FINANCING OF CZECH CULTURE CONTRIBUTORY ORGANIZATIONS

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Abstract

This paper is mainly focused on financing contributory organizations which are operating in the cultural sector. Czech contributory organizations set up by regions will be investigated. An analysis of financing is possible with the help of data collected by NIPOS during the time period 2008-2010 in the Czech Republic Otherwise data are not publicly available. Data are still limited and therefore basic financial ratios (self sufficiency ratio and labour demand ratio) of cultural sector will be calculated. Especially self sufficiency ratio is specific for cultural sector and is not calculated for classical profitable organizations. Data will be statistically evaluated and the main differences will be shown. Main trends especially in terms of financing and cost structure of cultural contributory organizations will be found. Cultural sector is not so homogenous as industrial sector in assumptions about financing. It will discover whether it is necessary to analyze sources of financing.

Keywords: Financing, culture, contributory organizations, Czech Republic.
JEL Classification: H11, L32, M21, Z10, Z11.

Introduction

The Czech Republic has a long history and rich cultural traditions and therefore there are many cultural organizations which can be set up as profitable or non-profitable units. Some categories of creative industries can be highly profitable and they do not need donor money. Companies related to architecture or fashion are usually owned privately as profitable organizations. On the other hand many economic organizations are directly financed from public sources. This article is mainly focused on financing contributory organizations which are operating in the cultural sector. We should protect our own culture and support organizations which allow us to see the history, customs, listen to the music, watch theatrical performances or read books. Activities mentioned above are only a fragment of culture. For quick orientation, these organizations, which will be further analysed, can be described as theatres, museums, galleries, observatories, etc.

Nowadays in the time of post-crisis and budget effectiveness, cutting costs of public expenditures are still very relevant. Cultural sector absorbs a lot of money which can disappear as in a black hole. This article should answer the questions of how much money cultural contributory organizations need each year and what proportion is paid directly by customers and what remains on public sources. Self-financing is usually not a core of funds. The second area is a question on which this money is spent, what the main cost items are.

This article will analyse the financing of contributory organizations operating in the cultural sector of the Czech Republic. For this purpose the data which are collected by NIPOS (The National Information and Consulting Centre for Culture) will be used. Data set which was used for an analysis is described further.

As the conclusion main trends will be found, especially in terms of financing and cost structure of these organizations. Cultural sector is not so homogenous as industrial sector in assumptions about financing. For example theatres can work on different assumptions than museums. The main difference between organizations will be shown which will discover whether it is necessary to analyze sources of financing and cost structure according to the cultural focus.

Sources of culture financing

Many cultural branches are supported by public budgets because they are not able to function on the principle of self financing. The Czech Republic is in this way no exception. General view is included in Table 1. Public budgets on different levels can be detected as first source (Contribution of different government levels is discussed in Čámská, 2011a). Almost one quarter goes from public budgets (28.3 billion CZK in 2009 –Results of accounts of Culture, 2009, 2011). Direct customers – households – spend less than 50%. It is obvious that without culture protection and public support many organizations are not able to exist. It is not only an example of the Czech Republic. Further information of comparison with other European countries can be found (Čámská, 2011 a).

Table 1. Sources of finance in the CR in 2009 (Results of accounts of Culture, 2009, 2011)

Sources of finance	Central government	Local government	Expenditures of household	Non-finance and finance firms	NGOs	Other world
%	7.0	17.1	42.7	25.6	7.4	0.2

Research literature does not deal often with the topic culture and its financing. It is possible to detect papers connected with sociology, politics, law, history or religion. Our view of interest is connected mostly with economic theory or business economics. We can find some papers in this field but their authors do not prefer general view on culture. Frey (1994) focuses on museums, their behaviour and economics. Frey and Meier (2003) describe cost structure of museums. Museums can be typically characterized by high fixed costs and low variable costs. In our point of view based on preliminary research this cost structure is typical for most culture contributory organizations in the Czech Republic. Building, collection, staff and insurance are according Frey and Meier (2003) the major cost items. Economic of museums is also studied by Pearce (1991) and Johnson and Thomas (1998). Economic of theatres in the Czech Republic is studied by Römerová but unfortunately conclusions have not been published yet.

A question of economics of cultural organizations should be completed with view of effectiveness, efficiency or measurability of art. Sociologic papers reject only economic opinions based on efficiency of art or culture. But cultural sector should not only absorb a lot of money which can disappear as in a black hole. With the help of public money the culture should be protected and supported, organizations should provide services for public – exhibitions, performances etc. Ideas how to measure art were published in article (Scholleová, Römerová, 2011). First discussion in the Czech Republic of the topic efficiency of cultural organization can be found in (Čámská, 2011b).

Data set

Data reflecting Czech cultural sector are collected by NIPOS (The National Information and Consulting Centre for Culture). When someone would like to analyze cultural organizations the situation is not easy because the range of data is not as wide as we have used when we analyse industrial units or profitable organizations in general. Thanks to the cooperation with NIPOS we are able to analyze at least basic financial data of cultural contributory organizations. Our data set consists of cultural contributory organizations set up by regions of the Czech Republic. There are 136 analysed organizations which represent museums, galleries, theatres etc. frequency distribution is shown in Table 2. Two organizations were excluded at the beginning of analysis because one organization was moved what could change cost structure and the second organizations was divided into 3 separated units. Organizations were divided into 6 categories – museum, gallery, theatre, library, observatory and others as Table 2 represents. Although museums and galleries together belong to the paragraph 3315 of public budget we marked them differently because these two types of organizations are represented the most in the sample. On the other hand some organizations are very rare and we set up the category others (information service, archaeological centre etc.) Our data set covers the time period 2008-2010 which means the crisis period (2009) and also years before and after. This length of time period should exclude any deviations from the common situation.

Table 2. Frequency of contributory organizations in the sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Museum	68	50.0	50.0	50.0
Gallery	23	16.9	16.9	66.9
Theatre	14	10.3	10.3	77.2
Library	13	9.6	9.6	86.8
Observatory	9	6.6	6.6	93.4
Others	9	6.6	6.6	100.0
Total	136	100.0	100.0	

Methods

Data set including 136 organizations will be analysed with the use of the statistical program SPSS. First methods of descriptive statistics will be used. Secondly we will work with the tool regression.

Financial analysis of Czech cultural contributory organizations will be calculated. It will not be financial analysis with wide range ratios as we are used in the case of industrial organizations. In our research we are limited by data which are collected. For each unit its name, region, wage costs, total costs and revenues from ordinary activities are available. As financial ratios self-sufficiency ratio and labour demand ratio will be calculated. Values of these ratios will be compared in the sample of 136 organizations. Data are available for the time period 2008-2010. It allows comparison in place as well as in time.

Second used method will be the regression. Our aim is to predict self-sufficiency of cultural contributory organizations and show if there is any difference among organizations due to their cultural focus.

Discussion

As we have mentioned in the chapter dedicated to methods first methods of descriptive statistics will be used. 3 quantitative variables – labour costs, total costs and revenues from ordinary activities are analysed. 136 units can differ in size and time series may not be stable because of economic crisis. These questions should be answered before further analysis.

Main descriptive statistics of labour costs, total costs and revenues from ordinary activities in years 2008-2010 are displayed in Table 3, 4 and 5. Numbers are written in thousands of CZK. All variables have risen during the time period. Noticeable increase can be detected during the years 2008 and 2009. Growth 2009-2010 is barely noticeable. The first influence is high inflation of 2008 and impact of economic crisis which decreased expenditures in general. Multi-source of financing of cultural organizations is not stable and without risk because during the crisis all sources are restricted (Boukal, 2011). Labour costs and total costs of contributory organizations in 2010 rose very slightly. Same trend can be detected with revenues because people did not spend more on cultural activities. When we compare labour costs with total costs labour costs rose more significantly than total costs in 2009 which rises labour demand ratio. Labour demand ratio will be further analysed. Time trends have been already discussed and conclusion is that there are no serious differences during time series because trends become stable.

Table 3. Main descriptive statistics of labour costs 2008-2010 (thousands of CZK)

		Labour costs 2008	Labour costs 2009	Labour costs 2010
N	Valid	136	136	136
	Missing	0	0	0
Mean		8949.075588	9603.728382	9735.529853
Median		5234.990000	6034.135000	5990.000000
Minimum		557.7300	527.5800	585.0000
Maximum		108248.3000	116511.1300	118220.8100
Percentiles	25	3403.070000	3600.392500	3722.500000
	50	5234.990000	6034.135000	5990.000000
	75	11681.730000	12280.520000	11928.510000

Table 4. Main descriptive statistics of total costs 2008-2010 (thousands of CZK)

		Total costs 2008	Total costs 2009	Total costs 2010
N	Valid	136	136	136
	Missing	0	0	0
Mean		23424.79	24588.84	24678.99
Median		14421.01	15040.98	14810.00
Minimum		1052.650	985.5300	1033.000
Maximum		233091.9	252841.7	256489.7
Percentiles	25	8140.302	8645.970	8472.885
	50	14421.01	15040.98	14810.00
	75	28198.94	29235.30	28951.00

Table 5. Main descriptive statistics of revenues from ordinary activities (thousands of CZK)

		Revenues 2008	Revenues 2009	Revenues 2010
N	Valid	136	136	136
	Missing	0	0	0
Mean		3893.275	4171.480	4206.938
Median		1140.440	1082.935	1108.500
Minimum		77.1100	30.2300	0.0000
Maximum		67540.87	81652.39	86165.39
Percentiles	25	387.5525	380.7400	326.2500
	50	1140.440	1082.935	1108.500
	75	2481.662	2795.725	3078.500

Second problem which should be answered is size of organizations. All 3 variables shown in tables above support idea, that most of organization are of the small size. If we take into account the variable revenues 75% of organizations have revenues lower than 3 078 500 CZK, 50% even lower than 1 108 500 CZK in 2010. The largest organization has revenues 86 165 390 CZK same year. With variables labour costs and total costs we would come to same conclusions.

According to size the organizations are comparable, most of them are small and only several are big, middle sized organizations are completely missing. Difficulty with absolute values we can solve with the use of relative variables – ratios. Ratios also solve the problem of dependency. If we aggregate all cultural organizations together (Table 3-5) we are not able to take decision about dependencies. Organization with low labour costs can have high total costs and it is possible that organizations with low costs have high revenues. Ratios self sufficiency and labour demand should solve these difficulties; ratios are defined as it is described further.

Labour demand ratio is calculated as labour costs divided by total costs. This ratio shows us the importance of labour costs on costs structure. According Frey and Meier (2003) labour costs should be important part of total costs. Self sufficiency ratio is calculated as revenues from ordinary activities divided by total costs. This type of ratio would be a non-sense for profitable organizations. For profitable organizations we would count profit margin, return on costs or assets etc. We are not able to count classical profitability ratios for contributory organizations because these organizations do not make a profit. Their costs exceed their revenues and the difference is covered by public subsidies. Proportion of self sufficiency is important for this type of organizations.

Development of labour demand ratio is shown in Figure 1. Cost structure has not changed in the time period 2008-2010. Wages and salaries are important cost item for cultural contributory organizations. Proportion of labour costs for most organizations is in the range of 30% to 50%.
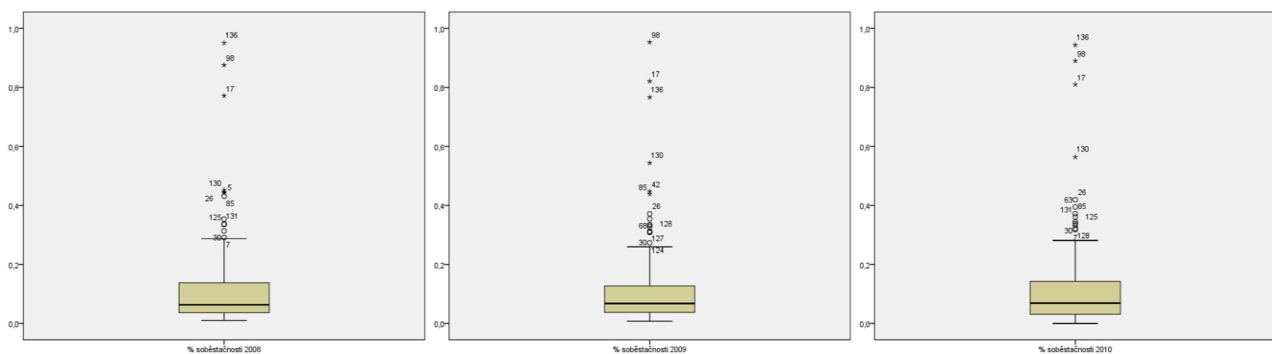
Figure 1. Labour demand ratio 2008-2010

Self sufficiency ratio confirms that cultural contributory organizations are not able to fulfil their mission without public support and financial sources. Most organizations are able to cover less than 10% of their costs with usage of revenues from primary activities. Median has been steadily during time period 2008-2010 around 6.7%. Figure 2 shows these results in graphic way.
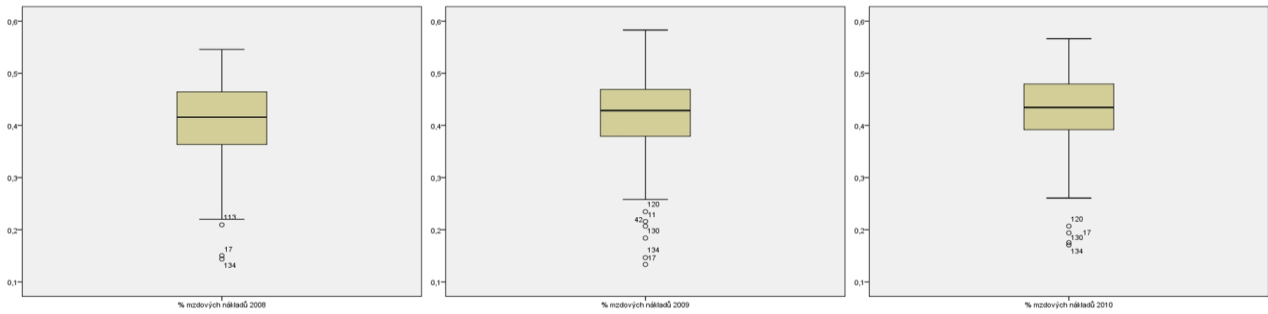
Figure 2. Self sufficiency ratio 2008-2010

Last step of our analysis is a regression model. We would like to prove if any model is able to predict future self sufficiency. Figures and tables above show stable trends of the sector of cultural contributory organizations. Due to the stability of the sector it should be possible to construct a model. Self sufficiency ratio 2010 (% soběstačnosti 2010) is taken as a dependent variable. Self sufficiency ratio 2009 (% soběstačnosti 2009) is an independent variable because of time stability. From wide range of functions as Figure 3 displays the linear curve is the best and the most simple.

Figure 3. Regression curves

Coefficients of a linear model are included in Table 6. R Square of this model is 0.889 which means that 88.9% of data variability is explained by chosen curve. If we add other independent variables which are available we are not able to improve explaining data variability significantly. We come to conclusion that self sufficiently is stable in time and there are not any differences depending on cultural focus of an organization.

Table 6. Characteristics of a linear model

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Constant	.005	.006		.905	.367
Self sufficiency 2009	.973	.030	.943	32.815	.000

We come to conclusion that self sufficiency ratio is stable in time and there are not any differences depending on cultural focus of an organization. If we omit self sufficiency ratio 2009 as an independent variable we can use as independent variables labour demand ratio 2010 and variable kind of organization (museum, gallery, theatre, library, observatory and others – used as binary variables). It is a multiple

regression and a model explains 48.7% of data variability (adjusted R Square). Coefficients of the multiple regression are included in Table 7. It proves us that cultural focus of the organizations is also important for value of self sufficiency.

Table 7. Characteristics of a multiple model

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	.287	.060		4.817	.000
Labour demand 2010	-.453	.132	-.229	-3.425	.001
Gallery	-.068	.027	-.167	-2.519	.013
Theatre	.172	.033	.342	5.181	.000
Library	-.034	.033	-.065	-1.009	.315
Observatory	.021	.039	.034	.530	.597
Other	,294	.040	.479	7.302	.000

Equations of self sufficiency depending on cultural focus are written bellow.

$$\text{self sufficiency of museum} = 0.287 - 0.453 \times \text{labour demand ratio} \qquad (1)$$
$$\text{self sufficiency of gallery} = 0.219 - 0.453 \times \text{labour demand ratio} \qquad (2)$$
$$\text{self sufficiency of theatre} = 0.459 - 0.453 \times \text{labour demand ratio} \qquad (3)$$
$$\text{self sufficiency of library} = 0.253 - 0.453 \times \text{labour demand ratio} \qquad (4)$$
$$\text{self sufficiency of observatory} = 0.308 - 0.453 \times \text{labour demand ratio} \qquad (5)$$
$$\text{self sufficiency of other} = 0.581 - 0.453 \times \text{labour demand ratio} \qquad (6)$$

Conclusion

Financing of Czech cultural contributory organizations which are set up by regions is in time very stable. Self sufficiency ratio has not changed during our time series although it was time of economic turbulences. Cost structure represented by labour costs also has not changed during time period and it seems that labour costs are high fixed costs. Differences among organizations due to their cultural focus ware detected. It would be better to exclude the category other because these organizations have higher self sufficiency ratio and lower labour demand ratio. Theatres have higher self sufficiency ratio than museums and galleries.

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