterion function".

Follows from this principle that the general optimum strategy of control U^* which is equal $U^* = (u_1^*, u_2^*, \dots, u_n^*)$ can be received if at first to find optimum strategy of control on a step n (W_n^*), then on two last steps (u_{n-1}^*, u_n^*), then on three last steps ($u_{n-2}^*, u_{n-1}^*, u_n^*$) etc. to the first step.

Article purpose – development of new methodology of management of the pricing process in the tourist enterprises which fully considers one of key features of the tourism sphere – seasonal fluctuations of the tourism product price.

Results. The formation of price for the tourism product can effectively investigate based on the process approach. The main advantage of the process approach to a problem of the formation of the tourism product price is that it allows you to track the contribution of each business process in the total result.

Any business process of the tourist enterprise directly or indirectly influences pricing of a tourism product.

In the pricing management process in the tourism enterprise it is possible to allocate three important subprocesses:

- 1) initialization, analysis and assessment of influence factors on the tourism product price;
- 2) establishing the new price of a tourism product;
- 3) adjustment of the price depending on a situation in the tourist market.

The first stage, certainly, is very important. But this article is devoted to research of the second and third subprocesses. Establishing the new price of a tourism product is reflection of the certain nominal value connected with the costs level of formation of a tourism product and level of his usefulness for the tourist as the final user of this product.

One of the main problems of management in the tourism sphere is absence the standard (target, optimum, nominal) values for indicators of the majority of processes. The problem of a quantitative assessment of the tourism

product price in most cases attracts lack of scientific approach to creation of a control system of the pricing process in the tourism enterprises.

We will establish the task of development of the economic-mathematical model for search of nominal values of key indicators of the pricing process, based on optimization of components of the tourist product price.

By search of nominal values of key process indicators target function expresses usefulness of such indicators in system of pricing. Coefficients of target function contain the corresponding weight coefficients of importance for various elements of the price. Weight coefficients, as a rule, are defined by expert methods.

Resource restrictions of activity processes of the tourism enterprise can be divided into 4 groups: personnel, which set the number of specialists in pricing; financial, defining the budget of process; information which indicate the providing level of the pricing process with information resources; the material, considering a status of infrastructure of process.

Thus, the model can be presented in the form:

$$F = \sum_{j=1}^n w_j x_j \rightarrow \max, \quad (1)$$

$$\sum_{j=1}^n w_j = 1, \quad (2)$$

$$\sum_{j=1}^n g(x_j) \cdot x_j \leq b_i, \quad i = 1, 2, \dots, m \quad (3)$$

$$x_j^{\min} \leq x_j \leq x_j^{\max}, \quad j = 1, 2, \dots, n \quad (4)$$

In this model F is the usefulness function of a set of indicators $x = \{x_1, x_2, \dots, x_n\}$ with the corresponding coefficients of importance from a set $w = \{w_1, w_2, \dots, w_n\}$,

which elements meet a condition of rationing (2). The system (3) may contain personnel, financial, information, material and other linear or nonlinear resource restrictions. Double inequalities of a look (4) include the upper and lower limits of standard values of indicators. In case of lack of such standards the inequality (4) has to be replaced with a simple condition of nonnegativity value of an indicator x_j with number j .

The third stage of the pricing management process is more difficult. It consists in adjustment of the tourism product price and her stabilization at such level, which as a result provides to the tourism enterprise the maximum annual profit.

At this stage there is a check of coherence of nominal value of the price received as the solution of an optimizing problem (1)-(4) with average value of an indicator on the process behavior chart. In this regard it is necessary to give concept of target value, nominal value and average value of an process indicator [24].

We will call target value or the process target separate value or a set of values of an indicator to which it is directed process (is adjusted). If the target is exact coincidence to a sample, then as target the unique value of an indicator acts. If the process target of is the tolerance, then target values represent an interval (as a rule, symmetric concerning a standard) which ends coincide with limits of the admission and in which process are considered as qualitative.

Average value of process call the arithmetic average of some characteristic of process received from the moment of establishing a target.

We will call nominal value as optimum value of a process indicator, which the maximum usefulness or the minimum loss in the conditions of the available process restrictions is reached.

D. Wheeler and D. Chambers [24] give simple interpretation of the key concepts defined above: "the target is what you have set; an average – what you have received, and nominal value – what you wanted to receive".

We will review an example of formation process of a tourism product which opens contents of the terms "nominal value", "average value", "target value" and "correction of the target".

Under the unstable work of hotel business actual the problem of the guaranteed providing necessary number of rooms in hotels is. Let it is necessary to reserve for formation of a tourism product S hotel rooms. For increase of probability of providing with necessary resources for accommodation of tourists the tourism enterprise has concluded agreements about reservation of rooms with n by hotels. At the same time hotel i have undertaken to provide s_i ($i=1, \dots, n$) rooms for clients of our tourism enterprise. It is obvious to fulfill obligations when forming a tourism product it is necessary that the condition $\sum_{i=1}^n s_i \geq S$ was

satisfied. We will assume that at realization of process of the tourism product formation the hotel i has provided r_i ($i=1, \dots, n$) hotel rooms, where $0 \leq r_i \leq s_i$. Then, the nominal value of process is equal to S ; average value is $\sum_{i=1}^n r_i$, and the target of process is $M = \sum_{i=1}^n s_i$. If in practice it

turns out that the tourism enterprise gets quantity of hotel rooms of less S , then it will be necessary to carry out correction of the target by increase in M . It can be done, for example, having concluded additional agreements with other hotels or having changed suppliers of hotel services on more responsible.

However, no procedures of target control are capable to provide exact coincidence of an average and nominal value of the tourism product price. The best option, which can be reached in practice, is a proximity of an average and nominal value. Thus, the target is a certain tolerance from nominal value. However, it is obvious that initial establishing of the target does not guarantee proximity of average value and nominal value for a long time at all. The main problem of control – to hold deviations of average value of key process indicators in certain admissible limits. At the same time, if average value is rather close to nominal, then intervention in process will only damage to him. If value of the characteristic of process exceeds a tolerance from nominal value, then it is necessary to carry out correction of the target – the operating impact on process for the change of average value.

One of widespread techniques of the target process control is the technique of use of individual values of indicators [24] which gives the chance of target correction after emergence of each next value of the parameter of process.

The technique of the correct control for the target is an effective tool of pricing management process for the fixed nominal value of the tourism product price. Unfortunately,

tourism is subject to influence of various external factors, one of which is the seasonality factor [2].

Authors allocate four seasons of tourism activities for degree of intensity of trips:

1) a season peak – the optimal period for the organization of recreational activity of people which is characterized by the maximum density of tourists and the most comfortable conditions for rest;

2) a season high – the period of the great business activity in the tourism market, time of action of the high tariffs for a tourism product and service;

3) a season low – the period of decrease in business activity in the tourism market of which the low prices of a tourism product and services are characteristic;

4) a season "dead" – the most adverse period for the organization of recreational activity.

It is obvious that a strategic objective of the tourism enterprise is receiving the maximum profit after all four seasons. And to set a problem of maximizing profit at any cost in each of seasons senselessly. Price strategy, so and the purpose, which is her cornerstone has to change from a season by a season. For effective the pricing process management in the tourism enterprise taking into account a seasonality factor we suggest to use the method of dynamic programming.

At the same time we will understand the pricing process in the tourist enterprise as dynamic system S . Initial S_0 and final S_k a status of system corresponds to initial and final date of the period of research of the pricing process. The control U – is a procedure of the target establishing of pricing process by means of which we can influence average value of the price of realization of a tourism product. The quantity of statuses of the pricing process is determined by quantity of seasons of tourism activity. The Bellman's optimal principle for the dynamic pricing process will be such: whatever was the price level of a tourism product in the previous season, target value of the price in the next season needs to be chosen so that the profit of the tourism enterprise in this season in the sum with profit of all subsequent seasons was maximum.

We will consider the following designations.

j – serial number of a season; n – quantity of seasons; i – serial number of value of the tourism product price;

CL_j – the average line of the process behavior chart (average value of the price in season j);

UPL_j – the upper control limit of process (the target value of the price directed to maximizing profit of the tourism enterprise during season j);

LPL_j – the lower control limit of process (the target value of the price directed to maximizing profit of the tourism enterprise during season j);

NP_j – the nominal value of the price, which calculated as solution of problem (1)-(4) for season j ;

x_i – value of an indicator with number i ;

x_s – the average value received from the moment of the last adjustment of the seasonal price;

$x^*(j)$ – nominal value of the price for season j ;

$x_0(j)$ – target value of the price for season j ;

W_j – nominal value of the price for season j ;

W – size of the general annual profit of the tourism enterprise.

Graphic interpretation of key values of the price in the target controlling method of the pricing process is presented in fig. 2.

In fig. 3 the scheme of methodology of the pricing process management in the tourist enterprises which is based on

complex application of methods of statistical process control and a method of dynamic programming is submitted.

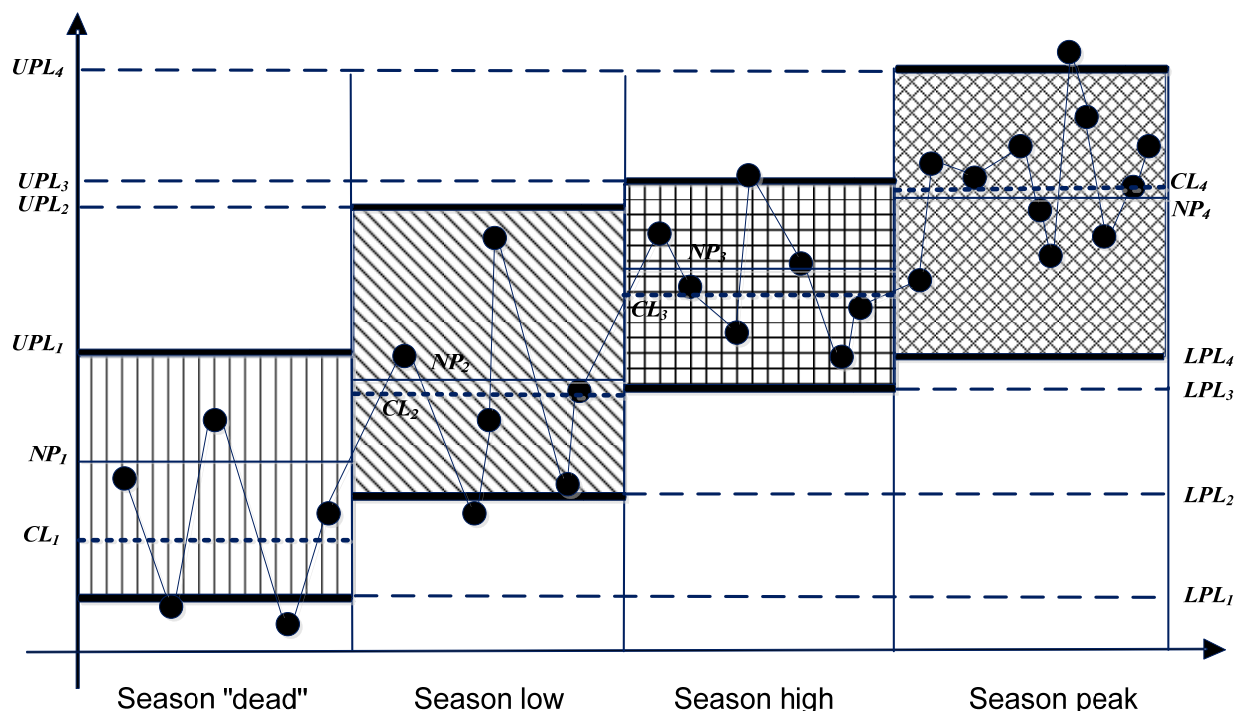


Fig. 2. Graphic interpretation of key values of the price in the target controlling method of the pricing process in the tourism enterprises

Source: author's design

Conclusions and discussion. The new methodology of the pricing process management in the tourism enterprises is presented in article. Procedure of the choice, establishing and control of target of the pricing process is the cornerstone of this methodology. Correctly the target and its effective correcting provides to the tourism enterprise the maximum profit on realization of a tourism product. For procedure of the target correction it is necessary to determine the price nominal value previously. For establishing of the price nominal value it is offered to use optimizing model which maximizes function of usefulness of structural parts of the price of a tourism product. Further realization of methodology consists in complex application of methods of statistical process control and a

method of dynamic programming and fully considers one of key features of the tourism sphere – seasonal fluctuations of the tourism product price.

In the conclusion it is necessary to allocate unresolved problems of the pricing management in the tourism enterprises. One of such problems is the problem of quantitative estimation of many elements of the tourism product price and with uncertainty of indicators of some business processes in the tourism enterprise. At last, we identify one more problem, which is called influence of a human factor.

Completely it is impossible to get rid of these problems, but it is necessary to set a task of the maximum accounting of uncertain parameters and influence of a human factor on pricing process.

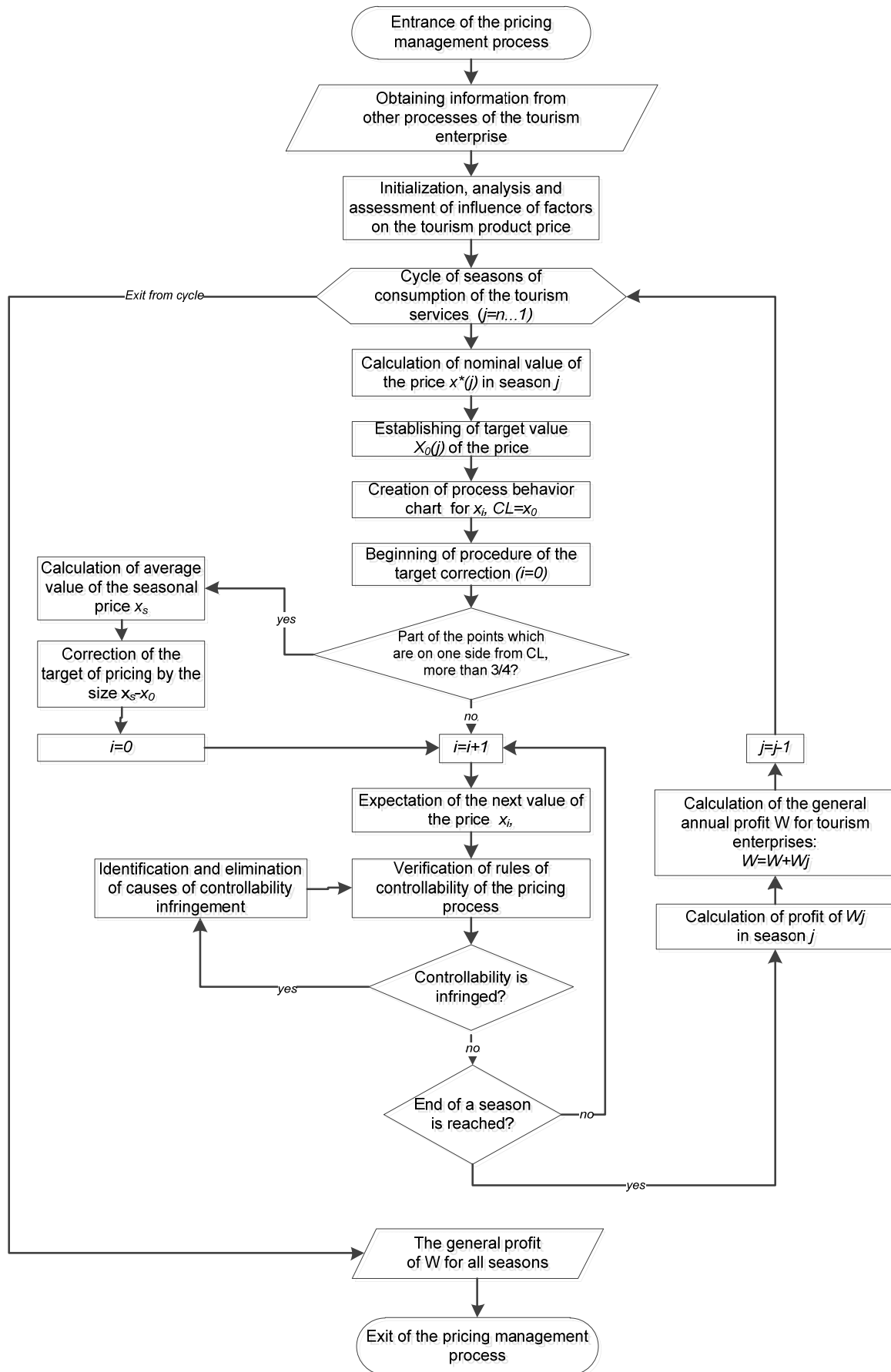


Fig. 3. The scheme of methodology of the pricing process management in the tourist enterprises

Source: authors' design

References

1. Bansal, S. P. (2003). Tourism development and its impact. *Tourism Recreation Research*, 28 (2), 94.
2. Baum, T., & Lundtorp, S. (2001). *Seasonality in tourism*. Oxford: Elsevier Science. DOI: <http://dx.doi.org/10.1002/jtr.408>.
3. Bellman, R. E., & Dreyfus, S. E. (1965). *Applied dynamic programming*. N. J.: Princeton University Press.
4. Bertsekas, D. P. (1995). *Dynamic Programming and Optimal Control*. Belmont: Athena.
5. Butler, R. (1998). Seasonality in tourism: Issues and implications. *The Tourist Review*, 53 (3), 18-24. DOI: <http://dx.doi.org/10.1108/eb058278>.
6. Cai, G., Zhang, Z. G., & Zhang, M. (2009). Game theoretical perspectives on dualchannel supply chain competition with price discounts and pricing schemes. *International Journal of Production Economics*, 117 (1), 80-96. DOI: <http://dx.doi.org/10.1016/j.ijpe.2008.08.053>.
7. Collins, M., & Parsa, H. G. (2006). Pricing strategies to maximize revenues in the lodging industry. *International Journal of Hospitality Management*, 25 (1), 91-107.
8. Cuccia, T., & Rizzo, I. (2011). Tourism seasonality in cultural destinations: Empirical evidence from Sicily. *Tourism Management*, 32 (3), 589-595. DOI: <http://dx.doi.org/10.1016/j.tourman.2010.05.008>.
9. Cvitanic, J., Possamai, D., & Touzi, N. (2015). Dynamic programming approach to principal-agent problems. *Optimization and Control*, arXiv:1510.07111.
10. Darestani, S. A., & Nasiri, M. (2016). Statistical process control. *International Journal of Quality & Reliability Management*, 33 (1), 2-24. DOI: <http://dx.doi.org/10.1108/IJQRM-08-2013-0130>.
11. Denardo, E. (1982). *Dynamic Programming – Models & Applications*. Prentice-Hall: Hemel Hempstead.
12. Guo, X., & He, L. (2012). Tourism supply-chain coordination: The cooperation between tourism hotel and tour operator. *Tourism Economics*, 18 (6), 1361-1376. DOI: <http://dx.doi.org/10.5367/te.2012.0179>.
13. Guo, X., Ling, L., Dong, Y., & Liang, L. (2013). Cooperation contract in tourism supply chains: the optimal pricing strategy of hotels for cooperative third party strategic websites. *Annals of Tourism Research*, 41, 20-41. DOI: <http://dx.doi.org/10.1016/j.annals.2012.11.009>.
14. He, Y., Zhao, X., Zhao, L., & He, J. (2009). Coordinating a supply chain with effort and price dependent stochastic demand. *Applied Mathematical Modelling*, 33 (6), 2777-2790.
15. Kamra, Krishan K. (2006). *Economics of tourism: Pricing, impacts and forecasting*. New Delhi: Kanishka Publishers, Distributors.
16. Keane, M. J. (1997). Quality and pricing tourism in destinations. *Annals of Tourism Research*, 24 (1), 117-130.
17. Kim, J., Bojanic, D. C., & Wernick, R. B. (2009). Price bundling and travel product pricing practices used by online channels of distribution. *Journal of Travel Research*, 47 (4), 403-412.
18. Lim, S. A. H., Antony, J., & Alblawi, S. (2014). Statistical Process Control (SPC) in the Food Industry. A Systematic Review and Future Research Agenda. Trends in Food Science & Technology. DOI: <http://dx.doi.org/10.1016/j.tifs.2014.03.010>.
19. MacGregor, J. F., & Kourtli, T. (1995). Statistical process control of multivariate processes. *Control Eng. Practice*, 3 (3), 403-414.
20. McMahon-Beattie, U., & Yeoman, I. (2004). *Revenue Management and Pricing: Case Studies and Applications*, Cengage Learning EMEA.
21. Meidan, A., Witt, S., & Moutinho, L. (1989). Pricing in tourism. *Tourism marketing and management handbook*, 305-309.
22. Van der Rest, J.-P. I., & Harris, P. J. (2008). Optimal imperfect pricing decision making: Modifying and applying Nash's rule in a service sector context. *International Journal of Hospitality Management*, 27 (2), 170-178.
23. Wheeler, D. J. (1995). *Advanced Topics in Statistical Process Control. The Power of Shewhart's Charts*. SPC Press, Knoxville, Tennessee.
24. Wheeler, D. J., Chambers D. S. (2009) *Understanding Statistical Process Control*. SPC Press, Knoxville, Tennessee.
25. Ziegel, E. R. (1993). *Understanding Statistical Process Control, Technometrics*, 35 (1), 101-102. DOI: <http://dx.doi.org/10.1080/00401706.1993.10485025>.

Надійшла до редколегії 04.01.16

Н. Сагалакова, канд. екон. наук, доц.
Київський національний торговельно-економічний університет, Київ, Україна

МЕТОДИКА КОНТРОЛЮВАННЯ МЕТИ ПРОЦЕСУ ЦІНОУТВОРЕННЯ НА ТУРИСТИЧНИХ ПІДПРИЄМСТВАХ

Досліджено ключові етапи процесу ціноутворення на туристичних підприємствах: підпроцес установки номінального значення нової ціни на туристичний продукт і підпроцес коригування встановленої ціни в залежності від ситуації на туристичному ринку. Для установки номінального значення ціни запропоновано використовувати оптимізаційну модель, яка максимізує функцію корисності структурних частин ціни туристичного продукту. Для коригування ціни на туристичний продукт при зміні зовнішніх умов застосовано процедуру установки мети з використанням діаграм перебігу процесу ціноутворення.

У статті представлена нова методологія управління процесом ціноутворення на туристичних підприємствах, яка заснована на комплексному застосуванні методів статистичного управління процесами і методу динамічного програмування і в повній мірі враховує одну з ключових особливостей сфери туризму – сезонні коливання ціни на туристичний продукт.

Ключові слова: туристичний продукт; процес ціноутворення; мета процесу; діаграма перебігу процесу; метод динамічного програмування.

Н. Сагалакова, канд. екон. наук, доц.
Киевский национальный торгово-экономический университет, Киев, Украина

МЕТОДИКА КОНТРОЛИРОВАНИЯ ЦЕЛИ ПРОЦЕССА ЦЕНООБРАЗОВАНИЯ НА ТУРИСТИЧЕСКИХ ПРЕДПРИЯТИЯХ

Исследованы ключевые этапы процесса ценообразования на туристических предприятиях: подпроцесс установки номинального значения новой цены на туристический продукт и подпроцесс корректировки установленной цены в зависимости от ситуации на туристическом рынке. Для установки номинального значения цены предложено использовать оптимизационную модель, которая максимизирует функцию полезности структурных частей цены туристического продукта. Для корректировки цены на туристический продукт при изменении внешних условий применена процедура установки цели с использованием диаграмм поведения процесса ценообразования.

В статье представлена новая методология управления процессом ценообразования на туристических предприятиях, которая основана на комплексном применении методов статистического управления процессами и метода динамического программирования и в полной мере учитывает одну из ключевых особенностей сферы туризма – сезонные колебания цены на туристический продукт.

Ключевые слова: туристический продукт; процесс ценообразования; цель процесса; диаграмма поведения процесса; метод динамического программирования.

ANNOTATION AND REFERENCES (IN LATIN): TRANSLATION / TRANSLITERATION / TRANSCRIPTION

Hrabrin Bachev, PhD, Professor
Institute of Agricultural Economics, Sofia, Bulgaria

SUSTAINABILITY OF FARMING ENTERPRISE – UNDERSTANDING, GOVERNANCE, EVALUATION

This article gives answers to following important questions: "what is sustainability of farming enterprises" such as individual and family farms, agri-firms of different types, agri-cooperatives, etc.", "what are the mechanisms and modes of governance of sustainability of farming enterprises", and "how to evaluate the sustainability level of farming enterprise and efficiency of its governance". First, evolution of the "concept" of sustainability of farming enterprises is discussed and more adequately defined as ability of a particular enterprise to maintain its managerial, economic, social and ecological functions in a long term. Second, institutional, market, private, public and hybrid mechanisms and modes of governance of farming enterprise's sustainability are specified. Third, a specific for the conditions of East-European agriculture framework for assessing sustainability level of farming enterprise and efficiency of its governance is suggested. Ultimate goal is to assist farming enterprises' management and strategy formation as well as improvement of public policies and forms of public intervention in agrarian sector.

1. Andreoli M. & Tellarini V. (2000). Farm sustainability evaluation: methodology and practice, *Agriculture, Ecosystems & Environment*. Vol. 77 (1–2), 43–52.
2. Bachev, H. (2004). Efficiency of Agrarian Organizations, *Farm Management and Rural Planning*. 5, 135–150.
3. Bachev H. (2005). Assessment of Sustainability of Bulgarian Farms, proceedings, XIth Congress of the European Association of Agricultural Economists, Copenhagen: EAAE.
4. Bachev H. (2009): Mechanisms of Governance of Sustainable Development, *Journal of Applied Economic Science*. Vol. 4(2), 169–184.
5. Bachev H. (2010). *Governance of Agrarian Sustainability*. New York: Nova Science Publishers.
6. Bachev H. (2013): New Institutional Economics Framework for Assessing and Improving Agrarian Organizations, *Bulletin of Taras Shevchenko National University of Kyiv. Economics*, 9 (150), 5–17. <http://dx.doi.org/10.17721/1728-2667.2013/150-9/1>
7. Bachev H. (2016). A Framework for Assessing Sustainability of Farming Enterprises, *Journal of Applied Economic Science*, Vol. 11(2).
8. Bachev H. & Nanseki T. (2008). Environmental Management in Bulgarian Agriculture – Risks, Modes, Major Challenges, *Journal of the Faculty of Agriculture of Kyushu University*. Vol. 53(1), 363–373.
9. Bachev H. & A. Peeters (2005). Framework for Assessing Sustainability of Farms, *Farm Management and Rural Planning*. 6, 221–239.
10. Barrett C. (1996). Fairness, stewardship and sustainable development, *Ecological Economics*. Vol. 19 (1), 11–17.
11. Bastianoni S, Marchettini N., Panzieri M. & Tiezzi E. (2001). Sustainability assessment of a farm in the Chianti area (Italy), *Journal of Cleaner Production*. Vol. 9 (4), 365–373.
12. Berge, E. & Stenseth, N. (1998). *Law and the Governance of Renewable Resources. Studies from Northern Europe and Africa*, Oakland: ICS Press.
13. Beerbaum S. (2004). Agricultural soil protection in Germany – social requirements and legal provisions, *ZUCKERINDUSTRIE*. Vol. 129 (9), 636–638.
14. Brklacich M., Bryant C. & Smith B. (1991). Review and appraisal of concept of sustainable food production systems, *Environmental Management*. 15(1), 1–14.
15. Coase, R. (1960). The Problem of Social Costs, *Journal of Law and Economics*. 3, 1–44.
16. Daily, G., Söderqvist, T., Aniyar, S., Arrow, K., Dasgupta, P., Ehrlich, P., Folke, C., Jansson, A., Jansson, B., Kautsky, N., Levin, S., Lubchenco J., Mäler K., Simpson D., Starrett D., Tilman D. & Walker B. (2000). The value of nature and the nature of value. *Science*. 289, 395–396.
17. De Molina M. (2013). Agroecology and Politics. How To Get Sustainability? About the Necessity for a Political Agroecology, *Agroecology and Sustainable Food Systems*. Vol. 37 (1), 45–59.
18. EC (2001). *A Framework for Indicators for the Economic and Social Dimensions of Sustainable Agriculture and Rural Development*, European Commission.
19. Edwards C., Lal R., Madden P., Miller R. & House G. (1990). *Sustainable Agricultural Systems, Soil and Water Conservation Society*, Iowa.
20. Epp R. (2013). The Agrarian Vision: Sustainability and Environmental Ethics, *Journal of Agricultural & Environmental Ethics*. Vol. 26 (3), 739–741.
21. Farah, A. & Gomez-Ramos A. (2014). Competitiveness vs. Sustainability: An Assessment of Profitability as a Component of an Approach on "Sustainable Competitiveness" in Extensive Farming Systems of Central Spain, *Sustainability*. Vol. 6 (11), 8029–8055.
22. FAO (2013). *SAFA. Sustainability Assessment of Food and Agriculture systems indicators*. Rome: FAO.
23. Fuentes M. (2004). *Farms Management Indicators Related to the Policy Dimension in the European Union*, 21. OECD Expert Meeting on Farm Management Indicators and the Environment, 8–12 March 2004, New Zealand.
24. Häni F., Pintér L. & Herren H. (2006). Sustainable Agriculture. *From Common Principles to Common Practice*, Proceedings of the first Symposium of the International Forum on Assessing Sustainability in Agriculture (INFASA), March 16, 2006, Bern, Switzerland.
25. Hagedorn, K. (2002). *Environmental Cooperation and Institutional Change*. Cheltenham: Edward Edgar.
26. Hansen J. (1996). Is Agricultural Sustainability a Useful Concept, *Agricultural Systems*. 50, 117–143.
27. Hayati D. Z. Ranjbar, & E. Karami (2010). Measuring Agricultural Sustainability, in E. Lichtfouse (ed.), *Biodiversity, Biofuels, Agroforestry and Conservation Agriculture*, Sustainable Agriculture Reviews 5, Springer Science, 73–100.