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## FINANCIAL NATURE OF RESORT MULTIPLIER

**Abstract.** It is analyzed the evolution of conceptual approaches to the analysis and evaluation of the multiplier effect of resort and recreational tourism. It is constructed the development scenarios of resort and recreational clusters for the next decade. It is established that the combination of conceptual approaches to evaluation of the multiplier effect and the results of multifactorial modelling of the impact of resort and recreation tourism on the gross regional product forms the methodological basis of justification of the national strategy of public administration of resort and recreation sphere.

**Keywords:** public administration, resort and recreation sphere, tourism, multiplier, cluster.

**JEL Classification:** L83.

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## ФІНАНСОВА ПРИРОДА КУРОРТНОГО МУЛЬТИПЛІКАТОРА

**Анотація.** У статті проаналізовано еволюцію концептуальних підходів до проведення аналізу й оцінювання мультиплікативного ефекту курортно-рекреаційного туризму. Побудовано сценарії розвитку курортно-рекреаційних кластерів на найближче десятиліття. Встановлено, що поєднання концептуальних підходів до оцінювання мультиплікативного ефекту та результатів багатфакторного моделювання впливу курортно-рекреаційного туризму на валовий регіональний продукт формує методологічні засади обґрунтування національної стратегії державного управління курортно-рекреаційною сферою.

**Ключові слова:** державне управління, курортно-рекреаційна сфера, туризм, мультиплікатор, кластер.

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## ФИНАНСОВАЯ ПРИРОДА КУРОРТНОГО МУЛЬТИПЛИКАТОРА

**Аннотация.** В статье проанализирована эволюция концептуальных подходов к изучению финансовой природы и оценки мультипликативного эффекта курортно-рекреационного туризма. Построены сценарии развития курортно-рекреационных кластеров на ближайшее десятилетие. Установлено, что сочетание концептуальных подходов к оценке мультипликативного эффекта и результатов многофакторного моделирования влияния курортно-рекреационного туризма на валовой региональный продукт формирует

методологические основы обоснования национальной стратегии государственного управления курортно-рекреационной сферой.

**Ключевые слова:** государственное управление, курортно-рекреационная сфера, туризм, мультипликатор, кластер.

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**Introduction.** The resort and recreation sphere provides a multifaceted contribution to the formation of the national wealth of the country. On the one hand, it is the income of producers of resort and recreation services, created workplaces, financial flows of wages, social transfers, taxes, rent, on the other hand, - it is investment in human capital, which is associated with social development and health of the nation. At the same time there is an effect of replacing the state expenditures on health care with a more effective source of self-financing for reproduction of public health through the purchase of resort and recreational services. Despite the urgent need to improve the technologies of public financial management, there is at the moment a lack of special researches, which are devoted to assessing the effectiveness of public authorities in relation to the powers delegated to them to ensure the development of resorts and tourism at the regional and national levels in the scientific space.

**Analysis of research and problem statement.** The fundamental basis of the methodological toolkit for macroeconomic modeling and market process regulation, taking into account the multiplicative effect, are laid in the researches of R. Kan [1], I. Fisher [2], J. Keynes [3]. In the development plan for the methodology of the multiplier of tourism, the scientific and practical value of methodological approaches to the evaluation of its effect, an important place is occupied by the development of foreign authors, B. Archer and K. Owen [4], E. Horvat, D. Frechling [5], M. Luka [6]. Taking into account the transformational processes in the national economy, the most thorough researches in this direction were conducted by T. Tkachenko [7], P. Zakharchenko [8], M. Boyko [9]. However, in the context of financial management, certain aspects of the use of macroeconomic models, and in particular, the study of the multiplier effect that provides resort and recreational tourism, remain virtually undisclosed and require a special research.

Taking into account the urgency of the problem and its insufficient scientific discovery, the purpose of our research is to develop the theoretical principles and formulate the practical recommendations directed to improving the information provision of the state policy of stimulating the development of resorts and tourism.

The main scientific results that are presented in this publication, are obtained by methods of economic analysis (processing of statistical materials), abstractions (definition of preconditions and trends of development of resort and recreational tourism), the relationship of researched phenomena and the realities of existing practice (evaluation of multiplicative contribution of resort and recreational spheres in the gross product formation), scientific experiment (development scenarios of resort and recreational clusters). The information base of the research was the works of Ukrainian and foreign scholars, materials from the State Statistics Service, the Institute for Economic Research and Policy Consulting, and own analytical works.

**Research results.** Modern methodological toolkit of information support of financial management composes various types of models, including multipliers. In the scientific work of the British economist R. Kan, there is formulated one of the first definitions of the multiplier – it is a coefficient reflecting the quantitative increase in total employment as a result of the initial increase in employment by type of economic activity, which is associated with investments. The concept of the macroeconomic employment multiplier is based on the assumption that, on other equal terms, based on the propensity of the population to consume, the application of certain state regulation measures that will lead to deterrence or intensification of investments will affect accordingly the dynamics of employment size. The change of employment size is expressed by the function of changes in net investment [1, p.182].

Understanding the financial nature of the relationship of consumption depending on the factors of income and time was first reflected in the scientific developments of I. Fisher. So far as rational financial behavior of consumers is formed on the basis of their current and future incomes, the cost of funds, which are directed to consumption, are defined by the income budget, which is received during a lifetime. In connection with this, the total volume of consumption is conventionally differentiated by time periods of human life with the definition of the range of “youth” and “old age” [2, p. 248-249].

In the economic encyclopedia it is given the definition of a multiplier based on the concept of J. Keynes: “The multiplier is a coefficient that characterizes the relation between aggregate value and its structural part, the influence degree of one value (incoming) on another (outcoming) in a managed system” [10, p.501].

In accordance with Keynes, the increase of cost, which is used for consumption (C) is a stable function of national income (Y). While the propensity to consume expresses the ratio  $\Delta C/\Delta Y$ , the function is decreasing ( $>0$ ;  $<1$ ). With income increasing it is also growing the consumption, but lesser than income. The greater the volume of growth of national income are directed to consumption, the better will appear a multiplier effect. Denoting the initial increase in national income as such, that corresponds to the basic investment increase,  $k$ , the marginal propensity to consume the proportion of growth intended for consumption, we get:

$$\Delta C/\Delta Y = \Delta C/\Delta k [3, p.314-315], \quad (1)$$

The functioning of the economy of resort and recreation services causes the so-called an effect of “snow slide”. On the background of investments intensification, it is occurred the growth of business activity not only in the sphere to which they are directed (in this case, it is resort and recreation). The impulses of economic recovery extend in the economic sphere in such way that there are revealed the derivative of income, as well as employment in other spheres. By the formula of infinitely decreasing geometric progression we obtain the mathematical expression of income by types of economic activity, which are related to the investigated sphere:

$$A + kA + k^2 A + k^3 A + \dots + kA^k = A \frac{1}{1 - k}, \quad (2)$$

The multiplier of Keynes, except of taking into account the marginal propensity to consume, reveals the financial nature of change correlation of investments with the dynamics of income which are formed by the principle of snow slide, creating a multiplier effect of government regulation of the economy. This means that the implementation of state regulation measures to encourage investment in accordance with the specified priorities of innovation and sustainable economic growth will solve the problematic aspects of related and adjoining economic activities.

The history of the study of financial nature of resort multiplier dates to the 70’s of XX-th century and it appears in the methodological aspects of its relationship and differences with tourist multiplier. There is defined a resort multiplier as a level of economic impact of wellness tourism that is expressed in the form of direct, indirect and induced income growth and employment in the recreation and tourism sector of seaside resort, in the scientific publication “The Encyclopedia of Tourism and Recreation in Marine Environments” [6, p.322].

The income multiplier, which is considered in the context of sustainable tourism development by T. Tkachenko, determines the change in the volume of additional income created by distributed profits, rent, wages, interest as a result of rising tourist expenses and it means the real value, part of the national income, net income of enterprises, household incomes, which are allocated to consumption and savings [7, p.146].

Let's illustrate the evolution of conceptual approaches to calculate the multiplier as an important economic indicator.

Tourist regional multiplier – the model of V. Archer and K. Owen) [4, p. 289-290]:

$$M = \sum_{j=1}^N \sum_{i=1}^n Q_j K_{ij} V_i \frac{1}{1 - L \sum_{i=1}^n X_i Z_i V_i}, \quad (3)$$

where  $j$  – the type of tourist services;

$i$  – the type of tourism services producers;

$Q_j$  – the share of consumer spending in total cost;

$K_{ij}$  – the share of spending of  $j$  - consumers in incomes of  $i$  - spending;

$V_i$  – the income generation for each  $i$  - category of producers;

$L$  – average propensity to consume;

$X_i$  – the model value of total cost for consumers for  $i$  - producers;

$Z_i$  – the share of local population's spending on purchasing services of  $i$  - type producers in total consumer costs.

The “final-demand multipliers” – based on the model “cost-release” - are the economic indicators that reflect intersectoral relationships and represent an increase in production volume, income and employment due to the dynamics of consumer demand. They are determined by types of economic activities related to the production of tourist, medical, hotel, restaurant, recreational and other services [5, p.12].

Recreation multiplier characterizes the ratio of change in one of the key economic indicators of production (employment, income) to change the cost of tourists. The basis for understanding the financial nature of the multiplier effect is the circulation of resources, goods, incomes arising from the cost of tourists [11, p.124]. P. Zakharchenko notes that the cyclical turnover begins with the expenses of tourists, which become the income of the enterprises of the resort and recreation sphere, transport, trade, consumer services, communications, entertainments. Accordingly, the received income is a source of additional income, investment, and wages, and for state and local budgets, they result in additional taxes, and fees. The cyclical turnover type: “expenses - income - expenses - income...” describes the model [8, p.34]:

$$Y = \frac{I}{1 - MCP}, \quad (4)$$

where  $I$  – investments, accepted for the expenditure of recreational tourists;

$MCP$  - is the marginal propensity to consume.

According to the considered model, the multiplier is expressed through the correlation  $\lambda = 1/(1 - MCP)$ , in the formal correlation  $\delta = MCP$  – is the sum of infinite decreasing geometric progression:  $\lambda = \delta^1 + \delta^2 + \dots + \delta^n + \dots$ , where for each additional unit  $\delta$  is the share of a growth rate on the corresponding turnover of cash from 1 to  $n$ .

In the scientific discourse of evolution of the methodological foundations of the analysis of financial nature of the multiplier and the evaluation of its cumulative properties, it is notable a significant level of development of these aspects of M. Boyko, who believes that the unified methodological approaches to calculating the multiplier effect does not exist [9, p.29]. Accordingly, the evaluation of the multiplier effect of resort recreation, in contrast to tourism, can not be built on one factual basis, for isolated from the realities a case, according to a universal template, with the same algorithm, and so on. In connection with this, the need to solve scientific problems that are

characterized by the features of a certain methodological affinity requires the special empirical researches.

The multiplicative analysis makes it possible to explain, how over time an increase or decrease in consumer spending ultimately affects the formation of national income and employment in the country. However, it should be considered the issues of differentiation of resort and recreational potential and the peculiarities of its use in various administrative and territorial entities of the country. On the other hand, the factual basis for determining the resort multiplier should cover a number of factors that determine local conditions and peculiarities of resort destinations in terms of sustainable tourism development. The evaluation of the tourism multiplier effect is not limited analysis of the impact of factors of resort recreation, health and wellness tourism on the meso- or macro-economic parameters of resort destinations. The range of this research type is broader, and it includes the assessment of multiplier contribution of agriculture (green), industrial and other types of tourism activity that are not subject of resort recreation. Accordingly, the resort multiplier, in contrast to the tourist, is revealed under the condition of economic development of resort and recreational space. At the same time, it should be considered the natural geographic, historical, cultural, social and economic factors of differentiation of resort and recreational potential that cause heterogeneity and uneven of its development at the level of administrative-territorial entities. According to the formulation of the strategic priorities of the state regulation of the resort and recreation sphere of Ukraine (level of problem definition) and assessment of the effectiveness of its functioning (level of verification of the task implementation) should be based on uniform methodological principles and at the same time on the differentiated parameters that take into account the regional features of resort and recreational tourism, problem aspects, threats, opportunities and prospects of its development.

Thereby, the subject field of effectiveness evaluation of public administration of resort and recreation sphere in Ukraine should be described by means of economic and mathematical modeling. Developing a multifactor econometric model, the GRP will be a performance indicator:

$$VRP = 11 * dsj - 2048 * dnj - 70 * dspj + 246 * oj - 43 * knj + 25673 * spj - 404 * rt + 8555116 * vd - 44929 * pp + 83711956 * tr - 322074346 * dk + 48613297 * do - 5848667 * pv + 85 * gpn \quad (5),$$

where  $vd$  – the income per capita of the local population, UAH;

$spj$  – the average number of full-time employees of enterprises of resort and recreation sphere, persons;

$tr$  – human resources: health, rating points;

$do$  – business optimism, rating points;

$oj$  (number of visitors serviced by enterprises of resort and recreation sphere, persons;

$jpn$  – the living area of overall rooms of enterprises of resort and recreation sphere,  $m^2$ ;

$dsj$  – enterprises' income from resort and recreation services, UAH million;

$pp$  – (the area of human settlements referred to resort and recreation ones due to normative order,  $km^2$ ;

$pv$  – observance of property rights, points;;

$rt$  – number of foreign tourists who were in specialized accommodation facilities, persons;

$dnj$  – income from the rental of specialized accommodation facilities, UAH million;

$dspj$  – income from the sale of tourist vouchers by enterprises, UAH million;

$knj$  – number of overnight stays in the specialized accommodation facilities, p/d;

$dk$  – business climate, rating points;

The impossibility simultaneously to ensure a uniform, sustainable development of resort and recreation sphere in all administrative-territorial entities in Ukraine is a prerequisite for the

formation of priority development clusters. On the basis of *target-indicators\**, there were developed the scenarios for the development of the Seaside (Region of Odessa, Mykolaiv, Kherson, Zaporizhia) and the Carpathian Region (Region of Ivano-Frankivsk, Lviv, Chernovtsy, and Trans Carpathian) of resort and recreation clusters according to the parameter of GRP growth, %. The values of selected target indicators and the average of the scenarios for the development of resort and recreational clusters are presented in Table 1.

Table 2

**Scenario of development of priority resort and recreational clusters**

Years	Growth rate, %							Average values from GDP growth scenarios (%)	
	t <sub>1</sub> * (vd)	t <sub>2</sub> (spj)	t <sub>3</sub> (tr)	t <sub>4</sub> (do)	t <sub>5</sub> (oj)	t <sub>6</sub> (gpn)	t <sub>7</sub> (dsj)	The Carpathian cluster	The Seaside cluster
2018	1	1,3	1,1	0,8	3	2	2,3	2,39	1,28
2019	2	2,5	2,1	1,7	6	6	6,4	5,29	2,87
2020	3	3,8	3,2	2,5	9	8	9,7	7,92	4,29
2021	4	5	4,3	3,3	12	12	12,9	10,69	5,81
2022	5	6,3	5,4	4,1	15	14	16,1	13,20	7,22
2023	6	7,5	6,4	5	18	16	19,3	15,68	8,58
2024	7	8,8	7,5	5,8	21	20	22,5	18,56	10,12
2025	8	10	8,6	6,6	24	22	25,8	20,77	11,33
2026	9	11,3	9,6	7,4	27	26	29	23,84	13,02
2027	10	12,5	10,7	8,3	30	28	32,2	26,31	14,38

*The source: developed by the author.*

According to the results of the analysis of scenarios under other equal conditions, the growth rates of GRP of the Carpathian region on average will almost twice exceed the rate of the Seaside region.

Thus, when forming strategic priorities of public administration, it should be based on real economic conditions and prospects based on the market potential of adaptive changes in the functioning of resort and recreational clusters in administrative-territorial entities of Ukraine.

**Conclusions.** In Ukraine, up to this time, there is no concept of public management of regional development taking into account the synergetic potential of resort and recreational clusters. The concept of such scale needs to be developed on a scientifically basis, in accordance with the principles of effective public administration, with the involvement of professional associations, scientific organizations, general public, specialists of economic and managerial profile in order to ensure a proper pressure, coordination, and the obligatory implementation of program objectives for the development of resorts and tourism. The development and implementation of the mechanism of financial management by regional clusters is a prospective direction for further scientific researches.

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\* Target indicators: t<sub>1</sub> – increase of incomes, increase of incomes; t<sub>2</sub> – job creation and employment promotion; t<sub>3</sub> – increase of the level public health; t<sub>4</sub> – restoration of business optimism, promotion of entrepreneurship development; t<sub>5</sub> – activation of consumer market of resort and recreational services; t<sub>6</sub> – investments in the development of the material and technical base of resort and recreational services; t<sub>7</sub> – income growth of producers of resort and recreational services.

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