The Concept of Comprehensive Income in the Economic Theory of the State

**Alexander Ya.
RUBINSTEIN**
Institute of Economics of the Russian Academy of Sciences
Moscow, Russian Federation
e-mail: rubinstein@inecon.ru
ORCID: 0000-0003-0455-3879; ResearcherID: F-9168-2019

Abstract. The article presents a concept of the comprehensive income of producers of patronized goods; the concept helped to determine the economic content of the term "budget subsidy", which in the Russian tradition is unreasonably interpreted as gratuitous aid from a paternalistic state. We substantiate this concept and the economic meaning of budget subsidy on the basis of a modified model of the Wicksell–Lindahl equilibrium as applied to patronized goods, the distinctive feature of which consists in their ability to satisfy the interests of individuals and the government that acts on behalf of society. We prove that such a modification of the equilibrium model is based on the use of the marginal utility theory in relation to the key term in the theory of patronized goods: public interest that is not reduced to individual preferences. Such an interpretation required that the absolutization of the marginalist principle of subjectivism based on "methodological individualism" should be abandoned. The presence of a public interest that is not reduced to individual preferences, and therefore the presence of the social utility function of the paternalistic state, fundamentally changes the content of the equilibrium. This approach resulted in the development of the concept of comprehensive income, which is defined as the sum of income from market sales and budget subsidies, deflated by different price indices. In order to summarize components of comprehensive income, we present our own methodology for constructing a "composite price index". The normative model for budget subsidy based on the assessment of the social utility of patronized goods is the most important practical result of our work. With regard to its normative nature, the article presents a theoretical substantiation of the three normative conditions and derives the corresponding equations

for model calculations of the budget subsidy value, tested on the example of national and municipal theaters using actual departmental statistics for the period from 2009 to 2019.

Key words: paternalistic state, patronized goods, "cost disease", productivity, comprehensive income, social utility, subsidy, income, composite index.

For more than fifty years, my research has been related in one way or another to the categories of donations, grants-in-aid, and subsidies. Despite certain differences in these terms (*donations* are provided on non-repayable terms, *grants-in-aid* are allocated for certain purposes, *subsidies* are allocated in the form of co-financing or shared financing of targeted expenditures), they have some fundamentally common features; this, in fact, determines their content. According to the information contained in dictionaries and in relevant articles of the Budget Code, these are different forms of state aid or support. But what is the support of a paternalistic state, what is the economic content of the term "budget subsidy", especially in relation to patronized goods? After the publication of the monograph *The Economic Theory of the State: a New Paradigm of Paternalism* [1], the issue regarding these "fundamentally common features" has become one of the tasks of the economic theory of the state.

Theoretical introduction

If we look into Russia's practice of state funding of patronized goods, for example, in the field of culture, science and education, we will see that the methodology for determining budget subsidies over the past half century has not changed much and differs little from that in the Soviet era. It is still based on the Marxist tradition, which originates in the labor theory of value that defined the cost method that still prevails today. In accordance with it, the financial department works hard to invent various systems for rationing the costs of producers of patronized goods and on this basis calculates the amount of budget subsidies provided, for instance, to theaters, in the form of the difference between their standard expenses and income from events. At the same time, the arbitrary nature and meaninglessness of the expenditure norms in usage once again convince us that such a methodology is flawed.

It has turned out almost impossible to change the ingrained interpretation of the budget funding of patronized goods as a kind of charity on the part of a paternalistic state, especially in relation to the performing arts. Even with the creation of a fundamentally new methodology — an alternative to the cost approach developed in the theory of patronized goods based on marginalist ideas of marginal utility and an emphasis on consumer demand, the state in the face of its financial bureaucracy is clearly in no hurry to abandon the image of a patron of the arts. We should also note that certain difficulties emerge in the course of developing a new approach: it seems that there is no place for budget subsidies in the mainstream of economic theory.

Apparently, for this reason, when dealing with state funding of various economic objects, opponents of the Marxist orthodoxy and advocates of the neoclassical theory and marginalism seek to explain this reality without going beyond the mainstream, and do not consider the state explicitly. Even the great Paul Samuelson preferred not to include the state in the analysis of social cost; on the first page of his famous article "The Pure Theory of Public Expenditure" he hastens to warn the reader: "I assume no mystical collective mind that enjoys collective consumption goods; instead I assume each individual has a consistent set of ordinal preferences with respect to his consumption of all goods" [2, p. 387].

His colleague, the creator of one of the most famous theories of public finance Richard Musgrave [3], when discussing budget expenditures, also ignores the activities of the paternalistic state and constructs its interests as a result of the transfer of individual preferences to the "political trust": "By voting for a particular party, individuals transfer to them the right to express their opinion about what public preferences should be" [4, p. 100−101].

Following Musgrave and his "meritorious paternalism", Richard Thaler − one of the authors of "libertarian paternalism" − in his concept of "Nudge" based on the principles of behavioral economics does not consider social costs at all, believing that in this case the state's intervention is not related to its interests in any way and is caused only by some "true" preferences of irrational individuals [5].

Probably, I need not cite other works of representatives of economic theory that consider the state as a transmitter of people's preferences. This doctrine, which originates in methodological individualism, proclaims a well-known thesis that any interest of society is reduced to individual preferences. In such conditions, the need for budget expenditures disappears on its own[1], so it would not be an exaggeration to say that the mainstream of economic theory has no meaningful explanation of what a budget subsidy is.

Thus, both in Russian practice and in modern economic theory, the essence of the category of budget subsidy has remained, in fact, undefined. This paper presents an attempt to solve this problem, both at the theoretical and methodological level; on the one hand, we abandon the cost approach completely, on the other hand, we use the marginalist tools of marginal utility in relation to patronized goods so as to build a model of budget subsidies, in which the state acts as a full-fledged participant in market relations, having its own utility function.

We emphasize that the proposed solution is based on the concept of economic sociodynamics and the theory of patronized goods [6; 7], which allowed us to consider a paternalistic state that is not somewhere outside the market or above the market, but is organically embedded in it [4, p. 97]. With this in mind, we can get an answer to the general question stated above. We proceed from the assumption that the budget subsidy is an expense of a paternalistic state, conditioned by the social utility of the patronized goods. One of the tasks of the present work is to consider the method for its evaluation.

The empirical part of the study is based on the example of one of the types of patronized goods, namely the products of the performing arts that reflect all the features of production and consumption in the humanities sector of the economy. Given this circumstance, it is necessary to pay attention to the fundamental regularity, which was originally discovered by William Baumol in this sector in relation to the theater. We are talking about the "price disease" or "cost disease" [8]. Its content is conditioned by two factors: the lag in the growth rate of labor productivity from the dynamics of the macroeconomic counterpart, and the lack of a natural mechanism for payroll growth. This disease results in the economic unprofitability of theaters and some other types of patronized goods[2].

Considering Baumol's theory, one should keep in mind specific features of creative activity and technological features of artistic production. Strictly speaking, it is necessary to revise the main conclusion of this theory by interpreting this pattern as a phenomenon of lagging *technological productivity*. The introduction of this category into scientific usage makes it possible to look

---

[1] We should mention the exceptions to this general conclusion, namely, the redistributive processes of welfare theory and the concept of market failures, requiring appropriate intervention on the part of the government.

[2] This pattern has been repeatedly confirmed in many empirical studies [9−16].

from a general perspective at the economic results of producers of patronized goods, including performing arts organizations, while paying attention to the particular nature of the "cost disease" and the limited manifestation of this pattern. It is explained by the fact that technological possibilities of increasing the market income of theaters and, thus, the growth of technological productivity are limited by the art production itself: "... the amount of labor intended for the production of a given level of product is constant over time and does not depend on innovation and the concentration of capital" [8, p. 415].

At the same time, the history of economic thought and the economic theory convincingly prove the existence of a common civilizational trend in global development – the increasing dynamics of labor productivity due to technological progress, which provides for the replacement of human labor with machines and equipment. The impossibility of such a replacement in art production, in fact, causes the phenomenon of lagging technological productivity in the field of art from productivity in the economy. Baumol convincingly illustrates this fact with his famous example: "... the output of four musicians performing a Beethoven quartet is the same today as it was 200 years ago" [8, p. 416].

The theoretical substantiation of this pattern allowed us to formulate another important conclusion regarding the need to compensate for the income deficit – a direct consequence of the lagging dynamics of labor productivity of theaters and other producers of patronized goods. In addition to the sponsorship of such enterprises and organizations, which Baumol referred to as "stagnant, with little or no technological progress" [17], the main method of covering the income deficit was public financing, which is usually interpreted by financial bureaucrats as the gratuitous assistance provided by the paternalistic state and aimed at compensating for the losses of producers of patronized goods, including performing arts organizations.

The concept of comprehensive income

Changing this interpretation of the budget financing of patronized goods, with its false orientation toward the state's gratuitous aid, required substantiating a fundamentally new approach developed within the framework of the theory of patronized goods. According to this theory, the state is a rational market actor that maximizes its own utility function, reflecting the interests of society as such [18, p. 35]. We also note that in the process of its evolution, the state is transformed into a paternalistic state [1, pp. 168–181].

The use of the main provisions of this theory and the corresponding modification of the well-known Wicksell-Lindahl model allows us to determine the conditions of equilibrium for patronized goods, taking into account individual interests and the interests of society as a whole, the paternalistic state being the bearer of the interests of the latter [19, p. 188–193]. Theoretical substantiation for the use of the Wicksell-Lindahl model is based on the following lemma: "If individuals from the set N present a demand D_1, D_2, ... D_n for the patronized good G and their aggregate demand D_I aggregated through market mechanisms, complements the demand of the state D_S for the same good, then the good G itself acquires the property of duality: while remaining a private good for individuals, it acts as a public good for the pair of aggregates D_I and D_S"[3]. This theoretical conclusion became the basis for the development of a fundamentally new approach to the valuation of the total result of the production of patronized goods.

It is well-known that the Wicksell-Lindahl model considers a public good, the demand for which is presented by two groups of individuals (two aggregated participants) with low and high income, respectively. As Lindahl noted, "the demand of one participant for a public good at a certain price depends on the point of view of

---

[3] The proof of this lemma in relation to protected goods, where the "mega-individual" and the state are considered as aggregates, is presented in [19, pp. 189–190].

another participant, since the supply of this good is possible only if the entire cost of its production is covered" [20]. The modification of this model for patronized goods also considers two market actors, which are the "mega-individual" and the state. In this case, the demand of the "mega-individual" is the market aggregate of the demand of separate individuals, and the demand of the paternalistic state results from the public choice determined by mechanisms of the political system.
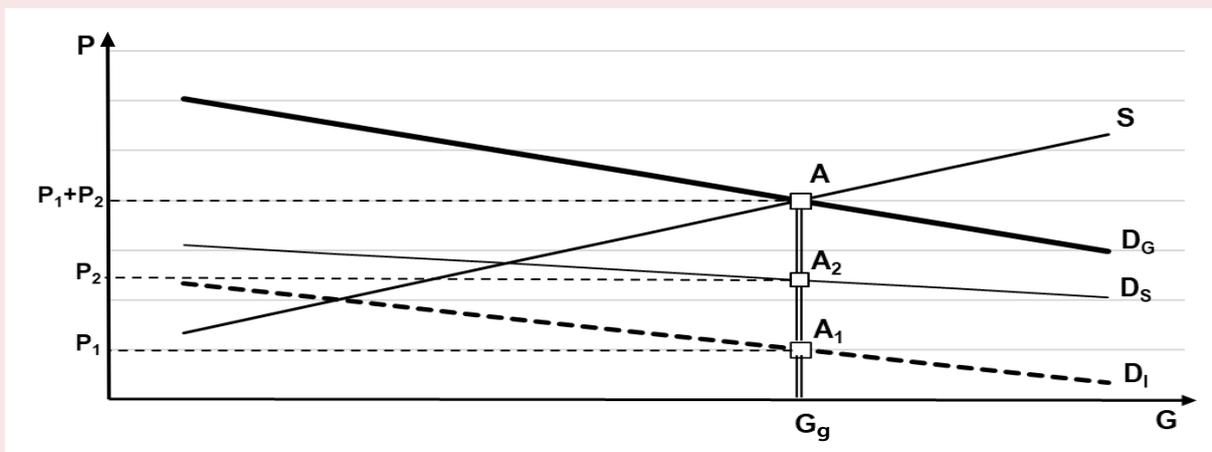
It is necessary to pay attention to the fact that the expenses of the state in accordance with its demand depend on the price at which they are purchased by consumers of patronized goods ("mega-individual"), compensating in total the costs of production in full. The specific feature of the Wicksell-Lindahl model is that "... each individual makes a different tax contribution corresponding to their assessment of the public good" [20, p. 91]. The developed modification of the equilibrium model for patronized goods also considers different prices. We are talking about the price P_1, at which individuals are ready to buy the patronized good, and the price P_2, at which the state is ready to pay for it in the amount of Gg, corresponding to the size of its demand for this good *(Fig. 1)*.

At the same time, economic theory indicates that the equilibrium price (p_1) is based on the marginal individual utility of each unit of the private good G_j; the price paid by the state (p_2) for the entire volume of the patronized good ($G=G_1+G_2+ +G_n$) corresponds to the marginal social utility of the public good G, thus reflecting the amount of budget funds spent on satisfying the demand of the paternalistic state.

Let us formulate a general conclusion. Taking into account that the two participants – individual actors who demand the patronized good and the paternalistic state that seeks to implement its own interests – act in the market simultaneously, we can say that the balance is achieved when the production costs of the patronized good are equal to the sum of proceeds from the market sales of this good ($R = p_1 \times Gg$) and the budget subsidy from the state ($S = p_2 \times Gg$), where R is the proceeds from the sale of the patronized goods, S is the budget subsidy. Strictly speaking, this conclusion describes the equilibrium conditions for any patronized goods and services, including theater goods.

A direct consequence of this conclusion is a new category – the *comprehensive income* of producers of patronized goods, which is the sum of revenue

Figure 1. Modification of the Wicksell-Lindahl equilibrium for patronized goods

from market sales and budget subsidies: $GR = R+S$. The introduction of this term into scientific usage fundamentally changes the content of all economic processes of production of patronized goods, in performing arts organizations as well. This also applies to labor productivity, where in addition to "technological productivity" there emerges the term "total productivity", which is determined by the ratio of comprehensive income to the number of workers ($P_T = GR/L_T$), where P_T is the total labor productivity in the production of patronized goods, L_T is the number of workers in this production[4].

In these circumstances, in order to determine the comprehensive income of producers of patronized goods, it is necessary to add a market component (for theaters, this is income from events) to its non-market component that corresponds to the volume of the budget subsidy, which, according to the theory of patronized goods, should be equal to the monetary expression of the social utility of theater goods [7, pp. 294–301]. We would like to emphasize that in this aspect, the theory under consideration is consistent with the system of national accounts, where the contribution of subsidized goods to gross value added is also measured by the sum of revenue and budget subsidies.

We should note that the development of the concept of comprehensive income contributed to the formation of new meanings and a new motivation for the activity of a paternalistic state. In this context, the budget funds allocated to theaters can be considered as an investment of the state or as a payment for the derived social utility of the created artistic product [19; 21; 22].

However, this reflection of the budget subsidy in the system of national accounts did not affect the ingrained attitude toward the financing of pat-ronized goods, including artistic products created

in the field of art, as an irrecoverable public expenditure. We think that the need to change the prevailing paradigm is long overdue – the traditional understanding of budget expenditures for the production of patronized goods as a kind of the state's charity should be replaced by the concept of investing in human capital and intangible assets that provide deferred external effects determining future economic growth.

The relevance of such a change is confirmed by rapidly developing research in the field of the "new economy", where in the framework of the evolution of the theory of economic growth its current stage is considered; this stage is characterized by its focusing not so much on the standard factors in the Cobb–Douglas function such as labor, capital, exogenous and endogenous technological progress [23; 24; 25], but on human capital and intangible assets [26].

However, despite the achievements in this research area, this methodology in its pure form is not applicable in relation to many types of patronized goods that suffer from the well-known disease of lagging technological productivity. First of all, this applies to theaters, where the features of artistic production generally do not fit in with the achievements of technological progress, conflicting with any replacement of creative labor with machines or equipment. In this context, a separate branch of the "new economy" seems promising, where the subject of research is the assessment of the contribution of state budget expenditures to intangible assets [26; 27]; this to a certain extent allows us to hope for the creation of a methodology and technique for assessing the non-market part of comprehensive income. This, however, requires very significant changes in the system of national accounts.

A certain step in this direction was the recognition of the thesis according to which the expenditures that ensure the growth of future income from the consumption of patronized goods should be considered as investments. Therefore,

---

[4] With this in mind, it is of obvious interest to test Baumol's cost disease for the indicator of "total labor productivity" of theaters. Such calculations are presented in [22, p. 443].

it is acceptable to assume that budget financing of theaters is an investment in intangible assets — the cost of creating new productions, which have a twofold effect on comprehensive income, on the one hand, increasing the market component as a result of the current consumption of theater goods, on the other — forming the corresponding external effects through the transformation of created artistic values into human capital gains. This content of state funding of theaters determines the way to measure the value of their comprehensive income: it can be measured by the sum of revenue and budget subsidies.

Composite price index

This definition raises a number of methodological questions. First, how to measure the comprehensive income of theaters in real terms at different points in time (in constant prices of the base year), if each of its components is deflated using different price indices: the market part based on the ticket price index [28, p. 73], the subsidy — using the GDP deflator. Second, and this is especially important, how to reflect the structural links between the income from events and the budget subsidy in the dynamics of the comprehensive income of theaters, taking into account the well-known problem of accessibility of theaters to the population [21]. The answer to these questions can be found by determining at each time the weighted average price index, where the weights are the shares of the market and non-market components of the comprehensive income of theaters[5].

1. Simple form. The general solution obtained in this way for any year t can be called the "simple form" of the composite price index

$$I^t_k = \lambda^t_R I^t_T + \lambda^t_S I^t_{GDP}, \qquad (1)$$

where I^t_k is the value of the composite price index in year t; I^t_T is the index of average prices for

theater tickets in year t; I^t_{GDP} is the GDP deflator in year t; λ^t_R is the share of revenues from events in the total income of the theater in year t; λ^t_S is the share of the budget subsidy in the comprehensive income of the theater in year t.

Using statistical data on the economy as a whole and the activities of Russian national and municipal theaters in the period from 2009 to 2019[6], we can calculate the composite index (I^t_k) as an example, comparing its dynamics with the index of average prices for theater tickets (I^t_T), the average consumer price index in the economy (I^t_{PP}) and the GDP deflator (I^t_{GDP}) *(Fig. 2)*.

Calculations show that before 2012, the GDP deflator was 7.5−11.8% higher than the theater price index and 1.7−2.8% higher than the composite index. After President Vladimir Putin signed the Decree of May 2012[7], the situation changed dramatically and the composite index curve took the median position, being between the GDP deflator and the index of growth in theater ticket prices, which were increasing especially rapidly during this period.
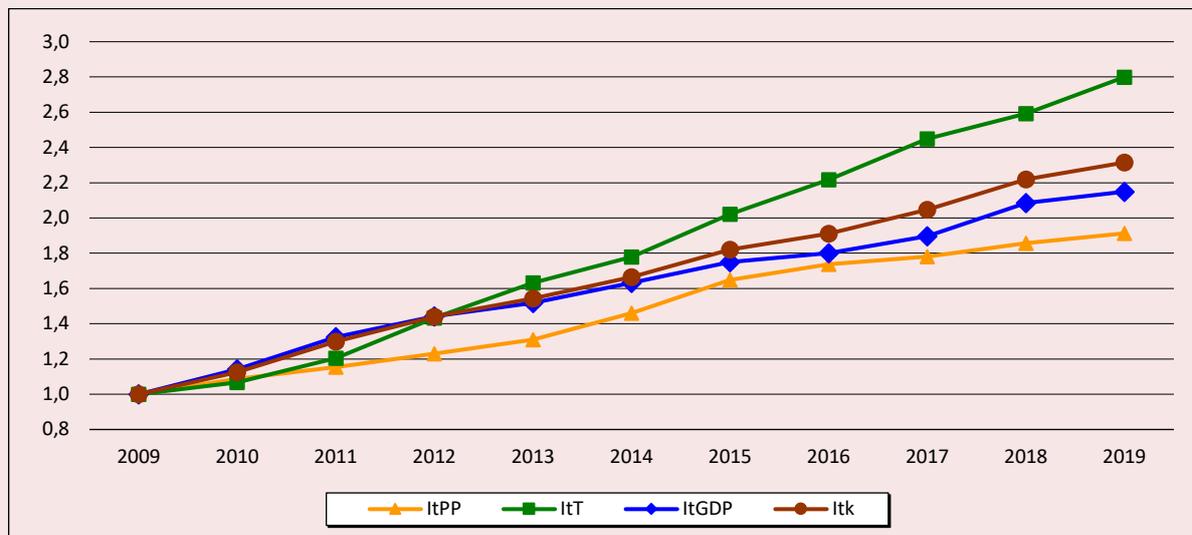
We note that the simple form of the composite index (1) reflects only the actual state of affairs, including the proportions formed in the past period between the market and non-market components of the comprehensive income. At the same time, the tools of the composite index allow us to expand the boundaries of economic analysis and consider a number of situations associated with a hypothetical increase in the share of budget subsidies in the total income of theaters, thereby changing its structure.

---

[5] I would like to thank R.I. Kapelyushnikov for suggesting this natural solution.

[6] All calculations presented in the paper are based on official statistics. Rosstat: https://rosstat.gov.ru/; Main Information and Computing Center of the Ministry of Culture of the Russian Federation: https://stat.mkrf.ru/indicators/ (accessed May 28, 2021).

[7] Decree of the President of the Russian Federation no. 597 of May 7, 2012 "On measures to implement the state social policy", according to which the salary of employees of cultural institutions was to reach 100% of the average salary in the region's economy by 2018.

Figure 2. Dynamics of the composite index in a simple form

Thus, using the identical equation $\lambda^t_R + \lambda^t_S = 1$, we can represent the simple form of the composite price index I^t_k in a slightly different way. To do this, we replace $\lambda^t_R = 1 - \lambda^t_S$ in the expression (1) and perform the corresponding transformations. As a result, we obtain the following formula:

$$I^t_k = I^t_T + \lambda^t_S(I^t_{GDP} - I^t_T). \qquad (2)$$

The resulting expression (2), where the proportion of the non-market component of comprehensive income is the variable, is the basis for distinguishing two other forms of the composite price index. First, we are talking about its *parametric* form, which allows us to analyze the variations in the proportion of the budget subsidy within a fixed amount of comprehensive income; second — about the *normative* form of the composite index, which takes into account various normative conditions that determine the assessment of the social utility of theater goods and the comprehensive income of theaters.

2. Parametric form. We would like to emphasize that in contrast to the simple form of the composite index, this model reveals additional aspects of the analysis that allow us to answer the question raised above that concerns the relationship between the revenue and the budget subsidy of theaters. In general, we mean taking into account structural changes in the comprehensive income of theaters in the composite price index. At the same time, it is necessary to pay attention to the fact that the ratio of its market and non-market parts is determined by the prices of theater goods. We note that this relationship is reversed: a reduction in the amount of funding forces theaters to raise ticket prices, and, conversely, an increase in theater ticket prices often leads to a decrease in the amount of budget subsidies. This is due to a well-known pattern: the increase in prices for theater goods is, as a rule, the most significant reason for the fall in demand and the reduction in the size of the theater audience. Such processes lead to a decrease in the social utility of theater goods and, accordingly, in budget subsidies as its monetary expression.

Let us quote Baumol: "… the demand for cultural services is elastic in terms of income, but inelastic in terms of price, which means that an increase in ticket prices above *a certain level* (italics added — A. R.) will lead to a decrease in revenue and state support" [29, p. 843]. On the basis of

this judgment, we formulate a general conclusion regarding the prices of theater tickets: their change determines the boundaries of the variable parameter λ^t_S, which characterizes the share of the non-market part of comprehensive income. At the same time, the following two points should be highlighted.

First, a macroeconomic indicator of inflation can be used as a "certain level" of prices (the limits of their maximum values); we are talking about the average consumer price index (I^t_{PP}). Second, taking into account the interest of society in preserving or increasing the social utility of theater goods, without allowing a reduction in the audience, we can assume that the state will seek to create mechanisms to protect the audience from super-inflationary increases in ticket prices. We are talking about an increase in the amount of the budget subsidy, which compensates for the lost profit from the price increase "above a certain level".

We note that the considered increase in the budget financing of theaters entails an increase in the share of subsidies in the comprehensive income of theaters by the amount of $\Delta\lambda^t_S$. In this case, the expression for the composite price index in its parametric form is as follows:

$$I^{*t}_k = I^t_T + (\lambda^t_S + \Delta\lambda^t_S)(I^t_{GDP} - I^t_T) =$$
$$= I^t_k + \Delta\lambda^t_S(I^t_{GDP} - I^t_T), \quad (3)$$

where I^{*t}_k is the composite index (parametric model) when the share of the non-market part of comprehensive income changes by the value of $\Delta\lambda^t_S$.

It is a difficult task to determine the value of $\Delta\lambda^t_S$, which takes into account the change in the value of the utility of theater goods; apparently, this task can have a normative solution only. The analysis of the literature shows that representatives of the "new economy" are engaged in studying similar problems [25; 27].

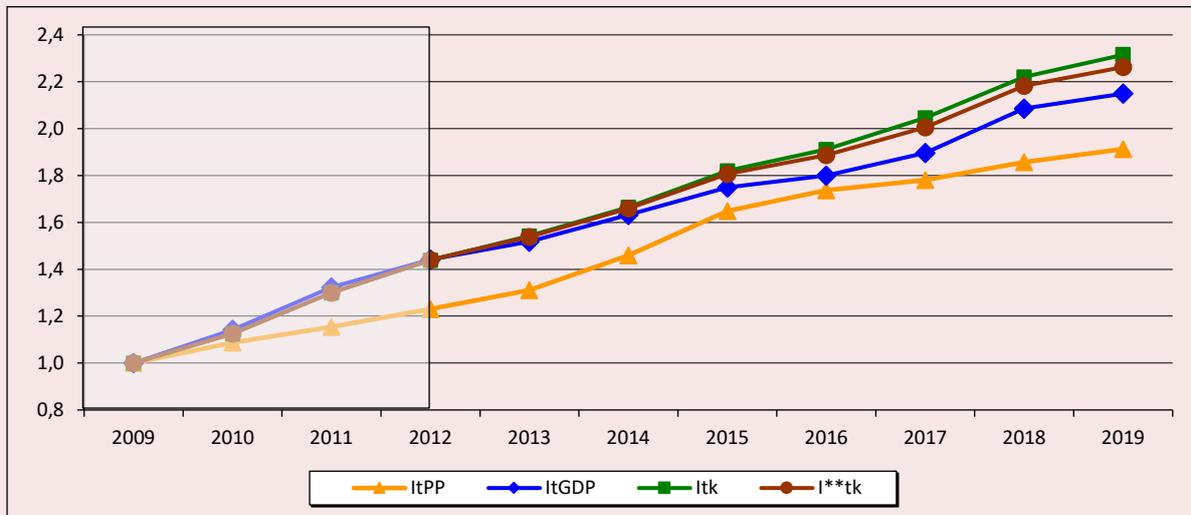In particular, the methodology and technique for measuring the impact of intangible assets on economic growth that are being developed within the framework of this concept helped to assess the effectiveness of investments for performing arts organizations in New York [30]. We emphasize, however, that even taking into account the impressive results of Rachel Soloveichik, one cannot simplify the task by assuming that the capitalization of intangible assets — performances of the repertoire of theaters that generate income even in the years after spending on new productions — can replace the general definition of the social utility of the results of theaters' activity.

In this paper, the parameter $\Delta\lambda^t_S$ can be considered as a feature of the region of variations in the share of subsidies in the comprehensive income of theaters — a possible increase in subsidies to ensure socially acceptable dynamics of prices for theater tickets from the standpoint of the paternalistic state. Moreover, this region of variation in the proportion of the subsidy has its own natural boundaries: $\Delta\lambda^t_S \in [0; \ 1 - \lambda^t_S]$. In this regard, for the lower bound ($\Delta\lambda^t_S = 0$), the composite price index is transformed into its simple form: $\min I^{*t}_k = I^t_k$. The upper bound of the variable parameter ($\Delta\lambda^t_S = 1 - \lambda^t_S = \lambda^t_R$) corresponds to the dynamics of the share of revenue from the sales of theater goods in the comprehensive income of theaters. Under these conditions, the composite price index is equal to $\max I^{*t}_k = I^t_k + \lambda^t_R(I^t_{GDP} - I^t_T) = I^t_{GDP}$. Thus, the general expression of the composite index, taking into account possible variations of the parameter $\Delta\lambda^t_S$, will be as follows:

$$I^{*t}_k = \begin{cases} \min = I^t_{GDP}, & \text{if} \quad I^t_T \neq I^t_{GDP} \\ \max = I^t_k, & \text{if} \quad I^t_T = I^t_{GDP} \end{cases}. \quad (4)$$

The description of the range of variations of the parameter $\Delta\lambda^t_S$ and the values of the composite index I^{*t}_k between its lower and upper bounds allows us to consider intermediate cases of the dynamics of this index, including those corresponding to the assumption that the increase in theater prices does not exceed the general

Figure 3. Composite price index in its parametric form ($I^t_T = I^t_{PP}$)

inflation ($I^t_T \leq I^t_{PP}$). By substituting $\Delta\lambda^t_S = -\Delta\lambda^t_R = -\lambda^t_R(I^t_T - I^t_{PP})/I_T$ in (3), we can obtain a formula for calculating the desired composite index:

$$I^{**t}_k = I^t_k - \lambda^t_R(I^t_T - I^t_{GDP})(I^t_T - I^t_{PP})/I_T. \quad (5)$$

The calculations performed using this formula have shown quite predictably that with an increase in the budget subsidy in sufficient volume so that the increase in ticket prices would not exceed the growth rate of average consumer prices in the economy, the curve of the composite index in its parametric form (I^{**t}_k) in the period after 2012 turned out to be inside the previously allocated area: between the GDP deflator (I^t_{GDP}) and the composite index (I^t_k). Based on the calculations performed, the following graph is constructed *(Fig. 3)*.

Having analytically determined the range of acceptable values of the composite price index in its parametric form and having performed the necessary calculations for its various options within the range of variation in the proportion of the budget subsidy in comprehensive income, we should consider the normative form of the composite price index.

Social utility and the normative model for subsidies

Let us now focus on the study of the most important model of the composite price index – its normative form, which has two distinctive features. These include, first, the feasibility of an *increase in the comprehensive income* of theaters as a result of an increase in its budget component caused by an increase in the level of social utility of theater goods and, second, a *substantive definition of the conditions* that generate an increase in social utility.

Taking into account the fact that the amount of budget funding depends on the social utility of theater goods, which is always based on the value judgments of the paternalistic state, the main problem remains the creation of institutional mechanisms that limit the "willfulness" of decision-makers, with their philosophy of patronage at public expense. In other words, the existing practice when the regulator makes the decisions that are often wrong should be replaced by meaningful principles of public choice – theoretically substantiated normative conditions for assessing social utility.

1. The three principles of conformity. Discussing this issue within the framework of the theory of patronized goods, we proceed from the fact that the state, as a rational participant in a competitive market, strives to maximize its own utility function. At the same time, it follows from Baumol's theory that the construction of a normative model of budget subsidies should first of all proceed from the expediency of creating conditions for eliminating the lag in the growth rate of *total labor productivity* in the production of patronized goods from productivity in the economy.

This follows from the very fact of the existence of national and municipal theaters. If the state establishes theaters with a view to the social utility of theater goods for which the state makes a demand, and pays for the satisfaction of this demand in accordance with this utility, then according to the theory, theatrical production should provide a productivity that is not lower than the average productivity in the economy. Otherwise, investments in theater activities could be put to better use.

Using the concept of comprehensive income and the category of total labor productivity, we can define the first normative condition. We are talking about the principle of correspondence of the dynamics of the total labor productivity of theaters to the macroeconomic analog – "Norm N_1". Given that the total productivity indicator includes the amount of the subsidy, this normative condition becomes a key element in the assessment of the social utility of patronized goods and thus in the budget subsidy model.

It is necessary to pay attention to another aspect of Baumol's theory, which pointed to the low capital-labor ratio that does not provide the necessary level of income in the performing arts, which belong to the sector with "stagnating productivity" [8, p. 201]. We are talking about the insufficient endowment of theaters with resources for innovative activities involving non-payroll expenses – investments in tangible and intangible assets.

This feature is reflected in the comparative dynamics of the share of labor costs in the comprehensive income of theaters (Y^t_T) and a similar macroeconomic indicator (Y^t_E). The calculations made on the basis of actual data show that in the period under consideration (2009–2019), the share of non-payroll expenses of theaters was about 10% lower than the average in the economy. Given the fact that the value of the indicator Y^t_T is proportional to the ratio of average wages to productivity, we see that the higher level of this indicator in the theater sector, in comparison with the economy as a whole, indicates a relative lag in labor productivity growth from wage growth in theaters; this requires certain explanations.

It is not quite right to attribute this phenomenon to the specifics of creative work and the artistic process, and most importantly, it does not explain anything. On the contrary, continuous updating of theater repertoire as a result of corresponding innovations – creation of new productions, as well as involvement of modern technologies and technical means in the artistic production, is one of the essential features of a repertory theater. And if this process is disrupted or slows down, it indicates a lack of appropriate resources. For theaters, it is more natural when the available funds allow for a corresponding increase in non-payroll expenses.

This circumstance encourages the use of another condition in the subsidy model, which "links" the increase in the capital-labor ratio to the dynamics of wages in theaters. The mechanism of such a "linkage" can be implemented through the introduction of the second regulatory condition – the compliance of the indicator of the share of payroll costs in the comprehensive income of theaters with its macroeconomic counterpart – "Norm N_2". This normative principle makes it possible to replace the shortfall in the incomes of theaters due to technological lag with an increase in the budget subsidy aimed at increasing the capital-labor ratio of creative work, mainly as a result of

investments in non-material (new and thoroughly renewable productions) and material (expenses for the maintenance of the building, computer equipment, light and sound equipment and stage machinery) assets of theaters.

Another theoretical principle that should be considered when constructing a subsidy model is conditioned by the need to find a normative solution to the problem of replacing an objectively absent mechanism for generating payroll. In this regard, we would like to emphasize that since the second half of the 20th century and up to the issuing of the Presidential Decree of May 2012, all payroll revisions and various payroll systems in the field of culture have used, in fact, the same regulation, which determines the degree of compliance of the average monthly wage in this area with a similar indicator in the economy.

In this sense, the actual Russian practice quite fits into the well-known theoretical position about the catching-up nature of payroll in the perfor-ming arts, which is justified by the fact that "art organizations compete in hiring workers on the national integrated labor market" [11, p. 92]. This circumstance allows us to assume that the actual payroll dynamics in theaters, including the revisions of remuneration in previous years and the implementation of the Presidential Decree of May 2012, reflects the normative condition for the compliance of the average monthly wage in the theater with its macroeconomic counterpart — "Norm N_3".

2. Normative dynamics of productivity. The theoretical substantiation for the introduction of normative conditions in the budget subsidy model provides for their representation in the composite price index and the growth rate of theater productivity. If we take into account the independence of the price indices I^t_{GDP} and I^t_T from the specified normative conditions, then in accordance with the definition of the composite price index (1) and the identity $\lambda^t_R + \lambda^t_S = 1$, the general formulas for determining the composite

index $I^t_k(N_j)$ and the index of productivity growth in the production of patronized goods $I^t_{PT}(N_j)$ in the prices of the base year, which meets the normative conditions "N_j", where $j \in [1; 3]$, are as follows:

$$I^t_k(N_j) = I^t_{GDP} + \lambda^t_R(N_j)(I^t_T - I^t_{GDP}), \quad (6)$$

$$I^t_{PT}(N_j) = GR^t_T(N_j) / GR^{t0}_T / I^t_{LT} / I^t_k(N_j), \quad (7)$$

where I^t_{LT}, I^t_T, I^t_{GDP} are indices of growth in the number of workers, ticket prices and the GDP deflator in year t in relation to the base year t_0; λ^t_R is the share of proceeds from ticket sales in the comprehensive income in year t; GR^{t0}_T is the comprehensive income of theaters in base year t_0; $GR^t_T(N_j)$ is the comprehensive income of theaters in year t at current prices, corresponding to the normative condition N_j.

2.1. Treatment of Baumol's cost disease. We note that the normative condition for the dynamics of the productivity of theaters (N_1) should be considered both in terms of the value of their comprehensive income $GR^t_T(N_1)$, which provides a corresponding increase in total productivity, and in terms of the composite price index $I^t_k(N_1)$ that allows us to compare comprehensive income in different years of the period under consideration. Using the expression (6), we can determine the first equation of the relationship between these indicators:

$$I^t_k(N_1) = I^t_{GDP} + \frac{R^t_T (I^t_T - I^t_{GDP})}{GR^t_T(N_1)}. \quad (8)$$

At the same time, for the convenience of the following presentation, we should give a formal definition of the normative condition N_1 and, on its basis, obtain a formula for calculating the productivity growth index corresponding to the fulfillment of this normative condition. In general, this norm can be defined as a proportionality coefficient (N^t_1):

$$I^t_{PT}(N_1) = N^t_1 I^t_{PE}, \quad (9)$$

where I^t_{PE} is the index of growth of average labor productivity in the economy in the prices of the

base year t_0, in year t in relation to the base year t_0; $I^t_{PT}(N_1)$ is the index of growth of labor productivity in theaters that meets the normative condition (N_1) in the prices of the base year t_0 in year t in relation to the base year t_0.

In this paper, we consider a special case: if $I^t_{PT} \leq I^t_{PE}$, then $N^t_1 = 1$ or $I^t_{PT}(N_1) = I^t_{PE}$; if $I^t_{PT} > I^t_{PE}$, then $N^t_1 = I^t_{PT} / I^t_{PE}$ or $I^t_{PT}(N_1) = I^t_{PT}$. Based on this, the theater labor productivity growth index (if $I^t_{PT} \leq I^t_{PE}$) can be determined based on the equality $GR^t_T(N_1)/GR^{t0}_T/I^t_{LT}/I^t_k(N_1) = I^t_{PE}$, which implies the second equation of the relationship between the composite index and the comprehensive income of theaters:

$$I^t_k(N_1) = GR^t_T(N_1)/GR^{t0}_T/I^t_{LT}/I^t_{PE}, \quad (10)$$

By equating the left-hand sides of the expressions (8) and (10), we can get equations for calculating the comprehensive income of theaters and budget subsidies that meet the normative condition (N_1):

$$
\begin{aligned}
I^t_{GDP}\, GR^t_T(N_1) + R^t_T(I^t_T - I^t_{GDP}) = \\
= [GR^t_T(N_1)]^2 / GR^{t0}_T / I^t_{LT} / I^t_{PE},
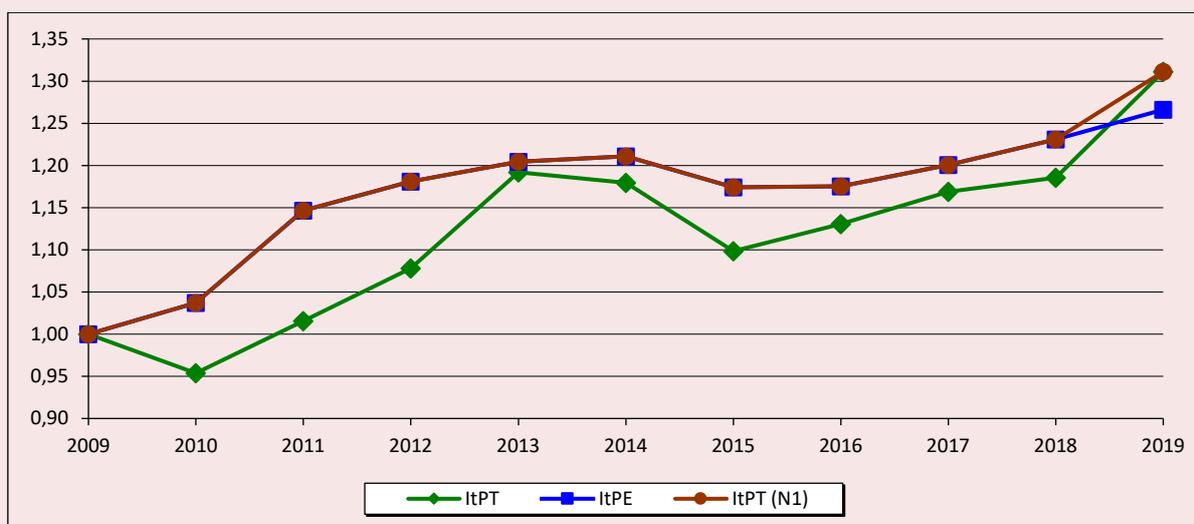\end{aligned} \quad (11)
$$

$$S^t_T(N_1) = GR^t_T(N_1) - R^t_T, \quad (12)$$

where $S^t_T(N_1)$ is the amount of the subsidy that meets the normative condition (N_1).

The calculations performed on the basis of the actual data of theater activity in the period from 2009 to 2019 have shown that the quadratic equation (11) with respect to the amount of comprehensive income $GR^t_T(N_1)$ that satisfies the normative condition N_1 has a positive solution in each year of the period under consideration. *Figure 4* shows the estimated dynamics of total labor productivity — the ratio of the normative value of comprehensive income in base year prices to the number of theater workers.

The area between the growth curves of the normative and the actual total labor productivity of theaters $I^t_{PT}(N_1)$ and I^t_{PT} determines the amount of the normative increase in the budget subsidy $\Delta S^t_T(N_1)$. The calculations have shown that in order to overcome one of the symptoms of Baumol's cost disease — lagging labor productivity — the amount of budget subsidies provided to theaters should have been increased by 12.3% in 2010, by 16.5% in 2011,

Figure 4. Comparative dynamics of labor productivity (2009 = 1)

by 12.1% in 2012 and by 8.9% in 2015. In other years, the required increase in the subsidy did not exceed 5%.

2.2. Increase in the capital-labor ratio. In this case, the normative condition N_2 should be formalized as well, by defining it in the form of the appropriate proportionality coefficient (N^t_2):

$$Y^t_T(N_2) = N^t_2 Y^t_E, \qquad (13)$$

where Y^t_E is the proportion of payroll expenses in the GDP of the economy in year t; $Y^t_T(N_2)$ is the normative value of the proportion of payroll expenses in the comprehensive income of theatres in year t.

As in determining the first normative condition (N_1), we proceed from the special case when the proportionality coefficient N^t_2 is 1. Then, based on (13), we can get a formula for calculating the standard value of comprehensive income of theaters that reflects the condition N_2:

$$GR^t_T(N_2) = \frac{Lab^t_T}{Y^t_E}, \qquad (14)$$

where Lab^t_T is the amount of annual payroll costs in theaters, including accruals, in year t.

Using (6) and (14) and performing the necessary conversions, we can define equations for the composite price index and the index of theater productivity growth that would meet the normative condition N_2:
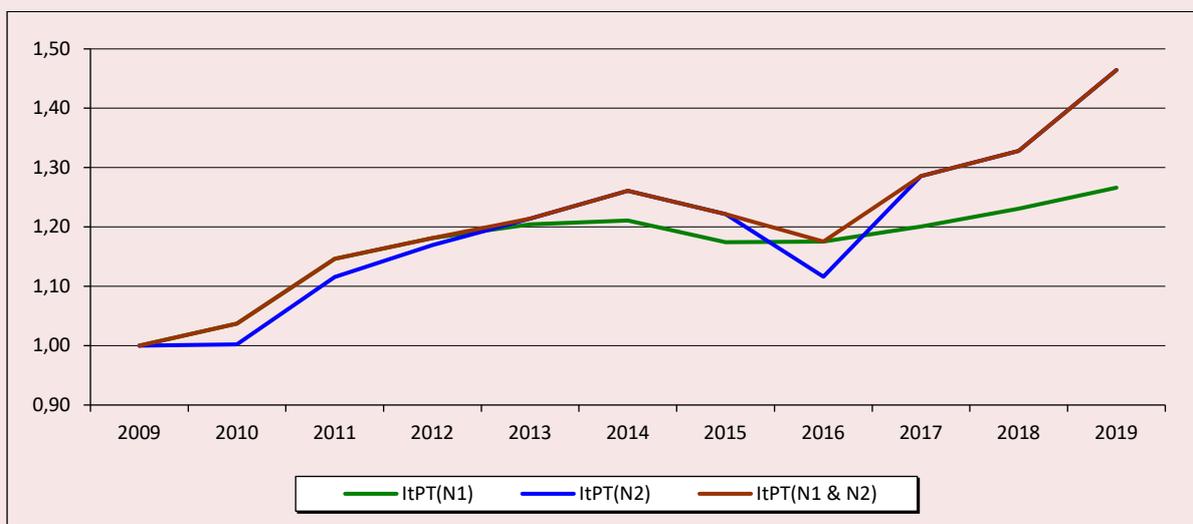
$$Y^t_k(N_2) = Y^t_{GDP} + \frac{Y^t_E R^t_T (I^t_T - I^t_{GDP})}{Lab^t_T}, \qquad (15)$$

$$Y^t_{PT}(N_2) = Lab^t_T / Y^t_E / GR^{t0}_T / I^t_{LT} / Y^t_k(N_2). \quad (16)$$

The calculations made with the use of factual data indicate that the dynamics of labor productivity of theaters that meet the condition N_2 in some years of the period under consideration (2010–2012 and 2016) did not ensure the fulfillment of the normative condition N_1. *Figure 5* shows graphs of the indices of growth of the total labor productivity of theaters corresponding to the first and second normative conditions, as well as their simultaneous implementation.

The calculations indicate that when constructing a normative model for the subsidy, it makes sense to consider the simultaneous fulfillment of the conditions N_1 and N_2. In this case, labor productivity growth index for theaters $I^t_{PT}(N_1 \& N_2)$, which meets two normative conditions simul-

Figure 5. Three options for the growth of normative labor productivity (2009 = 1)

taneously, can be determined on the basis of the following expression:

$$I^t_{PT}(N_1 \& N_2) = \begin{cases} I^t_{PT}(N_2), & \text{if } I^t_{PT}(N_2) \geq I^t_{PT}(N_1) \\ I^t_{PT}(N_1), & \text{if } I^t_{PT}(N_2) < I^t_{PT}(N_1) \end{cases} \quad (17)$$

At the same time, for each year t, we can obtain equations for calculating the comprehensive income of theaters and the budget subsidy that meet the normative conditions N_1 and N_2:

$$GR^t_T(N_1 \& N_2) = \begin{cases} GR^t_T(N_2), & \text{if } I^t_{PT}(N_2) \geq I^t_{PT}(N_1) \\ GR^t_T(N_1), & \text{if } I^t_{PT}(N_2) < I^t_{PT}(N_1) \end{cases}, (18)$$

$$S^t_T(N_1 \& N_2) = GR^t_T(N_1 \& N_2) - R^t_T. \quad (19)$$

2.3. Catching up wages. Based on the above-mentioned practice of payroll formation in performing arts organizations, and in accordance with the implementation of the Presidential Decree of May 2012, we can assume that the normative condition N_3 is reflected in the actual dynamics of wages of theater workers W^t_T in the period up to and including 2012 and, starting from 2013, in the normative wage $W^t_T(N_3)$ that corresponds to the roadmap W^t_{TM} established by these Decrees. In this case, we should provide a formal definition of the normative condition N_3:
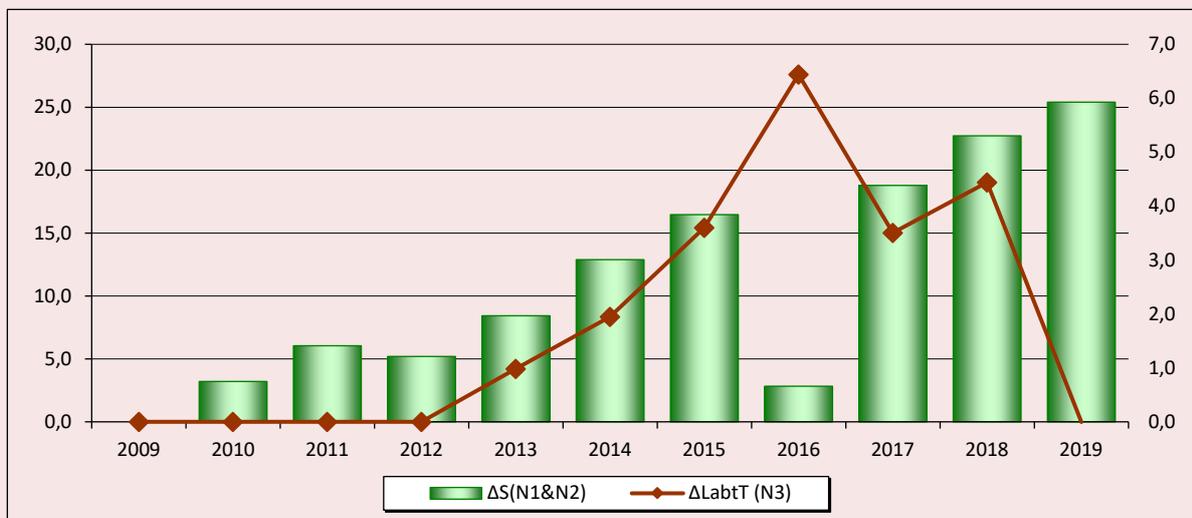
$$N^t_3 = \begin{cases} 1, & \text{if } t < 2013 \\ \dfrac{W^t_{TM}}{W^t_T}, & \text{if } t > 2012 \end{cases}. \quad (20)$$

Then the standard value of the nominal average monthly wage in theaters corresponds to the following expression:

$$W^t_T(N_3) = N^t_3 W^t_T. \quad (21)$$

We note that the condition N_3 is manifested in the change in the payroll expenses $Lab^t_T(N_3)$ that are required for the implementation of the Presidential Decree of May 2012 as well as in the dynamics of the comprehensive income of theaters $GR^t_T(N_3)$ and its non-market part $S^t_T(N_3)$. The calculation of the subsidy increase in $\Delta S^t_T(N_1 \& N_2)$ allows us to find out the extent to which the increase in budget funding, which corresponds to the simultaneous fulfillment of the normative conditions N_1 and N_2, is sufficient to ensure the third condition, associated with the normative increase in the wages of theater workers (N_3). To answer this question, we need to compare the increase in the subsidy $\Delta S^t_T(N_1 \& N_2)$ in relation to its actual value, with the necessary increase in payroll expenses $\Delta Lab^t_T(N_3)$ due to the fulfillment of the condition N_3 *(Fig. 6)*.

Figure 6. Comparative dynamics of the increase in the normative value of the subsidy and normative payroll expenses

The above graph shows that the increase in the productivity of theaters corresponding to the simultaneous implementation of the normative conditions N_1 and N_2 could not provide the conditions for the implementation of the Presidential Decrees of May 2012 over the entire interval of the period under consideration. The year 2016 turned out to be the "failing" year, because at that time the standard increase in payroll expenses significantly exceeded the increase in the subsidy corresponding to the simultaneous fulfillment of the conditions N_1 and N_2. Therefore, when constructing a budget subsidy model, one should consider the simultaneous fulfillment of all three regulatory conditions; to do this, we can use the following calculation formulas:

$$\Delta S^t_T(N_1 \& N_2 \& N_3) = \begin{cases} \Delta S^t_T(N_1 \& N_2), & \text{if } t \neq 2016 \\ \Delta \text{Lab}^t_T(N_3), & \text{if } t = 2016 \end{cases}. \quad (22)$$

$$S^t_T(N_1 \& N_2 \& N_3) = S^t_T + \Delta S^t_T(N_1 \& N_2 \& N_3). \quad (23)$$

We should emphasize that in contrast to the conditions N_1 and N_2, which provide treatment for Baumol's cost disease in terms of productivity dynamics and the increase in the capital-labor ratio, the combination of all three normative conditions (N_1, N_2 and N_3) corresponds to a higher assessment of the social utility of theater goods and implies an increase in the budget subsidy that makes it possible to invest additional funds in human capital – normative wage growth.

On testing the budget subsidy model

Let us summarize the empirical part of the study. The results of testing the subsidy model for Russian national and municipal theaters in the period from 2009 to 2019 are shown in two graphs *(Fig. 7–8)* that present the estimated growth rates of total labor productivity and the dynamics of the budget subsidy, corresponding to all the variants of normative conditions we have considered.

The successive steps that introduced the appropriate normative conditions into the subsidy model helped to determine the growth rate of labor productivity of theaters, which makes it possible not only to cure the Baumol's cost disease, but also to ensure sufficient growth of the budget subsidy to meet the conditions for the normative increase in wages.

The calculations performed allow us to determine the target areas to which the additional budget funds corresponding to the proposed subsidy model should have been allocated. It can be easily done, bearing in mind that the increase in the budget subsidy $\Delta S^t_T(N_3)$, which meets the normative condition N_3, should ensure an increase in payroll expenditures in accordance with the roadmap of the Presidential Decree of May 2012. Therefore, the remaining part of the total increase in the subsidy, if all three conditions $\Delta S^t_T(N_1 \& N_2 \& N_3)$ are met, in accordance with the technique for constructing the subsidy model, should be allocated to innovations that ensure the growth of the capital-labor ratio of theaters as a result of investments in their tangible and intangible assets *(Table)*.

Conclusion

The 150 years, in the course of which the economic theory was developing after the "marginalist revolution", have radically changed its mainstream, "melting" the concept of marginal utility and the idea of equilibrium into the core of the neoclassical theory. At the same time, we cannot confirm that marginalism has provided a solution to the entire field of unresolved problems and controversial issues. It is enough to recall "Keynesianism", "institutional theory" and "behavioral economics": all of them abandoned a number of initial provisions of the marginalist theory in one way or another and stood out as independent sections of modern economic science.

Figure 7. Calculated indices for the increase in the total actual and normative
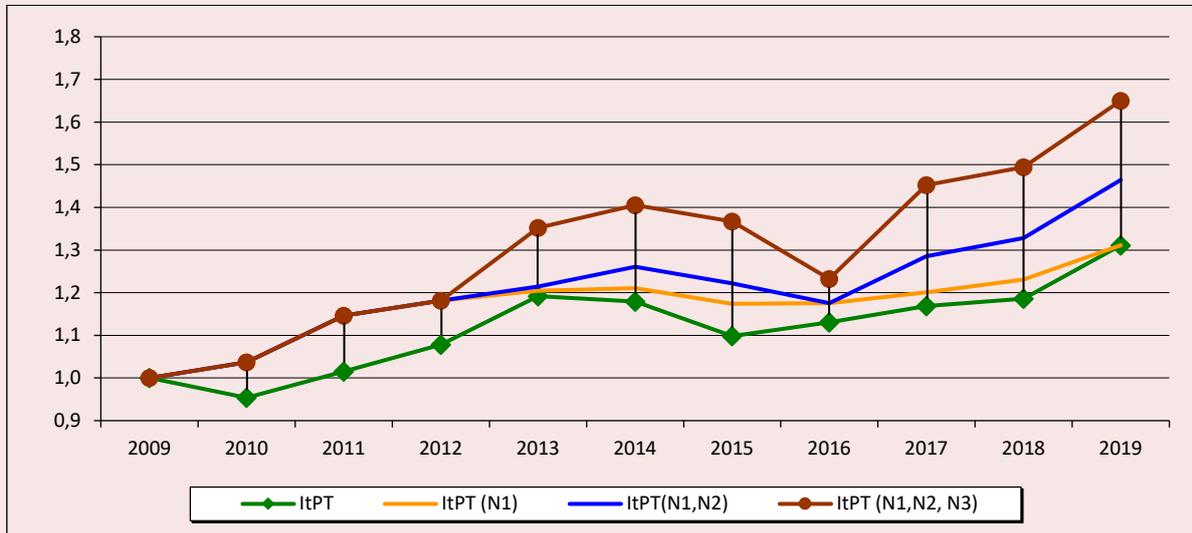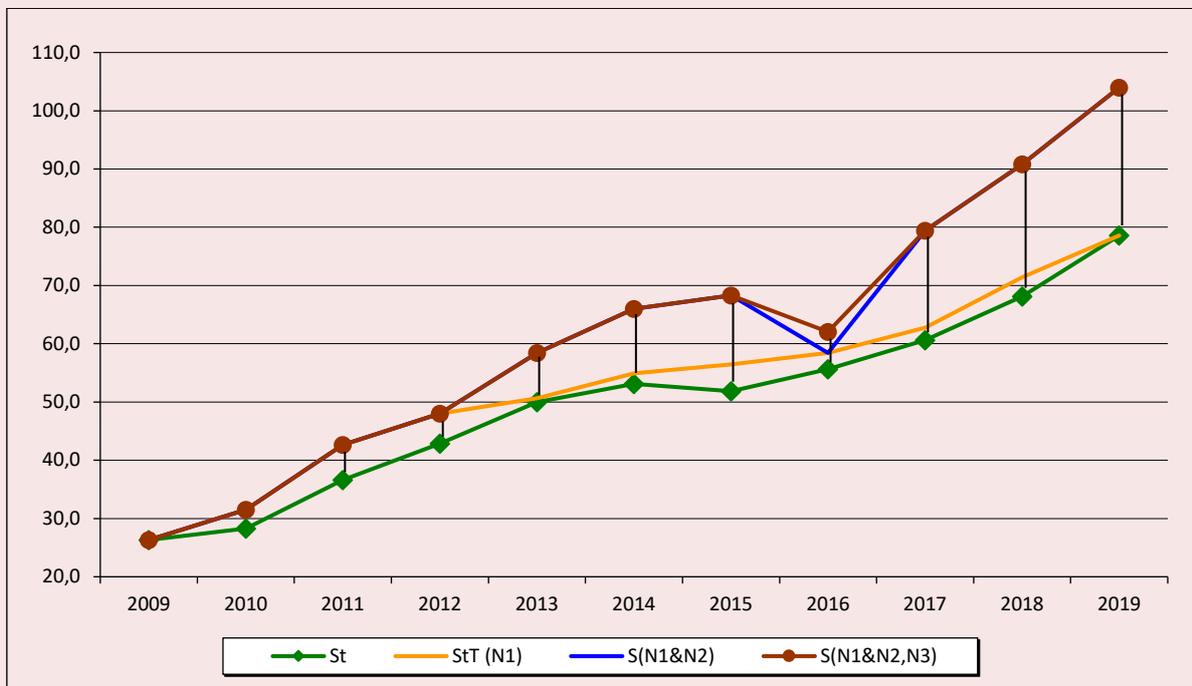productivity of theaters (in constant prices of 2009, 2009 = 1)

Figure 8. Dynamics of the actual and normative value of the budget subsidy
provided to theaters (in current prices), billion rubles

Dynamics of actual and model budget subsidies

Year	Actual amount of the sub-sidy, billion rubles	Normative (N_1, N_2, N_3) amount of the subsidy, billion rubles	Increase in the subsidy to its actual value, %					
			TOTAL, billion rubles	Including:		TOTAL	Including:	
				to ensure the growth of wages	to promote innovation		to ensure the growth of wages	to promote innovation
2009	26.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0
2010	28.3	31.5	3.2	0.0	3.2	11.3	0.0	11.3
2011	36.6	42.7	6.0	0.0	6.0	16.5	0.0	16.5
2012	42.8	48.0	5.2	0.0	5.2	12.1	0.0	12.1
2013	50.0	58.4	8.4	1.0	7.4	16.9	2.0	14.9
2014	53.1	66.0	12.8	1.9	10.9	24.2	3.6	20.6
2915	51.8	68.3	16.5	3.6	12.9	31.7	6.9	24.8
2016	55.6	62.1	6.4	6.4	0.0	11.5	11.5	0.0
2017	60.6	79.4	18.8	3.5	15.3	31.0	5.8	25.2
2018	68.1	90.8	22.7	4.4	18.3	33.4	6.5	26.9
2019	78.6	104.0	25.4	0.0	25.4	32.3	0.0	32.3

Marginalism, with its rather rigid postulates, failed to overcome the Marxist orthodoxy regarding the costs of a paternalistic state, where the cost approach still prevails. At the same time, the category of "budget subsidy", which is essential for the theory of public finance, has not been filled with a reasonable economic content, thus creating prerequisites for its interpretation as gratuitous state aid, the interpretation that the bureaucrats are very fond of.

In this sense, the semantic content of the term "budget subsidy", obtained on the basis of the modified Wicksell-Lindahl equilibrium model in relation to patronized goods can be named as one of the main outcomes of our present study. We should note in particular that the construction of such a model became possible as a result of combining the marginalist concept of marginal utility with the ideas of the theory of patronized goods, the fundamental difference of which is their ability to satisfy both the interests of individuals and the interests of society as a whole.

We may add that such a "theoretical merger" required the abandonment of one of the most rigid postulates of marginalism based on "methodological individualism". In accordance with the theory of patronized goods, the assumption concerning the presence of a public interest that is not reducible to individual preferences and, thus, the presence of the function of social utility of the state, fundamentally changes the content of the balance for patronized goods. This balance determines the content of a budget subsidy as a monetary expression of the social utility of patronized goods.

A consequence of the theoretical conclusion derived from the modified Wicksell-Lindahl equilibrium model and another important result of the research is the innovative concept of comprehensive income of producers of patronized goods; comprehensive income is defined as the sum of the income of producers of these goods and services from their market sales and budget subsidies. At the same time, the introduction of the category of "comprehensive income" into scientific

usage required that the problem of summing up its various components should be addressed. We are talking about a methodology and technique for constructing a "composite price index", the development of which can be considered as one of the outcomes of the present research.

Perhaps the most important result from the point of view of practice is the proposed normative model of the budget subsidy, which is based on the assessment of the social utility of patronized goods. Taking into account its normative nature, we provide a theoretical substantiation of the three normative conditions and derive the corresponding equations for model calculations of the budget subsidy value, using actual data of departmental statistics for the period from 2009 to 2019. As a result of the calculations, we conclude that theaters were underfunded, especially in the period after the Presidential Decree of May 2012, in the amount of 15 to 32%.

We would like to emphasize once again that the assessment of social utility will always be based on normative guidelines, so it is extremely important that the norms used should reflect the substantive interests of society and should not proceed from arbitrary bureaucratic decisions.

References

1. Rubinstein A.Ya., Gorodetskii A.E., Grinberg R.S. *Ekonomicheskaya teoriya gosudarstva: novaya paradigma paternalizma* [Economic theory of the state: A new paradigm of paternalism]. Saint Petersburg: Aleteiya, 2020. 424 p.

2. Samuelson P.A. The pure theory of public expenditure. *Review of Economics and Statistics*, 1954, no. 36, pp. 387−389.

3. Musgrave R.A. *The Theory of Public Finance*. New York−London, 1959.

4. Rubinstein A.Ya. *Rozhdenie teorii. Razgovory s izvestnymi ekonomistami* [The Birth of a Theory. Conversations with Well-Known Economists]. Moscow: Ekonomika, 2010. 224 p.

5. Thaler R.H., Sunstein C. *Nudge. Arkhitektura vybora* [Nudge: Improving Decisions about Health, Wealth, and Happiness]. Moscow: Mann, Ivanov i Ferber, 2018. 240 p.

6. Grinberg R.S., Rubinstein A.Ya. *Ekonomicheskaya sotsiodinamika* [Economic Sociodynamics]. Moscow, ISE-PRESS, 2000. 276 p.

7. Grinberg R.S., Rubinstein A.Ya. *Individuum & Gosudarstvo: ekonomicheskaya dilemma* [The Individual & the State: An Economic Dilemma]. Moscow: Ves' mir, 2013. 480 p.

8. Baumol W.J., Bowen W.G. *Performing Arts: The Economic Dilemma. A study of Problems common to Theatre, Opera, Music and Dance*. New York: Twentieth Century Fund, 1966.

9. Globerman S., Book S.H. Statistical cost function's for performing arts organisations. *Southern Economic Journal*, 1974, no. 40 (April).

10. Schwarz S., Greenfield H.J. The facts first: A reply to Baumol and Baumol. *Journal of Cultural Economics*, 1981, vol. 5 (2) (December), pp. 85−87.

11. Heilbrun J. "Baumol's cost disease". In: *A Handbook of Cultural Economics*. 2003. Pp. 91−101.

12. Ginsburgh A., Throsby D. (Eds.). *Handbook on the Economics of Art and Culture*. North-Holland, 2006.

13. Neck R., Getzner M. Austrian government expenditures: "Wagner's Law" or "Baumol's Disease"? *International Business & Economics Research Journal (IBER)*, 2007, vol. 6, no. 11, pp. 49−66.

14. Nordhaus W. Baumol's diseases: A macroeconomic perspective, contributions to macroeconomics. *Berkeley Electronic Press*, 2008, vol. 8 (1).

15. Rubinstein A.Ya. *Opekaemye blaga v sfere kul'tury: priznaki i posled-stviya "bolezni tsen"* [Patronized goods in the sphere of culture: Signs and implications of the "cost disease"]. Moscow: Institut ekonomiki RAN, 2012. 78 p.

16. Burakov N.A., Slavinskaya O.A. State paternalism and the econometric model of budget support of the theater. In: *Ekonometricheskie modeli elastichnosti sprosa na teatral'nye uslugi: nauchnye doklady* [Econometric models

of elasticity of demand for theater services: scientific reports]. Moscow: Institut ekonomiki RAN, 2017. Pp. 31–53 (in Russian).

17. Baumol W. Macroeconomics of unbalanced growth: The anatomy of urban crisis. *American Economic Review*, 1967, January, pp. 415–426.

18. Rubinstein A.Ya. *Ekonomika obshchestvennykh preferentsii* [The economics of public preferences]. Saint Petersburg: Aleteiya, 2008. 560 p.

19. Rubinstein A.Ya. *Teoriya opekaemykh blag* [The theory of patronized goods]. Saint Petersburg: Aleteiya, 2018. 305 p.

20. Lindahl E. Die Gerechtigkeit der Besteuerung. Eine Analyse der Steuerprinzipien auf Grundlage der Grenznutzentheorie. Translated by E. Henderson as: Just Taxation – a Positive Solution, 1919. In: Musgrave R.A., Peacock A.T. (Eds.). *Classics in the Theory of Public Financ*e. London: MacMillan, 1958, 4th Impression 1967. Pp. 168–176.

21. Rubinstein A.Ya. *Kul'turnaya deyatel'nost' v kontekste. Ekonomicheskaya teoriya, institutsional'naya sreda, sotsiologicheskie izmereniya* [Cultural Activity in the Context. Economic Theory, Institutional Environment, Sociological Measurements]. Saint Petersburg: Aleteiya, 2019. 1072 p.

22. Rubinstein A.Ya. "An imaginary patient" or what should be the financing of patronized goods. *Ekonomicheskii zhurnal Vysshei shkoly ekonomiki=HSE Economic Journal,* 2020, vol. 24, no. 3, pp. 434–464 (in Russian).

23. Solow R. Technical change and the aggregate production function. *The Review of Economics and Statistics*, 1957, vol. 39, no. 3, pp. 312–320.

24. Mankiw N.G., Romer D., Weil D.N. *A Contribution to the Empirics of Economic Growth*. NBER Working Papers 3541, National Bureau of Economic Research, Inc. 1990.

25. Corrado C., Hulten Ch., Sichel D. Measuring capital and technology. In: Corrado C., Haltiwanger J., Sichel D. (Eds.). *Measuring Capital in the New Economy, Studies in Income and Wealth*. Chicago: The University of Chicago Press, 2005. Vol. 65. Pp. 11–14.

26. Soloveichik R. *Theatrical Movies as Capital Assets. Manuscript.* 2013.

27. Adarov A., Stehrer R. *Tangible and Intangible Assets in the Growth Performance of the EU, Japan, and the US*. Wiener Institut für Internationale Wirtschaftsvergleiche (WIIW), research report 442, 2019.

28. Kapelyushnikov R.I. Productivity and remuneration in the field of art: an alternative interpretation. In: *Ekonomika kul'tury: novyi rakurs starykh problem* [The economics of culture: A new perspective of old problems]. Moscow, 2013.

29. Baumol W. Performing Arts. In: Eatwell J., Milgate M., Newman P. *The New Palgrave: A Dictionary of Economics*. Macmillan, 1987.

30. Soloveichik R. Artistic originals as a capital asset. *American Economic Review*, 2010, vol. 100 (5) (May), pp. 110–114.

Information about the Author

Alexander Ya. Rubinstein – Doctor of Sciences (Philosophy), Professor, Honored Scientist of the Russian Federation, Head of the Scientific Direction "Theoretical Economics", Institute of Economics of the Russian Academy of Sciences (32, Nakhimovskii Avenue, Moscow, 117218, Russian Federation; e-mail: rubinstein@ inecon.ru)