

# THE RESILIENCE OF THEATRES: ANALYSIS OF THE IMPACT OF COVID-19 IN THE CZECH REPUBLIC

Jakub Grosman – Petr Prokop – Daniel Subrt

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## Abstract

This paper focuses on the analysis of the first impact of the Covid-19 pandemic on theatres in the Czech Republic. The Covid-19 pandemic had a significant impact on performing arts, especially on theatres, and is testing the resilience of the entire organization. This paper compares different levels of impact during the first wave of measures taken to avoid spreading Covid-19 and the reaction to the crisis of 146 theatres in the Czech Republic. Using data from the broad survey and applying multiple correlation analyses, the paper seeks relationships between the status of selected indicators (finance, HR, artistic performance) before the crisis and the level of impact during the early stage of the Covid-19 pandemic. This paper shows that theatres founded by state and local governments were more resilient to the first immediate impact of Covid-19 and were better prepared for possible economic shock than non-profit theatres. Our study results also confirm that the pandemic severely affected non-profit theatres. The study provides rare empirical data on the first impact of the Covid-19 pandemic.

**Keywords:** resilience, theatre, impact, Covid-19

**JEL Code:** Z11, H12

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## Introduction

The WHO (World Health Organization) declared on March 11th, 2020 the Covid-19 pandemic as global. The Covid-19 pandemic has brought major disruption to arts and cultural organizations. The measures taken to avoid social interaction initiated restriction of visits to live performances. Theatres had to limit or suspend programs and quickly adapt to new models of delivering their content to the audience. In this paper, we explore how theatres in the Czech Republic have been affected by the restrictions initiated to avoid the further spread of Covid-19. This paper thus focuses on the resulting economic consequences on different types of theatres.

In the context of the Covid-19 pandemic, we explore the difference in response of different types of theatres and whether the economic and artistic performance before the crisis correlates to the response to the Covid-19 pandemic. The impact of Covid-19 has not been equal or monolithic, but most of arts and cultural organizations were affected. The response and action taken by the organization is depending on the level of organizational resilience.

Resilience is a concept primarily used in psychology, but nowadays this concept is applied in many sciences in general. The Latin origin points to the ability to recover from difficulties or to cope with abnormal events, such as crises, external shocks, or the intensity of competition. Resilience can be defined as „the ability to recover from setbacks, adapt well to change and keep going in the face of adversity“ (Ovans, 2015). Raetze et al. (2021) are dividing the literature on resilience into three perspectives: a) resilience as a rebound, b) adaptation to current circumstances and c) anticipation of a crisis. This paper is more focused on organizational resilience in line mostly with the first perspective and partially in line with the second perspective.

## **1. Literature review**

Despite the increased interest of scholars in cultural and creative industries (CCI), there has been a limited amount of literature covering the impact of crisis with a focus on theatres (at the moment of writing this paper). The first studies on Covid-19 impact on CCI can be divided based on the focus areas: a) economic impact studies, b) analysis of actions taken to support CCI and c) analysis of management changes triggered by the Covid-19 pandemic. There were also quite a several international studies analyzing the impact of Covid-19 on the entire CCI at the global and European level (UNESCO, OECD, EU, EY).

The research in the field of arts management is adopting concepts and approaches from other sciences. Art and cultural organizations overlap in many aspects with non-profit organizations (NPO). For this paper, the research approach of NPOs' resilience has been adopted to fit specifically theatres. The scholarly literature has little covered resilience in NPOs operating in CCI. Albeit there were recently some studies covering the NPOs' resilience in general and the need for reformation of their management. Searing et al. (2021) have constructed a theoretical framework determining the resilience of NPOs covering five key areas: a) financial resources, b) human resources, c) audience development, d) program management and e) management of the organization. Kim&Mason(2020) in their study of

American NPOs highlight, that access to resources and relationships are key determinants of resilience. Plaisance (2022) analyzed the relationship between variables of Covid-19 impact in the segment of financial and human resources, relationship with key partners and the need for reforms of NPOs. Kim&Mason (2020) analyzed the secondary data from a broad survey of US NPOs and focused on the relationship between the operating reserves before the crisis and performance during the Covid-19 pandemic.

## **2. Data and methods**

The measures taken by the Czech government were strict and most of the theatres were forced to limit their operations from March 2020: in the first stage the theatres were forced to limit the number of participants, and in the second stage they were forced to close their premises. The first survey of the immediate impact of measures taken was conducted by The Prague University of Economics and Business together with The Academy of Performing Arts in Prague with the support of The Arts Institute. The broad survey focused on organizations and individuals in the sector of theatres, music and galleries. The survey primarily focused on the impact of Covid-19. For comparison reasons, there were also collected data for the entire year 2019. The 2019 data allowed the analysis of impact in key areas of observation (finance, HR, audience and artistic performance). Thanks to the support of local networks and associations the survey was promoted among the organizations and individuals and had a high response rate. The survey collected 1.188 valid responses, of which 329 were from organizations and 859 were responses from individuals. The sector of theatres and music was represented equally by a share of 44% and galleries were represented by a share of 12% of all valid responses. Such a broad survey and response rate is unique for Czech performing arts and galleries.

In total 146 valid responses were collected from theatres. Comparing the sample survey with official data from state-run The National Information and Consulting Centre for Culture (NIPOS) the survey covered about 53% of all theatres reported by NIPOS, where the highest conformity was about 68% in the segment of non-profit theatres and 63% in the segment of theatres established and funded by central and local governments. According to Nekolny (2010), there could be active about 300-400 theatres in the Czech Republic.

The obtained data can be grouped into several categories based on: a) dependency on public funding, b) founders (independent or established by local or central governments), and c) size of the organization based on the number of employees and annual turnover– see table 1.

**Tab. 1: Theatres grouping in the survey conducted**

<b>Primary grouping</b>	<b>Secondary grouping</b>
<b>Dependency on public funding</b>	<ul style="list-style-type: none"> <li>• Theatres supported by public funds</li> <li>• Theatres not supported by public funds</li> </ul>
<b>Founders</b>	<ul style="list-style-type: none"> <li>• Theatres founded by central or local government</li> <li>• Non-profit theatres</li> <li>• Commercial theatres</li> </ul>
<b>Size</b>	<ul style="list-style-type: none"> <li>• Micro</li> <li>• Small</li> <li>• Medium</li> <li>• Large</li> </ul>

Source: authors

## **2.1 Hypothesis**

Survey of so far published studies and reports showed that European CCI was highly affected by the Covid-19 pandemic (EY, 2021; OECD, 2020; UNESCO, 2020). Performing arts were among the most impacted in comparison with other sectors of CCI (CISAC, 2021; Kompetenzzentrum Kultur-und Kreativwirtschaft des Bundes, 2021).

The paper aims to analyze the different levels of Covid-19 impact and the relationship between performance indicators before the crisis and during the Covid-19 pandemic. Non-profit theatres, which are based on independent founders, have a lean structure and are less stable in human and financial resources. Non-profit theatres have less access to resources than theatres founded by central or local governments (publicly established).

**Hypothesis 1 (H1): Non-profit theatres have been more likely to experience the negative financial impact of Covid-19 measures.**

Overview studies highlighted that the self-employed were among the most affected by Covid-19 measures (Culture Action Europe & Damaso, 2021; OECD, 2020; Searing et al., 2021). In European CCI there is a higher than average share of self-employed (Eurostat, 2021), whereas the share of self-employed in Czech CCI is the 3<sup>rd</sup> highest in Europe and is reaching a share of about 40%. The non-profit theatres are less stable and we can expect that they were forced to dismiss more self-employed.

**Hypothesis 2 (H2): Non-profit theatres were forced to dismiss more self-employed than publicly established theatres.**

Both hypotheses emerge from the literature review and theoretical framework discussed.

## 2.2 Variables

To study the resilience of theatres in the Czech Republic, we analyze the relationship between the selected indicators of theatres during normal operations (before the crisis) and the Covid-19 impact. Performance indicators for commercial organizations are mainly focused on financial indicators. Kaplan & Norton (1996) highlighted that for NPOs there have to be more than financial indicators as their mission is different to commercial organizations and therefore they enhanced the model of Balanced Scorecard (BSC) with a multidimensional set of indicators.

Organizations active in CCI are often using the model of 3E (Economy, Efficiency, Effectiveness) despite its limitations for CCI. The selected indicators for Czech theatres are a combination of BSC and 3E indicators following the key areas of focus and considering the specific characteristics of the Czech theatre environment – see below table 2.

**Tab. 2: Selected indicators**

Area	Performance indicators (before crisis - 2019)	Covid-19 impact indicators (2020)
<b>Organization</b>	<ul style="list-style-type: none"> <li>• Seniority</li> </ul>	
<b>Finance</b>	<ul style="list-style-type: none"> <li>• Total of operational costs per year</li> </ul>	<ul style="list-style-type: none"> <li>• Lost income</li> <li>• Savings in operational cost</li> <li>• New funding obtained</li> </ul>
<b>Human resources</b>	<ul style="list-style-type: none"> <li>• Number of employees</li> </ul>	<ul style="list-style-type: none"> <li>• Number of dismissed employees</li> <li>• Number of dismissed self-employed</li> </ul>
<b>Audience</b>	<ul style="list-style-type: none"> <li>• Total number of visitors per year</li> </ul>	<ul style="list-style-type: none"> <li>• Total number of lost visitors</li> </ul>
<b>Artistic performance</b>	<ul style="list-style-type: none"> <li>• Total numbers of performances</li> </ul>	<ul style="list-style-type: none"> <li>• Total number of lost performances</li> <li>• Newly initiated performances</li> </ul>

Source: authors

The independent variables are in line with the performance indicators before the crisis (in the year 2019). The dependent variables aim to describe the Covid-19 impact and are equal to impact indicators (in the year 2020).

Following Plaisance (2021) and Kim&Mason (2020) the correlation matrix is proposed following the objectives of the research to establish the determinants of the theatres' performance. Different correlation matrixes were applied to different types of theatres based on grouping – see table 1. The correlation matrixes showed no statistical issue. The statistical tests applied to regression analysis confirm their relevance.

### **3. Results**

#### **3.1 Descriptive Statistics**

Literature review already highlighted that non-profit theatres were more affected by Covid-19 restrictions imposed on live performances (EY, 2021; Kompetenzzentrum Kultur-und Kreativwirtschaft des Bundes, 2021; OECD, 2020).

Covid-19 has a massive impact on the activities of theatres. Theatres covered in the survey reported a 20% loss of their annual visits in the period of March-April 2020, which is corresponding with many cancelled performances amounting to 17% of the total number of performances in 2019. The non-profit theatres were more agile and reacted swiftly to the situation: they run crowdfunding activities online and were able to deliver content online.

Surprisingly the loss of income amounts to 5% of the total annual income of 2019, which is a minor disruption for the entire sector of theatres. The limited financial impact could be explained by the heavy dependency of Czech theatres on public funding. The non-profit theatres were reporting almost double impact in lost income in comparison with theatres founded by the local or central government, which are more stable and could rely on founder support. The non-profit theatres were forced to save on costs almost 50% higher than the rest of the theatres. The non-profit theatres came out of the Covid-19 pandemic with the biggest financial losses and severe damages to their business model.

The impact in the field of human resources was significant: the reported theatres have to dismiss about 3% of their total employee fundus. The impact on non-profit theatres was almost 50% higher than on theatres founded by local or central governments. Surprisingly non-profit theatres were forced to cancel fewer contracts with self-employed in comparison with the rest of the theatres, which were focused on protecting their employees and therefore in the first wave cancelled more contracts with freelancers.

### 3.2. Relationship analysis

The correlation matrix in form of a heat map confirmed that the variable of income loss during the Covid-19 crisis has a significant correlation to the variables of theatre performance before the crisis. The theatres funded by local or central governments were more financially impacted by the crisis. On the other hand, they were able to capitalize on the stable background of the founding body and on top reached public support fund to mitigate the lost income. The non-profit theatres were less likely to receive public support. This was explained by the survey participants in follow-up qualitative research by the high administrative effort needed to apply for public support.

The correlation between the variable of savings during the first wave of the Covid-19 pandemic and performance before the crisis is more valid for non-profit and smaller types of theatres. The bigger the theatre, the fewer savings were realized. This was later explained by the follow-up survey by the ability to reach public support. The correlation between the variable of savings during the first wave of the Covid-19 pandemic and performance before the crisis was highest for independent theatres.

**Graph 1: Correlation matrix for theatres founded by the local or central government**

<b>Theatres founded by local or central government</b>	Seniority	2019: Costs	2019: Number of employees	2019: Number of visitors	C19: Loss of income	C19: Savings	C19: Obtained gifts	C19: Dismissed employees	C19: Dismissed freelancers	C19: Lost visitors	C19: Canceled performances	C19: New performances
Seniority	1											
2019: Costs	0,381	1										
2019: Number of employees	0,346	0,987	1									
2019: Number of visitors	0,393	0,931	0,910	1								
C19: Loss of income	0,407	0,911 ***	0,854 ***	0,910 ***	1							
C19: Savings	0,393	0,434	0,371 **	0,582 **	0,685	1						
C19: Obtained gifts	0,054	0,580	0,576	0,519	0,517	0,108	1					
C19: Dismissed employees	-0,193	-0,160	-0,145	-0,102	-0,137	0,076	-0,080	1				
C19: Dismissed freelancers	0,160	0,740	0,716	0,703	0,801	0,460	0,647	-0,113	1			
C19: Lost visitors	0,409	0,907	0,884	0,961 ***	0,937	0,641	0,461	-0,104	0,730	1		
C19: Canceled performances	0,149	0,515	0,509	0,567	0,448	0,184	0,208	0,000	0,364	0,493	1	
C19: New performances	0,168	0,562	0,560	0,540	0,560	0,221	0,604	0,228	0,619	0,537	0,226	1

Source: authors

Interestingly we see a limited relationship between the variable of dismissal of employees and variables of theatre performance before the crisis. Surprisingly the non-profit theatres were forced to dismiss fewer employees, which could be foreseen as a future thread as their employee fundus is limited. This could be partially explained by the preference for self-employment in non-profit theatres: in fact, there is a limited number of employees in non-profit theatres and most of the staff is cooperating as self-employed freelancers.

Surprisingly the correlation between the variable of seniority and the impact of Covid-19 measures is limited. The only significant correlation of the variable of seniority was reported in the segment of commercial theatres, where the management of human resources is closer to the commercial environment.

**Graph 2: Correlation matrix for non-profit theatres**

<b>Non-profit theatres</b>	Seniority	2019: Costs	2019: Number of employees	2019: Number of visitors	C19: Loss of income	C19: Savings	C19: Obtained gifts	C19: Dismissed employees	C19: Dismissed freelancers	C19: Lost visitors	C19: Canceled performances	C19: New performances
Seniority	1											
2019: Costs	0,131	1										
2019: Number of employees	0,488	0,340	1									
2019: Number of visitors	0,139	0,641	0,166	1								
C19: Loss of income	0,142	0,406 *	0,187	0,336	1							
C19: Savings	-0,041 *	0,596 ***	0,324 *	0,312	0,352	1						
C19: Obtained gifts	-0,026	0,391 ***	0,279	0,232	0,306	0,724	1					
C19: Dismissed employees	0,4945 ***	0,081	0,605 ***	0,030	-0,007	0,034	0,096	1				
C19: Dismissed freelancers	-0,010 ***	0,397 ***	0,099 ***	0,163 ***	0,290	0,313	0,289	0,161	1			
C19: Lost visitors	0,094	0,307	0,263 **	0,561 ***	0,327	0,558	0,465	-0,055	0,078	1		
C19: Canceled performances	0,120	0,267	0,320 ***	0,396 ***	0,477	0,335	0,233	-0,019	0,017	0,568	1	
C19: New performances	0,139	0,197	0,117	0,055	0,403	0,103	0,119	-0,019	-0,047	0,074	0,373	1

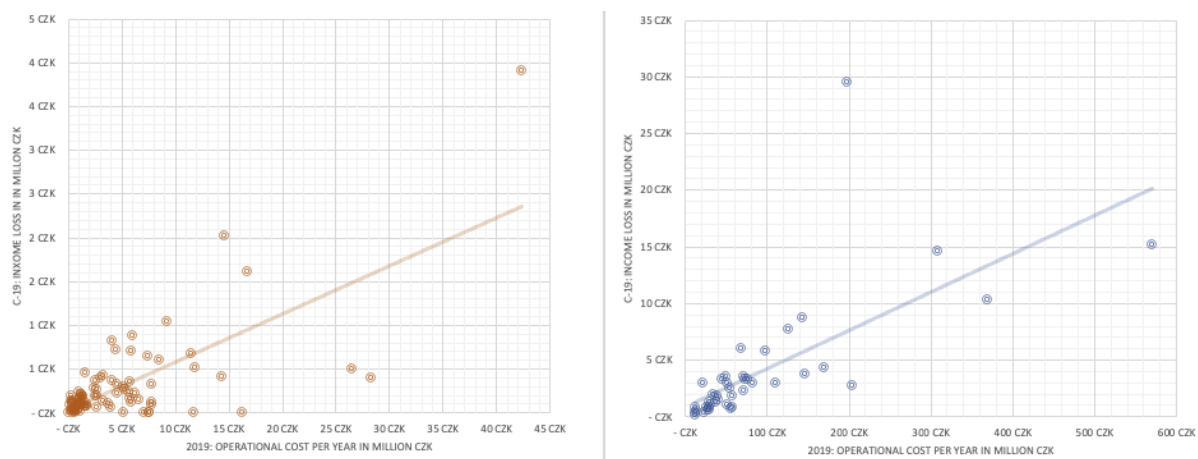
Source: authors

Regression analysis confirmed that the non-profit theatres were more severely impacted by financial losses due to Covid-19 restrictions. This provides additional evidence in favour of H1 and shows consistency with literature that the independent cultural organizations are more vulnerable to economic shocks. The independent theatres were more affected by the closure of their premises as they are more dependent on the income from tickets and in case the pandemic will be longer, they could be more vulnerable as they have limited financial reserves to survive unexpected drops in their revenue stream coming from ticketing. Among the most affected



theatres were small non-profit theatres up to annual operational costs of 5 million CZK. On the other hand, small non-profit theatres were more flexible on agile in reaction to the crisis and were able to realize more savings as their costs are mostly variable. Small non-profit theatres were also able to generate more new income streams such as crowdfunding, etc.

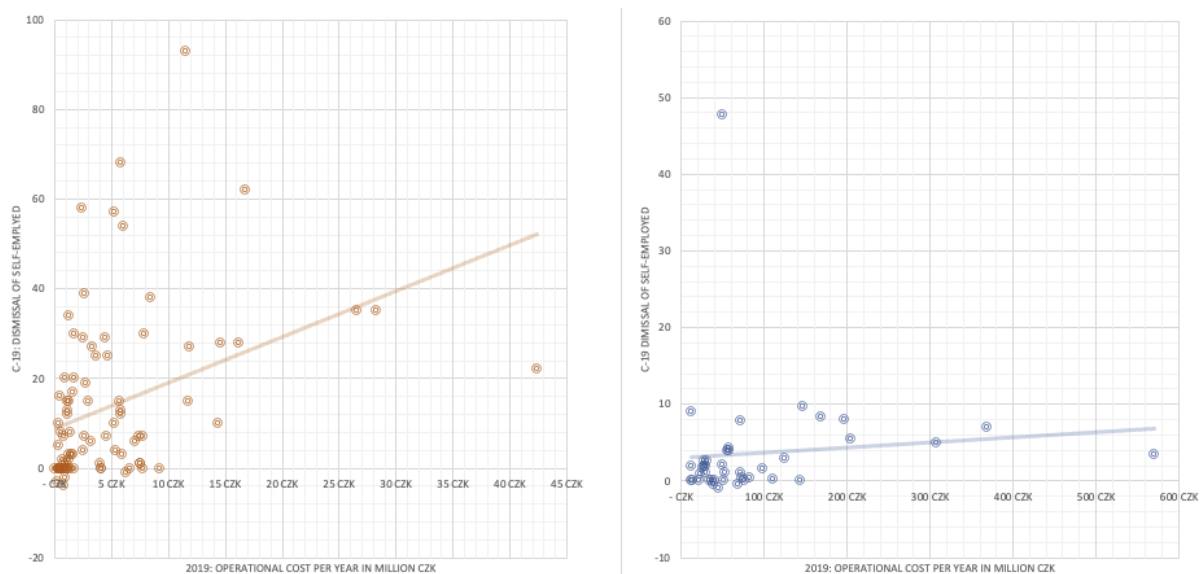
**Graph 3: Comparison of loss income between independent theatres and publicly funded theatres**



Source: authors

The group of self-employed was the most affected by Covid-19 restrictions and was facing major threats of losing their contracts with theatres. The data showed that the size of an organization determines the approach to human resources. The bigger the theatre, the more the organization prefers employees, which they would like to keep in the organization. This was a threat to self-employed as they were the first to be dismissed. H2 was confirmed as the non-profit theatres were forced to dismiss more self-employed in comparison to their total human resources pool including employees and self-employed contractors. The publicly founded theatres were dismissing contracts with self-employed as they are mostly medium-size and large organizations, but in general, they showed a more stable environment for the self-employed and employees. The level of dismissal of self-employment contracts for non-profit theatres could be in longer-term essential for their future ability to operate and essential for their survival in a crisis. It is important to mention that the real number of personal self-employed could be lower as many self-employed artists and cultural workers have more contracts and relationships with more theatres.

**Graph 4: Comparison of dismissal of self-employed between independent theatres and publicly funded theatres**



Source: authors

#### 4. Conclusion and discussion

This paper is discussing the context of the Covid-19 pandemic and its impact on the Czech theatre environment, which was significantly affected. The theatres are among the most vulnerable part of CCI. Theatres show limited resilience to the crisis as their health was already before the Covid-19 crisis showing signs of structural issues. The objective was to find out how the Covid-19 restrictions affected different types of theatres and what was their response to the crisis.

The findings support H1 and highlight a higher impact on non-profit theatres as they are more vulnerable and missing the founders' stable backgrounds. Despite the massive public support of CCI to mitigate the financial loss, the non-profit theatres were not always able to benefit from this support. In contrast, the medium size and large theatres were able to reach public support and limit their financial losses (in some cases on the level of before-crisis income). Small non-profit theatres were not able to fulfil all administrative requests to claim public support and in some cases, they were even not able to manage the administrative burden of application. On the other hand, medium-sized and large theatres, which are mostly publicly founded, were able to follow up on the public support application. For independent theatres, crisis management is already part of their modus operandi. Non-profit theatres were able to react faster to the changes and realized more savings and introduced new forms of content

delivery to their audience. Thanks to the agility of non-profit theatres, they could stay in touch with the community, which could be essential for their future prosperity.

H2 was confirmed as the findings showed that the theatres founded by central or local governments were forced to dismiss less self-employed than the non-profit theatres. The self-employed cultural workers usually create the core of the small non-profit theatres and their dismissal is threatening the future survival and operations of those theatres. On the other hand, a few limitations need to be mentioned: a) limited amount of employees and self-employed at non-profit theatres as there are mostly micro and small organizations, b) protection of employees by theatres founded by central and local governments, which leads to dismissal of self-employed at first instance. This is in line with the literature, which showed that the group of self-employed will be the most affected by Covid-19 restrictions (Culture Action Europe & Damaso, 2021; EY, 2021; OECD, 2020) and the freelancer group is the most endangered.

The Covid-19 pandemic has shown the essential role of CCI for the society to survive the crisis, which was mirrored in the stable public and individual support to the cultural organizations. Before the crisis stability of an organization has a major influence on the resilience of the theatres. The size of the organization and the stable background of the founder has a major influence on theatres' resilience. Public support and funding solved the short-term financial issues of the Czech theatre sector, but long-term human resources-related issues remained untouched. The outcome of the ongoing crisis should be an opportunity for a new setup of the entire CCI, which could lead to a stronger position for the European CCI.

Our findings have few limitations. Despite the relatively strong response rate, we capture only screenshots of the entire Czech theatre environment during a limited point of time – two months after the first wave of Covid-19 restrictions. Despite these limitations, our study contributes to studies covering the impact of Covid-19 and the resilience of cultural organizations to the crisis. Our findings confirm that the theatres were hardly impacted by Covid-19 restrictions and that the non-profit theatres were hit harder than the theatres founded by central or local governments.

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## Contact

Jakub Grosman

Prague University of Economics and Business, Faculty of Business Administration,  
Department of Arts Management  
nám. W. Churchilla 1938/4, 130 67 Prague  
Jakub.grosman@vse.cz

Petr Prokop  
The Academy of Performing Arts in Prague, Theatre Faculty, Department of Arts Management  
Karlova 26, 116 65 Prague  
Petr.prokop@damu.cz

Daniel Šubrt  
Prague University of Economics and Business, Faculty of Business Administration,  
Department of Arts Management  
nám. W. Churchilla 1938/4, 130 67 Prague  
Daniel.subrt@vse.cz