

Multiplication Effects of Subsidies to Culture in Brno

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Abstract:

The basic problem which any subject in public administration providing access to public goods and services has to solve is the public funds co-financing of cultural services with respect to their effectiveness. In the last five years managers of culture organizations asking for public subsidy, supported by the Culture policy of the Ministry of Culture of the Czech Republic, have argued with findings providing an alternative theory of multiplication effects. However, in the Czech Republic only one primary survey on this topic was conducted. Used arguments were thus picked from foreign researches or this particular Czech research without being based on real data. That is why the Department of Public Economy at the Faculty of Economics and Administration of Masaryk University initiated a research of multiplication effects of public subsidies to Brno theaters. It was carried out in cooperation with two pre-graduate students in the first half of 2007. The data were collected from subscribers of the National Theater in Brno, the Brno City Theater, and from websites visitors of the Center for Experimental Theater, which covers three stages of the alternative theater in Brno. Information acquired through primary data collection from visitors was combined with a secondary research of materials from economic departments of all the theaters. This research, as mentioned above, is not new in the Czech Republic because a similar survey was conducted in 1999 in four non-Prague theaters. However, for the theatres in Brno, the research brought completely new data and implications which could be used for solving problems mentioned at the beginning of this text. The goal of this paper is not only the theoretical explanation of multiplication effects, their principles and results of finished researches, but also to inform about methods, processes, results and weak points of this research from Brno.

Key words:

Culture, cultural processes, private goods, public goods, mixed goods, positive external cost, negative external cost, multiplication effect, cost-benefit analysis (CBA)

1. Introduction

In the beginning of 2007, Prague struggled with the decision whether to hold or not the Olympic Games. Prague council representatives asked the prestigious PricewaterhouseCoopers firm to elaborate analyses which reduce the high input costs of holding the Olympic Games (economic calculations state 135 billion CZK, out of which 70 billion should be covered by taxpayers) by multiplication effect benefits. Thus the Olympic investment should bring an additional multiplied amount of 25 billion CZK according to the study. Naturally, the multiplication effect theory is not generally accepted among economists; the CEO of the Center for Economics and Politics, Petr Mach, even regards it as non-reputable. A discussion on this topic is logical and it currently takes place in Brno as well, where the attention of multiplication effects is paid to the field of culture rather than sports.

2. Theoretical background

Culture can be divided into several spheres, such as arts, cultural value preserving, mass media, churches, etc. According to Široký (1977), it is possible to trace elements of public goods in all the mentioned fields of culture. However, the prevailing types include mixed goods and merit goods. This statement is supported by the existence of positive **external costs** as well as specifying a group of people using cultural goods. An external cost is defined in the economic theory (Peková, Pilný, 1998) as a specific phenomenon when an activity of one subject (e.g. production, providing services, etc.) generates an external benefit (i.e. positive external cost) or an external cost (i.e. negative external cost) for other subjects

(namely for the state or municipality, etc., in our case). Positive external costs are generated especially in the field of affecting individuals by cultural values, as well as influencing their subsequent capability of creative thinking, education towards the aesthetic and cultural potential of people and towards more educated voters. From this perspective, cultural goods require support, and state financing (or subsidies, at least) is definitely a benefit here. Because the consumption of the majority of concrete cultural activities is directed at population of individual regions (which often have different needs), we talk about mixed goods in this case or merit goods with local importance, and they should be financed (subsidized) especially through budgets of the individual municipalities.

Another aspect that needs to be taken into account when determining the value of cultural goods is the fact that the basis of the economic value of cultural goods and products is their use value and rareness. Big difficulties are connected even with the assessment of freely accessible cultural goods or cultural services provided for a non-equivalent entrance fee since cultural goods often have a high value in the eyes of the public but low price at the same time.

Never-ending discussions about funding result in a situation where the field of culture and its financing has not been fully resolved. Many economists assume that an efficiency analysis in the field of culture is a hopeless task since efficiency in the public sector is not a question of economy but politics. Thus determining benefits of culture should not be only the domain of economists, but also sociologists, culture theorists and psychologists, and their conclusions should form fundamentals for politicians to start from. And because culture as a whole is added to the category of mixed or merit goods in the economic theory, it is a matter of a political decision to determine to what extent it should be financed through public funds.

Contemporary analyses of non-profit, or cultural, respectively, institutions, generally based on Šíroký (1997: 168):

- **they compare only operational subsidies with profits,**
- **or they concede even the existence of “other” benefits coming from the existence of these organizations but they do not express them numerically.**

An alternative to the first above-mentioned way of analyzing cultural institutions can be **autarky monitoring**, which is currently very popular. Autarky is not expressed as a ratio of subsidies to profits but as a ratio of an institution’s own total returns to total costs. According to the materials of the Theatre Institute, the autarky percentage with theaters of the repertoire type ranges from 12 to 20%. For the autarky percentage with the monitored theaters in Brno, see the following table:

Table 1: Autarky percentage with Brno theaters in 2006 (in %)

Theater	NT	BCT	CET
Autarky percentage (own total returns/total costs)	19.13	30.66	20.18
Attendance (approximately in all of their own stages, excluding visiting performances)	70	95	90

Source: Kouřilová, I.- Pávišová, L. Multiplikační efekty v kultuře, 2007

The second above-mentioned and widespread efficiency analysis in the field of culture is a cost-benefit method. According to Mališová – Malý (1997), the key problem of the cost-benefit analysis (CBA) is measuring the amount of individual costs and returns (benefits) in

monetary units, or estimating their price, respectively. The CBA definition implies that should this analysis be applied, it is necessary to be able to price not only material items but also intangible ones. Even in cases where a market price of a surveyed item exists, the necessity of its modification can appear because markets are not perfect and they can reflect the amounts of costs or benefits in a distorted way. Further complications may arise because of the occurrence of external costs, presence of risk or uncertainty, impact of projects on the distribution of revenues, and others. On a general level, first of all it is necessary to examine whether a given item has its own market price or not when pricing costs and benefits. If a market price of an item exists, the problem is half gone. It is then necessary to make sure that such a price is not substantially distorted (for instance, by the existence of a monopoly). In case a market price does not obviously reflect social costs, a so-called shadow price is determined, i.e. a price purged from the distorting effects. If it is impossible to find a price for a given item on the market, it is possible to try to price it through a market price of similar products – substitutes, if some exist. If a suitable substitute is found, its price is modified in the same way as mentioned above. There are basically three situations when there is no suitable substitute available:

- if costs and benefits have the character of private goods but there is no market alternative to them in a given economy (e.g. only public health care is available), so-called indirect methods of pricing can be used here, e.g. a derivation or estimation of the amount consumers are willing to pay for provided goods or services;
- if costs and benefits have the character of collective (or pure public) goods (e.g. unpolluted environment), real pricing requires here an irreplaceable prerequisite in the form of a political process, either reaching its real result or attempting to estimate the price;
- if costs and benefits rest in influencing values such as health, human life, culture, etc., we will most probably come across situations when it will not be possible to price some items in a given case despite all effort, and we will have to put up with their physical listing.

Benefits of goods which cannot be priced directly in monetary units can be defined and divided into:

- direct and indirect – direct are those that are tightly connected with the main objective of a provided subsidy while an indirect benefit is in fact a by-product,
- material and intangible – material are those that can be priced by means of market mechanism through the market whereas intangible ones cannot be priced in this way,
- monetary and real,
- those that arise as an intermediate product and those that are final products, and
- internal and external – internal are those that arise within the jurisdiction while external ones arise outside of it.

If we use some of the above-mentioned criteria for assessing benefits of culture, or theaters, respectively, we can classify the benefits coming from subsidies for these institutions as gains:

- for visitors of theatrical performances
- for inhabitants living in the vicinity of theaters (this point can include for instance embellishment and up-keeping of theaters' vicinity, building and maintaining streets and roads, certain "atmosphere" of the place, certain composition of inhabitants, the absence of industry, etc.)

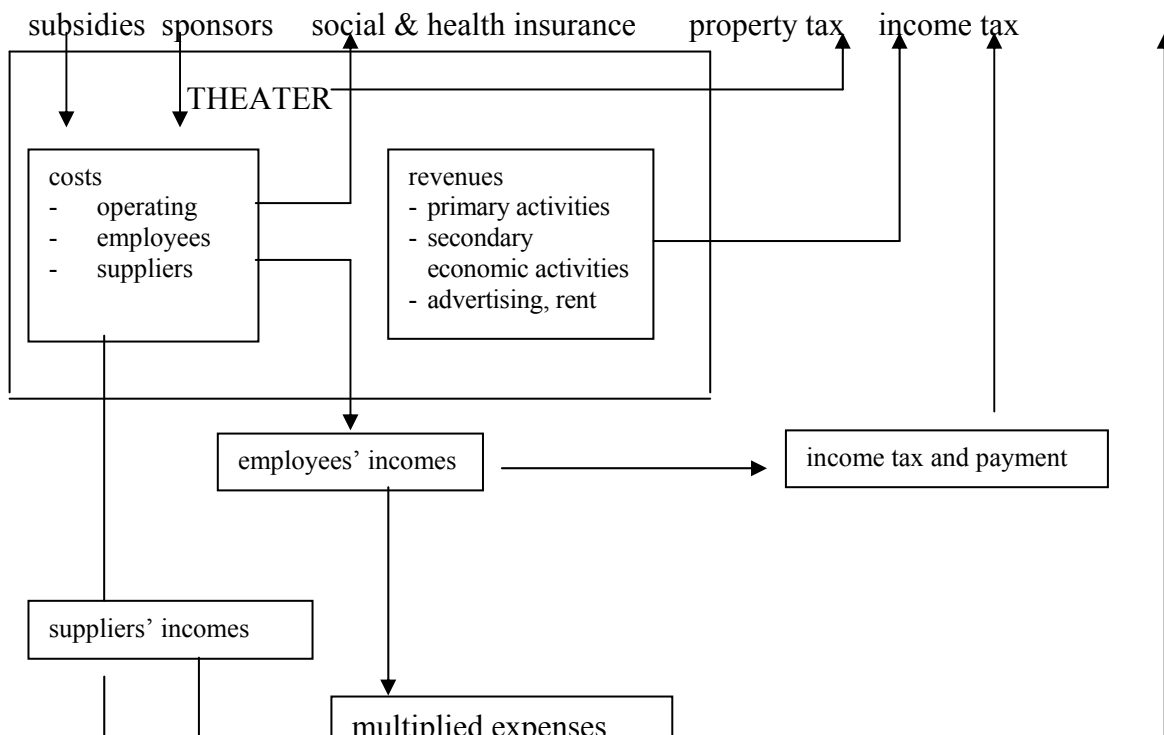
- in a number of intangible benefits (e.g. education of people towards cultural awareness, focus on spending people’s free time in a certain way, the reduction of criminality within these groups of inhabitants, etc.)

To objectify subsidies to culture, it is possible to use one of the alternative economic approaches besides the above-mentioned “traditional” analyses; this approach does not stem only from realizing the significance of culture for the spirit of a region, but from its significance for economic vitality of the region itself. When assessing the effects of expenditures on culture from public funds, an analysis of the demanding side of this transaction is often totally neglected, i.e. an analysis of visitors of cultural and artistic events. It is understandable that theater visitors’ total expenses connected with visiting a theatrical performance do not equal only the price of a theater ticket alone, but in fact they spend a much higher amount of money. It can include, for instance, a fare price, expenses in a theater refreshment bar, the purchase of a new dress, a visit at the hairdresser’s, and so on. These expenditures, however, become an income of somebody else (outside the theater area) and part of them can again become an expense of this other person and further an income of another person. This is thus known as the so-called **multiplication effect**, i.e. the multiplication of a primary expense of a theater visitor.

Even the supply side, i.e. the theaters themselves, will similarly initiate additional incomes for their employees and various firms (their suppliers) through paid wages and payments for various orders.

The sense of this reasoning is the fact that the multiplication effect will represent a bigger benefit to the economy than the original amount of the primary expense (subsidies); and therefore the possible change in expenses for culture should not be measured merely by benefits coming from the field of culture itself, but also by benefits stemming from the multiplication effects. It is absolutely obvious that the benefit from public funds expenses (subsidies) for culture would be bigger under this conception than under the traditional one. The extent of researching financial flows in cultural institutions as well as multiplication effects can be seen in the following picture:

Picture 1: Financial flows in a multiplication effects analysis shown on an example of a theater:



additional-income tax and payment

multiplied (further) expenses

Source: Hon, J. – Šíroký, J., Ostrava: MLO, 2000

When examining the given issue, it is necessary to refer to the economic theory that understands a **multiplication effect** as an induced effect, originating on the basis of an additional income of an economic subject (in our case this includes employees of theaters and suppliers); on the other hand, an **external effect** is understood as an effect caused by the very participation of the visitors of a theatrical performance. The **incidence** is then defined as any impact of a theater on its visitors or entrepreneurial subjects as well as other effects on the vicinity.

3. Results of existing surveys

Foreign analyses (in Rhineland-Westphalia, Vienna, Switzerland) as well as surveys conducted in the Czech Republic (Marketing Laboratory Ostrava, STEM Prague) confirm the proposition that theaters not only cost money, but they also bring it. They state that the amount visitors spend on an admission ticket equals or exceeds the amount they spend on additional services (transportation, refreshments, a visit at the hairdresser's, etc.). First studies of these effects in our country prove that an investment of 1 CZK in a theater activity generates 1.89 CZK (Hon – Šíroký (2000)); According to the report called *Teze k multiplikačnímu efektu divadla*, worked out by the Theater Institute, even Switzerland demonstrates a direct multiplication effect of the state's expenses on culture, reaching 292%, i.e. in the ratio of 1:3 since 1 Swiss franc generates 3 francs. The same material by the Theater Institute further lists the following three types of utility effects of theaters:

Economic utility effects

- Theater subjects spend a significant part of their expenditures on services and goods produced in other branches of the economy; by doing so they ensure sales of further production.
- Out of all public financial sources provided for theaters, a third of them returns back to public funds in the form of both direct and indirect surcharge payments (it was proved that in the Ostrava region 1 million CZK return out of the total 2.5 million CZK) because a theater is an important tax and fee payer.
- Theaters produce goods and articles of cultural nature predominantly from inland sources and with minimum costs on material flows. They use mostly inland workforce, which is often highly qualified, creative and with strong innovative abilities.
- It is a relatively cheap source of development and economic prosperity.
- Theatrical activities directly affect cultural tourism, which brings above-standard incomes for public funds.
- Out of the group of culture instruments, theater is one of the crucial economic tools for the development of city and town agglomerations. Sociological studies show that agglomerations with "cultural events" prosper even economically at the same time.

- Theater as a culture product is part of the culture industry, which surpasses the traditional industries thanks to its production of services and goods of cultural nature. In the USA it has already reached 6% of GDP while in Germany it has reached 3% GDP with an ever-growing trend.

Social utility effects

- Theatre is an important factor of social cohesion.
- Theater is an important urban element. It becomes a natural center of a community and people.
- It is the involvement of public funds that helps theaters to be democratic, open and accessible for the majority of people. People's participation in cultural wealth is guaranteed by the Charter of Basic Human Rights and Freedoms. Theater reinforces democracy.
- People's cultural rights, namely the right for the protection of cultural heritage and an access to it, the right to participate freely and practically in the use and performance of culture, the right for the freedom of artistic activities and propagating their outcomes, belong to the declared public interest.
- Theater is directly connected with life quality.
- Theater contributes to the cultivation and education of people.
- As a place of so-called positive deviation, it is an instrument against criminality, social deprivation, drug addiction, and so on.
- In the globalization process it is a place of national and regional identity as well as identification with one's own cultural heritage including language. It identifies people with their town (town district, region or country). Theater also easily crosses boundaries and barriers even towards cultural minorities. Theater represents a highly mobile socioeconomic potential of a community.

Aesthetic utility effects

- interpretation, preservation and the development of cultural heritage,
- space for new artistic work,
- a place of experimenting, innovation and creativity as the determining phenomena of current years,
- a place of lively communication as well as space for self-reflection of people through arts,
- overlaps to other kinds, genres and media, including a direct influence on the film and audiovisual arts,
- space of an alternative to commercial activities.

4. Research methodology in Brno theaters

The research was carried out in parallel with writing up diploma theses (January – May 2007) by students of the Public Economy study program, Iva Kouřilová and Lenka Pávišová. Iva Kouřilová was gathering data in the Brno City Theater (thereinafter BCT) while Lenka Pávišová in the National Theater (thereinafter NT). To be able to make comparison with so-called stone theaters, data were gathered even from the playhouses of the Center of Experimental Theater (thereinafter CET) although it was done only in an on-line form on the CET webpages.

The **primary research** took the form of addressing subscribers and visitors of the theaters. A printed questionnaire was given to 3,500 BCT subscribers and 2,700 NT subscribers. All of

them could choose between filling out the questionnaire in a written form and filling it out on the theater's webpage. These data were used for examining the "theater – visitor" relationship. The **secondary research** focused on addressing economic departments of the theaters so that it would be possible to obtain information from the existing materials for the second and third part of the research, i.e. "theater – theater" and "theater – suppliers".

The public inquiry was answered by 550 NT visitors (95 of them answered on the internet), 521 BCT (134 of them answered on the internet) and 70 CET visitors (merely an internet inquiry) and all of them were included in the research. All the following indicators are valid for the year 2006.

The basic premise of the research consisted of **three partial hypotheses**:

- a theater subsidized from a town budget induces through its products primary as well as additional expenses on goods and services satisfying needs of its customers – theater visitors (an analysis of the "theater – visitor" relationship);
- a theater subsidized from a town budget is not only an artistic unit, but also a production one; it induces multiplication effects in further economic activities of those entrepreneurial subjects that operate primarily within the given area and for a financial compensation for which they provide a theater with their products (an analysis of the "theater – theater" relationship);
- a theater subsidized from a town budget induces payments back to the town budget but even the state budget (an analysis of the "theater – suppliers" relationship).

The **basic hypothesis** then had the following wording: effects on the economy induced by a theater as well as direct and indirect tax payments are higher than municipal subsidies; in addition, part of the induced effect remains directly in the town and another part is transferred elsewhere. In other words: the external effects on the economy induced by a theater as well as direct and indirect tax payments are higher than municipal subsidies.

4.1 Results of the "theater – visitor" relationship analysis

This section examined the structure of people's expenses on activities connected with a theater visit, i.e. an external effect of this visit.

When classifying external effects, the following division was used:

- "direct" external effects
- "indirect" external effects.

Direct external effects are connected with every visit of a theatrical performance, and their value is consumed at a single moment. Indirect external effects then represent expenses that are not directly connected with the visit of a theatrical performance but they are results of even other factors. Moreover, their value is not consumed instantaneously at a single theater visit but they transfer their value gradually. It is obvious that both direct and indirect external effects can be further classified as necessary and voluntary. Necessary external expenses are understood as those expenditures that a visitor has to pay at any theater visit (e.g. fare price); on the other hand, the term voluntary includes expenses whose amount depends on personal habits of a visitor (e.g. refreshments).

The figures were processed for the needs of the analysis in their absolute value, i.e. how much a visitor really paid, but in the case of a visit at the hairdresser's, cosmetics and manicure, recalculated results were used, i.e. results showing only that part of the expense which visitors themselves attach to the theater visit. (For instance, an expense on a hairstyle prior to the

theater visit: 100 CZK, what percentage of this expense do you connect with the theater: 5%, calculated amount: $100 * 0.05 = 5$ CZK.)

Although data for indirect external effects, such as an expense on making or buying a dress, purchase of shoes, accessories, jewelry, etc., were monitored, in the end they were not included in the economic calculations of the multiplication effects because of their difficult verification. The gathered monitored data are summarized in Table 2:

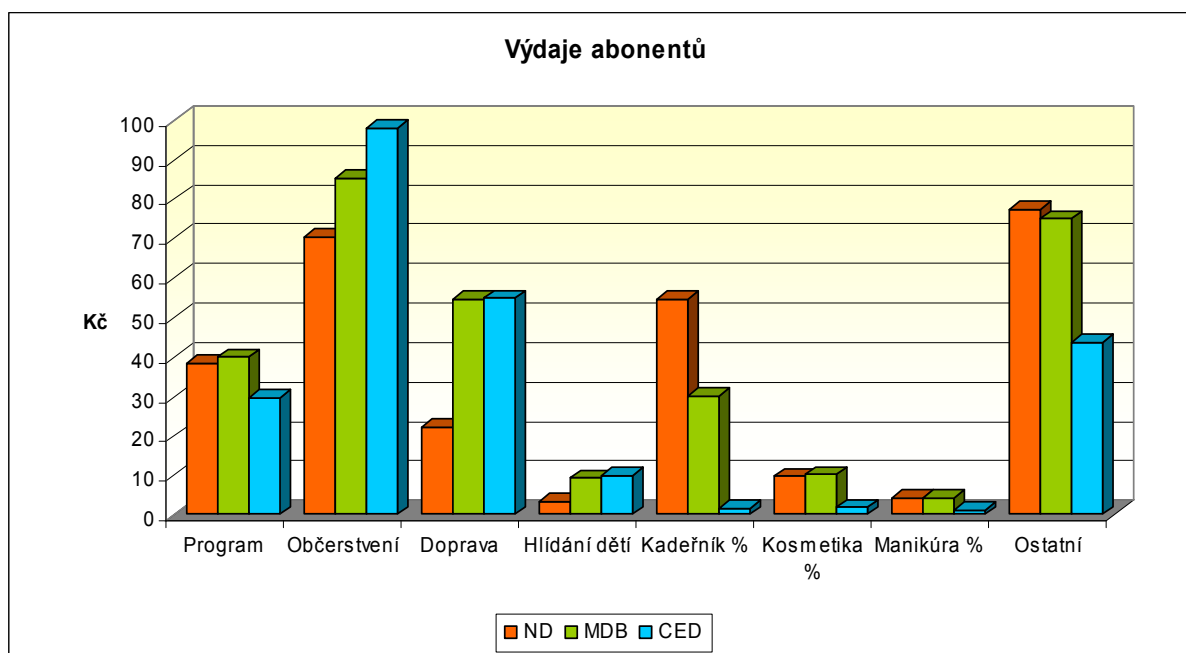
Table 2: Subscribers'/Visitors' expenses connected with their visit in the monitored theaters (in CZK)

Subscribers' expenses	NT	BCT	CET
Program brochure	38.4	39.9	29.6
Refreshments	70.4	85.4	97.9
Transportation	22.2	54.5	54.8
Babysitting	3.4	9.3	10.0
Visit at the hairdresser's %	54.6	30.2	1.7
Cosmetics %	9.7	10.2	1.8
Manicure %	4.2	4.2	1.1
Others	77.3	75.0	43.6

Source: Kouřilová, I.- Pávišová, L. *Multiplikační efekty v kultuře*, 2007

The highest amount is represented in all the three cases by refreshments, followed by the program brochure; expenses on this item correspond to the price level of program brochures in the monitored theaters. Expenses on babysitting correspond to the fact that BCT has the highest number of visitors in the productive age (NT has the highest proportion of seniors while CET has the highest proportion of students). On the other hand, the amount of voluntary expenses on a visit at the hairdresser's, cosmetics and manicure can be explained by the dramaturgy of the theaters ("high-class art" versus "experimental"), which is reflected both through the premises of the theaters and the structure of visitors. Other expenses represent purchases of CDs, books, DVDs, and so on, and they correspond to the production of these supplementary materials by the theaters, i.e. so-called merchandising. The same data, only in a more transparent form of percentages, are summarized in Graph 1:

Graph 1: Subscribers'/Visitors' expenses connected with their visit in the monitored theaters (in %)



Source: Kouřilová, I.- Pávišová, L. *Multiplikační efekty v kultuře*, 2007

To calculate **direct multiplication effects**, **basic expenses of a subscriber** were monitored; these include expenses on the program brochure, refreshments (before a break, during a break and after the performance), transportation, babysitting, a visit at the hairdresser's before the performance, cosmetics before the performance and manicure before the performance.

Extended expenses then correspond to a sum of basic and other expenses (i.e. a purchase of CDs, books, DVDs, T-shirts, etc.).

When comparing the amount of the direct external expenses (excluding "other" expenses) with the **price of an admission ticket** (NT – 166.6 CZK, BCT – 268.4 CZK, CET – 152.0 CZK), the so-called **basic multiplication effect** of theater visitors was calculated. In case of NT it totaled 1.7; in BCT it was 0.9; CET reached the value of 1.3. So if a theater visitor spends 1 CZK in the price of an admission ticket, he or she spends on average **1.3 CZK** on other incidental expenses.

When taking into account (to a large extent specific) "other" expenses, we obtain an **extended multiplication effect**, which is slightly higher – 1.57 CZK to be specific (1.9 in NT, 1.2 in BCT and 1.6 in the case of CET).

To determine possible **tax payments from direct external expenses** excluding transportation charges¹, a self-proprietor claiming expenses for reaching, maintaining and securing incomes in the form of a lump sum reaching 50%² was used as a recipient of direct external expenses (with the awareness of substantial distortion). From the perspective specified in this way, the overall tax payment (using the minimum rate of 12%, which, however, is likely to be higher in reality) would comply with the following calculations:

¹ transportation costs were not included in these calculations because of the diversity of means of transport: a car, public city transport, train, or bus that have a completely different influence on a provider

² Act number 586/92 Coll., of income taxes, in current wording, article 7, paragraph 9, letter c.

Tax base = program brochure + refreshments + babysitting + hairstyle + cosmetics + manicure + others

Tax = tax base * 0.5 * 0.12

In case of NT it is 19.30 CZK, 15.3 CZK in case of BCT and 11.2 CZK in case of CET.

Taking into account the average price of an admission ticket (195.7 CZK), this figure would mean that public funds would acquire an **average of 15.23 CZK** from taxes by buying an admission ticket and watching a performance, which induces direct expenses. This amount corresponds to approximately 7.8% of an average ticket price.

Table 2: Direct multiplication effects in the monitored theaters:

Direct multiplication effect	Calculating method	NT (in CZK)	BCT (in CZK)	CET (in CZK)	Average (in CZK)
Basic	(Program brochure + refreshments + transportation + babysitting + hairstyle + cosmetics + manicure)/average ticket price	1.7	0.9	1.3	1.3
Extended	(Program brochure + refreshments + transportation + babysitting + hairstyle + cosmetics + manicure + CDs, books, DVDs, etc.)/average ticket price	1.9	1.2	1.6	1.57
Tax payment from direct external expenses	Self-proprietor claiming a lump sum of 50% + tax rate of 12%	19.30	15.3	11.1	15.23

Source: Kouřilová, I.- Pávišová, L. *Multiplikační efekty v kultuře*, 2007

The above-mentioned calculations have confirmed the first partial hypothesis, which says that theater visitors spend their money not only on an admission ticket but also on additional external expenses.

4.2 Results of the “theater – theater” relationship analysis

Data for both the following analyses were obtained from economic departments of the monitored theaters. First of them, examining the “theater – theater” relationship, focused on incomes and expenses of NT, BCT and CET. The reason for this was the fact that it was desirable to express finally in numbers payments for social and health insurance paid by theaters for their employees, income tax payments paid by employees, corporate tax payments paid by theaters for additional economic activities, as well as transmitted tax payments of catering facilities for spending employees’ meal vouchers for their meals. When calculating all the above mentioned figures, the “minimizing” key was used; this means that all tax payments are calculated with the lowest possible tax rate. The amount of social and health insurance payments was determined by multiplying total labor expenses by the coefficient of 0.125 (i.e. an 8% payment for social insurance and a 4.5% payment for health insurance paid

by an employee). The income tax payment was determined by multiplying a tax base (total incomes minus total insurance payments) by the lowest possible tax rate of personal income tax (12%), i.e. by the coefficient of 0.12. When calculating the payment of catering facilities, we used the same assumption of a tax paid by a self-proprietor as in the case of the “theater – visitor” relationship analysis (expenses determined by a lump sum of 50% of incomes and the lowest income-tax rate of 12%).

This part of the analysis proved the second partial hypothesis, saying that theaters not only consume money, but they also produce financial resources further through their demands on specific activities.

4.3 Results of the “theater – suppliers” relationship analysis

When analyzing the “theater – suppliers” relationship, it was taken into account that theaters indirectly influence the amount of payments or even the very originating of the obligation to pay financial resources to public funds at other economic subjects, usually their suppliers. All the three monitored theaters generate incomes of other economic subjects by their demands on specific goods and services. These subjects, suppliers of the theaters, then have to pay taxes and legal tax deductions from their incomes. Suppliers of theaters were divided into two groups for the sake of this analysis:

- Standard suppliers – suppliers of electricity, water, heating, etc., i.e. big firms whose financial results can be influenced by theaters to only a negligible extent.
- Specific suppliers – for whom theaters represent very important customers because providing services to a theater is their main source of income. The monitored costs included material costs (theatrical production, costumes, wigs, scenic decorations, lighting, etc.), repairs and maintenance, traveling expenses including connected taxes (income tax and road tax), services (security service, telephones, royalties, etc.), other costs (e.g. legal insurance of employees, car insurance, insurance of spectators, people on visiting performances, bank fees, etc.).

It was possible to prove the third partial hypothesis thanks to the third part of the research, i.e. the fact that theaters indirectly influence the amount of payments or the very originating of the obligation to pay financial resources to public funds at other economic subjects, usually their suppliers, respectively. That is why they generate reverse payments to public funds.

4.4 Multiplication effect of theaters as production units

The final findings of “theater – theater” and “theater – suppliers” relationships were consequently used for estimating multiplication effects of theaters as production units. This was supposed to prove the validity of the **basic hypothesis of the research**, which can be shortly shown in the following way:

Subsidies \leq external effects on the economy + direct tax payments + indirect tax payments + legal tax deductions, where:

External effects on the economy were expressed as a multiple of the number of visitors who came to the respective theaters in 2006 (again, only visitors of domestic playhouses were considered due to the minimizing key approach) and a self-proprietor’s tax payment from the extended external effect of visitors; this effect was calculated within the “theater – visitor”

analysis. **In the case of NT it reached approximately 3,715 thousand CZK, approx. 2,769 thousand CZK in BCT and approx. 424 thousand CZK in CET.**

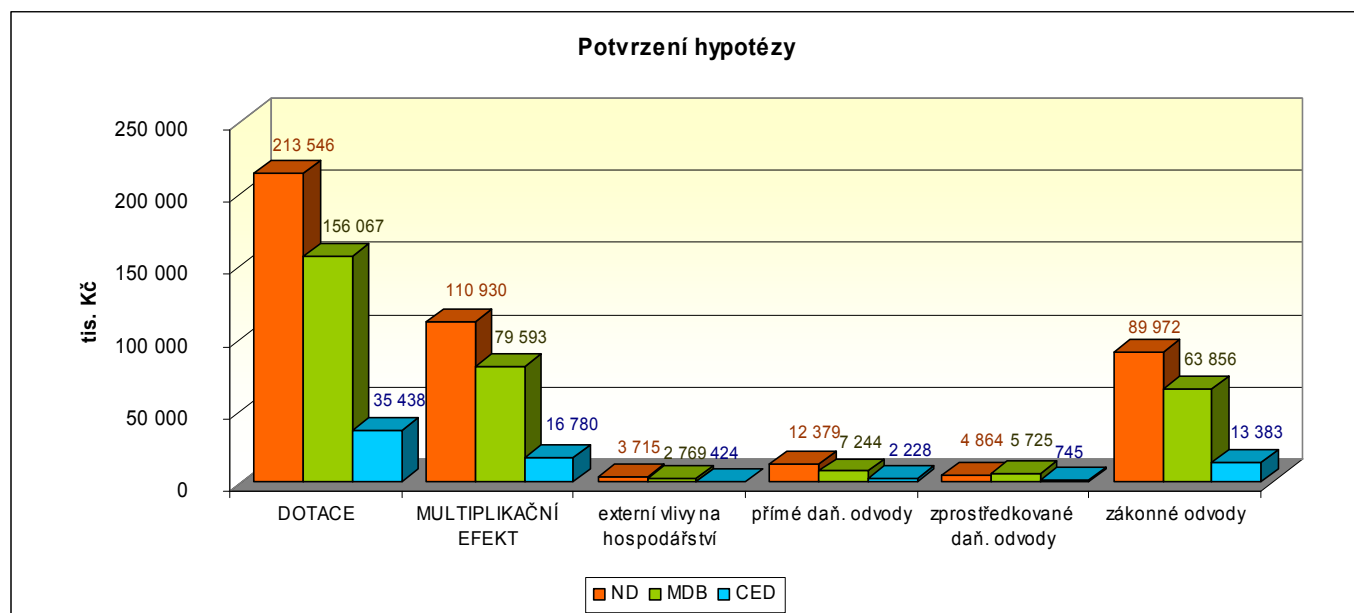
Direct tax payments consist of a corporate tax payment, payment of other taxes and personal income tax payment paid by employees from their wages. The total sum of direct tax payments reaches **approximately 12,379 thousand CZK in NT, approx. 7,244 thousand CZK in BCT and approx. 2,228 thousand CZK in CET.**

Indirect tax payments are calculated from the expenses theaters pay for material, energy, repairs and maintenance, travel expenses, representation, services and from other expenses. Even in this case the minimizing key was used for the calculation (i.e. recipients of these services claim expenses with a lump sum of 50% and they pay the lowest rate of income tax, i.e. 12%). Indirect tax payments for subsistence allowances were also added to the amount received in the above mentioned way. Indirect tax payments then reached **approximately 4,864 thousand CZK in NT, approx. 5,725 thousand CZK in BCT and approx. 745 thousand in CET.**

Legal tax deductions are then represented by social and health insurance paid by employees and a theater itself, together with payments for depreciation back to the budget of its founder, i.e. the town of Brno. Legal deductions reached **approximately 89,972 thousand CZK for NT, approx. 63,856 thousand CZK for BCT and approx. 13,383 thousand CZK for CET.**

A graphic survey of all the data can be found in the following graph:

Graph 2: The amount of subsidies for theaters, the amount of theaters' external effects on the economy and reverse payments of theaters to public funds (in thousand CZK)



Source: Kouřilová, I.- Pávišová, L. *Multiplikační efekty v kultuře*, 2007

The same data can be obtained from Table 3, which has been further expanded by the sum of all the sectional items of reverse payments to public funds, i.e. by **the multiplication effect of theaters as production units**:

Table 3: Data for the verification of the basic hypothesis (in thousand CZK)

Confirmation of the hypothesis (in thousand CZK)	NT	BCT	CET
SUBSIDIES	213 546	156 067	35 438
MULTIPLICATION EFFECT	110 930	79 593	16 780
external effects on the economy	3 715	2 769	424
direct tax payments	12 379	7 244	2 228
indirect tax payments	4 864	5 725	745
legal tax deductions	89 972	63 856	13 383
% of subsidies that return to public funds indirectly	49%	51%	47%

Source: Kouřilová, I.- Pávišová, L. Multiplikační efekty v kultuře, 2007

The data in the table show us exactly that the basic hypothesis was verified for none of the monitored theaters because the theaters return to public funds neither an amount equal to the amount of received subsidies, nor a higher amount of money. NT returns 49% to the budget, BCT returns 51% and CET returns 47% of received subsidies.

I think it is possible and necessary to explain the difference in the presented data not only by the amount of provided subsidies, but mainly by the capacity of the monitored theaters. Even autarchy and the visit rate of the theaters (see Table 1) will naturally play an important role here. Dramaturgy and directional work that are different for each theater also have to be taken into consideration.

Conclusion

The field of culture has been marked with a variety of legal forms after 1989. Almost each of these forms tries to receive subsidies for its activities from public funds. That is why logical efforts to make the system of financing theaters, or culture, respectively, transparent have emerged, i.e. efforts to create an objective system of financing. Setting a reliable system of criteria for assessing the effectiveness of financial resources put into culture is a problem, which has been solved by researches all over the world for several decades. Besides simple indicators such as costs per visitor, costs per cultural program production or the rate of autarchy (which can serve rather for comparing the development of a single institution in time sequence or comparing its position within a group of institutions providing similar services under comparable conditions), methods working with multiplication effects of investments in culture are being used more frequently.

A research carried out in three theaters in Brno proved that:

- *People's expenses connected with visiting theatrical performances induce, i.e. multiply, their further external expenses, namely:*
 - *When a visitor spends 1 CZK in the price of an admission ticket, he or she spends on average 1.57 CZK on other additional expenses (an average of the three theaters).*
 - *By purchasing a ticket and watching a theatrical performance, which will induce direct expenses, public funds would obtain on average 15.23 CZK from taxes. This approximately corresponds to 7.8% of an average ticket price.*
- *Theaters as subsidized institutions induce, i.e. multiply, additional incomes for various sectors (branches) through their demands on these sectors (branches).*

Theaters thus act as production units that are in many ways linked with the economic life of towns, regions and the country. Thanks to this fact they return to public funds on average (of all the three theaters) approximately 50% of the obtained subsidies.

However, it is necessary to keep in mind that using this method of multiplication effects is relatively largely demanding on a researcher's scientific preparation, system of data gathering and costs related to it. The **difficulty of the Brno research** lies in the low return rate of questionnaires in CET when expressing direct multiplication effects in numbers; another problem was the use of the so-called minimizing key with multiplication effects of theaters as production institutions, as well as monitoring the economic data in a single year. **The basic methodological problem and the weakest point of the entire research remains**, as it was mentioned at defining the partial hypotheses, the fact that **legal tax deductions are included in the multiplication effect. A methodologically undoubted multiplication effect is only the direct multiplication effect of theater visitors.**

However, I still assume that **this research is first and unique in the Brno theatrical environment**, and despite its weak points **it has the potential to contribute to the objective decision-making of politicians in Brno regarding investments in local (maybe not only) theatrical culture.**

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