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THE ECONOMIC IMPACT OF A CULTURAL EVENT: THE CASE OF THE KLAIPEDA SEA FESTIVAL 2010

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Abstract

The focus of the research is to estimate the regional economic impact of the Klaipeda Sea Festival 2010, which took place on July 30th – August 1st, 2010. The direct effect of the festival to the city's economy is calculated by surveying the businesses in five sectors (lodging, food and beverages, transport, entertainment, and souvenirs) and the local visitors. Simple output multipliers are then applied in order to measure indirect economic effects. The income received by municipality is also considered. The Klaipeda Sea Festival 2010 turned out to have a positive economic impact on the city's economy resulting from the lodging, food and beverages, transport, and municipality sectors. Nevertheless, the estimated impacts from the entertainment and souvenirs sectors are negative. The study contributes to current academic literature in the field of cultural economics by demonstrating a new approach for assessing the economic impact of the cultural events via combining both supply and demand sides, analyzing specifics of industries, and by presenting the first impact study in Lithuania.

Keywords: economic impact, the Klaipeda Sea festival, cultural economics, Input-Output table, multiplier

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1 Introduction

What is the value of a cultural event? A large cultural event may provide pleasure, satisfaction, perhaps even pride; however, none of these can be easily quantified and measured. The inability to put culture in quantitative terms sometimes leads to the sector being underrated and easily ignored. The scarcity of comparable measures can lead to funds being distributed inefficiently or shifted to sectors and industries that are perceived to be more important. The development of economic impact studies has shed some light on the way cultural events should be assessed and their impacts quantified. Economic impact studies can be used to inform authorities and businessmen of the benefits of cooperating and investing in tourism both for enterprises and the community. Such studies also broaden the perspective of tourism analysis, which is no longer based only on the statistics of hotel vacancies and visitor turnover. Tourism executives are able to evaluate the effectiveness of their work and understand their role in the development of the sector. Finally, economic impact studies act as a tool for the development of certain laws and policies related to cultural matters (Frechtling, 2006). Alternatively, economic impact studies can be seen as a substitute for financial balance sheets of the event or project in question (Crompton, Lee, & Shuster, 2001). In fact, an impact analysis can be more useful than a financial report as it addresses the most important question of any event – what "community residents receive in return for their investment of tax funds" (Crompton et al., 2001).

As pointed out by Herrero, Sanz, Devesa, Bedate and Del Barrio (2006), "the artistic and cultural activities have not only a key cultural and social value, but also an undeniable economic impact". Therefore, it is worth digging deeper into the field of Cultural economics. Cultural economics is defined as a specific disciplinary field dealing with "theoretical reasoning and empirical testing of human and institutional behavior towards present and accumulated culture" (Herrero et al., 2006). Cultural factors can determine economic development in several ways. First of all, cultural activities and cultural heritage generate a series of both direct and indirect economic effects and, therefore, contribute to the growth of seemingly unrelated sectors such as finance, construction, transportation, etc. Secondly, certain cultural elements (especially heritage) may in some cases be very attractive investment items. Moreover, the recently increasing

popularity of *cultural tourism* instead of *pure leisure tourism* has created lots of development opportunities for areas with cultural attractions (Herrero et al., 2006).

Economic impact studies are widely used around the world and not only in academic literature. While academics focus on applying different methods and dealing with new challenges raised by the designs of studies, most of the globally known consulting companies, among a variety of other services, are offering economic impact analyses. In the Baltics, however, such studies are not very common. In 2008 there was an attempt to estimate the economic impact of Dzintari Concert Hall in Jurmala, Latvia (Zemite, 2008); however, the narrow scope of the study does not imply any significant real life changes and the analysis provided is rather vague. As for Lithuania, no such studies have been performed in the field at all. Therefore the Klaipeda Sea Festival 2010, which is chosen in this study, creates the perfect setting for academic experimentation, without setting any limit on the scope of the study and could bring some valuable real life implications not only for the development of the festival, but also for the general acknowledgment of economic studies of cultural events.

Klaipeda Sea Festival is one of the oldest and biggest celebrations in Lithuania. In July 30th – August 1st, 2010 it was held for the 51st time and, according to the local media, attracted approximately 500,000 people. Even though the festival is an expensive attraction from the municipality's point of view, not much has been done in terms of assessing the economic impact or even the accurate number of residents and guests visiting the festival. Local festivals, like Klaipeda Sea Festival, are considered to be the means of promoting tourism and increasing the economic development of an area. As summarized by Felsenstein and Fleischer (2003), there are three most obvious arguments for treating local festivals as promotion tools. Firstly, they boost the local tourism sector. Secondly, they can help to form the reputation of the location and in such way become known for potential tourists. Thirdly, the festival's strategic placement in the city's cultural agenda can help to prolong the tourism season (Felsenstein & Fleischer, 2003). Having in mind the ideological and strategic importance of this event to local residents, organizations, and businesses, the need for an estimation of the economic effect of the festival seems to be crucial.

Taking into consideration all of the above, we raise the following research question:

What economic impact does the Klaipeda Sea Festival 2010 have on the city's economy? What are the direct and indirect economic effects of the event?

The description of Klaipeda Sea Festival is provided in the subsequent section, which is then followed by a discussion of existing academic literature in the field of Cultural Economics. Due to the fact that several research techniques (some being used for the first time in academic literature) are employed in this study to answer the questions raised, a detailed discussion on sampling procedures and other methodological tools is provided later in the work. The research then proceeds with an analysis of the results, and conclusions and future research possibilities finalize the paper.

2 Klaipeda Sea Festival

Klaipeda Sea Festival is a several-day festival held on the last weekend of July. Various activities take place in the city during the festival, mainly in the central area and nearby beaches: a huge variety of entertainment, ranging from the poetry evening to the craftsmen fair, amusement park, open-air concerts, ship races, etc. Over the years it has become the largest cultural event of the city, attracting a large number of guests and generating income to local businesses. Nevertheless, the festival is still dependent on the municipality's funding and, especially in the last years, on commercial sponsorship, the return on which is not clear. Therefore, in-depth analysis of a project like this is essential in order to see its economic impact on the regional economy.

So far local media has been practically the only source of information regarding the economic details of the festival. It was announced that in 2010 the budget of the Sea Festival was around 500,000-600,000 LTL (roughly 145,000-174,000 EUR) (Zebra, 2010). Another article claims that the organizers of the festival – public organization *Juros svente* – earned 527,700 LTL (153,000 EUR) in 2007 and 306,600 LTL (89,000 EUR) in 2006 (Zebra, 2008). The topics of the festival's income, expenses, employees' salaries, and the prices for the licenses during the event are always a sensitive topic for the regional press, so it is clear that the Klaipeda Sea Festival is interesting for the local people not only from the entertainment point of view, but also for the organizational processes and backstage affairs.

In the end of 2005 a representative survey was carried out by one market research company (due to confidentiality reasons company's name cannot be revealed and hereinafter it is referred to as *Agency*) with an aim to find what is the city inhabitant's attitude towards the Sea Festival. The results showed that 95% of the respondents perceive the Sea Festival as a very interesting celebration, 66% define it as the biggest event of the city, and 60% see it as the event that promotes the city. Only 3% of the respondents stated that they do not participate in the Sea Festival activities, which leads to the conclusion that in general (not talking about any particular year) almost the entire population of the city is involved. 57% of the local people have guests from other places coming over for the celebration, and the average number of guests is five. The most interesting day to visit the attractions is considered to be Saturday (on average 5.8 hours spent in the festival), followed by Sunday (4.3 hours), and Friday (3.8 hours). The research shows that on average a person spends 50 LTL (around 14.5 EUR) in the Sea Festival and the expenditure is distributed rather equally: 28% on entertainment, 25% on drinks, 23% on food, and 23% on souvenirs. The most fascinating attractions are considered to be the fireworks, parades and carnival, music concerts, folklore fair and nautical events. (*Agency*, 2005)

3 Literature Review

3.1 Economic Impact Analysis

The academic literature related to cultural events is mainly focused on two different aspects: the economic side of the festivals and sporting events, or consumers' satisfaction and perception analysis. The former group of research consists mostly of case studies with a focus on one individual event (Herrero et al., 2006; Morganti & Nuccio, 2004), but there are also attempts to grasp the aggregate economic impact of a number of smaller cultural events in the region (Gibson, Gordon, Walmsley, & Connell, 2010) or even measure how the preparation for the Summer Olympic Games 2012 is affecting the local business community of East London (Raco & Tunney, 2010). Moreover, some recent studies in the field have been transferred to a multi-country level and comparative stakeholders' analysis has been performed (Getz & Andersson, 2010). Various approaches of economic impact

studies can be applied for a wide set of events that differ in terms of size, purpose, location, funding, etc.

Morganti and Nuccio (2010) analyze a music festival called MITO which took place in Milan. The festival lasted 21 days in September of 2009 and offered 120 concerts and 150 fringe events of different genres in various locations. The entrance was free or of a budget price and the festival's budget of 6m EUR was half-financed by public funds. The events attracted more than 95,000 people, which in fact consisted of approximately 25,000 individuals attending several concerts. The study shows that MITO produced a total impact on sales of around 6.1m EUR and created nearly a hundred jobs (full-time and part-time). Moreover, the authors state that MITO should have a more international scale and focus on three main issues: district policy, building an international network, and offering not only concerts but also unique events for socializing and learning.

In the study by Herrero et al., published in 2006, the city of Salamanca in western Spain is the main focus of analysis as it was the European Capital of Culture in 2002. The authors differentiate between *cultural spending* and *spending on facilities and equipment.* What is more, they use the Input-Output Tables to calculate the impact not only for the autonomous community of Castillia y Leon, but also for the entire Spain and even for the global economy. The estimations of the economic impact are the following (approximated figures): overall 700m EUR, of which 542m EUR for Castillia y Leon, 108m EUR for the rest of Spain, and 52m EUR for the rest of the world.

Another related study is 'Identifying annual variations in the spending behavior and economic impacts of day trippers to Sacramento, California, USA' by Chhabra (2005). The focus of the study is the *day trippers,* which are defined as 'a tourist who spends less than 12 hours (does not stay overnight) at a tourist destination' (Chhabra, 2005). This definition is further broken down into two categories – leisure tourists and business travelers. An interesting point is that the surveys were carried out in two rounds – one in fall of 2001 (soon after the tragedy of 9/11), and the second in spring of 2002, so the author tries to make the conclusion that the terrorist attacks had a positive effect on domestic traveling. However, it is not clear whether this is due to more confidence or simply better weather conditions. Chhabra (2005) also uses OLS regressions to see what factors determine the

spending behavior of the day trippers and finds that age has a negative effect, leisure day trippers spend significantly more than business trippers, and the size of the group had a negative effect in 2001, but a positive effect in 2002. Regarding the economic impact estimations, the figures are: 49.7m USD in 2001 and 82m USD in 2002. Leisure day trippers contributed 32.5m USD and 54.7m USD in 2001 and 2002 respectively. 609 new jobs were created in 2001, and 993 in 2002.

In 2003 a research on two Scottish festivals in rural North Carolina was done by Chhabra, Sills and Cubbage. One festival analyzed took place for four days in 1997 and attracted slightly more than 17,000 non-local visitors, while the other festival took place one day in 2000 and had slightly more than 4,000 non-local visitors. The study shows that the total economic impact of the festivals represents only a tiny percentage of economic activity in the regions due to relatively small multipliers. Lodging expenditures turned out to have the greatest impact for the multi-day festival, while food and beverages expenditures were most important for the single-day festival. The total economic impact (meaning direct, indirect, and induced effects altogether) of the larger festival was 2.6m USD or 154 USD from every non-local visitor. The smaller festival's impact amounted to 82,600 USD, which is only 20 USD per each non-local visitor.

3.2 Contingent Valuation Model

In recent years a growing interest in the economic assessment of cultural events has led to the development of a new branch of impact studies, which instead of focusing on income generation in the economy via direct and indirect effects, try to measure consumers' utility and assess their willingness to pay (WTP) for the event. The studies employing Contingent Valuation Methodology (CVM) look at consumers' expenditure for a given level of public good and mathematically can be expressed as $e=e(p, q_0, u^*)$, where u^* represent utility function of market goods and level of public good, while q_0 is the current level of public good provided (Noonan, 2003). The model enables quantifying the effects of increased government spending on willingness to pay, which in turn means that it can be evaluated whether additional revenues could outweigh the costs. The research design creates grounds for easier comparison of a number of events by providing easily understandable, more generally applicable results and reducing the amount of necessary

data. However, even though the data collection process is not exposed to recall bias as the survey is based on prioritization of different options, the process is affected by other surveying characteristics. Noonan (2003) in his meta-analysis of the studies previously performed with the same methodology reveals that the WTP depends not only on objective and logical aspects such as size or topic of the event, but also on factors like format of the survey (door-to-door, phone, mail, etc.), so reliability of the studies diminishes. Therefore, as the uncertainty with regard to the optimal and most accurate method remains and a visitors' survey is needed, the methodology is hardly applicable for Klaipeda Sea Festival's impact assessment.

3.3 Input-Output Model

Wassily Leontief, a Russian-American economist, is credited for the development of the economic impact analysis. In 1953 he was awarded Nobel Memorial Prize in Economics Science for his research in the field of impacts of economic shocks and simplifying the Input-Output table (I-O from hereafter) making it more convenient to apply. Therefore, in more than 60 years a considerable amount of literature has been published that discusses the methods used for economic impact studies. Agha, as cited by Mondello and Rishe (2004), summarizes the common process of impact analysis short and simple: "the first step of the analysis is estimation of total direct spending. This is the largest component of the study; however, the easiest one to miscalculate as sampling techniques and adjustments to make regarding whom to include should be chosen carefully." It is also crucial to exclude the expenditure by local residents of the area as it is just the recirculation of already existing money flows and consumption shifted from a different time and potentially a different field. This means that only new expenditure, also sometimes referred to as in-scope expenditure, is considered as economic impact. Moreover, indirect (multiplier) effects have to be taken into account, as money spent by visitors goes through several subsequent rounds in the local economy and increases economic activity. The simplified scheme of an event's impact on an area is presented in the Figure 1 of Appendix A.

Most studies tend to use a rather unified methodology, but differences appear due to the specifics of the event (Herrero et al., 2006). One of the most popular (and thus the most

criticized) methodology is the I-O model. The I-O model is used widely for different event analyses: Felsenstein and Fleischer (2003) apply I-O to measure the economic impact of two music festivals taking place in small towns in Israel; Herrero et al. (2006) use it to estimate the impact of Salamanca, being the European Capital of Culture in 2002; Chhabra (2005) applies I-O to analyze the spending behavior, and economic impacts of day trippers to Sacramento, USA and also in another study of two Scottish festivals in rural North Carolina (Chhabra et al., 2003). Tyrell and Johnson (2006) use a slightly modified I-O approach to assess the economic impact of Newport Folk Festival, held in 1997 in Rhode Island, USA. Crompton et al. (2001) apply I-O for a four-day festival on Ocean City, Maryland, USA, which took place in spring 1999.

The majority of variations in the methodologies of economic impact studies arise in the very first step – the measuring of visitor expenditure. Frechtling (2006) presents and describes six main estimation methods that are officially accepted by the World Tourism Organization. A method is considered to be appropriate if it complies with three principles: relevance, coverage, and accuracy. The first and the most convenient method is to use existing data; however, such data is usually accessible only on a state level, whereas the economic impact is calculated for the sub-national area. The second method is to carry out household surveys, which is quite straightforward, but is often biased due to recall effects. The third method – visitor surveys – is considered to be the most accurate one, especially when the exit-survey model is used not more than 24 hours later after the event and the respondents still have 'fresh memories'. Frechtling (2006) also cites Smith, who states that 'most economic impact measures of tourism are ad hoc indicators based only on visitor survey data'. One more alternative method is to collect information on sales from the tourism establishments. Such data is highly reliable; nevertheless, it is hard to distinguish the customers in terms of residence area, i.e. locals versus festival guests. Another method is to use central bank records of foreign exchange transactions. This method is rarely used due to being subject to serious limitations. Firstly, it is suitable to estimate foreign-visitors spending only, and secondly, it is not possible to apply it to, for example, European Union countries that have a single currency. The sixth type of approach is expenditure models, which try "to capture the salient aspects of visitor expenditures without actually surveying visitors about this activity" (Frechtling, 2006). The simplest version of this research design

is using the expenditure ratio model, where the ratio is calculated as total visitor spending calculated from the survey divided by the total visitor spending on lodging. Then it is multiplied by the receipts gathered from the accommodation businesses in the area. The main drawback of this model is that it does not allow distinguishing visitor expenditures related to a particular event. Another version of the expenditure models is cost-factor analysis. The most frequently used framework is Travel Economic Impact Model (developed by the Travel Industry Association of America) which combines the activity levels for trips to certain places with appropriate average costs of each unit of travel activity (New Mexico Tourism Department, 2010). Unfortunately, this model also lacks the ability to distinguish visitor expenditures for individual events (Frechtling, 2006).

3.4 Computable General Equilibrium and Critique to Input-Output Analysis

Computable General Equilibrium (CGE) technique is the main competing model to the I-O estimation and its close variations. If for I-O analysis knowing the expenditure is enough, the databases for CGE-designed research should in addition include much more information with regard to industry spending, demand elasticity, etc., or as it is generally referred to - Social Accounting Matrix (SAM). The model is considered to be more rigorous and enables taking into account the constraints of the resources, which is more realistic than an analysis with all I-O assumptions (Dwyer, Forsyth, & Spurr, 2005). The idea behind the theory is that usually economic impacts are not exactly the same as net economic benefits from a cultural event, which in turn means that negative implications should be computed. The negative effects reported in Dwyer, Forsyth and Spurr's (2006) study on economic impact of the Quantas Australian Grand Prix, for example, were present in motor vehicle, water transport and transport services, communication and other industries. Similarly, a negative impact can be noticeable across different states or broader regions, not only industries in particular.

Even though the method could bring some interesting results, it is hardly applicable to the case analyzed. Firstly, the rationale behind using CGE instead of I-O analysis in most of the studies is the fact that the funding for a cultural event comes from the government on a national level, so it becomes essential to estimate whether the overall impact is positive or negative (Dwyer et al., 2005). However, in the study by Getz and Andersson (2010) on

festival stakeholders in four countries, it was concluded that local governments were the second most important stakeholder, while senior levels of government play a rather small role in the financing of an event. This is also the case with Klaipeda Sea Festival, which is usually funded by Klaipeda City Council and private sponsors, and in 2010 was fully financed by businesses (Pinigu karta, 2010). In addition, CGE outperforms I-O in terms of estimation precision as I-O analysis is usually suffering from overestimated results. Nevertheless, a study by Dwyer et al. (2005) suggests that most negative effects can be assigned to wider regions or the whole country rather than the region of the festival. The research question raised in this work is purely related to the economy of Klaipeda City, which means that the improvement on estimation precision from using the CGE model would hardly be significant. The CGE model is more complex and requires special software for analysis, thus making it costly and impractical to use.

The summary of the models discussed is provided in Appendix B, Table 3.

3.5 Sampling Techniques

The crucial part of every economic impact study on a cultural event is the sampling procedure as it creates the basis for the whole research and greatly influences the reliability of the work. As it has already been mentioned, the first of the adjustments to make to the whole festival audience population is the exclusion of local residents from the area of interest, as their spending does not create any additional stimulus to the economy (Crompton, 2006). Moreover, a precise definition of the geographic area is important to successfully identify the outsiders, which are the focus of every economic impact study. Crompton (2006) also distinguishes two other groups of visitors: ‘time-switchers’ and ‘casuals’, which are sample-exclusive. Chhabra et al. (2003) define ‘time-switchers’ as cultural event guests who intended to visit the city or region already in advance and the festival created an incentive to align the dates of the two. People who belong to this type of customers do not create additional economic activity, but rather shift their expenditure in time bringing effects similar to the ones implied by local inhabitants. As opposed to ‘time-switchers’, ‘casuals’ do not have any particular interest in the event and visit the area for other reasons, however, get involved in the activities while being on site. Even though

conceptually the origin of the groups is opposite, the implications to impact studies are the same and should be adjusted for in direct expenditure calculation.

3.6 Multiplier

Estimating the direct effects of visitor spending on the local economy can be easily performed and primarily requires a thorough sampling procedure. The calculation of indirect effects, on the other hand, can be more challenging as acquiring precise multipliers is essential in order to perform an adequate and reliable analysis. Most studies use publicly available multipliers, for example those published by the Bureau of Economics of the U.S. Department of Commerce (Horvath & Frechtling, 1999), or Minnesota IMPLAN Group (Mondello & Rishe, 2004; Crompton et al., 2001), etc. It is important to note that multipliers differ among countries and regions, therefore making available multipliers of other regions not applicable. The size of a multiplier is determined by many factors such as the size of the area, its internal economic structure, as well as industrial and commercial linkages to the surrounding localities (if interregional effects are of primary interest) (VanBlarcom, 2007).

Calculation of multipliers has been researched extensively in recent years, which has led not only to several different multipliers being applied nowadays, but also produced a diversity of names for them, which causes confusion. Miller and Blair, as stated in Schaffer (1999), in their work distinguish three categories of multipliers: output, income and employment, with several different types included in each of the categories. Income multipliers are designed to evaluate how the money created in the economy circulates from the household perspective, and are taken directly from the I-O matrix, while output multipliers consider industrial activity and represent a sum of partial industry multipliers. Employment multipliers are created for evaluating new employment created by the economic shock and are usually calculated using the employment-output ratio (change in employment proportional to change in output).

It is also important to define direct, indirect, and induced effects, which help to understand the differences between the various types of multipliers within each category. When only direct effects are taken into consideration, the multiplier is 1. Indirect effects

grasp the effects of a unit change in final demand (inter-industry relations), whereas induced effects measure the effects of changes in household income.

4 Methodology

4.1 Scope of the Study

Klaipeda city as referred to in the research question can be defined as a territory in the western part of Lithuania and administered by the Municipality of Klaipeda. The territory is of 98.35 sq. km size and at the beginning of 2010 hosted a population of 182,752 (Statistics Lithuania, 2010).

Due to the timing of the study several adjustments must be made regarding the usual design of the economic impact study. Both the supply approach (i.e. business survey) and the demand approach (i.e. local visitors' survey) are combined to estimate the incremental spending (VanBlarcom, 2007). The logic behind the adjustment is that if the expenditure would have occurred in the same region independently of whether the event took place or not, it is not incremental – the money would have been spent anyway (Research Resolutions and Consulting Ltd., 2005). Local visitors are likely to spend money in Klaipeda city even if there is no festival, thus their expenditure has to be deducted from the total business revenues.

It should also be noted that several simplifications to the general methodology are made in this study. Firstly, we are not able to breakdown festival visitors according to their accommodation, length of stay, whether they are participants or spectators, etc. This is a rather usual procedure in economic impact studies; however, it is impossible to perform when a survey of non-local visitors as such has not been conducted. Nevertheless, as said by Dr. VanBlarcom (2007), 'those with experience in economic impact analysis caution that this process involves assumptions and estimates and the impact numbers should be regarded as 'best estimates' rather than as 'infinitely precise'.

The methodology of this study follows three major steps: a survey of the companies operating in certain business sectors, a survey of the local people, and the estimation of direct and indirect economic effects using the regional industry multipliers. The business survey is needed to estimate how much money locals and visitors from other regions spent

during the festival combined, while surveying the locals enables grasping the size of expenditure made by locals. The difference between the two then represents the spending of non-local festival attendees, only which is considered to be new expenditure generated in the economy. In the following sections each of the steps is described in more detail.

4.2 Business Sector Survey

4.2.1 Businesses' Survey Design

As noted by VanBlarcom (2007), the objective of the impact studies is to measure how much economic activity has been increased by an event. That is, to compare the value of sales (or turnover) during the period of the event with the figure that would have been observed without the event. Data can be gathered by conducting either a visitor survey, which enables directly estimating new expenditure, or a business sector survey which then should be supplemented with a locals' survey. As the festival analyzed took place in August 2010, it is not possible to apply the intercept interviews (exit survey) method. In order to be as precise as possible while estimating the turnover that would have been hypothetically earned, we compare the Festival weekend's revenues with the ones generated during the weekend after the event (6^{th}-8^{th} August, 2010). The same year is chosen to capture the same general economic situation, while the weekend closest to the event - in order to be able to avoid seasonality effects. We could refer either to the weekend before or after the festival; however, the weather conditions during the weekend after were more similar to the weather during the Klaipeda Sea Festival (the week prior to the event was slightly colder).

4.2.2 List of Enterprises

In the economic impact studies the categories of businesses are usually selected optionally, depending on the event analyzed. The survey of enterprises in our study focuses on six sectors that are directly related to the Klaipeda Sea Festival (see Appendix A, Figure 2). We use the website visalietuva.lt – the Lithuanian yellow pages directory to compile the list of the companies in each sector and to get their contact details. For this research we could also use data from the national registry 'Registrų centras', but it cannot be accessed free of charge and contains essentially the same information as free yellow pages.

Moreover, the list is supplemented with businesses and individuals that received the special license to trade in the craftsmen fair during the Klaipeda Sea Festival, which is acquired from the organizers of the festival. Initially, the following six private business sectors were considered: lodging, food and beverages, transportation, retail, entertainment and craftsmanship/souvenirs.

4.2.3 Sampling

In sectors with a relatively small number of companies (lodging, transportation, entertainment, souvenirs) we have taken a census of all the operating companies. Other sectors required choosing a sampling technique from two available options: a quota sampling or a systematic scheme. As it is rather complicated to estimate the quotas based, for example, on the number of employees in a firm, this technique was rejected and systematic sampling method was used instead. The systematic sampling method is a version of probability sampling, similar but easier than a simple random sampling. It requires a certain sampling frame, where 'a random starting point is selected on the list and every 'nth' name or unit is selected from that point on' (Gray, Williamson, Karp, & Dalphin, 2007). The main advantages of this method are its simplicity and the assurance of evenly picked items, while the drawback is that the selection frame may contain a hidden pattern that compromises the representativeness of the sample (Gray et al., 2007). However, this problem is more likely to occur when sampling units such as houses or newspapers. In the case of this research paper the pattern was avoided as the companies were ranked in alphabetical order before the typical selection procedure[1] was applied.

The total revenues earned due to the Klaipeda Sea Festival in 2010 are calculated using the following formula (compiled according to VanBlarcom, 2007):

[1]n companies from a population of N companies are selected with the sequence of procedures:

1. Label each company as x_i, where $i \in [1; N]$;
2. Randomly select one item from the first group of k items in the list, where $k=[N/n]$;
3. Keep picking k^{th} company, x_i, x_i+k, x_i+2k,… until the sample contains n companies (Planet Math, n.d.). If the response rate is low, more companies are selected in the same way until enough data is collected.

$$S = \sum_{i=1}^{m} N_i \times B_i$$, where

S = total spending within the designated area, i.e. Klaipeda city,

N = total number of companies of interest in a sector *i*,

m = number of sectors,

B_i = average revenues of a member in the sector *i*.

4.2.4 Data Collection Procedure

The majority of the businesses were contacted via phone. At first we briefly informed them about the research and then asked if they were willing to participate in our survey. Then we asked if we could e-mail them a letter with a link to the survey. A portion of the companies answered the questions immediately via phone; some also suggested arranging a meeting or refused to participate at all. Regarding the largest or strategically most important companies (the biggest hotels, restaurant chains, or the ones that are usually especially crowded during the festival), we arranged short personal meetings with the managers. Personal meetings allowed us to be more convincing, to look more reliable, and also to get more insights on specific industry matters.

Moreover, we had a recommendation letter from the pro-rector, which was sent or shown to those who were quite skeptical about the research. We also revealed our contact information (surnames, e-mail addresses, and telephone numbers) in every letter, in the survey, and distributed our contact cards in the meetings. Moreover, we ensured interviewees and survey respondents that all the data will be used on an aggregate level only – this is why there are no explicit calculations shown in this paper. To sum up, all these actions were taken to ensure the companies that no strategically important or sensitive information would be revealed to the public and so that managers would be more willing to co-operate.

In addition, the questionnaire was designed so that it would require very little time to fill in: there were only four questions about the sector, whether the company worked during the festival, what revenues the business generated during the festival and the

percentage change in turnover in comparison to the weekend after. The questionnaire for the businesses can be seen in Appendix C.

4.3 Local Visitors' Survey

The study carried out by *Agency* at the end of 2005 shows that 97% of Klaipeda's residents participate in the Sea Festival either every year or at least every few years. Therefore, a representative survey for basically the entire population of the Klaipeda city was carried out following a similar sampling technique as used by *Agency*. The calculated representative sample, which is necessary in order to achieve the confidence level of 95% and a confidence interval 4, for the 146,213 Klaipeda city residents in the age group 15-74 (out of 182,752 city residents in total) includes 600 respondents (Creative Research Systems, 2010). Due to the rather large sample requirement several sampling methods were combined.

Proportional Quota Sampling is used when a researcher wants to represent the characteristics of the population by sampling an appropriate portion of each characteristic (Research Knowledge Methods Base, 2006). In this study, proportional quota sampling is based on age groups. The sample size implies that most responses could be collected via online surveys. Nevertheless, to avoid selection bias of only Internet users being reached, a part of the responses (in total 237 - based on the proportion of Internet users in Lithuania) should be collected by distributing hard copies of the questionnaires (the distribution of six major age groups in the population as well as online/offline respondents' proportions can be seen in Appendix F, Table 6). Facebook and its Klaipeda-related groups were used to spread the questionnaire online. Due to the wide range of age groups necessary to represent, the questionnaire was also sent to companies operating in Klaipeda city and representing a variety of industries: manufacturing, food and beverages, energy, etc. The rest of the survey was carried out in the form of hard copies by questioning people, both visitors and sellers, in the local market.

4.3.1 Questionnaire

The visitor questionnaires for estimating total expenses are quite standard in the economic impact studies. As suggested by VanBlarcom (2007), the exemplifying framework can be taken from the AVESTA website and adjusted to the needs of a

particular study. The questionnaire available online is thus adjusted for the Klaipeda Sea Festival. It consists of three parts. The first part includes general questions on demographics (gender, age group, place of residence) and the number of days of attending the event, as well as the question whether a respondent participated in the festival at all. The latter question is asked in order to evaluate the real proportion of the attendees of the festival in the city's population. The second part - the core of the locals' survey - asks to provide the best estimates of the amount spent on different categories of products and services. The results of this section are used to calculate the mean spending of local visitors and then to assess the total locals' expenditure (by multiplying the mean and the number of local attendees).Part three consists of questions that help to identify the locals as 'time-switchers' and to clarify the effect of Mika's concert to some extent (more information about the concert and its effects on the study is provided in the delimitations section). The full questionnaire can be found in Appendix D.

The questionnaire was translated into Lithuanian and a pilot survey including 8 people was conducted. The respondents represented different age groups (3 participants of the pilot survey belonged to the age group 15-24 and the remaining 5 people represented each of other groups analyzed). Some misunderstandings were clarified and the structure of several questions in the third part was changed, which created grounds to believe that the clarity of the remaining questions asked was sufficiently high.

4.4 Multiplier

Due to the fact that neither Statistics Lithuania nor Klaipeda Business Development Agency is calculating regional income multipliers, we construct the multiplier using the I-O table provided in the Eurostat database (n.d.) and a free software IRIOS 1.3 (Stelder, Oosterhaven, & Eding, 2006) that enables to calculate necessary simple output multipliers and can also be used for more rigorous analysis of economic shocks. The multiplier is computed automatically; nevertheless, the logic behind the calculation of regional multipliers is provided in this section.

I-O tables report monetary values of the industry's inputs as the representation of other industries' outputs. Wassily Leontief is credited for the development of the model, which is now extensively used in a variety of impact studies and for the identification of

economic clusters, or in other words - related sectors in the economy. The total output can be expressed as a sum of intermediate goods (inputs) and the demand for final goods created by a sector. The core I-O table is constructed of sectors denoted as *i* and industries *j*, generated flows of sectors to the industries x_{ij}, final consumption c_i and total output of the sector x_i. Numbers of sectors and industries are similar, except for the fact that payments to employees made by each industry is considered to be a separate sector and is placed in the bottom of the table, which results in the table being asymmetric (Schaffer, 1999). An example of the table with 4 sectors (the 4th being labor) is provided in Table 1.

Table 1

The core I-O table

	1	2	3	Final demand	Total output
1	x_{11}	x_{12}	x_{13}	c_1	x_1
2	x_{21}	x_{22}	x_{23}	c_2	x_2
3	x_{31}	x_{32}	x_{33}	c_3	x_3
4	x_{41}	x_{42}	x_{43}	c_4	x_4

Note: Schaffer, 1999.

From this table Leontief defines the sales of sector *i* to industry *j* as a linear function of total output: $x_{ij} = a_{ij} * x_j$. Therefore, the total output can be expressed as:

$$x_1 = a_{11}x_1 + a_{12}x_2 + a_{13}x_3 + a_{14}x_4 + c_1$$

$$\vdots \quad = \qquad\qquad \vdots$$

$$x_4 = a_{41}x_1 + a_{42}x_2 + a_{43}x_3 + a_{44}x_4 + c_4$$

The matrix of Leontief coefficients a_{ij}, can be written as $A = \begin{pmatrix} a_{11} & \cdots & a_{14} \\ \vdots & \ddots & \vdots \\ a_{41} & \cdots & a_{44} \end{pmatrix}$ and the simple output multiplier of the industries in the hypothetical economy of the example expressed as a sum of partial multipliers:

$$a_1 = a_{11} + a_{21} + a_{31} + a_{41}$$

$$\vdots \quad = \qquad\qquad \vdots$$

$$a_4 = a_{14} + a_{24} + a_{34} + a_{44}$$

4.5 Delimitations

4.5.1 Multiplier Calculation

Besides the lost opportunity to apply precise multipliers for each sector due to the data provided by Statistics Lithuania being too aggregated and outdated, there is one more limitation related to the calculation of the multipliers. The multipliers calculated measure the economic activity in Lithuania rather than Klaipeda city, which is the focus of this work. This means that the result is likely to be slightly upward-biased: enterprises in Klaipeda city might not have access to the production of all the suppliers locally, but rather use services and products made in Lithuania, which then should be considered as an interregional flow. Nevertheless, the structure of the industries' outputs should not vary significantly in such a small territory as Lithuania and its parts.

4.5.2 Concert of Mika

On the 1st of August, the last day of the Klaipeda Sea Festival 2010, a concert of the famous British pop singer Mika took place. The concert of Mika was organized by the private company Medusa Concert Ltd. and took place in the Cruise ship terminal, the territory entrance to which was restricted for non-participants. The ferry service was also closed in order to protect the concert from 'free-viewers'. Therefore, the attendees of the concert represent a type of 'casuals' and have to be accounted for. According to the media, the concert attracted around 7000 people, mostly from Vilnius and Kaunas (Delfi, 2010). Nevertheless, as it was mentioned before, effects of 'casuals' cannot be extracted from the calculation using our alternative approach: the adjustment is hardly possible as visitors are residents of different regions and thus cannot be easily identified or reached.

However, the interconnectedness of the events cannot be denied as well: the presence of the festival had definitely contributed to the promotion of the concert and vice-versa, so we believe a large proportion of the Mika's concert audience were actually people whose decision to attend the concert itself was influenced by the presence of the Sea Festival. What is more, the concert was organized in Klaipeda and not in Vilnius specifically because of the festival - even though they were officially regarded as two different events the concert was later included into the official program of the Sea Festival as well as named 'peak of the festival' by people and media. All this provides strong

grounds for treating Mika's fans as regular visitors of Klaipeda Sea Festival 2010. The survey results indicate that only a small portion of Klaipeda residents attended the concert and basically all of them would have participated in the events of the festival had no such concert taken place.

4.5.3 Employment and grey economy

Economic impact studies usually do not only measure monetary effects, but also try to evaluate changes in employment created in the economy by an increase in demand during and after the event (Schaffer, 1999). The calculation of the increase is simply made by using an existing employment-output ratio and evaluating its proportional change. However, in this way the level of resource utilization before the demand shock is not taken into account, so the estimation is likely to be upward-biased. On the other hand, in this study a question about new hires during the festival could have been included into the business survey; however, we believe that including it would have caused a lower response rate and led to less reliable data. Employment could be an even more sensitive topic to businesses than revealing revenues if some illegal activities have been undertaken, and with short-term seasonal employment in mind this is likely to be the case. Therefore, not being able to precisely measure the effect on employment we cautiously exclude the aspect from our analysis. We also abstain from trying to evaluate the size of the grey economy as it is beyond the scope of this study and would require a different research design.

5 Empirical findings

In the subsequent paragraphs the results of our study are presented. Firstly, the direct impacts from each sector to the economy of Klaipeda are calculated and explained. Secondly, the results of the Klaipeda residents' spending are showed. Then the multipliers and total economic effects resulting from each industry are computed and explained. As it has already been mentioned before, the explicit calculations of the change in revenues are not displayed due to the agreements with the parties that provided the data.

5.1 Businesses Survey Results

Lodging; Accommodation sector is usually included in the methodology of the economic impact studies which analyze the several-day events. Hotels, hostels, and guest

houses by nature attract revenue from the people who are not residents of the area; therefore, the estimation of the direct and indirect effects is vital for the event studies. Moreover, locals do not contribute to the revenues of the lodging industry, so there is no need to deduct their expenditure from the total income, as it is the case in other sectors. There are 41 accommodation services providing companies registered in Klaipeda city that suit our research design. We managed to get 25 valid responses and achieve a 71% response rate.

The average increase in revenue during the Klaipeda Sea Festival 2010 was 1705.76 LTL (494 EUR) per company. During the phone interviews and meetings the representatives of the hotels claimed that such increase is not a significant portion of their usual turnover. The reason behind this is that the Klaipeda Sea Festival takes place during the peak of the summer holiday season, when the hotels are already working at their full capacity. Therefore, the increase in revenues comes from slightly raised prices during the festival days (personal communication, January, 2011). The total change in revenues compared to a usual weekend is 69,936 LTL (20,255 EUR), which is also the direct impact of the festival on the lodging sector of Klaipeda's economy.

Food and beverages; The food and beverage industry is vital for the Klaipeda Sea Festival study as most of the events and performances in the crowded city center are accompanied by bars, restaurants and outdoor food stalls. The primary list, downloaded from the yellow pages directory, contains 233 entries in this sector. After the necessary adjustments we were left with a list of 140 companies and received 92 valid answers, which yields a response rate of 66%.

The total income for the food and beverages sector during the Festival is estimated to be 4,859,768 LTL (1,407, 486 EUR). More details in this sector cannot be provided due to a couple reasons. Firstly, part of the data was acquired solely via questionnaire, while the major restaurant chains were approached separately and provided the information in a different format. Secondly, the estimation of the direct impact would be more accurate if we would have obtained the distribution of companies based on their size, location, and the number of sites owned. However, we do not include such questions in the survey because of confidentiality concerns – with such information it is quite easy to identify which

company reported what figures. The companies could perceive such questions as suspicious and this could have resulted in a dramatically lower response rate.

The average increase in revenues for the cafes, bars, and restaurants is 24% (see Table 5, Appendix E). On the one hand, cafes, bars and restaurants that are located in the Old Town, which is the main site of the Festival activities, experience a sharp increase in customer flow and thus in revenues. On the other hand, those businesses that are situated elsewhere do not attract additional customers. Some even face a decline in turnover because their usual customers switch to places in the city center during the festival (personal communication, January, 2011).

Retail shopping; Retail sector appeared to be the most complicated to analyze in the case of Klaipeda Sea Festival 2010. It contains 217 entries ranging from individually owned grocery stores to retail chains like “Maxima” and “Rimi”. To obtain a representative sample, we would need to classify the retailers according to the goods they offer. It would be especially time-consuming as a large portion of the list is small size enterprises with no description of their business activities: they are listed just as “commercial firm”, “private enterprise”, or “limited liability company”. Moreover, even if we were able to identify the business spheres of the retailers, it would still be unclear how to treat them. As there are no previous studies that would deal with estimating retailers’ revenue, there is no generally accepted technique. We could treat all the revenues in the sector the same way, but we could also isolate the large retailers (like Maxima or Rimi), because it can be argued that their income is transferred to the company’s headquarters and leave the city’s economy. Thus the final estimation would depend purely on our subjective judgment. Moreover, the large retailers are very unlikely to share their financial information even for the research purposes.

Even though it is too complicated to estimate the change in revenues in this sector, it is possible to ratiocinate at least the general trends of money flows during the festival. If we would be able to look at the revenue composition in the large shopping malls (Akropolis, Banginis, BIG) during the days of the event, we would probably see a shift in terms of the origin of the customers. The people who come to the Klaipeda Sea Festival from the small towns or villages usually use the opportunity to shop for clothes, outfits, or

other items in the large shopping centers. For Klaipeda residents it is easier to shift their shopping patterns for non-essential goods to a later period in time so they are less likely to go shopping during the festival. Following this logic, we would expect these two effects to cancel each other out or the non-resident shoppers' effect to be slightly bigger.

Smaller grocery stores are likely to demonstrate a slightly different pattern. Festival visitors who come to the city for the celebration are likely to eat out (if they stay in the hotel) or to have their meals with friends or relatives who live in Klaipeda (if they stay with them). Therefore, it is likely that the food stores do not feel any significant effect of the Klaipeda Sea Festival. However, the stores offering more limited number of goods (mostly alcohol beverages, cigarettes, snacks, and ice-cream) usually experience a substantial rise in turnover. As such stores are usually located in the city center; they become the usual choice for festival visitors wishing to buy snacks or refreshments but not willing to pay high prices in bars and cafes. Also, as many of the activities during the festival are outdoors, the possibility to carry the food or beverage with you is another advantage of small beverage and snack retailers.

To sum up, from all the retail sector the small stores that sell refreshments and snacks are most likely to feel a significant change in revenues during the festival. However, the impact is not estimated in this study.

Transportation; As the number of people in Klaipeda city increases substantially during the Klaipeda Sea Festival, it inevitably affects the city's transport infrastructure. It is interesting not only to see the monetary impact, but also to look at what actions different transportation providers take up during the festival and how they are interconnected. The primary list of the sector contains 52 companies. The majority of them are car rental companies which we consider unrelated to the Klaipeda Sea Festival. The adjusted list has only 12 companies left, which we classify into five categories. As we cannot use the same sampling techniques as for the lodging or food and beverages sectors, a wide range of alternative methods are employed to obtain necessary information.

The precise revenue for the public enterprise "Klaipeda passenger transport", which runs the public bus service in Klaipeda city, is impossible to specify. As the representative of the company explained, the company had started implementing the electronic system

that would allow tracking the number of passengers using public buses only several months ago. They do not have the data for July 2010, and they also do not know how many paper tickets were sold and used during the weekend of the festival. However, they shared information about additional bus routes (mostly night buses) as well as costs related to those routes and reinforced security. According to the company, additional revenues they earned basically match the additional expenses, thus we use the figures of expenses in our analysis and the estimated increase due to the festival is 12.24% (personal communication, February 15, 2011).

The Joint Stock Company "Smiltynes perkela" is the business that operates passenger and vehicle ferries between Klaipeda and the Curonian Spit. The Curonian Spit is a popular holiday destination in general and becomes even more attractive during the Klaipeda Sea Festival as some activities (mostly sport tournaments) take place in Smiltyne's beaches. We acquired the precise quantities of the passengers and vehicles during the respective weekends, which enabled to calculate the change in revenues, which turned out to be 25.11%. The industry expert also claimed that the effects of the festival are double-sided. On the one hand, the number of customers increases dramatically (60% more passengers and 20% more vehicles). On the other hand, during the celebration the company must rearrange its timetables and routes. The 1st ferry terminal (in the city center) is temporarily moved to another place, because ships and yachts visiting or participating in the festival need extra space to wharf. The activities in the 2nd ferry terminal (which has more capacity for motor vehicles) are slightly limited because of the events that are taking place in the Curonian lagoon (ex. wreath-laying ceremony for the gone sailors). So, according to the interviewee, there would be some potential to increase the revenues even more if the ferry infrastructure would not be disturbed by the above mentioned factors. However, with the organizers' plans to expand the marine-related activities in future festivals, it is unlikely to happen (personal communication, February 14, 2011).

There are 10 registered taxi firms and some taxi drivers who operate their private cars independently. We have conducted conversations about the sector with directors of several taxi firms whom we managed to reach and estimated the total figures using the information they provided. They claim that on weekends all the companies are working at

almost full capacity, so the Klaipeda Sea Festival does not have a big impact in terms of the number of customers. However, the fares are usually higher, which leads to the turnover during the days of the Festival increasing by approximately 25% (personal communication, February, 2011). It might be possible that during the festivals prior to 2010 the differences were even larger, but, as stated by the person from the "Klaipeda passenger transport", in 2010 many people used much cheaper night buses, which might have stopped taxi companies form raising the prices to the levels of earlier festivals (personal communication, February 15, 2011).

Another type of transport in Klaipeda is minibuses. There are 10 enterprises registered in Klaipeda, and, because of the specific regulations for each specific route, each of those companies specializes in one or at most two routes. However, the owners of the minibus firms were reluctant to reveal any financial information due to last year's conflict with the municipality and the "Klaipeda passenger transport", who are forcing the minibus companies to keep raising their fares in accordance to public bus ticket prices. Nevertheless, some important information was obtained from a person who had been working on a project with all the minibus companies half a year ago. The data shows that the minibuses experienced a 67% increase in revenues during the Klaipeda Sea Festival 2010 (personal communication, February 18, 2011).

Another necessary step to complete the analysis of the economic impact on the transportation sector is to add the revenue difference of the JSC "Klaipedos autobusu parkas". This company operates 11 intercity and 4 international bus routes, so it is necessary to estimate the change in revenues for the buses that run the non-local routes. Based on our data, during the Festival weekend the company faced a 24.4% increase in turnover.

To sum up, the transportation sector generated an additional 1,210,359 LTL (350,544 EUR) during the festival, representing a 25.19% higher income with as compared to the weekend after the festival took place.

Entertainment; Entertainment sector presents an interesting case for the study due to the specificity of the companies that belong to the industry. The primary list consists of 62 entries, and roughly half of them have to be discarded because of their location or the

unrelated ventures like betting firms. This leaves us with 28 businesses, which we divide into several categories.

The biggest category – 17 different organizations – consists of museums, theatres, and art galleries. We contacted the majority of them and received a quite precise picture of the situation. Museums and galleries in Klaipeda are closed on weekends. Theatres that are public organizations revealed that if they participate in the Sea Festival's activities, they do that by order of the municipality and do not generate revenues because most of the events during the celebration are for free (personal communication, February 3, 2011). Theatres, culture centers and organizations that are independent from the municipality appear to be boycotting the whole festival as such. They feel that the average visitor of the festival is too different from their target audience and that the festival events are too distinct from what they see as "art and culture". Some of the representatives even claim that they usually try to leave the city during the celebration. Thus, with public organizations performing for free and private organizations not participating at all, the revenue can be regarded to be zero. The only organization that generates additional value due to the Klaipeda Sea Festival taking place is the Lithuanian Sea Museum located on the Curonian Spit. The increase in the museum's revenues is approximately 25% - the same amount as for the Smiltyne Ferry Company.

Another category consists of casinos. There are four different companies registered operating in Klaipeda city. Unfortunately, due to the specific nature of their business, it is impossible to get the information about their revenues.

Nightclubs are the only category of the entertainment sector for which we managed to receive precise revenue figures (except for the Sea Museum). During the Klaipeda Sea Festival 2010 seven main nightclubs were operating. Three of them, namely "Lamborghinio", "El Calor", and "Manhattan", have been facing financial problems for more than a year already and, to our knowledge, none of them is operating at the moment. The other four reported a sharp rise in revenues during the festival. "Kiwi" organized a floating "Kiwi Boat Party" in the ferry which was dedicated both to the Sea Festival and for the birthday fiesta of the club's resident DJ. "Dr. Who" organized three parties in its open terrace during the celebration, one of which was the official after party for the singer Mika

who was the headlining act for the 2010 festival (Klaipeda Diena, 2010). “Roxy” cooperated with the company “Memel City” and used its industrial-turned-entertainment space in the quay for day time concerts and night time parties throughout the whole festival. “Martini” did not offer anything special as it had celebrated its fifth anniversary just a week before the Sea Festival. However, it still had an additional stream of clients. Even though the turnovers of the clubs during the festival were around 44% higher than during the following summer weekend, the total figures are still relatively small: totaling 468,389 LTL (135,369 EUR) for the weekend. This can be explained by the summertime being the worst season for nightclubs in general. The revenues of the entertainment industry are presented in Table 5, Appendix E.

The craftsman fair: souvenirs and participation fees; The craftsman fair that is always taking place during the Klaipeda Sea Festival is a vital part of the festival not only from the tradition point of view, but also because the income received from the trade fares constitute around 30% of the festival’s budget. The cooperation agreement signed with the organizer of the event - public organization “Jūros šventė” – enables us to access some confidential data about the festival. It is especially helpful for the analysis of the souvenir sector as in general the data on the fair’s participant structure, number of participants, and contact details is protected by law and is possible to obtain only after an official contract with the organizers.

There were 374 participants in the fair of 2010. However, only 7.4% were local sellers. Almost two thirds of the traders came from Vilnius and Kaunas regions, while the remaining part represented various smaller towns of Lithuania. As only 28 craftsmen who traded in the fair were Klaipeda residents, 22 of them were contacted and 20 answered, which resulted in a 91% response rate. As we were allowed by the festival’s organizers to communicate with the fair’s participants as their official representatives, the craftsmen were willing to provide the information. The average revenues for one craftsman was indicated to be 3,529 LTL (1,022 EUR), meaning that all local craftsmen earned 75,601 LTL (21,896 EUR) during the celebration.

The participation scheme of the fair is also important for the economic impact assessment. In order to receive permission to trade during the Klaipeda Sea Festival, it is

necessary to submit an application in the beginning of summer and to book a retail area through the ticket selling agencies. The area of the fair is divided into three sections according to location, with more central locations having higher rent rates. All the interviewees claimed that as a rule of thumb the fare they pay for the place corresponds to 30% of the turnover generated. As the official financial report of the 2010 festival is not yet finalized, we have estimated the total amount of rental income collected according to the fair's plan and the prices per place in each section. Then we computed the amount paid to the organizer of the festival by the participants who do not reside in Klaipeda, which was 286,733 LTL (83,043 EUR) (Appendix E, Table 5).

5.2 Local Visitors' Survey Results

5.2.1 Sample description and adjustments

The locals' survey has been answered by 611 people: 83% of the respondents filled in an online survey, while the remaining 17% (or 103 people) were questioned on site. In comparison to the planned sample size and proportions, the real sample structure is slightly different: the youngest group is overrepresented, while the elderly are underrepresented. The precise sample structure is provided in Appendix F, Table 6.

The sample is adjusted by excluding cases that represent a mismatch within the answers. Such cases include stating non-attendance of the festival, while at the same time: a) saying on which days it was visited; b) providing figures on expenditure during the celebration. Not being able to fully control the spread of the survey, some non-Klaipeda city residents have filled in the survey. These cases have also been removed before calculating the attendance rate. Therefore, the attendance rate of the Klaipeda Sea Festival 2010 by Klaipeda city population is estimated using the final sample of 485 responses and equals 87.01%. The rate differs among the age groups: it represents a decreasing trend with respect to age (see Appendix F, Table 6).

In order to reduce the effects of recall bias some more answers are excluded before further analysis. The question "Please state the days of Klaipeda Sea Festival 2010 that you attended" has a possible answer "I don't remember". As a result, it is assumed that people who cannot precisely name the days they attended the festival on are also likely to misstate their expenditure, which requires even more precision and "fresh memories".

Disproportionally to the population where number of men and women is approximately equal, 35% of the survey respondents were men, while women comprised the remaining 65%. This sampling bias is adjusted for by using the post-stratification technique, which allows performing analysis based on weighted groups. A detailed calculation of the weights, which in this case are based on gender and age group, is provided in Appendix F, Table 7. In order to estimate the total spending of locals during the weekend when Klaipeda Sea Festival 2010 took place, the mean spending on goods and services provided by the 4 sectors of interest is calculated.

One limitation of the alternative approach used in this research is the disability to extract the effects created by 'time-switchers' and 'casuals'. However, we argue that 'casuals' should make up a very little number of Klaipeda Sea Festival visitors and be represented mostly by foreigners. The reasoning behind this is that Klaipeda Sea Festival is an old event receiving huge press coverage each year both before and after the festival, so it is rather impossible for Lithuanians not to be aware of the fact that the celebration is taking place. 'Time-switchers' should also present only very small portion of festival visitors. The festival takes place during a summer weekend, which lessens the probability that special vacation plans are needed: people are likely not to have a particular plan for a summer weekend until it becomes clear what weather could be expected. Therefore, in summer 'good weather' rather than 'presence of the festival' effects are more likely to influence the decision to visit Klaipeda.

Even though the groups mentioned above cannot be excluded, the research design enables grasping the effects of 'local time-switchers'- locals, who stayed in Klaipeda because of the festival instead of going on holiday somewhere else. Therefore, some additional revenue is generated in the city that would otherwise be spent elsewhere. Spending created by these people is directly linked to the presence of the Klaipeda Sea Festival, so it should be added to the direct economic activity created by guests. After adjusting for 'local time-switchers' and the attendance rate the total number of Klaipeda citizens whose impact should be deducted from the total business revenues is calculated. The estimated number of locals is 104,493 (see Table 8, Appendix F).

5.2.2 Results of the locals' survey

Using the weights calculated for female and male respondents in different age groups, the mean spending is calculated for each age group and sector. The results reveal some interesting spending patterns: the biggest spenders are people in the age group 35-45 with the mean expenditure reaching 117.05 LTL (33 EUR) during the weekend of Klaipeda Sea Festival 2010. The least is spent by people in the age ranges of 55-64 and 65-75 (total spending amounts to 38.11 LTL (~11 EUR) and 31.59 LTL (~9 EUR) respectively). However, the precision of the latter number might be misleading due to the small sample size for this particular group.

The average spending for all groups is calculated to be 85.75 LTL (24.83 EUR), which is higher by around 35 LTL (~10 EUR) than the figure estimated in 2005 by the *Agency*. However, in contrast to their research, this study includes transportation as one of the expenditure categories. Also, the growth in spending could be related to increases in the overall price level, so the difference hardly indicates changes in consumption patterns.

Moreover, it is also necessary to note that the distribution of spending on products and services of different categories shows significant differences. For example, the youngest group in the sample (15-24 years) spends the most on Food and Beverages (eating and drinking out) and entertainment (50% and 25% of total spending in the age group during the Klaipeda Sea Festival), while souvenirs are the least attractive choice to attribute spending to. Spending on craftsmen production increases with respect to age: 45-54 year-olds spend 35.39 LTL (10.25 EUR) on average, while the youngest group only spends 9.31 LTL (2.7 EUR). The structure of expenditure disaggregated by age groups is depicted in Figure 3, Appendix F.

Having indicated the total number of local visitors and mean spending on different product categories, individual spending of each group is estimated for the food and beverages, transportation, entertainment and souvenirs sectors, which are 4.24m, 1.05m, 1.57m and 2.43m LTL respectively (accordingly in EUR: 1.23m, 0.3m, 0.45m, and 0.7m) (see Table 8 of Appendix F for the full summary of the figures).

5.3 Simple Output Multipliers and Total Effects

To calculate output multipliers for the sectors of interest, data provided in the Eurostat database (n.d.) is used. Due to the fact that the process of compiling the core I-O tables is time consuming and carried out every five years, the latest I-O available for Lithuania is for 2005. According to Statistics Lithuania (personal communication, January 24, 2011), the table for year 2010 will be published in 2013. Conway (1977) in his study "The stability of Input-Output multipliers" (using data for 1963, 1967 and 1972) and concludes that there are little differences in coefficients calculated for different years. Therefore, we argue that the regional multipliers' values for 2005 and 2010 should not differ significantly and affect the precision of the estimated effects.

The data provided is classified based on NACE 1.1 classification groups and in the Lithuanian case consists of 57 industries. Statistics Lithuania cannot provide a more detailed core I-O table due to confidentiality issues, which raises additional limitations related to the precision of estimated industries' multipliers: accommodation services, restaurants and bars are included in the same NACE group, which means that the same multiplier is applied to evaluate indirect effects for several sectors.

Table 2
Economic impact of Klaipeda Sea Festival 2010: Direct, indirect and total effects

NACE	Assigned sector	Businesses' revenues	Locals' spending	Direct impact	Simple output multiplier	Total impact	Indirect impact
55. Hotel and restaurant services	Lodging	69,936	-	69,936	1.68	117,423	47,487
	Food and beverages	4,859,768	4,241,038	618,730		1,038,848	420,118
52. Retail trade	Retail shopping	-	-	-	1.38		
	Souvenirs	75,601	2,429,588	-2,353,987		n/a	n/a
60. Land transportation 62. Water transportation	Transportation	1,210,359	1,053,819	156,540	1.47	230,113	73,574
92. Recreational, cultural and sporting activities	Entertainment	468,368	1,572,372	-1,104,004	1.68	n/a	n/a
75. Public administration	Municipality	286,733	-	286,733	1.50	430,386	143,653

and defense; compulsory social security						
Totals	6,970,765	9,296,817	1,131,939 -3,457,990	-	1,816,770	684,831

Note: Compiled by authors.

The calculated output multiplier for the sector 'Hotels and restaurant services' is equal to 1.68. A rather high multiplier can be explained by the fact that the sector spends a lot of income on locally provided services and fast moving goods, supplied by retailers. The multiplier is used to estimate the total impact of the lodging and the food and beverages sectors. The direct impact of the Klaipeda Sea Festival on the Lodging industry is 69,936 LTL (20,254 EUR), and the total impact is 117,423 LTL (34,008 EUR). The indirect effect is thus estimated to be 47,487 LTL (13,753 LTL). The total effect on the food and beverage sector is 1,038,848 LTL (300,871 EUR), and the indirect effect is 420,110 LTL (121,675 EUR).

The transportation sector creates an interesting case for analysis. Klaipeda is the seaport of Lithuania located on one shore of the Curonian lagoon, thus one of the means of public transportation is a ferry enabling passengers and vehicles cross the lagoon and reach the Curonian spit. Therefore, the company providing these transportation services is also included in the sample. The NACE classification distinguishes between land and water transportation services. However, as there is only one company providing water transportation services, we are forced to merge the data and calculate a multiplier including both groups in order to ensure complete confidentiality. The estimated transport multiplier is 1.47, which implies that additional expenditure from festival guests increased the economic activity of the city in the short run by 919,711 LTL.

Similarly to hotel and restaurant services, the entertainment sector has a rather high output multiplier of 1.682; however, the expenditure by local people substantially outweighs the estimated turnover. The direct impact of the festival in this sector in negative: -1,104,004 LTL (-319,742 EUR). The figure might be negative due to several reasons: firstly, the data for the casinos is missing; secondly, a large part of the spending on entertainment goes to the funfair and carousels, which are owned by non-Klaipeda

residents; thus the money virtually "flows out" of the city; thirdly, a wide range of the entertainment offered in Klaipeda Sea Festival 2010 is hardly measurable. Some classic examples of such activities may be taking photos with funny exotic animals or giving the money street musicians. Such kind of entertainment is very often unofficial (i.e. the artists do not have to own a license to run the business), thus it is almost impossible to track down all the people who sell entertainment services at the festival.

Another issue created by the scarcity of more detailed intra-industry money flows relates to the impact of money injected into the economy by craftsmen. All the activities of souvenirs' producers, jewelers, artists and other participants of the fair are included in group 52 (retail trade services) in the NACE classification. This means that the retail shops definitely buying a significant part of imported goods are treated similarly to craftsmen, whose production, by definition, should be made out of natural Lithuanian inputs. Regarding the craftsmen, the direct impact on Klaipeda's economy is also negative. This can be easily explained because, as mentioned above, out of more than 350 craftsmen only 7.4% were Klaipeda residents. Therefore the majority of the money that people spent on the items in the fair – 2,353,987 LTL (681,761 EUR) – were in fact acquired by those who live in other parts of Lithuania or even abroad. Nevertheless, the multiplier is 1.384, which is applied to the revenues that the municipality received from the non-resident participants of the fair. Therefore, the participation fees have a total economic effect of 430,386 LTL (124,648 EUR) and an indirect effect of 143,653 LTL (41,605 EUR).

To sum up, we see two opposite effects of the Klaipeda Sea Festival 2010. The Lodging, Food and Beverages, Transportation, and Municipality related transactions contribute to Klaipeda's economy by 1,816,770 LTL (526,173 EUR). 1,131,939 LTL of this sum is a direct economic effect resulting from spending by the city's guests, while 684,831 LTL (198,341 EUR) is the total indirect effect. The effect of the entertainment sector is highly likely to be underestimated as a large portion of data cannot be obtained using this research design. Similarly, due to time constraints and the complexity of the sector's structure, major retailers are left out of the analysis. The Souvenir sector is the only one that is clearly generating a negative economic impact to Klaipeda city, reaching more than 2m LTL (579,240 EUR). This is an interesting and unusual result because such cases

when the majority of enterprises operating in the venue of a regional event are from external regions are rare in practice. The municipality generates a considerable amount of money from the craft fair, which is subsequently used to cover the maintenance of the organizers' office and costs of the festival.

6 Conclusions

Both scholars and businesspeople have acknowledged the importance of economic impact studies a long time ago. This paper on the Klaipeda Sea Festival 2010 is, to our knowledge, the first research in Lithuania that attempts to measure the economic effect of an event applying the methodology of the impact studies. So far only approximate estimates of the effects of cultural or sports events could be found in the press; however, such information is in most cases doubtful in terms of both the reliability of the source and precision of calculations. Some events have also been analyzed by market research agencies; however, they usually focus on the average spending per visitor and personal opinion about the event rather than on the aggregate economic value added. Moreover, such studies are performed for commercial purposes and are not available publicly.

To answer the following research questions: *What economic impact does the Klaipeda Sea Festival 2010 have on the city's economy? What are direct and indirect economic effects of the event?* a specific research design was created. The Klaipeda Sea Festival 2010 turned out to have a positive economic impact on the city's economy resulting from four out of seven areas. The increase in revenues of accommodation services is small because summer is the busy season for them in general. The visitors' spending on food and beverages during the Festival resulted in more than 1m LTL having been injected into the local economy (in the longer term). The transportation sector also contributed to the region's economy with slightly more than 230,113 LTL (66,645 EUR). The last positive figure estimated is the effect of the income that the "Juros sventes", the official organizer or the event, received from the non-resident craftsmen who pay participation fees for the craft fair. The total impact to the city is approximately 430,000 LTL (127,433 EUR). The results suggest that certain changes could be introduced in order to boost the economic impact of the event to the city's economy. The organizers should try to involve more local enterprises into the industries where currently the non-resident

providers of goods and services are dominating, namely the entertainment and souvenirs sectors.

All in all, the outcome of this study is rather surprising as the estimated economic effect of the Klaipeda Sea Festival 2010 is much smaller than was anticipated by authors and suggested by the media, and is even likely to be negative. There might be a number of explanations for such low figures. Firstly, as the vast majority of the festival's events are free of charge, it is possible that people who visit Klaipeda during the Klaipeda Sea Festival spend on average less money than if they would visit the city for a simple holiday. Furthermore, mass events are likely to attract more tourists with tight budgets, but at the same time keep away more wealthy visitors. In addition, there are some grounds to believe that the proportion of the non-resident festival visitors is much smaller than is generally believed. The organizers and journalists have estimated the number of total attendees to range from 300,000 to 400,000 every year, and in some sources this number was said to have increased up to 500,000 (15min, 2010). However, so far nobody has tried to measure the number of visitors more accurately. If the proportion of non-Klaipeda residents would in fact be relatively small, it would explain why the Klaipeda Sea Festival does not generate any substantial economic effects. It is not unusual for a large event to have no significant impact on the local economy. The most discussed examples are the Olympic Games and the American NFL championship finals, widely known as the Super Bowl (Baade & Matheson, 2003). There have been numerous studies conducted to assess the economic impact of these mega-events, and they rarely turn out to be profitable. This happens because shortly after the event the retailers have to face a substitution effect, hotels and tourist attractions have to deal with a sharp decline in the number of tourists, while specially built facilities often become redundant (Conger, 2010). Nonetheless, even if the economic impact for the local economy is not substantial, organizing a large event is an honor for the city and an occasion to celebrate for its residents.

Even though the research has presented a number of obstacles regarding the quantitative analysis, it also brought the opportunity to employ a wide range of different techniques and qualitative reasoning. This helped not only to estimate the revenues of the different sectors, but also to reveal lots of interesting facts about the Klaipeda Sea Festival and the problems the industries are experiencing in relation to the event.

7 Possibilities for future research

In our opinion, future research in the field of cultural economics in Lithuania could focus on the following events: annual Jazz music festivals that take place in Vilnius, Kaunas, and Klaipeda; the international country music festival Visagino Country that has been held every year for the past 18 years already; the Street Musician Day, which, despite being a non-commercial event, is spectacularly successful and expanding not only in Lithuania, but also abroad. Another captivating event to study would be the Lithuanian Song and Dance Celebration, which would probably show an impact both from the spectators' and participants' (dancers and singers who live in Vilnius or Kaunas for a week during the event) perspectives. Moreover, we believe that one of the most promising and topical event for an impact study in the nearest future would be the upcoming EuroBasket 2011 basketball championship.

Moreover, future research could also focus on checking the reliability of the alternative method used in this research by trying to match the impacts calculated using the alternative method with results of traditional types of analysis. This could enhance the usage of impact studies as the alternative approach requires significantly less funds and human capital. Therefore, governmental institutions could perform such studies more often and as a result adjust related policies to maximize the economic impact of cultural events.

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9 Appendix A

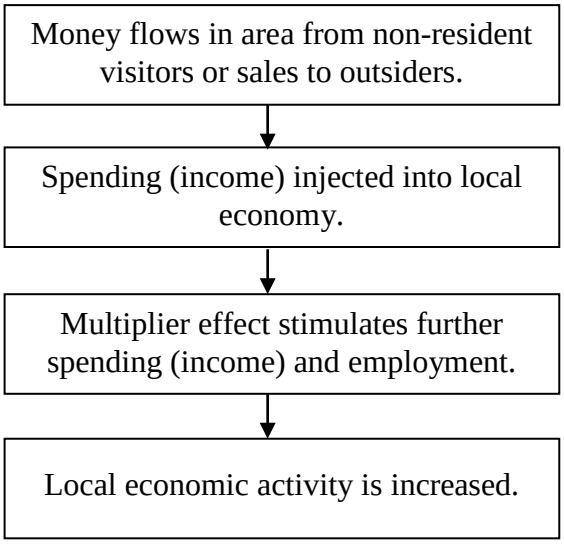

Figure 1.*Complete I-O model*
Note: VanBlarcom (2007).

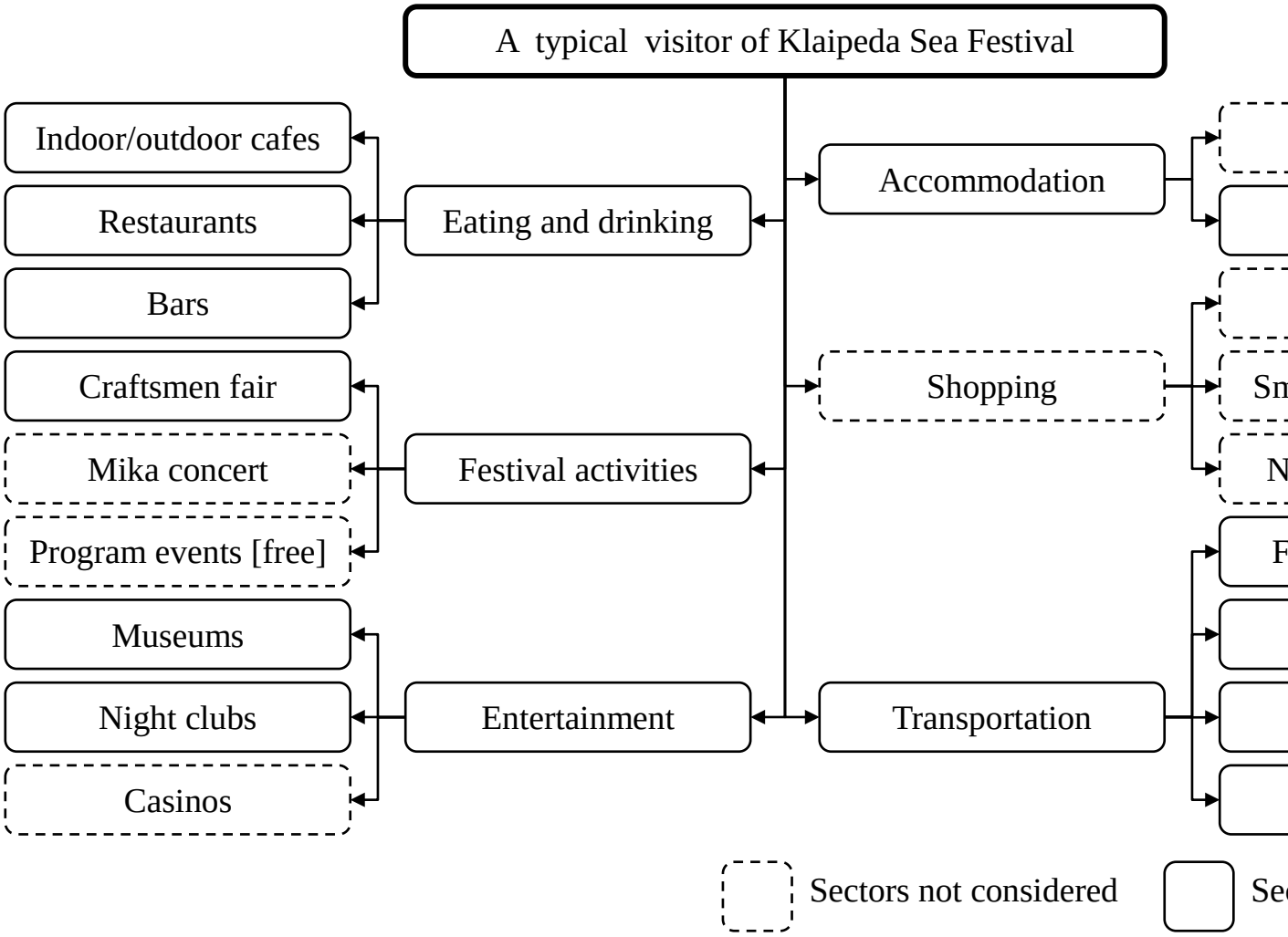

Figure 2.*Spending of a typical Klaipeda Sea Festival visitor by sectors*
Note: Compiled by authors.

10 Appendix B

Table 3

The summary of the main models used in economic impact studies

Model	CVM	I-O		GCE
		Traditional	Alternative	
Measure	WTP via utility function	Total economic impact: direct and indirect effects		Total effects including negative aspects
Data	Visitors' survey: ranking/rating/choosing hypothetical changes	Visitors' expenditure	Businesses' revenues and locals' spending	Publicly available resources
Tool	Regressions	Sum of expenditure I-O table for multiplier		Social Accountability Matrix
Cases to be applied to	Need to assess non-market prices of cultural resources, estimate levels of attributes and assess improvement of what factors would add most value to consumers. Easily comparable with other studies as it is less affected by the context.	Limited areas/regions are the main interest.	The time gap between the event and the research is significant.	Wider economic impact.
Drawbacks	Participants' need to be inquired, which means that it is hard to perform if visitors' are widely spread geographically. Optimal research technique not found so highly exposed to survey characteristics bias.	Strong recall bias: exit-survey method precise only. Need to exclude 'time-switchers', 'casuals'. Multipliers need significant amount of information.	Do not take into account limited resources. Need to exclude local inhabitants.	Extremely complex estimations, huge amount of data needed.
Authors	Noonan (2003); Johnson & Whitehead (2007)	Herrero et al. (2006); Chhabra (2005); Cropmton et al. (2001); Morganti and Nuccio (2004)		Dwyer et al. (2005);

Note: Compiled by authors.

11 Appendix C

Survey about the revenues of Klaipeda city enterprises during the Klaipeda Sea Festival 2010

This survey is a part of a Bachelor thesis of the students in the Stockholm School of Economics in Riga. The goal of the thesis is to quantify the economic impact of the Klaipeda Sea Festival 2010 to the Klaipeda city. Two surveys are being conducted simultaneously: the first one of the Klaipeda city enterprises'/institutions' and the second- of Klaipeda city residents. In this way, the spending of city guests will be calculated by deducting spending of local visitors of the Festival from the revenues generated by businesses. Later on a regional multiplier will be applied to estimate indirect effects.

The information you provide will be completely confidential, and the results of the survey will be released only in the form of totals and percentages. You will need around 2 min to fill in the questionnaire.

If you have any questions, please, contact Agne Pranulyte (agne.pranulyte@gmail.com, +370 696 48326), or Ginvile Ramanauskaite (ginvile.ramanauskaite@gmail.com; +370 621 11151).

*Required fields.

Q1*. Please indicate the type of economic activity of your business:

- Lodging (hotels, hostels, etc.)
- Food and beverages (cafes, bars, restaurants, bowling/ pool clubs)
- Retailer (shopping center, grocery)
- Transport services (railway, city and region bus operator, taxi, ferries)
- Entertainment (cinema, night clubs, strip clubs, museums, art galleries, theatres)
- Souvenirs (artwork, craftsmen artifacts)
- Other

Q2*. Did your enterprise/institution work during Klaipeda Sea Festival 2010?

- Yes
- No

Q3. Please, indicate the revenues (in LTL) your business generated during the Klaipeda Sea Festival (July 30-August 1, 2010).

(_____)

Q4. Please, indicate the growth of your company/institution revenues (in percentage terms) for the Klaipeda Sea Festival 2010 (July 30-August 1, 2010) in comparison to the weekend a week later (August 6-8, 2010).

(_____)

Thank you for your time!

12 Appendix D

Survey about the locals' expenditure in Klaipeda Sea Festival 2010

This survey is a part of a Bachelor thesis of the students in the Stockholm School of Economics in Riga. The goal of the thesis is to quantify the economic impact of the Klaipeda Sea Festival 2010 to the Klaipeda city. The information you provide will be completely confidential, and the results of the survey will be released only in the form of totals and percentages. You will need around 5-7 min to fill in the questionnaire.

*Required fields.

Part 1. General questions

Q1*. Please indicate your gender:

- Female
- Male

Q2*. Please indicate your age group:

- 15-24
- 25-34
- 35-44
- 45-54
- 55-65
- 65-74

Q3*. Where do you usually live?

- In Klaipeda city
- In Klaipeda region (please specify _____)
- Other

Q4*. Have you attended the Klaipeda Sea Festival 2010?

- Yes
- No

Q5. On which days did you attend the Klaipeda Sea Festival in 2010? (you may select several)

- Friday
- Saturday

- Sunday
- I don't remember

Part 2. Expenditure

Q6. Please include all spending made by you or by you. Remember to include all payments made by check, bankcard, and credit card. Include your best estimates if you are unsure of exact amounts.

Meals, food, and drinks in restaurants/bars/cafes _____

Retail shopping _____

Transportation _____

Entertainment costs (excluding tickets to Mika concert if attended) _____

Souvenirs and craftsmen products _____

Part 3. Other

Q7. Have you attended Mika's concert?

- Yes (→go to Q8)
- No (→go to Q9)

Q8. Would you have attended the activities of Sea Festival if Mika's concert wouldn't take place?

- Yes
- No

Q9. Have you chosen to stay in Klaipeda this summer to attend the Sea Festival rather than take a holiday?

- Yes
- No

Q10. If Klaipeda Sea Festival would not have taken place in 2010, where would you probably have stayed?

- In Klaipeda city
- Elsewhere (please specify) _____

Thank you for your time!

Appendix E

Table 4

Businesses' survey: structure and size of the sectors

Sector	Types of companies in the sector	No. of companies in the primary list[1]	No. of companies in the adjusted list
Lodging	Hotels, hostels, guest houses	56	41
Food and beverages	Cafes, bars, bowling, pool clubs, bakeries, restaurants	233	140
Retail shopping	Grocery stores and shopping centers	217	-
Transportation	Railway, city and regional buses, minibuses, taxis, ferries	52	12
Entertainment	Cinemas, nightclubs, cultural centers, casinos, museums, art galleries, theatres	62	28
Souvenirs	Souvenirs, craftsmen products	374	28

Note: Compiled by authors based on Visalietuva.lt

[1]The primary list is downloaded from the visalietuva.lt directory. Then it is adjusted by discarding the companies that are duplicated (i.e. listed twice or having the same owner), have unrelated activities, or practically operate not in the Klaipeda city, but in its outskirts. More elaborate description of each sector is provided in the empirical findings section.

Table 5

Comparison of businesses' revenues during the festival and an ordinary weekend

Assigned sector	Businesses' revenues during KSF 2010	Change in revenues, %	Business' revenues during the weekend after KSF 2010
Lodging	69,936	100%	-
Food and beverages	4,859,768	23.90%	3.922.362
Retail shopping	-	-	-
Souvenirs	75, 601	100%	-
Transportation	1,210,359	23.90%	966.848
Entertainment	468,368	43.94%	325,395
Municipality	286,733	100%	-

Note: Compiled by authors

13 Appendix F

Table 6

Sample size and structure of Klaipeda residents' survey

Age Group	15-24	25-34	35-44	45-54	55-64	65-74	Total
Population	25227	29139	26933	28708	19900	16306	146213
Expected sample[1]							
Total	104	120	111	118	82	67	600
Internet users,%	94.2	83.4	68.0	52.0	30.4	9.6	60.5
Online	98	100	75	61	25	6	363
Offline	6	20	35	57	57	60	237
Real sample							
Total	204	118	130	96	45	18	611
Online	199	114	113	73	10	0	509
Offline	5	4	17	23	35	18	103
Excluded							
Misleading answers[2]	7	2	2	0	0	0	11
Non-Klaipeda residents	61	26	15	13	0	0	115
Sample[3]	136	90	113	83	45	18	485
Attendance							
Yes	126	83	105	69	32	7	422
No	10	7	8	14	13	11	63
Attendance rate, %	92.64	96.67	92.92	83.13	71.11	38.89	87.01
Excluded							
Suffering recall bias	18	11	8	7	0	0	44
Outliers[4]	10	8	10	6	4	0	38
Final number of attendees[5]	108	72	97	62	32	7	378
Final sample further considered[5]	98	64	87	56	28	7	340

Note: Compiled by authors.

[1] Expected sample is calculated for 95% confidence level and confidence level of 3.99.
[2]Misleading answers are considered to be those reporting non-attendance and spending or days, on which a person was attending the festival.
[3] Sample represents 95% confidence level and confidence interval of 4.44.
[4] Outliers: 5% outermost values in the sample from both sides (based on Huhtala, M. (2007). Assessment of the local economic impacts of national park tourism: the case of Pallas-Ounastunturi National Park.).
[5]*Final number of attendees* does not exclude outliers, while *Final sample further considered* does.

Table 7

Post-stratification weights.

Age Group & Gender	Population N[1]	Proportion in population	Sample n	Proportion in sample	Weight[2]
Age 15-24: Female	12,555	0.0859	68	0.2	0.4293
Age 15-24: Male	12,672	0.0867	30	0.0882	0.9822
Age 25-34: Female	15,145	0.1036	45	0.1324	0.7826
Age 25-34: Male	13,994	0.0957	19	0.0559	1.7127
Age 35-44: Female	13,985	0.0956	68	0.2	0.4782
Age 35-44: Male	12,948	0.0886	19	0.0559	1.5847
Age 45-54: Female	15,712	0.1075	41	0.1206	0.8911
Age 45-54: Male	12,996	0.0889	15	0.0441	2.0147
Age 55-64: Female	11,641	0.0796	20	0.0588	1.3535
Age 55-64: Male	8,259	0.0565	8	0.0235	2.4007
Age 65-74: Female	10,208	0.0698	5	0.0147	4.7475
Age 65-74: Male	6,098	0.0417	2	0.0059	7.0901
Total	146,213		340		

Note: Compiled by authors.
[1] Source: Statistics Lithuania.
2 Weight = (Proportion in population)/(Proportion in sample)

Table 8

Spending of Klaipeda's residents (in LTL) by different age groups and sectors during the weekend of Klaipeda Sea Festival 2010

Age Group	15-24	25-34	35-44	45-54	55-64	65-74	Total
Mean spending							
Food & beverages	39.10	47.69	53.78	45.11	19.16	12.52	39.02
Transport	10.66	9.08	11.70	12.71	7.75	4.07	9.81
Entertainment	19.75	22.56	23.80	8.29	0.00	0.00	13.92
Souvenirs	9.31	30.82	27.77	35.39	11.20	15.01	23.01
Total spending	78.83	110.15	117.05	101.50	38.11	31.59	85.75
Population attending	23,370	28,169	25,025	23,864	14,151	6,341	120,920
'Time-switchers'							
Number in the sample	11	10	22	8	0	0	53
Proportion,%	10.18	13.89	22.68	12.90	0	0	14.02
People in Klaipeda	2,569	4,047	6,109	3,704	0	0	16,429
Final local visitors' number	20,801	24,122	18,918	20,161	14,151	6,341	104,493

Age Group	15-24	25-34	35-44	45-54	55-64	65-74	Total
Locals' spending							
Food & beverages	813,314	1,150,359	1,017,390	909,449	271,131	79,394	4,241,038
Transport	221,737	219,024	221,336	256,243	109,669	25,810	1,053,819
Entertainment	410,817	544,183	450,240	167,132	0	0	1,572,372
Souvenirs	193,656	743,427	525,343	713,487	158,490	95,184	2,429,588
Total spending	1,639,733	2,656,993	2,214,308	2,046,311	539,290	200,325	9,296,961
Total spending (EUR)	474900	769,518	641,308	592,653	156,189	58,018	2,692,586

Note: Compiled by authors

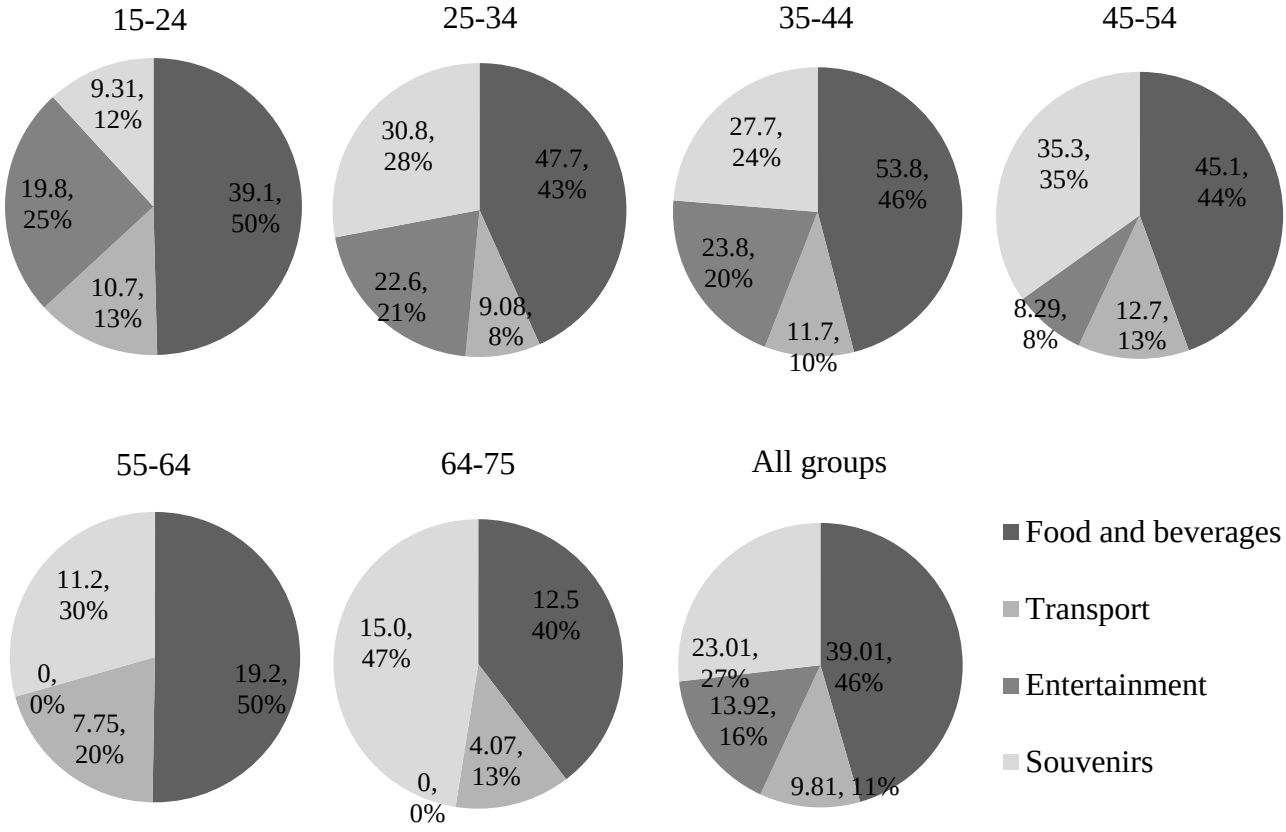

Figure 3.*The structure of local visitors' spending by age group (the first number represent average spending in LTL)*

Note: Compiled by authors.

14 Appendix G

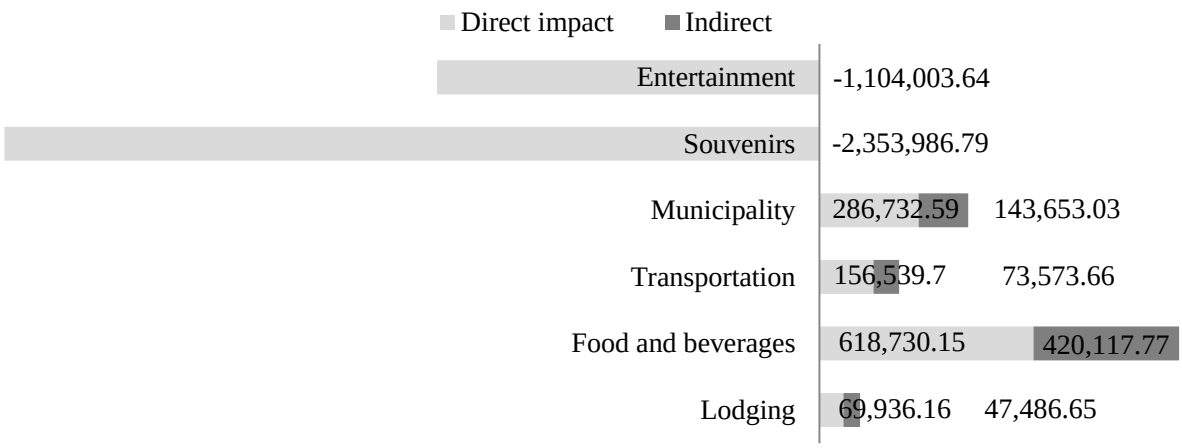

Figure 4.*Direct and indirect economic impacts created by the sectors.*

Note: Compiled by authors.