

ECONOMIC LEGACY OF THE EUROPEAN YOUTH OLYMPIC FESTIVAL IN VUOKATTI

**Jyväskylä University
School of Business and Economics**

Master's Thesis

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**JYVÄSKYLÄN YLIOPISTO
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ABSTRACT

| | |
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| Title Economic Legacy of the European Youth Olympic Festival in Vuokatti | |
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| Date 5/2023 | Number of pages 71+2 |
| <p>This master's thesis examines the economic impacts of the European Youth Olympic Festival (EYOF) 2022 organized in Vuokatti, Finland. The general attitude towards sports event organizing has been to a great extent positive in terms of benefits realized from event organizing. The legacy of sports events is often particularly used to reason the needed investments into sports event organizing. However, criticism towards especially sports mega-events have been on the rise recently. Furthermore, sports mega-events have been dominant sphere in research, and the academic research of economic impacts of smaller scale sports events remain limited.</p> <p>This research employs a case study methodology and explores three research questions of: what kind of direct economic impacts did EYOF 2022 generate; how do the organizers evaluate the effects of pandemic and disclosure of Russia and Belarus in relation to the economic outcome of the event; and how is the event legacy of EYOF 2022 reviewed by the organizing committee? The data of the research consists of thematically analyzed interviews (n=3) with key representatives of the EYOF 2022 organization, final report of EYOF 2022, and regional economic impact study conducted by the organizers. Furthermore, the research utilizes data from Visitory.io of the key figures of travelling and tourism in Sotkamo. The research applies event impact model (Virkkunen et al., 2015) as a theoretical framework and lens to answer the research questions.</p> <p>The research finds that although the direct economic impact for the organizers was negative, the indirect impacts and legacy of the event aligned with the expectations of the organizers and can be used to rationalize the invested resources into the organizing. Moreover, the research suggests defining a model to analyze the impacts of sports event organizing in Finland, as prior focus in existing models has been dominantly on international large-scale sports event organizing. Overall, this research provides a current case example of analyzing the economic impacts of smaller scale sports events organizing and provides insights for event organizers, policymakers, and scholars.</p> | |
| Key words sports events, event legacy, event economic impacts | |
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TIIVISTELMÄ

| | |
|--|-----------------------------------|
| Tekijä Riku Heinonen | |
| Työn nimi Euroopan nuorten olympiafestivaalin taloudelliset vaikutukset Vuokatissa | |
| Oppiaine Responsible management and business of sport | Työn laji Pro gradu -tutkielma |
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| <p>Tämä pro gradu -tutkielma tarkastelee Vuokatissa järjestetyn Euroopan nuorten olympiafestivaalin (EYOF) 2022 taloudellisia vaikutuksia. Suhtautuminen urheilutapahtumien järjestämiseen on ollut suurelta osin positiivista, kun tarkastellaan tapahtumajärjestämisen tuomia hyötyjä. Urheilutapahtuman jälkeensä jättävää 'perintöä' käytetään usein perusteluna tarvittaville investoinneille tapahtumien järjestämiseen. Kuitenkin kritiikki erityisesti suurten urheilutapahtumien osalta on lisääntynyt viime aikoina. Lisäksi urheilun suur tapahtumat ovat olleet pääasiallisia tutkimuskohteita, ja akateeminen tutkimus pienemmän mittakaavan, urheilutapahtumien taloudellisista vaikutuksista on rajallista.</p> <p>Tutkimus käyttää tapaustutkimuksen metodologiaa ja siinä vastataan kolmeen tutkimuskysymykseen: millaisia suoria talousvaikutuksia EYOF 2022 tuotti; miten järjestäjät arvioivat pandemian sekä Venäjän ja Valko-Venäjän ulossulkemisen vaikuttaneen kisojen taloudelliseen tulokseen; sekä miten järjestäjät arvioivat EYOF 2022 tapahtuman jälkeensä jättämää perintöä? Tutkimuksen aineisto koostuu temaattisesti analysoiduista tapahtuman avainhenkilöiden haastatteluista (n=3), EYOF 2022 tapahtuman loppuraportista sekä järjestäjien aluetaloudellisten vaikutusten selvityksestä. Lisäksi tutkimus hyödyntää Visitory.io:n tuottamaa tilastotietoa matkailun alueellisista tunnusluvusta Sotkamossa. Teoreettisena viitekehyksenä tutkimuksessa käytetään tapahtumien vaikutusmallia (Virkkunen ym., 2015).</p> <p>Tutkimustulokset osoittavat, että vaikka tapahtuman suorat taloudelliset vaikutukset järjestäjille olivat negatiiviset, epäsuorat vaikutukset ja tapahtuman perintö olivat linjassa järjestäjien odotusten kanssa ja osaltaan perustelevat järjestelyihin suunnattuja resursseja. Tutkimus ehdottaa myös kansallisen mallin määrittämistä urheilutapahtumien vaikutusten arvioimiseksi Suomessa, koska olemassa olevien mallien painopiste on ollut pääasiassa kansainvälisten suurten urheilutapahtumien arvioinnissa. Kaiken kaikkiaan tämä tutkimus tarjoaa ajankohtaisen esimerkin urheilutapahtuman taloudellisen vaikuttavuuden arvioinnista ja tarjoaa oivalluksia tapahtumajärjestäjille, päättäjille ja tutkijoille.</p> | |
| Asiasanat urheilutapahtumat, tapahtuman 'perintö', tapahtuman talousvaikutukset | |
| Säilytyspaikka Jyväskylän yliopiston kirjasto | |

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1 INTRODUCTION

The history of sports events dates back to ancient times when people gathered to compete in the first Olympic Games in search of excellence and glory. While these aspects of sports and sports events in particular exist today, much has changed in their nature. (Young, 2004, 3-5) The scale and variety of sports events around the world is vast, taking place at various levels and among various groups of people. The sports in question may vary significantly depending on the geographic location of the event. Environmental factors and the nature of certain sports, such as winter sports or water sports, partly explain this variation, but cultural and regional development also have a significant impact on which sports are played and how they are organized around the world.

At its roots, sports and competitions have been voluntary activities aimed at determining a winner in a given contest (Young, 2004, 3). However, as the importance of sports in the world has continued to grow, so too have the monetary aspects of the sporting world. The commercialization of sports has enhanced business opportunities around sports and sports events, and private sports sector has become a major sector in the sports field. (Laine, Vehmas, 2017, 3-4)

Due to the societal status of sports and the admirable characteristics associated with it, the majority of countries in the world have decided to provide government support for sports. As sports have its roots in volunteer activities, voluntarism still plays a significant role in organizing of sports. With the private sector increasing its prominence, sports are nowadays seen as a three-sector model where all public, private, and voluntary sectors overlap and often collaborate to produce and offer sports and sports services. (Laine & Vehmas, 2017, 1-3) This three-sector model is also present in sports events organizing, which impacts the variety of setups and goals that sports events today might have.

Over time, the largest sports events have grown in size and scope, with many becoming major economic and political drivers in their respective regions (Taks et al., 2014). According to a study by the International Olympic Committee (2017), the Olympic Games alone generated over \$5 billion in revenue during the 2016 Rio de Janeiro Games. Beyond the Olympics, major sporting events such as

the FIFA World Cup, Super Bowl or Wimbledon only to mention a few, have become major economic engines, generating significant economic activity for their host cities and countries.

1.1 Background of the study

In Finland, the development of sports has followed the global trends in many aspects. As in sports globally, three sectors of sports can also be distinguished in the Finnish sports sector (Itkonen & Salmikangas, 2015). The commercialization of sports has become particularly evident in Finnish ice hockey. Perhaps due to the country's geographic location, Finland has traditionally had a strong presence in the winter sports field. Finland has also been relatively active in organizing sports events and hosted some of the largest international sporting events, including the Olympic Games in 1952 and World Athletics championships in athletics in 2005 (Laakso et al., 2006). Other international sporting events organized in Finland in the 21st century have been for example International Ice Hockey Federation's (IIHF) world championships in men's ice hockey, rally in Jyväskylä and World Cup Levi in alpine skiing to mention a few. (Luumi & Porkkala, 2022; Tiusanen, 2014; Viinikka, 2019)

Along with the increased interest and the development of sports into an industry, the number of academic research on sports economics have also increased in recent decades (Andreff, 2011). Given the increased visibility of sports events, and the ubiquitous nature of events in general to affect on the majority of general population, the wide popularity of event studies in research can be considered unsurprising (Robertson et al., 2018).

Prior research of the impacts of sports event organizing has emphasized the largest global sports events, the so-called mega events such as the Olympics or FIFA World Cup in men's football, and economic impacts have been the dominant sphere of research (Taks, Chalip & Green, 2014). The interest in research has recently grown also towards the leveraging of smaller scale sports event organizing and local impacts that such events generate (Diedering & Kwiatkowski, 2015). Yet today, many impact analysis of sports events tend to rely on the organizers themselves, and there would be room to increase the academic reliability of the reporting of the outcomes.

The complexity of economic impact analysis of sports events is well acknowledged in the field and might be a reason reducing the amount of scientific research on smaller scale sports events organizing. Similar gap can be distinguished also in Finland. The interest towards economic reporting of sports events is prominent, and a variety of analysis are being conducted to serve the need of economic reporting of the events. However, the number of academic research in the field remains scarce, and this master's thesis study attempts to provide a case-study example to add to the knowledge of economic impacts of sports event organizing in Finland.

The European Youth Olympic Festival (EYOF) is a European-level sporting event organized every two years under the International Olympic Committee

(EYOF, 2022). As the name indicates, the participants of the games consist of youth athletes and the competitions can be seen as a pre-phase for the Olympic Games at a more senior age. In 2022, the European Youth Olympic Festival for winter sports took place in Sotkamo, Kajaani and Lahti in Finland.

1.2 Aim of the study and research questions

This research analyses the economic impacts of EYOF 2022 from the perspectives of the organizing committee, and the municipality of Sotkamo. Furthermore, this research concentrates on the economic impacts of organizing an international, medium-size sporting event and hence adds to the scarce field of research in the field of economic impacts of Finnish sports events organizing. In order to create a detailed understanding of the economic impacts of EYOF 2022, the following research questions are being answered:

RQ 1: What kind of direct economic impacts did EYOF 2022 generate?

RQ 2: How do the organizers evaluate the effects of pandemic and disclosure of Russia and Belarus in relation to the economic outcome of the event?

RQ 3: How is the event legacy of EYOF 2022 reviewed by the organizing committee?

The research question 1 concentrates on finding out the short- and long-term economic impacts of EYOF 2022. Research question 2 assesses the impacts of unforeseen global events, and the magnitude of the economic influence of them for the games. Eventually, research question 3 sheds light on the legacies remaining from the organizing of EYOF 2022. The aim of the research is to establish knowledge for event organizers and municipalities and cities of the economic requirements and possible outcomes of sports events organizing in Finland.

1.3 Structure of the thesis

This research builds upon case study research approach for which the data consists of interviews with key representatives of EYOF 2022 organization, the final report of EYOF 2022, regional economic impact analysis of the games, as well as data of travelling and tourism in Finland and Sotkamo in particular. Furthermore, academic literature on sports event organizing in the 21st century provides grounds for academic approach of the subject. With case study approach, this research aims to provide a comprehensive understanding of the total economic impacts of EYOF 2022.

First three chapters of this research provides an understanding of the academic research in the field of sports event organizing, and the challenges present in measuring the economic outcomes of the events. In chapter 4, the case

of the European Youth Olympic Festival is presented. Chapter 5 presents the research methods applied and further methodology of this study. Chapters 6 presents the results of this research and Chapter 7 concludes the findings by answering the research questions. Furthermore, assessment of this research as well as recommendations for future research in the field are provided in Chapter 7.

2 SPORTS EVENTS

Sports events around the world vary from small local competitions to sporting mega-events generating multi-billion revenues. Some events are organized based on voluntary resources with low costs, while others might be a combination of privately and publicly organized events. Through the commercialization of sports, there is also a growing number of events operating purely with financial goals and motives. In recent years, leveraging of sports events has become more common and sports events today might have strategic goals for example for economic, social or environmental purposes. (Chalip, 2014)

2.1 Impacts of sports events in research

The extensive research in the field of sports events has prominently focused on mega-events like the Olympic Games or FIFA World Cup in men's football (e.g., Preuss, Andreff, Weitzmann, 2019; Thomson et al., 2019; Chalip, 2014; Dimitrovski, Lekovic, Duradevic, 2020). This can be rationalized given the scale, media coverage, political interest, and resources required for these events. Research on sports mega-events has primarily concentrated on assessing the economic impacts and developments, such as tourism development, that hosting such events would generate to the host countries or regions. (Taks, Chalip & Green, 2015)

Although economic impact has been a dominant sphere in research, concentration on broader aspects of sports events organizing, such as social leveraging of sports events (e.g., Chalip, 2014; Roche, 2000) has been on the rise for some time as well (Robertson et al., 2018). The nature of sports mega-events and their various and proportional impacts on societies and economies call for comprehensive understanding of the total impacts, rather than only focusing on a specific changes or impacts derived from the event. Preuss (2006) presented the idea of event 'legacies' to comprehensively capture the impacts that major sports events generate for their host regions, going beyond only the direct impacts, and

academics (e.g., Leopkey & Parent, 2016; Byers, Hayday & Pappous, 2020) have continued to build on the knowledge.

In recent years, also smaller scale sports events have increased their attention in the research field (e.g., Rowley & Smith, 2022; Duglio & Beltramo, 2017; Taks et al., 2014; Wilson, 2006; Crompton, 1999). While the economics have played dominant role in the research of smaller scale sporting events as well, also the wider implications of these events have been studied in some extension in the research relating to small- and medium- size sports events as well (e.g., Chalip & Fairley, 2019; Taks, Chalip & Green, 2015; Kerwin et al., 2015)

Due to the variety of scale of different sports events, also the magnitude of the derived impacts varies in line with the event. Rowley and Smith (2022) align their view with previous literature, stating the more beneficial nature of smaller scale sports events organizing compared to large-scale or sports mega events. Possible explanatory reason behind the more feasible nature of smaller scale sports events has been found to lie in their lesser demand for large investments (Rowley & Smith, 2022; Salgado-Barandela, Barajas, Sanchez-Fernandez, 2023). In order to frame the sports event research, academics have been categorizing the types of sports events and defined event typologies. Table 1 represents the event typologies, devised by several authors over the course of time and finalized by Duglio and Beltramo (2017).

TABLE 1 Typology of Sports Events (Duglio, Beltramo, 2017)

| | |
|--------|---|
| Type A | Irregular, one-off, major international spectators events generating significant economic activity and media interest (e.g., Olympics, Football World Cup, European Football Championship) |
| Type B | Major spectator events, generating significant economic activity, media interest and part of an annual domestic cycle of sports events (e.g., FA Cup Final, Six Nations Rugby Union Internationals, Test Match Cricket, Open Golf, Wimbledon) |
| Type C | Irregular, one-off, major international spectator/competitor events generation limited economic activity (e.g., European Junior Boxing Championships, European Junior Swimming Championships, World Badminton Championships, IAAF Grand Prix) |
| Type D | Major competitor events generating limited economic activity and part of an annual cycle of sport events (e.g., National Championships in most sports) |
| Type E | Minor competitor/spectator events, generating very limited economic activity, no media interest and part of an annual domestic cycle of sports events (e.g., Local and regional sport events in most sports.) |

The scope of sports event research in Finland has concentrated on assessing the outcomes of the largest sporting events organized in Finland, even major international sporting events do not take place in Finland on a yearly basis. The only Category A event organized in Finland, applied by Duglio and Beltramo's (2017) typology, has been the Helsinki Olympics in 1952.

Below category A, sports events do take place in Finland and there have been events and studies focusing for example the IIAF championships in Helsinki in 2005 (Laakso et al., 2006) and the largest gymnastics event in the world

Gymnaestrada in Helsinki in 2015 (Virkkunen et al., 2015). Interest and studies have focused also on men's ice hockey championship tournament (e.g., Luumi & Porkkala, 2022) that has been organized in Finland four times during the 21st century. Beyond sports events studies, academic research of the overall economic development and commercialization of the Finnish sports sector exists for example by Puronaho (2014, 2006) and Fasandoz (2016).

Thesis papers exist on a variety of sporting events in Finland, assessing the economic impacts of specific sporting events such as Rally in Jyväskylä (Tiusanen, 2014), 2011 Finnish championship race in Biathlon (Mustonen, Nuutinen, 2011), and Kalevan kisat in athletics (Ryhänen, 2020). Furthermore, regional economic impacts of sports and general event organizing has been studied at bachelor level for example by Luoma (2010) and Elo (2019) as well as at master's level concentrating on the development of city of Tampere as an event host by Joki and Virtanen (2018).

In addition to academic research and a variety of different reports, publications from organizations in the Finnish sports field have been produced as well. The Finnish National Olympic Committee published a report on the landscape of sports events organizing in Finland (Leskinen, 2018) and Ministry of Culture and Education has published regularly on the sports landscape in Finland (e.g., Jokisipilä, 2022). Furthermore, the Finnish government presented the strategy for major events in Finland for the years 2023-2033, which presents the future role of the Finnish government in sports events organizing. (Finnish government, 2023) Notable for the governmental strategy is, that although the strategy is for a ten-year period, the government of Finland is likely to change in the elections during that time.

2.2 Sports event economics

Although sports events can be categorized by their size, as for example according to Duglio and Beltramo (2017), the wide variety of different sports events around the world are challenging to be categorized homogeneously. Similarly, there can be a variety of different motives that event organizers could be aiming for through event organizing. Although at its roots, financial gain might often not be the primary goal for sports event organizing, it is still a central element of organizing economically feasible events, ensuring continuity of hosting events in the future as well. However, the leveraging of sports events with purely financial motives has become more in common during the past decades. (Chalip, 2014; Diederling & Kwiatkowski, 2015)

To secure economically feasible organizing of a sport event, the event organizer must be able to cover expenses with income from sources such as ticket sales, media revenue, government or city subsidies, sponsorships, and other sources of income. On the other hand, expenditures associated with organizing a sports event can be even more extensive, including for example construction costs for building new infrastructure, salaries for staff, transportation, accommodation, and other organizational expenses. Especially for large-scale

sports events, there is a high degree of risk and uncertainty regarding both the expenses and incomes of the event. (Laakso et al., 2006)

Laakso et al. (2006) contends that organizing a financially responsible large-scale sports event requires utilizing existing infrastructure, making responsible investments, having public sector as an enabler, and sharing of risks and liabilities between the principal and contractor of sports events. Leskinen (2018) notes that the risks and benefits of sports event organizing are often unequally balanced among the involved parties. Similarly, academics have emphasized that the feasibility of leveraging an event depends on the fact that the entire responsibility cannot be borne solely by the event organizers (e.g., Dwyer, 2004).

Sports event organizers have historically relied heavily on voluntarism to reduce their expenditure in terms of labor work (Laakso et al., 2006). By utilizing volunteers, event organizers have been able to effectively manage their costs, yet there is shown to be also other kinds of positive effects inside the host community through volunteerism (Kerwin et al., 2015).

While the societal values of organizing sports events can be perceived to be strongly positive, only a small percentage of sports events are profitable in Finland or globally (Leskinen, 2018). The benefits of 'soft legacies' such as an improved image of a region or organizer, or enhanced public welfare, often however justify the bidding, governmental subsidies, and hosting of sports events (Preuss, 2006; Leskinen, 2018).

In Finland, this acumen of thinking begun to become visible especially in 1940-1960's as Yhtyneet Paperitehtaat Oy (United Paper Mills) practiced its policy of widespread social benefits system, where sports activities were central at the company's manufacturing sites. Although financial interests and the productivity of the forest company could be seen ultimately underlying factors, the investments and effect into the development of Finnish sports sector were yet considerable. (Ruuskanen, 2014)

Given the wide array of impacts that sports events generate, the public-private partnership model is commonly used to organize large-scale sporting events, where both parties have their own interests and liabilities in the process. The amount of resources contributed by either the private or public sector can vary significantly between different events. Further details regarding the rationale for public involvement in sports and other event initiatives are provided in Figure 1 by Crompton, Lee, and Shuster (2001, 80).

2.3 Regional economic impact of sports events

In many regions, both major and minor sporting events have become increasingly significant in terms of economic planning and tourist development strategies (Diedering & Kwiatkowski, 2015) and their contribution to the development has been recognized (Mackellar, Nisbet, 2017). In order to justify the use of taxpayer money, host cities and countries have based their decision-making on certain assumptions. Crompton, Lee, and Shuster (2001) proposed their model of "basic principles for undertaking economic impact studies" (p. 80)

which outlines the necessity for communities to invest in sports and other services to generate further tax revenue in the area.

THE CONCEPTUAL RATIONALE FOR UNDERTAKING ECONOMIC IMPACT STUDIES

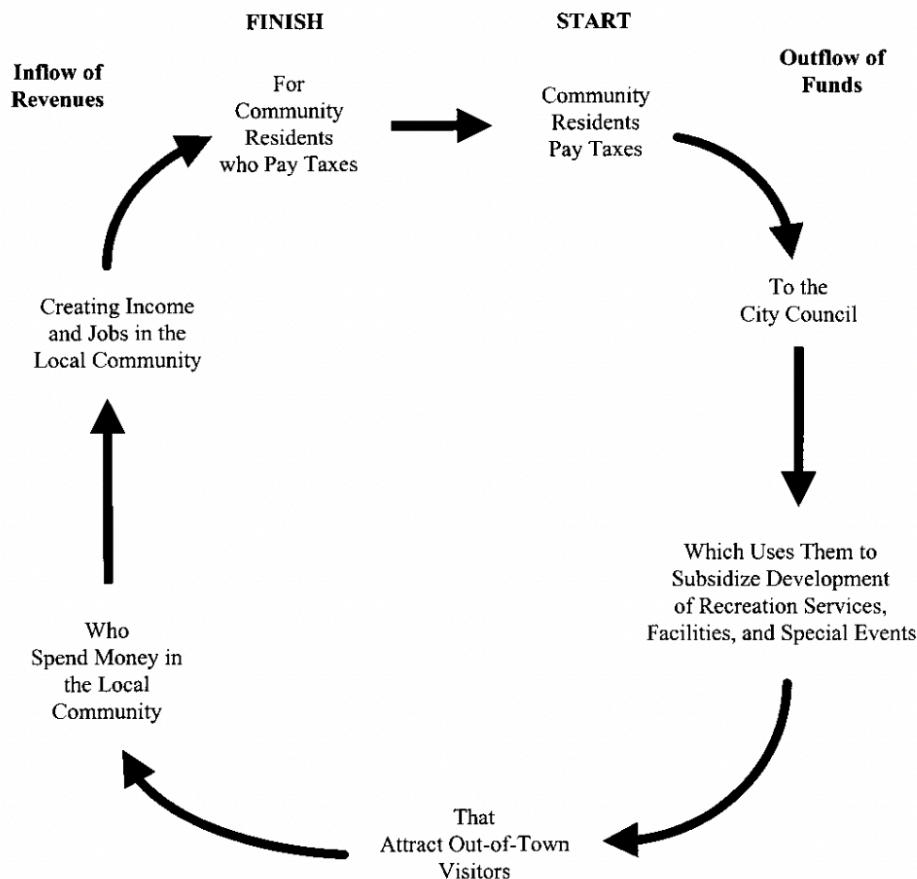


FIGURE 1 The conceptual rationale for undertaking economic impact studies (Crompton, Lee & Shuster, 2001, 80)

To accumulate surplus for the community, the expected tax income from event organizing would naturally need to exceed the amount of public funds invested. However, Crompton, Lee, and Shuster (2001) argue that this straightforward approach is conceptually flawed. The authors note that public money is invested by the community residents and therefore, the return on investment should be evaluated based on what the residents receive, rather than only examining the input-output relation of tax money (Crompton, Lee, & Shuster, 2001, 80-81).

The financial prominence of a sports event for a region is dependent also on the size of the event and the size of the total economy of the host region. The misalignment between the economic impacts on event organizers and host regions or cities can result in varying levels of desire to bid for and host sports events. Therefore, a thorough understanding of the economic impact of sports events on regional development is essential to make informed decisions of

investing in and hosting of sports events. (Mules & Dwyer, 2005) Laakso et al. (2006) highlighted the same potential disconnect between the economic results for the event organizers and the regional economic impact. Although a sports event may generate significant profits, the regional economic impact may remain minimal. Conversely, an event generating losses for the organizers may still have a substantial impact on regional economic development (Laakso et al., 2006). Recently, academics have argued in favor of hosting of smaller scale sports events (Rowley & Smith, 2022), suggesting perhaps their better economic alignment with the host region.

Furthermore, academics have emphasized the role of strategic planning in relation to actualizing the desired outcomes and impacts of sports events organizing (e.g., Chalip, 2014; Chalip & Fairley, 2019; Mackellar, & Nisbet, 2017, Thomson et al., 2019). This acumen of thinking represents also the paradigm shift away from the impacts that sports events merely leave behind to something that can be planned for. Ziakas (2023) argued further for the 'event-portfolio' perspective and found that consistent event organizing activities are more likely to generate positive leverage from events, rather than just executing one-off events.

As previously discussed, the role of the government as a facilitator for sports event organizing and as a stakeholder in the three-sector model of sports is central as public investments in sports event organizing can yield positive outcomes for governments, cities, and municipalities. The Finnish government's recent major event strategy (2023) continues to evolve in line with research on the event industry in Finland (Liikamaa, Wirén, Westerholm, 2020). Research on the event industry in Finland has been limited and practically only begun to develop after the Covid-19 pandemic. Stakeholders in the event industry sector formed an association known as Tapahtumateollisuus ry. (Event Industry Registered Association). The association commissioned a research study from the Business School of the University of Turku to provide an overview of the state of the industry in Finland (Liikamaa, Wirén, Westerholm, 2020). Liikamaa, Wirén, and Westerholm (2020) suggest that the reason for the lack of prior research of the industry may be due to its widespread and complex nature, as well as the absence of industry classification to collect data in commonly shared databases.

Although the Finnish Government (2023) outlines the principles of needed development, such as financing, infrastructure, and growth acceleration, to support the growth of both sports events and the event industry in general in Finland, the challenge on measuring the event impacts is at the same time being acknowledged. The strategy includes hence also a proposition of determining and implementing the "most appropriate" tools to generate consistent impact data of future events in Finland (Finnish government, 2023).

2.4 Measuring the economic impact of sports events

The starting point for economic evaluation of sports events should according to Mules and Dwyer (2005) consist of three major phases. First, understanding of all

the expenditure related to the event needs to be formulated. Second step involves allocating the expenditure to particular industries. In the third phase, total impact on the regional income and the Gross Regional Product can be formulated through the use of industry-based economic multipliers. The term 'multiplier' is used by the economist to cover the economic ripple effect of money re-circulating in the area and creating additional business turnover, employment, household-, and tax incomes, hence generating greater economic activity than the initial investment or new money injection into the area, as for example due to a sports event taking place, would have been. (Mules & Dwyer, 2005)

While economic impact studies are frequently used to evaluate the economic impacts of sports events, Diederling and Kwiatowski (2015) note that the results of such studies remain controversial. Despite numerous attempts to assess the total economic impacts of sports events, the debate persists due to the complexity of the evaluations and claims that a significant number of studies produce biased results (Diederling & Kwiatkowski, 2015). The debate on the appropriate definition of 'best practice' approach has also persisted and Taks et al. (2011) highlighted that using different analysis methodologies can lead to vastly different conclusions from the same event.

Additionally, some economic factors related to event organizing have proven to be difficult to measure and insignificant in relation to the overall economic impact. For instance, Agha and Taks (2018) found that modelling resident spending behavior during an event - naturally having an economic impact, is both challenging and negligible compared to the net effect of the event's economic impact. This sentiment was also echoed by Virkkunen et al. (2015), who noted that residential spending at events often involves money already circulating in the area and would only be spent otherwise or saved in the area, even without the event. Therefore, economic impact studies of sports events should focus on the new money that flows into the region as a result of the event (Agha & Taks, 2018).

Salgado-Barandela, Barajas & Sanchez-Fernandez (2023) highlighted geographical leakage as a limitation in determining economic impacts of sports events. Especially related to sports events organized in small cities, covering the leakage of money to neighboring cities or countries with more preferable services for the event visitors would require consideration. The authors concluded that although the measuring of exact leakage remains challenging, the regional factor of distribution of money should not be ignored in economic impact studies.

Economic Impact Analysis (EIA) is frequently employed as a means of measuring the economic impact of sports events (Mules & Dwyer, 2005). By utilizing Input-Output (I-O) modelling based on multiplier analysis, EIA aims to convert the increased expenditure in the event host area into a net income retained in the region (Taks et al., 2011). However, criticism of the model used in sports context has been apparent, with accusations of "inappropriate and overinflated multipliers" (Taks et al., 2011), "overestimation of multipliers" (Andreff, 2006), and the model's inability to distinguish between costs and benefits (Taks et al., 2011).

According to Taks et al. (2011), sports economists should use Cost-Benefit Analysis (CBA) instead of EIA to generate reliable information of the net costs

and benefits, thereby measuring the actual net benefits of hosting a sports event. Taks, Chalip and Green (2015) note similar findings by stating that the standard formulation of EIA is likely to find positive outcomes for sports events, because EIA considers only the new money coming into the region, and fails to determine, whether the impact is only due to increased spending from the government or organizers of the event. Compared to EIA, CBA has a distinct advantage in identifying net benefits and does not limit to the economic impacts originating from sports events. The downside of the method is, that performing a thorough CBA requires “enormous amount” (Taks et al., 2011) of information.

Similarly, Preuss (2007) notes that although economic and tangible measures are necessary for rationalizing the bidding processes of sports events, the outcome of an event is not straightforward to measure. Crompton, Lee, and Shuster (2001) respectively highlight the challenge of measuring the economic impact, stating that: “Economic impact analysis is an inexact process, and output numbers should be regarded as a “best guess” rather than as being inviolably accurate. Indeed, if a study were undertaken by five different experts, it is probable that there would be five different results.” (Crompton, Lee & Shuster, 2001)

Despite the academics favoring CBA, EIA is often used due to the simplicity of the model, and relatively easily accessible data that the model uses. The results of sports event EIA’s have been widely reported in public and served the need of results for decision makers. (Taks et al., 2011) However, Diederling and Kwiatkowski (2015) note scholars to have pointed out political pressure as one of the key reasons for announcing favorable numbers for the host organization, which may compromise the reliability of the reported results.

The challenge of measuring economic impacts of sports events seems to remain in Finland as well. The report of economic impacts of the Ice Hockey World Championship in Tampere and Helsinki serves as a recent Finnish example of controversial results of such studies in Finland. Without considering the success of the event organizing, the economic reporting of the results appears to face the aforementioned obstacles in Finland as well.

From May 13th to 29th, 2022 Ice Hockey World Championships took place in Tampere and Helsinki, seeing home team Finland winning the championship and reporting profit of 13,9 million euros for the organizers together with direct economic impacts of over 100 million euros for the host- cities of Tampere and Helsinki (Luumi & Porkkala, 2022). While the financial outlook of the tournament appears to be prominent, critique raised towards the potential inconsistencies in accurately measuring the economic impact of the games and claimed the results to be exaggerated (Hirvonen, 2022). From the report, it appears that the direct economic impact of the tournament was gathered through participant surveys. Specifically, questionnaires were sent to 37,534 ticket-holding visitors, of which 40.4 percent (15,174) responded. The total number of visitors during the tournament was 347,628 people. The economic impact analysis from the IIHF championship tournament utilized eventIMPACTS-model to evaluate the regional economic impact of the tournament. Instead of aiming to provide an exact figure, the report utilized economic multipliers

ranging from 1.25-1.75, offering hence an estimated range for the regional economic impact of the tournament. (Luumi & Porkkala, 2022)

As a result, and following the chosen methodology of the study, the report stated that additional 33 million euros were spent on lodging in Tampere during the time of the tournament (Luumi & Porkkala, 2022). The critique noted that for the entire month of May, registered and unregistered, such as Airbnb and Vrbo, lodging services reported sales of 14.2 million euros in Tampere (Visitory.io, 2022), which raises profound questions of the accuracy of the economic impact figures gathered through the participant surveys.

Similar examples of reporting regional economic impacts of Finnish sports events in the media can be found, including for example Sector Rally Finland in the city of Jyväskylä (Jyvaskyla.fi, 2022), World Championships in skiing in the city of Lahti (Karttunen, Viinikka, 2017), Levi World Cup in alpine skiing (Viinikka, 2019), and World Championships in winter swimming in Rovaniemi (Torikka, 2014). Common feature in these articles and the economic reporting they include is that often the event organizers themselves are responsible for measuring the regional economic impact of the events, which becomes subsequently published in the media.

In this research, the emphasis is on the EYOF 2022 related revenues and expenditure inside the organizing committee and the municipality of Sotkamo, to form a reliable understanding of the total economic impacts of EYOF 2022. Respectively from the viewpoint of Sotkamo municipality, the short and possible long-term economic and social benefits should justify the required investments for the EYOF 2022. The direct economic impacts, as well as regional economic impacts of the games are being assessed in the results and conclusion parts of this research.

3 SPORTS EVENT LEGACIES

Event impact studies begun to emerge in 1980's to increase understanding of possible outcomes that sports event organizing might lead to. However, in the case of sports mega-events, impact evaluations did not find the anticipated positive outcomes in short-term. (Thomson, Schlenker & Schulenkorf, 2013) Short-term approach for evaluating sports events, especially sports mega-events and their direct economic results, appeared flawed due to the enormous resources it requires to organize events such as the Olympic Games or World Cup in men's football in the short term (Preuss, 2015). Subsequently, researchers have called for longer-term focus and more comprehensive evaluation of the total impacts of sports event organizing (Thomson, Schlenker & Schulenkorf, 2013).

The term 'event legacy' has concise the assumption of long-term outcomes that event organizers might expect to reach from event organizing over time. (Thomson, Schlenker & Schulenkorf, 2013) The challenge in the research and assessment of sports events has been the numerous aspects and impacts that relate to event organizing. It is often difficult to distinguish the exact revenue, benefits, or costs of an event, let alone the subsidiary aspects of these, and be able to measure these impacts over time. (Zawadzki, 2022) The challenge in research has also been the inconsistent definitions of legacy across academic and industry practices (Thomson et al., 2019).

The impact areas of an event are numerous and in research it has been outlined to contain areas such as economic, regional, employment, image, tourism, social, and environmental impacts (e.g., Leopkey & Parent 2016; Preuss, 2007; Diederling & Kwiatkowski, 2015). Public policy planners, press coverage and sports event organizers have been willing to highlight the positive impacts in these areas to be reached through sports event organizing (Thomson et al. 2019; Zawadzki, 2022). Furthermore, organizations such as the International Olympic Committee (IOC), has its own interests to participate in the discussions, and Zawadzki (2022) note that the legacies generated from sports events have been "rarely fully analyzed" (Zawadzki, 2022). Thomson et al. (2019) conclude academic literature to point out that in generating positive legacies from sports mega events "more needs to be done by host cities to secure legacy outcomes" (Thomson et al., 2019).

3.1 Definition of sports event legacy

The sports event legacy research typically defaults to Preuss' (2007) definitions of planned and unplanned, positive and negative, and tangible and intangible structures that remain longer than the event itself. These areas form the so called "legacy cube" presented in the Figure 2.

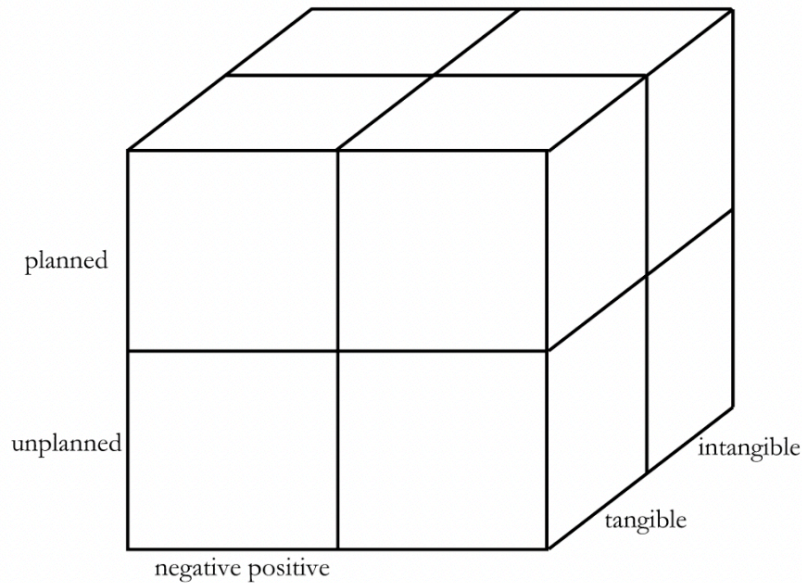


FIGURE 2 Legacy cube (Preuss, 2007)

The legacy cube highlights that there are both tangible and intangible aspects and outcomes in event organizing and some of them can be planned before-hand, while others remain completely unplanned and hard to estimate before the event. Therefore, the legacy planning of an event must rely on benchmarks from already held events and estimations based on these. After the event, evidence for legacy could be reviewed and found from macro-economic factors. (Preuss, 2007)

Organizing sports events have presented opportunities for economic development, social improvement and regeneration within the host cities and countries. Preuss (2006) notes that the term legacy should be distinguished from a word 'impact' as legacy is something that will last long after the event, covering hence more than for example only the increased consumption in the area during an event. Preuss (2006) summarizes literature around positive event legacies to include: "new event facilities, general infrastructure, urban revival, international reputation, increased tourism, improved public welfare, additional employment, local business opportunities, corporate relocation, city marketing, renewed community spirit, inter-regional cooperation, production of ideas, production of cultural values, popular memory, education and experience and know-how." (Preuss, 2006)

Negative legacies respectively include areas such as: “high construction costs, investments in non-needed structure, indebtedness of public sector, temporary crowding problems, loss of permanent visitors, property rental increases, only temporary increases in employment and business activities and socially unjust displacement” (Preuss, 2006). Related to the negative effects of sports mega-events, Dabscheck (2015) note that both the IOC and Federation Internationale de Football Association (FIFA) operate their respective monopolies, increasing hence the risk of creating negative legacies out of the Olympic Games or World Cup in men’s football. One prominent example of such risks relates to the “investments in non-needed structure” (Preuss, 2006) or “white elephants” (Zawadzki, 2022), resulting in over-sized sporting objects with little or no later use after the event.

The rise of the debate on negative legacies of mega-sports events has initiated a development where some host cities and nations have begun to withdraw their bid proposals (Preuss, 2015; Robertson et al., 2018). Furthermore, the ability of sports mega events to generate sustainable and positive legacies at all has been questioned in some recent studies (Carbonell-García et al., 2022). New kinds of negative legacies have also emerged, as state involvement with political intentions, human right violations, and corruption allegations have been linked with sports mega-events bids in a growing manner (e.g., Griffin, 2019).

Even the term ‘legacy’ initiates from the research around sports mega-events, the understanding of the word to describe long-lasting effects of sport event organizing does not limit to only cover the impacts of these sports mega-events. Taks, Chalip and Green (2015) suggest that the use of expressions ‘strategic outcome’ or ‘event leverage’ might prove out to be more feasible in a context of small- and medium-size sports event organizing, and their respective impacts on the host communities. The authors note that the differences of the terms might be subtle in theory, but the practical difference is that as legacy planning focuses on the possible outcomes of the event for the community, event leverage focuses respectively on the community and strategic benefits the community aims to gain through sports event organizing (Taks, Chalip & Green, 2015). Byers, Hayday and Pappous (2020) suggest that event leveraging could be understood also as legacy delivery, where the importance lies in the pre-event planning and delivery of positive legacies through event organizing. Table 2 presents the subtle differences in the typology.

TABLE 2 Comparison of legacy, impact, and leverage characteristics (Carbonell-García et al., 2022)

| Characteristics | Legacy | Impact | Leverage |
|------------------------|--|--|--|
| Visible results | Long term | Short term | Short or long term |
| Must be | Planned or Unplanned | | Planned and Proactive |
| Objective | | Outcomes | Improvement of strategies and tactics (search for the most effective ones) |
| Outcome can be | Positive or Negative Tangible or Intangible | Positive or Negative Tangible or Intangible | Positive |

Note. Adapted from: Chalip 2004; Chalip 2006; Preuss 2007; Preuss and Solberg 2006; O'brien and Chalip 2007.

3.2 Measuring the legacy

Researchers are still facing obstacles in the measurement of event legacy. Preuss (2007) defined three key obstacles that the event legacy measurement face. First challenge is, that when aiming to distinguish 'net' effect of an event, a major challenge is formulated by acknowledging, that without the event, the funds or public subsidies would have likely been invested in alternative projects. These alternative projects would have in turn created other legacies and outcomes, complicating hence the assessment of the actual legacy of a sport event. In economics, these costs are often referred as opportunity costs. (Preuss, 2007)

Second challenge is the issue of deciding on a negative or positive value of a legacy. This refers to the fact that while the perceived value of a legacy can be strongly positive for some, at the same time the value can be experienced being strongly negative for others. (Preuss, 2007) Difficulties in determining the positive value of a legacy can be compared to the challenges of EIA analysis presented in chapter 2.4., and the inability of the model to distinguish between 'costs' and 'benefits' (Taks et al., 2011).

Third challenge is the measurement of legacy over time, which indicates that at a certain point, for example years after the event has taken place, it becomes extremely hard to distinguish whether certain development is due to the event taking place, or dependent on totally different development (Preuss, 2007). Zawadzki (2022) notes respectively that the potential impacts of an event may go unnoticed due to the economic fluctuations, and at best, sports events may only have a role of mitigating or reinforcing the shifts in the surrounding economy, hence complicating the evaluation of the impacts over time.

The challenges outlined by Preuss (2007) has remained relevant despite further research in the field and the academic debate of the benefits of staging international sports events has remained on-going (e.g., Dashper, Fletcher & McCullough, 2014; Agha & Task, 2018; Zawadzki, 2022). Robertson et al. (2018) note that despite the broad event research and attempts to develop event assessment frameworks, the criticism of both the lack of theoretical standing as well as critical examination have persisted. Furthermore, the authors note that positivist approach remains to dominate event study research and present a call for "critical event studies" (Robertson et al., 2018). Consequent of the quest presented by Robertson et al., critical approaches towards legacy have grown in number in recent years (e.g., Chalip & Fairley; 2019; Byers et al. 2020) in particular in nexus with sports mega events. Acknowledging the need of careful legacy planning (Thomson et al., 2019) at all scales of sports event organizing, academics have however found evidence of positive legacy generation in relation to small and medium size sports event organizing (Rowley & Smith, 2022; Salgado-Barandela, Barajas, Sanchez-Fernandez, 2023).

Even EYOF 2022 cannot be considered as a sports mega-event, the term legacy is often used to cover the total impacts of also smaller scale sports event organizing. Furthermore, European Youth Olympic Festival highlights the generation of event legacy itself as an outcome of hosting the games. (EYOF, 2022) As presented in Table 2, instead of the term event legacy, terms such as event

impacts, event outcome or event leverage could be comprehended to be particularly close by their nature. To avoid confusion of the different terms in this research, the word legacy is being used to comprehend the total impacts of the organizing of EYOF 2022, and impact is designated to depict more narrow outcomes of the games.

4 EUROPEAN YOUTH OLYMPIC FESTIVAL (EYOF)

The European Youth Olympic Festivals (referred hereafter as EYOF) dates back to 1990's when the games were organized for the first time under the name European Youth Olympic Days (EYOD). The games took place in 1991 in Belgium for summer sports and in 1993 in Italy for winter sports. EYOF is part of the Olympic family, organized under the supervision of European Olympic Committee, operating respectively under the International Olympic Committee. (EYOF, 2022)

Nowadays, EYOF is the largest multisport event for youth athletes aged 14-18 in Europe. Approximately 3,600 young athletes take part in the summer games, whereas approximately 1,600 participants attend in the winter games. In addition to the games and their intention to prepare the athletes to take part in the Olympics at a later age, the EYOF also aims at teaching the values and ideals of the Olympic movement, educating and motivating youth to adopt healthy lifestyles, and promote the networking of European top young athletes. (EYOF, 2022)

Before EYOF 2022 in Vuokatti, Finland had organized EYOF games twice in the 21st century. In 2001, Vuokatti hosted the first EYOF organized in Finland, gathering over 1,100 participants and in 2009, the city of Tampere hosted the summer games gathering over 3,300 athletes to Finland. (EYOF, 2022)

The bidding process to host the EYOF proceeds through European National Olympic Committees and the host of EYOF must be a city or a region. As a benefit for the host of the games EYOF organization defines the areas of development of sports and sports participation, developing image and tourism opportunities of the host city or region, direct and indirect economic benefits, generating a legacy, promoting of Olympic ideals, and a variety of social benefits such as reinforcement of community pride and development of local youth and volunteerism in the area. (EYOF, 2022)

4.1 EYOF 2022 in Vuokatti

In 2022 in Vuokatti, there was expected to be nearly 2,000 young athletes. In addition to the athletes, there was also a great number of other stakeholders taking part in the games and travelling to Vuokatti. (EYOF, 2022) Covid-19 pandemic had its effects on the organization of EYOF 2022 meaning strict policies regarding the athletes, volunteers and spectators as well as decentralized organizing of the games. Due to the pandemic, for example boy's ice hockey tournament took place already in December 2021.

With the exception of ski jumping and Nordic combined organized in the city of Lahti, all other sports of EYOF 2022 took place in either Vuokatti skiing center or Kajaani ice hall. The sports that were competed in Vuokatti and Kajaani included alpine skiing, biathlon, cross-country skiing, figure skating, ice-hockey, snowboarding, and short track and were all organized under the same organizational committee. (Final Report, EYOF, 2022)

Ski jumping and Nordic combined events could not take place in Vuokatti due to facility requirements, and were instead held in the city of Lahti, some 500 kilometers away. The ski jumping hills in Vuokatti did not meet the standards set by the International Ski and Snowboard Federations (FIS), so the organizing of the events was handed over for Lahti Ski Club. While there was collaboration between the EYOF 2022 organization and Lahti Ski Club, the execution of the games in Lahti was handled independently by the club. As a result, the EYOF 2022 activities in Lahti were not included in the financial reports for the games in Vuokatti and Kajaani. The part of organizing ski jumping and Nordic combined in Lahti are neither included in this research, however it can be mentioned that the organization also in Lahti was prominent, consisting of approximately 300 persons in total. (Final Report, EYOF, 2022)

In total, there were 932 athletes from 46 countries who participated in sports held in Vuokatti and Kajaani. The total number of participants, including also other team members was 1693. The final number of participants was affected the most by the decision to disclose Russia and Belarus from the games due to the outburst of war in Ukraine. A notable feature of EYOF 2022 was that both male and female athletes competed in all sports for the first time in the event's history. Numbers on the people involved at EYOF 2022 are presented in Figure 3. (Final Report, EYOF, 2022)

- Number of participated NOCs - **46**
- Number of athletes – **932 (494 boys, 438 girls)**
- Total number of participants - **1693**
- Number of volunteers – **1124**
- International volunteers – **104**
- Full time employees throughout the project – **1**
- Part-time employees (last 6months) – **4**
- School tours reached **2,500** children and young people in seven municipalities
- During the event weeks, a total of **3,600** schoolchildren were watching the race



FIGURE 3 EYOF 2022 Vuokatti by Numbers (EYOF 2022 Vuokatti presentation, EOC General Assembly Skopje, 2022)

4.2 Organization

The event organization consisted of three different groups that were The Executive Committee, The Organizing Committee and volunteer workers. The organizing committee consisted of seven larger responsibility areas, each having their own responsible person. These areas were in turn divided into 42 smaller departments responsible of their specific tasks during the competitions and there was a total of 71 persons in charge of these organizational areas, mainly consisting of volunteer workers. The Secretary-General and Kainuun Liikunta ry. (Kainuu Sports Association) in the executive committee had overall operational responsibility of EYOF 2022. (EYOF, Final Report, 2022)

The Executive Committee respectively consisted of a total of nine persons and three organizations with equal number of seats in the committee. The organizations in the executive committee were the municipality of Sotkamo, Finnish Olympic Committee and Kainuu Sports Association. The municipality of Sotkamo was the responsible organizer of EYOF 2022, Kainuu sports association the responsible organizer, and Finnish Olympic Committee provided the organization with their expertise of event organizing under the Olympic Committee standards, as well as their relations to other national Olympic Committees in Europe. (EYOF, Final Report, 2022)

As the majority of the organizing committee of EYOF 2022 consisted of volunteer workers, the operational activities of the games were largely covered by volunteer workers as well. At its peak in March 2022, there were over 1,100 volunteers in Vuokatti enabling the games to take place. One of the main themes of EYOF 2022 was the inclusion of young people, both as athletes in the competitions, but also as volunteers working at the event. Over half of the volunteers were under the age of 29 and a prominent source of volunteers were secured from the upper secondary schools, high schools, vocational schools and higher education institutions in the area. Through collaboration with educational institutions, EYOF organization managed to secure labor resources for example for the areas of security, visibility and media. (EYOF, Final Report, 2022)

In addition to the work input from the executive and organizing committees, and the volunteers, also the municipality of Sotkamo was able to provide EYOF 2022 organization with labor resources. The municipality allowed its communal workers to assist the EYOF 2022 organization for the high demand periods during the games. Similar assistance in smaller scale was also received from the city of Kajaani. (EYOF, Final Report, 2022)

Economic structure of EYOF 2022 was organized so, that the municipality of Sotkamo was the main responsible and organizer of the games, as was already required in the bidding process, and Kainuun Liikunta acted as a sub-contractor for the municipality of Sotkamo, being responsible for the organizing tasks related to the games. Hence the municipality of Sotkamo would have been entitled for possible surplus, as well as responsible for potential deficit from the games. The Finnish government shared some of the economic responsibility of EYOF 2022 organizing through grants from the Ministry of Education and Culture.

4.3 Financial outlook of EYOF 2022

The tentative budget of EYOF 2022 were set to be 3,5 million euros and the operational goal for the organizers was to reach zero result, or even a slight profit in favorable circumstances. The final result was affected by the decreased income due to the war in Ukraine and increased costs and prolonged timeline for the competitions due to Covid-19 pandemic. Total costs for the organizing of the games were 2 925 791,12 euros and at the time of publishing final report the operational result was -192 718,70 euros. (EYOF, Final Report, 2022)

The outburst of war in Ukraine in 2022, took place so close to the EYOF 2022 competitions that the Executive committee was forced to react quickly. The disclosure of Russian and Belarussian athletes from the games decreased the amount of received participation fees, while at the same time for example the reservation terms for accommodation did not allow the organizers to cancel anymore the reserved accommodations and avoid all related costs. (EYOF, Final Report, 2022)

At EYOF 2022, the Covid-19 pandemic did not significantly decrease the revenue, but instead increased the expenses and caused a delay in the

organization of the games. For instance one significant factor contributing to the increase in expenses was the division of the games, including an ice hockey tournament to be held already in December 2021 in Kajaani, causing duplicate costs, such as separate opening and closing ceremonies. Furthermore, Covid-19 inflated the costs in terms of more expensive agreements, particularly for food, merchandise, and marketing material deliveries. These costs could have possibly been avoided, or contracts with more favorable terms for the organizers could have been secured, if the event had taken place all at once. (EYOF, Final Report, 2022)

Due to the rescheduling of the competitions, the final event had to eventually take place during a peak season at Vuokatti skiing center. This respectively caused an increase in the price of accommodation, and due to the lack of free accommodation, the organizing committee had to use more expensive alternatives, which were less favorable in terms of their conditions.

Prominent subsequent costs from the pandemic were also the prolonged and increased labor needs in the organizing of the games and changes in domestic flight services to the airport of Kajaani, causing rerouting of participants to Oulu, Kuopio, Kuusamo and Rovaniemi airports and hence additional costs from bus transportation. In addition, the diminished resources left for partner negotiations and uncertainty of the event taking place at all deteriorated the circumstances for successful partnership negotiations and revenue from visibility elements. (EYOF, Final Report, 2022)

4.4 Income structure of EYOF 2022

The income for EYOF 2022 organization was generated mainly from two sources. Personnel entry fees that National Olympic Committees, meaning participating countries and their athletes, paid for the organizers was the largest source of income equaling 1,420,536.58 euros. Grants for the EYOF 2022 organization generated 945,000 euros, where a grant of 695,000 euros from the Finnish national Ministry of Education and Culture was the largest single grant. Entry fees from the athletes and grants combined 86,1 percent of all the revenue and covered 80,9 percent of the total costs of EYOF 2022. (EYOF, Final Report, 2022)

Third largest source of income was municipal grants from the hosting municipalities of Sotkamo and city of Kajaani equaling 226,129 euros and 8,2 percent of total revenue and 7,7 percent of total costs. Additionally, the municipality of Sotkamo and city of Kajaani provided EYOF 2022 with communal labour work for the event. The municipality of Sotkamo was financially backing up the organization of the games as the event host, as was already required also in the bid terms for EYOF 2022. (EYOF, Final Report, 2022)

The revenue from fundraising activities; sponsorship agreements and advertising revenues, was 95,710 euros and other revenues consisting of for example ticket sales to certain events at EYOF 2022 generated a total of 59,795.62 euros. Together, the revenues from these additional commercial sources formed

5,7 percent of the total revenue and 5,3 percent of the total costs of EYOF 2022.
(EYOF, Final Report, 2022)

5 DATA AND METHODOLOGY

This chapter presents the choice of methods employed to provide findings and answers for the research questions in chapters 6 and 7. Furthermore, reliability and validity of the chosen methods as well as ethical considerations of the research are being assessed.

5.1 Case study as a research approach

The use of case study as a research method results in a highly contextual study, covering a specific timeframe of a phenomena and aiming to provide a detailed study covering multiple aspects of an individual case. Due to highly contextual nature of the approach, case studies typically involve small number of participants, yet rely on multiple sources of data. Case study approach benefits from prior development of theory to guide both the data collection and analysis of the data. (Skinner, Edwards & Corbett, 2015, 116-117) Practice-oriented case studies aim for contributing to the knowledge of specific practitioner or group of practitioners. Alternatively, case study might contribute for a development of a new theory for later use in the academic community. The aims of a case study approach could hence be defined as theory-oriented or practice-oriented. (Dul & Hak, 2007, 30-32) Arguments for the use of case study research include analysis of the elements of time, environment, and context where the activity occurs to depict a detailed interpretation of the studied subject (Jones, 2015, 119).

Case study approach was experienced suitable for the aims and for the need and availability of data in this research. Furthermore, although the event organizing of EYOF 2022 falls under the category of international sports events, each event is unique by a variety of different factors starting from the host country, aims and motives, and extending to organizational structures and unique outcomes of events. To outline the economic impact and further legacy of EYOF 2022, “a detailed investigation” (Skinner, Edwards and Corbett, 2015, 118) of the subject was experienced to be necessary, and therefore case study approach found to be the most appropriate approach for the research.

In addition to the research approach aligning with the aims of the research, also the availability of data was evaluated to meet the requirements of conducting case study research. Responsible persons of EYOF 2022 organization agreed to take part in this research and provided the researcher also with recommendations of the people who could add to the knowledge. In this regard then, the snowball method was carried out. Furthermore, detailed financial accounting of EYOF 2022, final report of the games, and regional economic impact study carried out by the event organizers provided a good starting point for detailed investigation of the event.

The research process of this research is described in Figure 4. It was expected, that collecting data will create a need for further data collection and analysis, hence making the process iterative. The availability and interest of the interview participants also allowed clarification and collection of further qualitative data at later phases of the research process.

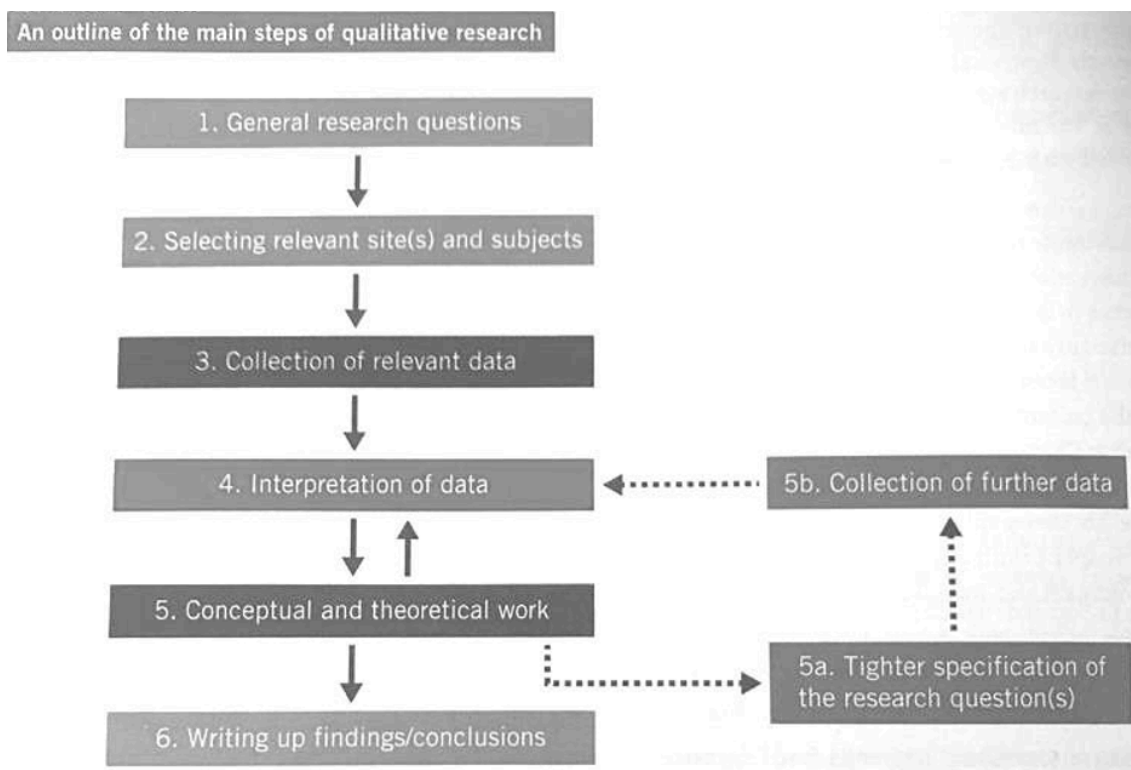


FIGURE 4 Data collection process (Bell, Bryman & Harley, 2019, 358)

5.2 Theoretical framework

Theoretical framework of a research guides the outcome of research findings. It provides the researcher with directions that frame explicitly the viewpoint, from where the researcher approaches the empiric knowledge and findings of the research area. (Alasuutari, 2011, ch 4)

Theoretical framework for this research is the event legacy model presented by Virkkunen et al. (2015). The model follows the initial idea of the “legacy cube” (Preuss, 2007) and was formulated in a study analyzing the event impacts of an international gymnastics event, Gymnaestrada, in Helsinki in 2015. The model regards impact areas of an event to be direct economic impacts, regional economic impacts, employment, image development, tourism impacts, social impacts, and environmental impacts as presented in Figure 5. (Virkkunen et al., 2015)

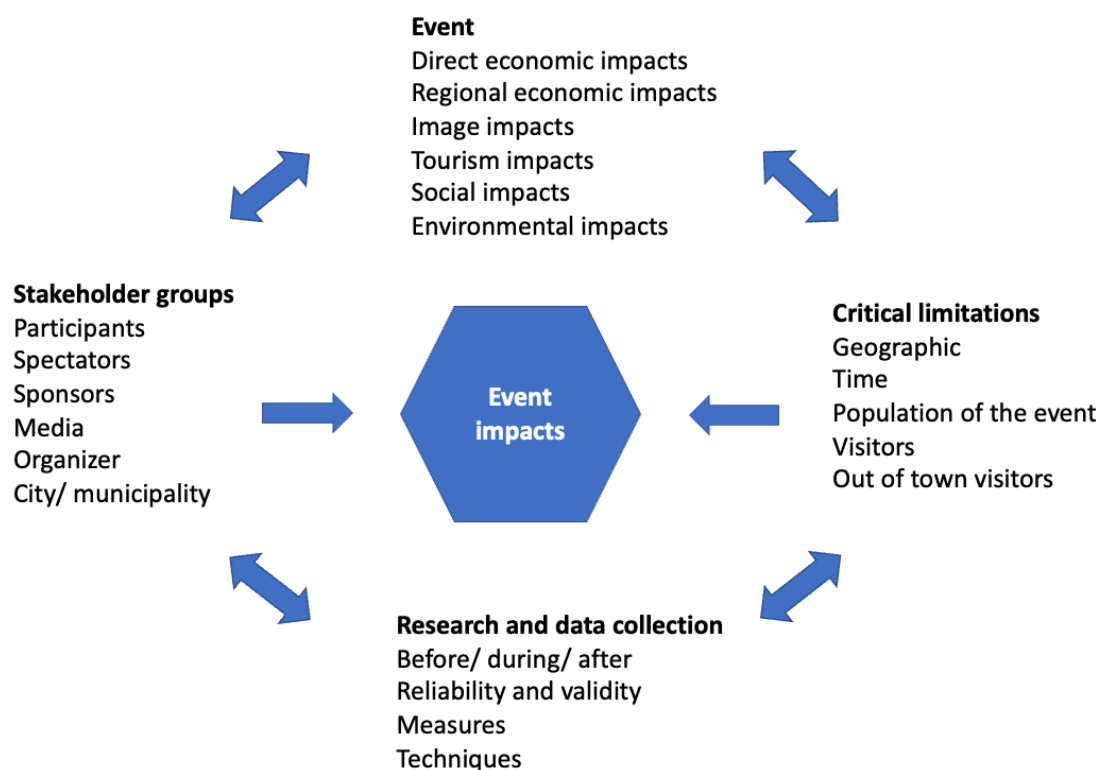


FIGURE 5 Event impacts model (adapted from Virkkunen et al., 2015)

In this research, the focus of first two research questions is to assess especially the direct economic and regional economic impacts of the EYOF 2022. Aspects of employment, image, tourism, social, and environmental impacts are considered and discussed respectively in connection with research question 3. The aim is to find out, how well the EYOF 2022 organizers’ experiences of possible outcomes align with the theoretical framework and further academic literature, rather than explicitly express monetary – and possibly arguable, numeric results that could be generated for example through input-output modelling.

Both the theoretical framework of this research (Virkkunen et al., 2015) and case study approach require clear boundaries. Clearly narrowing the research case “strengthens the methodology, design and validity.” (Skinner, Edwards & Corbett, 2015, 132) The critical limitations presented in Figure 5 could be evaluated to apply with further methodology of this research. In addition, Virkkunen et al. (2015) identify that the model might not fit for all major events

and that the model does not regard analyzes of accessibility as event impacts. Maintaining and developing accessibility of Sotkamo would have been an interesting aspect to consider in this research, however as the theoretical framework does not take impacts on accessibility into account, this realm of event impact cannot be assessed through the framework in this research.

5.3 Data collection and sources of data

The data collection for this research consists of various sources of data, as is characteristic for case study research approach. Interviews with the key representatives of EYOF 2022 organization, provided material of the EYOF 2022 organization's comprehensive measuring and reporting of the games, as well as general data of travelling and tourism in Finland set the foundation of data collection for this research.

5.3.1 Interviews as a method of data collection

Collection of qualitative data is often accomplished through interviews, where the researcher can gain richer data from smaller sample group than for example would be possible through questionnaires. Through the use of interviews, the researcher can explore typically the questions of 'why' and 'how'. (Jones, 2015, 176)

The selection of interviewees for this research was considered carefully, with a focus on key personnel from the organizing committee of EYOF 2022. Since the municipality of Sotkamo was the event host, the municipal manager of Sotkamo was identified as a central person to be interviewed. Respectively Kainuun Liikunta was responsible for the operative tasks of EYOF 2022 and hence the executive manager of Kainuun Liikunta was identified as a key person to be interviewed in this research. The overall responsibility of the operational tasks of EYOF 2022 was carried by the secretary general of EYOF 2022. For the timeframe of organizing EYOF 2022, the secretary general was also the only full-time employee of the EYOF 2022 organization, and involvement of an interview from the secretary general was also experienced central for this research.

In addition to Sotkamo municipality and Kainuun Liikunta, third organization in the organizing committee of EYOF 2022, the Finnish Olympic Committee, was considered as a potential research interest for this study. However, due to the role of the Finnish Olympic Committee not including operational responsibilities, nor financial investments into EYOF 2022, the involvement of an interview from Finnish Olympic Committee was found not central for the research aims. Furthermore, other research interests, such as local entrepreneurs or the role of the Finnish Ministry of Education and Culture granting EYOF 2022 with government subsidies were considered yet ruled out from the aim of this study. However, research considering the mentioned viewpoints in sports event organizing in Finland might prove out to be interesting in future studies.

Interviews for this research were conducted as post-event interviews to gain insight for the whole timeframe of EYOF 2022, and to include evaluations of post-event experiences as well. Furthermore, the financial reports were completed only after the games, and some last details, such as the decision on the final grant application in the Finnish Ministry of Education and Culture, were on-going after the event.

The data was collected using a semi-structured interviews in which additional and specifying questions could be asked from the respondents. The open-ended nature of semi-structured interview provides opportunities for both interviewer and interviewee to discuss topics in more detail (Skinner, Edwards, Corbett, 2015, 55). Open-ended questions were used to allow respondents to freely express their thoughts and opinions on a particular topic and to create detailed discussion around the interview questions and topics. Semi-structured approach also allows the researcher flexibly to alter the structure of the interview and collect further data through subsidiary questions (Jones, 2015, 176). The preliminary questions planned before, and used in the interviews are presented in Appendix 1.

The role of each interviewee in the EYOF 2022 organization defined the focus area and direction of the interviews. Some questions were considered in more detail in some interviews, whereas chronologically later interviews and open-ended questions could build on already gathered knowledge and focus could be shifted to other topics or the specific responsibility areas of the interviewee in more detail.

As the strengths of semi-structured interview method rely on the open-ended discussion between interviewer and interviewee, Skinner, Edwards and Corbett (2015) note that the major disadvantage of the method lies there as well, as researcher is exposed to subjective insights and interpretations of the informant. Jones (2015) add to the possible challenges by stating that interviewees are respectively subject to the researcher – often unconsciously affecting the results with gestures of approval or denial, hence altering the interviewees further responses. Furthermore, human challenges of problem of recall, misperception and incorrect knowledge might be present in the interviews as well (Jones, 2015, 177-178).

To limit the challenge of reliability of the gathered data in this research, the researcher aimed to provide interviewees with knowledge of the research and research aims. The researcher believes also that the collaborative approach towards the research from the interviewed persons facilitated the sharing of their honest opinions and even information, that could be considered somewhat sensitive. The fact that the numeric data referred during the interviews could be verified from alternative sources, such as financial statements, could be evaluated to mitigate the problem of recalling the correct information. Also the fact, that the interviewees volunteered to supplement their answers in the instance of obtaining later data or decisions, and their availability to comment on the interpretation of the data could be evaluated to enhance the reliability of data collection in this research.

5.3.2 Analysis of the interview data

In conducting qualitative data analysis, the first step is to become familiar with the data by reading and re-reading the interview transcripts. Next, initial codes are generated to identify meaningful segments of the data. The codes are subsequently grouped together to search for themes, which are eventually interpreted and presented. (Skinner, Edwards & Corbett, 2015, 58)

Thematic data analysis is a flexible method that allows researchers to explore complex phenomena and identify findings from research material that contribute to creating knowledge around the research problem (Eskola & Suoranta, 1998, ch. 4).

Coding process and analysis of the data initiated with the research questions and different elements of the theoretical framework making hence the approach theory bound. Theory bound analysis acknowledges the prior familiarization of the researcher into the subject. (Tuomi & Sarajärvi, 2018, ch. 4) Where in the interviews direct economic impacts of EYOF 2022 were considered, or estimations of them presented, the importance of the answers was experienced rather numeric, and themes were eventually developed under the remaining impact areas of the theoretical framework and topics emerged from the interviews. Even all the interviewees had their own perceptions of, and angles to EYOF 2022, all the themes derived from the interviews fit under the scope of the theoretical framework of this research. This was experienced on the other hand to verify the appropriateness of the used theoretical framework, but it could be also noted that for example the event impact areas such as economic, image or social impacts could be evaluated to be broad enough and yet predictable to emerge as themes from the data.

Thematic data analysis often provides the research with citations, allowing the reader with “an idea of the voices of participants” (Jones, 2015, 281). As well as Jones (2015), Eskola and Suoranta (1998) also emphasize, that the number of used citations in the research should be carefully considered, and that the citations from the interviewees should not be considered as the results of the research. The researcher wanted on the one hand to present the ideas of the interviewees to establish a rich description of the results, but on the other hand careful consideration was practiced including citations only when they were experienced to add and bring value for the research. The interviews and transcriptions of the interviews took place in Finnish. Where in the results parts, there are direct citations used in this research, the initial idea of the interviewee is aimed to be presented as similar as only possible when translating the original text into English.

Interviews were carried out as recorded meetings via Microsoft Teams. Technological execution of the interviews realized well, and no loss of data took place during the data collection. Next, the interviewees were transcribed using Microsoft Word. The recordings were not transcribed letter-to-letter. Instead, repetitive, or expletive words were removed to create a coherent flow to the transcriptions of the interviews. After the first transcriptions of the text, the recordings were listened and the text read at the same time to ensure, that the

ideas and expressions from the interviewees had been preserved in the transcriptions. General information of the interviews is presented in Table 3.

TABLE 3 Information of the interviews

| | Date | Duration | Form | Pages of transcription |
|--------------------|-------------|-----------------|-------------|-------------------------------|
| Interview 1 | 10.1.2023 | 36:52:00 | MS Teams | 12 |
| Interview 2 | 17.1.2023 | 30:38:00 | MS Teams | 8 |
| Interview 3 | 3.2.2023 | 40:38:00 | MS Teams | 12 |

5.3.3 Final report of EYOF 2022

The final report of EYOF 2022, prepared by the event organizers, serves the need of external reporting of the execution and outcome of the games. The report comprises 66 pages and provides a detailed account of the event's organization, timeline, economy, practicalities, media relations, and the sports present at the games. Although completed in January 2023, the last financial details of the games were unknown at the time and were further clarified in the interviews conducted for this research. The EYOF 2022 organization provided the report for use in this research, and it offered an informative starting point for detailed investigation of the event.

The report was thoroughly analyzed, with particular attention given to the financial information and general organizing of the games. Table 4 presents the financial information in the report, and Chapter 4 and the description of EYOF 2022 organization are enriched by the knowledge gained from the final report.

The reliability and accuracy of the report can be evaluated from two perspectives. Firstly, numeric reporting, such as financial figures or the number of volunteers and staff in the organization, is based on the EYOF 2022 organization's reporting of the outcome of the games. As the organizers received public funds and grants from the Ministry of Education and Culture and the IOC, they were required to comply with detailed reporting requirements, which could be evaluated to increase the reliability of the provided material. Secondly, the report includes subjective interpretations from the organizers about their experiences at EYOF 2022. The subjective nature of these descriptions was acknowledged while analyzing the report, and further complementary knowledge was obtained in the interviews conducted for this research, using the report as a starting point.

5.3.4 Survey of regional economic impact of EYOF 2022

Due to the nature of the financing model of EYOF 2022, and especially grants from the Ministry of Education and Culture and European Olympic Committee,

the financial reporting of the games was expected to meet certain level of detail. To comply with the requirement, EYOF 2022 organization conducted regional economic impact evaluation to assess the regional economic impact of the games, which also serves as the basis of regional economic impact analysis in this research. As the final report of EYOF 2022, also the regional economic impact analysis by the organizers was provided for the use of this research.

The regional economic impact assessment for EYOF 2022 was conducted, and the framework for the evaluation revised in collaboration with Kajaani University of Applied Sciences. The EYOF 2022 organizers' starting point for the evaluation was to document the money used by the organization for services in the area such as hotel reservations, transportation, and food orders. In total, the organizers identified 20 distinct areas of services utilized in the realization of the games. In addition to the use of local services, salaries paid by the organization were included in the evaluation of regional economic impact of EYOF 2022. Furthermore, the organizers evaluated visitor spending in the area by conducting participant surveys among the visitors of EYOF 2022. As a result, the survey identified 17 different groups of visitors attending EYOF 2022, as presented further in Table 5. Central for the evaluation of regional economic impact, the groups included divisions for local, domestic, and international visitors of EYOF 2022, hence allowing the analysis of additional economic activity initiated by the games on a regional level (Agha & Taks, 2018).

The approach of the event organizers to carefully analyze the possible outcomes, and their strong scientific background and earlier experience on respective studies could be considered to increase the reliability of the provided material. However, the nature of the study needs to be acknowledged, and admit that it would be unlikely to obtain meticulous results to describe the exact amount of visitor spending during EYOF 2022. Therefore, both the input and output of the calculations need to be regarded as informed estimations.

5.3.5 Visitory.io

In chapter 6, data obtained from Visitory.io is presented together with the results of this study. Jones (2015, 71) emphasizes the nature of internet with nearly infinite sources of data where "anyone with correct equipment" (Jones, 2015, 71) can produce or edit information. Therefore, a source from the internet would require assessment of quality, accuracy, and usefulness.

Visitory.io is a service gathering and presenting travelling and lodging information from multiple sources. The service is available in 15 European countries. Visitory.io has received finance from both public funds in Finland as well as from European Regional Development Fund. Finnish limited liability company behind the service is Tutkimus- ja analysointikeskus TAK Oy (The Research and Analysis Centre TAK Ltd). Visitory.io is a referenced source, whenever development of travelling or tourism information is needed. The municipality of Sotkamo utilizes the service in communal decision making as well as a basis for informed decision making. The initiative to use Visitory.io as a source of data emerged from the interviews conducted in this research.

The quality and accuracy of the data could be evaluated relatively trustworthy and sufficient for the use of this research. Due to the nature of Visitory.io as a service of a limited liability company, a more detailed investigation of how Visitory.io compiles the reports, could not be examined, as this kind of information is not shared in public. However the legitimacy of the service could be evaluated prominent in Finland.

The data in Visitory.io can be arranged based on geographical area, as for example Lapland, or to depict the development of a single city or community of interest. The data Visitory.io provides involves several areas such as the use rate of accommodation services, total sales generated from accommodation services, number of visitors including their division by countries, or the market share of the total accommodation services in Finland. Furthermore, the data can be sorted to specific years and months. In case of Sotkamo, being the primary focus of interest in this research, the data in Visitory.io extends to the beginning of year 2010.

Relating to the focus area of this research, the travelling and accommodation information of Sotkamo is examined from the past years until the end of February 2023, which was the last month where data could be acquired to be used in this research. The data allows examination of the development of travelling and tourism in Sotkamo and provides an opportunity for further analyzes of the possible impacts of organizing EYOF 2022.

The steps in gathering data from Visitory.io included detailed examination of the number and nationality of visitors in Sotkamo, especially between the years 2015 and 2023. Given the researcher's preconception of the effects of Covid-19 pandemic, the year range was extended to include years prior to the outburst of the pandemic as well. Moreover, the use rate of accommodation services and total sales generated were examined in detail. The data gathered from Visitory.io was analyzed using Microsoft Office programs and presented in form of figures and tables later in this research.

5.4 Reliability and validity

The reliability of a qualitative research consists of the fact that the results are consistent and would stay the same if the research would have been reproduced by another researcher (Jones, 2015, 101-102). The assessment of reliability in qualitative research could be examined for example through evaluating the researched subject and research aims, commitment of the researcher, data collection process and data analysis as well as reporting of the results. However, being able to reliably prove the findings of qualitative research is challenging due to the personal interpretations of the researcher. (Tuomi & Sarajärvi, 2018, ch. 6) Because of this, Creswell suggest that "good qualitative research contains comments by the researchers about how their interpretation of the findings is shaped by their background" (Creswell, 2009, 192; as in Skinner, Edwards & Corbett, 2015, 75). Validity respectively considers whether the researcher has

been studying, what has been promised to be studied, and that the methods used are appropriate to reach valid results (Jones, 2015, 103).

The reliability of this research is aimed to be ensured through a detailed description of the research process. The data collection process was carried out in accordance with the research plan, and all data was recorded, transcribed, and reviewed for accuracy. The financial data used in this research was provided by the EYOF 2022 organization, and its reliability could be considered enhanced by the fact that grant payments and applications of EYOF 2022 were founded on the data. Moreover, the professional and academic backgrounds of the interviewees providing the data and conducting the participant survey to measure regional economic impact of EYOF 2022 can be considered enhancing the reliability of the provided data. Similarly, the reliability of data obtained through Visitory.io could be evaluated trustworthy and sufficient for the use of this research.

In earlier studies, the researcher has familiarized himself with the concept of sports event legacies and found a genuine interest to continue on this path when writing this master's thesis. Furthermore, the researcher has a strong background in Finnish football and knowledge around event organizing, particularly in Finnish football, as well as interest towards the financial aspects that relate to event organizing.

The challenge of maintaining objectivity is particularly relevant in relation to research question 3, which assesses the legacy and evaluates the indirect economic impacts of EYOF 2022. To ensure objectivity of the results, the results and conclusion of this study are closely tied to the theoretical framework and further literature in the field of sports event organizing. Furthermore, the researcher committed to acknowledge and minimize the possible interpretations of data, that could have stemmed from the researcher's own personal background.

Validity of this research is aimed to be increased first and foremost with close co-operation with the instructor, Hanna Vehmas, from the University of Jyväskylä. In the drafting phase of this research, the research approach together with the choice of methods were carefully considered. At this point, the researcher wants to address warm appreciation towards the guidance received for this research. Due to the collaborative approach of the interviewees towards this research, also re-evaluations of the findings and additional questions could be asked from the participants. This could be seen to positively impact the reliability by reducing the possibility of subjective error between the researcher and the interviewees. Warm appreciation needs to be also addressed to all the participants of this research.

Access to financial administration systems or complete financial statements from EYOF 2022 could have enhanced the reliability of this research. However, it is understandable that such information is often considered sensitive and not shared with external parties. Despite this limitation, the key financial figures provided for public use were evaluated to be reliable and comprehensive for the purpose of this research. Furthermore, the researcher ensured that interviewees were asked detailed questions and that any estimations emerging from the interviews, were clearly presented as such, and used only as financial inputs where appropriate.

5.5 Ethical considerations

Ethics refer to the understanding of the principles of right conduct. Legal considerations and codes of behavior provide fixed rules for research ethics; however, researchers might often face ethical conflicts, and ethical considerations need to be considered throughout the research process. (Skinner, Edwards, Corbett, 2015, 44) Ethically responsible research should comply with ethically responsible conducts and abstain from dishonesty (Tuomi & Sarajärvi, 2018, ch. 5) General codes that should be followed in the research would include among others: voluntary participation, minimized psychological or social risks for participants, informing participants of the research aim, and strict confidentiality of the information (Jones, 2015, 141-142). Furthermore, Finnish National Board on Research Integrity (TENK), outlines that research should follow the principles of integrity, meticulousness, and accuracy as well as respect the work of other researchers (Finnish national board on research integrity, 2023).

All the interviewees informed their consent to participate to this research. They were informed of the data protection regulations of the University of Jyväskylä, and this research does not deviate from the university guidelines. Given the small number of interviewees in this research, identification of the persons from the research could be considered possible. This is partly due to the key roles of the interviewees in organizing EYOF 2022. Although this research includes financial information, the public nature of it can be considered to lower the sensitivity of the information to be used in this research. Related to the financial information, the researcher decided to clearly define in a rigorous manner for the reader, when the presented numbers are based on reported financial statements, and when estimations from the interviewees are being presented, to reduce the possibility of confusion between these two.

During the research process, ethical considerations such as the sensitivity of certain information, was considered throughout the research project and discussed together with some of the participants. Participating to the research was not identified to expose the participants to any potential risk or harm. From the researcher's perspective, also the outcome of the research could be presented with no potential risk or harm for the participants. The researcher commits to the responsible conduct of research, outlined by the Finnish National Board on Research Integrity.

6 RESULTS

Based on the literature presented in chapters 2, 3, and 4, secondary research material received from the EYOF 2022 organization, data from Visitory.io, and interviews of the key representatives of the EYOF 2022 organization, the results of this study are being presented in this chapter. The sub-sections of the chapter are structured according to the research questions and theoretical framework used in the research. Conclusion of the results and assessment of the research are provided in the last chapter.

6.1 Economic impact of EYOF 2022

The EYOF 2022 organization received grants from various sources including the European Olympic committee, the Finnish government's Ministry of Education and Culture, as well as the municipality of Sotkamo and the city of Kajaani. As a result of grant funding, and the nature of the grants founding on realized expenses of the EYOF 2022 organization, a detailed financial statement of the games was prepared and provided for analysis in this research. The realized budget for EYOF 2022 is presented in Table 4.

TABLE 4 Financial results of EYOF 2022 (EYOF, Final Report, 2022)

| REVENUES | | |
|---|-----------------|-----------------|
| ENTRY FEES | | |
| Personnel entry fees (NOCs) | 1 420 536,58 € | |
| Municipality revenues | 226 129,00 € | |
| ALL ENTRY FEES | | 1 646 665,58 € |
| OTHER REVENUES | 59 795,62 € | 59 795,62 € |
| ALL REVENUES | | 1 706 461,20 € |
| COSTS | | |
| PERSONNEL COSTS | | |
| | -242 231,36 € | -242 231,36 € |
| OTHER COSTS | | |
| Facility rents | -47 725,82 € | |
| Machine- and equipment rents | -1 63 853,63 € | -211 579,45 € |
| EXTERNAL COSTS | | |
| Professional services | -730 141,05 € | |
| Advertising costs | -33 003,48 € | -763 144,54 € |
| TRAVEL- AND ACCOMMODATION COSTS | | |
| Daily allowances | -27 452,69 € | |
| Travel expenses | -1 63 055,21 € | |
| Mileage allowances and car expenses | -25 116,24 € | |
| Accommodation / food | -1 096 157,65 € | -1 311 781,79 € |
| MATERIAL COSTS | | |
| Marketing materials | -222 131,31 € | |
| Sport related materials | -65 502,50 € | |
| Printing and copying costs | -75 672,88 € | -363 305,69 € |
| OTHER OPERATING COSTS | | |
| Meeting costs | -1 344,16 € | |
| Prizes | -4 789,31 € | |
| Insurances | -10 700,00 € | |
| Other operating costs | -16 913,82 € | -33 747,29 € |
| ALL COSTS | | -2 925 791,12 € |
| INCOME-EXPENDITURE BALANCE | | -1 219 329,92 € |
| FUNDRAISING | | |
| Advertising revenues | 7 110,00 € | |
| Sponsors | 88 600,00 € | |
| ALL REVENUES | | 95 710,00 € |
| Fundraising costs | | -13 848,13 € |
| ALL FUNDRAISING | | 81 861,87 € |
| INCOME-EXPENDITURE BALANCE | | -1 137 468,05 € |
| INVESTMENT AND FINANCING ACTIVITIES | | |
| Interest expenses | -250,65 € | |
| ALL INVESTMENT AND FINANCING ACTIVITIES | | -250,65 € |
| INCOME-EXPENDITURE BALANCE | | -1 137 718,70 € |
| GENERAL GRANTS | | |
| Special government grants | 695 000,00 € | |
| Other grants | 250 000,00 € | |
| ALL GRANTS | | 945 000,00 € |
| RESULT OF THE FINANCIAL YEAR | | -192 718,70 € |

The initial budget for the games was 3.5 million euros. Table 4 illustrates that the event resulted in a deficit of -192,718.70 euros, with total costs of 2,925,791.12 euros. After the finalization of the EYOF 2022 financial report, the European Olympic Committee granted an additional 40,000 euros to cover the increased expenses due to the pandemic and conflict in Ukraine. As a result, the total amount granted by the European Olympic Committee was raised to 290,000 euros and hence the final deficit from EYOF 2022 reduced to -152,718.70 euros.

The grant from the Finnish Ministry of Education and Culture was based on applications after the organizational costs had already been incurred, making it difficult to budget and evaluate the cost-structure during the life cycle of EYOF 2022. Hence also the final governmental subsidy for the unforeseen costs faced by the EYOF 2022 organization remained uncertain during the operational activities. The last round of applied subsidy was eventually granted at a significantly lower level than the organizing committee had expected. Negotiations and appeal for the final amount of the grant were still ongoing at the time of this research and eventually the last application got rejected in the ministry.

The interviewees of this research found both positive and negative elements of the model of government subsidies EYOF 2022 received. Considerations of the challenges of the model included the budgeting challenges due to receiving the grant payments only after the costs had already taken place, hence increasing the

demand for initial financing. In the case of EYOF 2022, municipality of Sotkamo was able to support the organization, but the model was experienced possibly challenging for smaller sports event organizers. The uncertainty of the subsidized amount was also experienced as an area of future improvement. On the other hand, the organizers admitted that without the government support, sports events such as EYOF 2022 would not be able to be organized in Finland at all and noted that there are likely to be areas of improvement in all possible models.

Organizers expected the final financial result to be negative, but less than -100,000 euros depending on whether Ministry of Education and Culture would approve the final application. As the Ministry of Education and Culture eventually rejected the final application, the total loss for EYOF 2022 set to be -152,718.70€. The municipality of Sotkamo as the organizer of EYOF 2022 is the final responsible for the loss.

6.1.1 Impacts of Covid-19 and war in Ukraine

As the organizer applied for a grant from Finnish Ministry of Education and Culture based on the unexpected financial impacts during EYOF 2022, these costs were documented and reviewed thoroughly for the application. The decision to exclude Russia and Belarus from EYOF 2022 close to the games resulted in some unavoidable costs related to prior reservations. These costs were affected also by the prior two rescheduling of the games due to Covid-19, which left the organizers with already weakened position for cancellations of reservations and orders. Additionally, negotiations with vendors during the peak season in Vuokatti were challenging for the organizers. The economic net effect of the cancellation of Russian and Belarussian athletes was estimated to be approximately negative 40,000 euros.

“Altogether 168 participants were ruled out from the games, and practically the effect on the income side was approximately 140,000 euros. Because the disclosure took place so late, and the peak-season was on in Vuokatti, then all the accommodation and food reservations for those countries could not be cancelled anymore.” (H1)

“When talking about euros, and what could be accounted for the war, then close to 40,000 euros and maybe even more was the effect on the result.” (H1)

Even the organizers mention that a great number of the cancellations were due to the war in Ukraine, the aftermath of the pandemic and the Covid-19 restrictions at the time of EYOF 2022 had also prominent effects on the budget. The main areas where Covid-19 and rescheduling of the games inflated the costs were presented in chapter 4. The financial effect of Covid-19 generated mostly to the cost side of the budget since the effect of pandemic to the amount of athletes and other staff members arriving to Vuokatti was only singular cases.

“Covid was an issue of its own. That is why the games had to be rescheduled twice and prolonged this project. Paid staff was needed longer, and marketing and PR-material had to be renewed with new dates and years, at worst twice.” (H1)

“Perhaps the most prominent effect from Covid was the re-organizing of departures to the games. The activity of Kajaani Airport was reduced to very minimum level, and

international teams could not fly there. So we needed to expand the departures of the teams from Kuusamo, Oulu and Kuopio airports to get them here.” (H1)

“Quick estimation of what Covid caused to the cost side, surely it is around 150,000 euros.” (H1)

While the direct budget effects of war in Ukraine and Covid-19 can be separated, the indirect costs of these two are more challenging to measure. As the organizers realized the tightening of the initial budget, they were forced to find cost savings from other operational areas. According to the organizers, the unwanted first cost saving area was marketing of EYOF 2022. Furthermore, the availability of time became scarce for the organizers, as a lot of effort were needed for running errands caused by the unexpected changes.

Also negotiations of partnership agreements were impacted due to the pandemic and decrease in the available resources for the negotiations. After the outburst of Covid-19 pandemic, the organizers set a goal of generating revenue of 100,000 euros from sponsorship agreements. The final amount of 96,700 euros was deemed as an acceptable result, even the organizers felt, that there could have been reasonable potential without the tightened resources and confusion around organizing the games at all to double or even triple the revenue from sponsors.

“Sponsoring income ended up little. Due to Covid, it was difficult to get sponsors and after the pandemic hit, we concluded that let’s try to gather smaller and possibly more local sponsors. Conservatively we estimated that if we could gather 100,000 euros, it would be already quite okay.” (H2)

6.1.2 Cost effect of volunteers

Volunteers and their work efforts were at a paramount of importance in realizing EYOF 2022, both on the operational level and financially. All the interviewees of the research perceived that organizing of the games would have not been possible without the work input of volunteers. This was furthermore seen as an advantage for Finnish sports event organizing, as the organizers acknowledged that in some countries, all work related to sports event organizing comes through service fees and bought services. This respectively increases the total costs of sports event organizing remarkably and might increase the need for public funding in other countries.

“If compering abroad, what kind of financing respective events receive from public funds in their countries, then it is not even enough that 10 times less we get, instead it can be even 20 times less financing for respective events” (H3)

“Surely we will never reach the same figures than in Middle-Europe or elsewhere, where government support can be well over 10 times more compared to Finland.” (H2)

The exact economic effect of volunteer work for the EYOF 2022 organization is dependent on certain variables but it can be evaluated based on the number of hours worked and an assessment of possible compensation level. Considering the total amount of volunteers both in December in Kajaani (200 volunteers) and

in March in Vuokatti (1124 volunteers) the work hour estimation for volunteer work at EYOF2022 could be set at 105,920 hours. To know exactly the theoretical compensation that would have been paid as a salary for the volunteers, is not possible to determine, but estimations of the amount are possible to be made.

“Total number of volunteer work hours is really difficult to estimate. But the total number of volunteers was about 1150. If thinking, that each volunteer worked eight hours for the around 10 days, then from that it can be calculated then.” (H2)

“If thinking from employers’ side, and you would have to pay 10–15 euros to the employee, and then you can almost multiply with 1.4–1.5 to have the employers expenses, then 20 euros per hour would not be far away from what the voluntary working hour would have cost in reality as a bought service” (H3)

Even conservative calculation, with estimated salary of 10 euros per hour and multiplier of 1.2109, covering only statutory salary-related expenses, (Accountor, 2023) would equal to a cost estimation of 1,282,585 euros worth of volunteer work at EYOF 2022.

6.1.3 Investments on infrastructure

The advantage of Vuokatti Ski Center and Kajaani ice hall was that the majority of venues and infrastructure for EYOF 2022 already met the requirements during the bidding process. Although eventually and opposing to the organizers’ belief, the ski jumping hill did not qualify as an event venue and ski-jumping and biathlon had to be separated to be organized in the city of Lahti. To be able to utilize already existing event venues also promoted to realize the aim of environmentally sustainable games.

The most prominent investment in the area was the building of Vuokatti Arena, a multi-purpose arena with two ice rinks and convertibility to be used for indoor sports and events as well. The cost level for the construction was over 10 million euros. Although admitting EYOF 2022 to Vuokatti was the final decisive factor in beginning the construction, the project had been planned since 2005 and will serve the area and further improve the possibilities for different sports activities and camps in the area for decades. Respectively, the demolition of the old ice hall was delayed due to EYOF 2022 as the facility could cost-efficiently serve the ski management needs of EYOF participants and was dismantled only after the games had taken place.

In addition to the newly built Vuokatti Arena, some smaller investment for EYOF2022 event facilities were needed, which in great part remain in the area for future use as well. Only temporarily built venue was the park used for snowboarding in Vuokatti Ski Center, that served only for winter 2022. Other sizeable investments were equipping Vuokatti Arena indoor hall with plumbing and other needed improvements to comply the facility with needs for catering large number of visitors at once, improvements for skiing and biathlon facilities and tracks with 40,000- 50,000 euros, and short track cushions worth “over 50,000 euros” to Vuokatti Arena ice rink.

In addition to a few more visible investments, and Vuokatti Arena as a sizeable new facility, EYOF 2022 organization also implemented some smaller

structural solutions that comply with the most up to date requirements and will serve some of the sports at EYOF 2022 also long in the future.

6.2 Regional economic impact of EYOF 2022

The regional economic effects of EYOF 2022 for Sotkamo, Kajaani and on wider perspective for the whole Kainuu-region and Finland, is a central question when evaluating the economic impact of hosting international sports events such as EYOF 2022. As presented above, both Sotkamo and Kajaani, and the Finnish government provided resources for EYOF 2022, making it hence important to gain knowledge of the outcomes and effects that the games brought to the region.

Through the participant survey of EYOF 2022, the organizers aimed to create an understanding of the total visitor spending during EYOF 2022 to formulate the regional economic impact of the games. Part of the results of the survey are presented in Table 5, illustrating the results of personal consumption of visitors at EYOF 2022.

TABLE 5 Estimation of visitor spending at EYOF 2022

| Group | Number of people | Visiting days | ADDITIONAL SPENDING day/person | Total |
|----------------------------|------------------|---------------|--------------------------------|---------------------|
| Athletes | 932 | 7 | 20,00 € | 130 480,00 € |
| Staff members | 761 | 7 | 30,00 € | 159 810,00 € |
| VIP guests | 150 | 5 | 100,00 € | 75 000,00 € |
| Officials | 70 | 7 | 30,00 € | 14 700,00 € |
| Volunteers FIN, local | 920 | 10 | 5,00 € | 46 000,00 € |
| Volunteers FIN, other | 100 | 10 | 15,00 € | 15 000,00 € |
| Volunteers INT | 104 | 10 | 15,00 € | 15 600,00 € |
| Erasmus Mediacamp | 49 | 7 | 15,00 € | 5 145,00 € |
| Erasmus Winterschool | 35 | 12 | 20,00 € | 8 400,00 € |
| Erasmus Coach seminar | 46 | 7 | 25,00 € | 8 050,00 € |
| Spectators March, local | 1000 | 5 | 5,00 € | 25 000,00 € |
| Spectators March, other | 500 | 5 | 70,00 € | 175 000,00 € |
| Spectators December, local | 500 | 5 | 5,00 € | 12 500,00 € |
| Spectators December, other | 300 | 5 | 70,00 € | 105 000,00 € |
| Student/pupil spectators | 3600 | 1 | 5,00 € | 18 000,00 € |
| CdM seminar December | 33 | 3 | 50,00 € | 4 950,00 € |
| VIP guests December | 10 | 3 | 50,00 € | 1 500,00 € |
| | | | | 820 135,00 € |

Summing up the estimated economic impact of visitor spending in the area with accommodation and food, bought services, and salaries, the direct economic impact of EYOF2022 would equal 3,645,753 euros.

Based on the participant survey, the organizers have presented a conservative evaluation of additional impact of 4-5 million euros for the region's economy. To avoid exaggerating the results, the organizers prefer to express the impact as "at least four million euros." This kind of amount of regional economic impact was evaluated to have a prominence in the local economy as well.

"Surely that kind of money has already an impact in the area. Comparing only to the budget of the games, and as the most of it remained already in the region, and then on

top of that indirect spending by the visitors in the area. Then surely the 4 million is not exaggerated by any way, what the games have left to the local economy.” (H3)

Although the organizers could not schedule the timing of EYOF 2022 at their free choice, the aim was to place the competitions so that they would also serve the local economy the most. The initial dates for the competition were set to be prior to Finnish winter holiday season, which attracts visitors to Sotkamo, and especially Vuokatti Ski center on a regular basis too. After the pandemic, the games were relocated first to slightly quieter month of December but eventually held during the highest peak-season in Vuokatti in mid-March.

To provide a more accurate view of the positive impact on the regional economy, the estimations of the table need to be revised following the ideas presented by Agha and Taks (2018) and Virkkunen et al. (2015). This involves subtracting the local spending, measuring hence only the new money coming into the area. From the Table 5, this would cover the spending of local volunteers, local spectators, and local student or pupil spectators. Additionally, the economic impact of the food offered to local volunteers need also to be deducted from the regional economic impact estimation. Based on the organization's own impact analysis for EYOF 2022, these impact areas were estimated to have a total impact of 230,300 euros, which brings the estimated additional economic impact of EYOF 2022 for the region to 3,415,453 euros.

To avoid the well acknowledged risk of using over-inflated multipliers to evaluate the regional economic impacts, multipliers of 1.25–1.75 are applied and the result of regional economic impact is presented as a scale. The multipliers are adopted from the eventIMFACTS-model, deployed to evaluate the regional impacts of men’s ice hockey World Championships in Tampere as well. (Luumi & Porkkala, 2022) Reasoning for the use of the multipliers is their design to specifically suit evaluating the economic impacts of sports events. Furthermore, the critique towards the reporting of economic impacts of ice hockey World Championships particularly concentrated in the initial data inputs of the estimations, rather than the ‘over-inflation’ of the used multipliers.

The impact of leakage of money as presented by Salgado-Barandela, Barajas and Sanchez-Fernandez (2023) can be considered minor, as the EYOF 2022 organization was responsible for the accommodation and placement of the event visitors, other than locals, for the whole duration of the games. One aspect of leakage however was the reduced amount of time spent by the international guests in the area. As the original plan of flying all the athletes and teams to Kajaani airport with close proximity to Vuokatti needed to be adjusted to alternative airports, the time international athletes and staff members spent in Sotkamo and Kajaani was replaced with being transported to the event venue from further away airports, with no access to the services in the area and hence lowering the regional economic impact for Sotkamo.

The regional economic impact of EYOF 2022 is presented in Table 6. To maintain a conservative approach to the subject, an average of the lowest and highest value, equaling 5,123,179.50 euros, is used as a result for regional economic impact in Table 7 in chapter 6.4.

TABLE 6 Regional economic impact of EYOF 2022

| NEW MONEY IN REGION | MULTIPLIER | REGIONAL ECONOMIC IMPACT |
|---------------------|------------|--------------------------|
| 3 415 453,00 € | 1,25 | 4 269 316,25 € |
| | 1,45 | 4 952 406,85 € |
| | 1,75 | 5 977 042,75 € |

The rationale for public involvement in sports event organizing, as presented in Figure 1, can also be extended to consider the grant funding that EYOF 2022 received from the Finnish Government. Although the aim of this research is not to delve in the taxation practices of Finland, nor present tax generation derived from EYOF 2022 for example through the use of EIA, certain considerations regarding the tax generation for the Finnish government from EYOF 2022 are important in justifying the public involvement in the organization of the games.

The financial data of EYOF 2022 allows for the calculation of direct tax impacts, specifically value added tax (VAT) and personal income tax, with certain limitations. The VAT rates of Finland (Finnish Tax Administration, 2020) were applied to the appropriate services used by the EYOF 2022 organization. To define the amount of tax accrual of the estimated consumption of EYOF 2022 visitors – where the nature of the consumption could not be distinguished, the general VAT rate of 24 percent was used. However, for some extent it is likely that the data includes consumption that would have been subject to lower VAT rates as well.

The personal income tax level of 27.2 percent was chosen to approximate the average income tax rate of a Finnish person, and it was applied to the amount of salaries paid by the EYOF 2022 organization. (Central Union of Taxpayers, 2022) This rate includes not only the income tax, but also social security payments of 8.65 percent, as well as averages of municipal tax (7.37 percent) and tithe (1.38 percent) in the calculation.

In line with the approach used to evaluate the regional economic impact, domestic consumption was excluded from the calculation. However, it should be noted that the number of Finnish athletes and staff members at EYOF would have needed to be distinguished from the data for a more accurate estimation. Taking these limitations into account, the additional direct tax generation from EYOF 2022 for the state of Finland can be estimated to be 370,000–420,000 euros, added with municipal taxes of approximately 30,000 euros.

6.3 Sotkamo's aims and experience of EYOF 2022

As the municipality of Sotkamo was the host of EYOF 2022, the evaluation of the success of the event organizing in the region is not entirely tied to the direct

economic outcome of the event. Instead, the aims of the event organizing in line with the outcomes need to be considered. The aim of the organizers to achieve a zero-result suggests that generating financial profit or even covering the expenses of directly allocated resources was not the primary goal for EYOF 2022 event organizing from Sotkamo's perspective.

"From the sports side we are 100 percent satisfied, and with the realization of the budget, of course Covid and disclosure of Russia and Belarus brought their own setbacks. But from the municipal perspective, with what we invested – cannot say with small, but with moderate investments, we reached very prominent positive visibility and managed to organize good games." (H3)

In addition to the short-term impacts on local economy, from the perspective of municipality of Sotkamo and Vuokatti ski center, one of the main goals for organizing EYOF2022 was to reach people internationally and gain visibility for the facilities in Vuokatti. Hence "boosting" (H3) the local travel and tourism business opportunities as well as attracting new attention for the area was a central goal for the organizers. Furthermore, Sotkamo municipality has a strategic goal of enhancing the regions visibility and promotion of its services and possibilities through event organizing. Financially, Sotkamo is prepared to invest in events on a strategic level, and no opportunity costs were reported related to the organization of EYOF 2022, emphasizing the importance of thorough planning and municipal budgeting for event organizing in the area.

The municipality of Sotkamo is constantly seeking to organize suitable events to support the economic activity in the area. Therefore, show-casing event organizing capabilities in the area was also found important outcome to support future applications of sports and other events to be organized in the area.

The international attention received by the event for the duration of the games was seen as a central factor in the willingness to become the host of EYOF 2022 and enhance the regions visibility. Following media visibility was hence a central measure for the event organizers to evaluate the outcome and the municipality reported satisfaction towards the reached outcome from the games.

"Before the games, international visibility for the facilities we have here was particularly the reason even to want to host the games." (H3)

6.4 The legacy of EYOF 2022

Although the financial result of EYOF 2022 organizing is negative, the assessment of the event legacy is what defines if the resources and effort put into the event were worthwhile in the end. As noted by Preuss (2015) and Thomson, Schlenker and Schulenkorf (2013), and discussed in chapter two, the ability of sports events to attract visitors from far away, the potential they have to increase economic activity, and the long-lasting effects that can be reached through leveraging sports events calls for thorough analysis and assessment of legacy. Table 7 summarizes the investments, realized outcomes, and possible tangible and

intangible, long-lasting outcomes of EYOF 2022 organizing from the viewpoint of Sotkamo municipality.

TABLE 7 Sotkamo’s investments into EYOF 2022, realized and possible outcomes

| EYOF 2022, REALIZED BUDGET = 2 925 000 € | | | |
|--|---------------------------------------|---------------------|--|
| SOTKAMOS INVESTMENTS | TANGIBLE OUTCOMES | INTANGIBLE OUTCOMES | POSSIBLE LONG-TERM IMPACTS |
| SOTKAMOS FINANCING | REGIONAL ECONOMIC IMPACT | VISIBILITY | IMPROVED IMAGE OF SOTKAMO |
| 181 129,00 € | 5 123 179,50 € | SOCIAL CAPITAL | IMPROVED IMAGE OF FINLAND |
| | | | INCREASED CAPABILITIES FOR FUTURE EVENTS |
| FINANCIAL RESULT | IMPROVED INFRASTRUCTURE | | INCREASE IN TOURISM |
| -152 718,70 € | 100 000 - 120 000€ | | INCREASED INTEREST TOWARDS VUOKATTI |
| | | | IMPROVED CULTURE OF VOLUNTEER WORK |
| OPPORTUNITY COSTS | DIRECT COMMUNAL TAX GENERATION | | INCREASED SELF-ESTEEM |
| N/A | 30 000 € | | |
| | | | |
| TOTAL | | | |
| 333 847,70 € | | | |

From Table 7, first thing to note is the absence of the over 10-million-euro investment into the new Vuokatti Arena. Even organizing EYOF 2022 cannot be considered the starting point for the investment, nor is the construction visible in the financial statement of the games, winning the bid in 2016 delivered the last deadline for the construction work to be finished and hence pushed the establishment of the new arena. Due to the extensive planning process of building the new arena, and the fact that the former ice hall in Vuokatti was dismantled right after EYOF 2022 had taken place, the need for the new venue could be however reasoned even without EYOF 2022 taking place. Hence the researcher argues that the investment should not be included in the evaluation of the legacy of EYOF 2022, although the last push of the time frame in the construction can be acknowledged.

“The new ice hall had been on the drawing board since 2005. At the time the games were admitted, it became concrete that the building will be started. Certainly the games were speeding up, and as one reasoning factor, that now is the time to realize the plan.” (H3)

Next to the construction of Vuokatti Arena, the most significant tangible improvements in Vuokatti were the alteration and improvements of Vuokatti Arena to accommodate mass sports events catering, and improvements to the skiing and biathlon facilities. Furthermore, acquisition and installment of short-track pads to Vuokatti Arena were needed to carry out the short-track competitions at EYOF 2022. The combined acquisition costs of improvements in the aforementioned areas were approximately 100,000 - 120 000 euros and these investments will serve the area for further use in the future. For example, the short-track pads and experience of, and facilities for organizing official short-

track competitions cannot be found anywhere else in Finland. The organizers wished this to offer a unique advantage for Vuokatti in the future.

The only temporary investment of EYOF 2022 was the building of snowboarding park into Vuokatti skiing center. With acquisition costs of 55 000 euros, the park complied with the requirements of EYOF and served in the area for the winter 2022, temporarily providing state of art services for snowboarding in Vuokatti. However, due to the nature of the investment, the long-term benefit of the investment is not considered prominent and not included in Table 7 as an outcome from EYOF 2022.

Concluded from Table 7, the municipality of Sotkamo invested total of 333 484,70 euros into EYOF 2022. Structural improvements in Vuokatti area were realized between 100 000 - 120 000 euros. The regional economic impact evaluation of 5,1 million euros is based on the gathered data and presented using the average of the results to avoid exaggerating the impact, as presented in Table 6.

When evaluating the total economic outcome, the impact areas of EYOF 2022 does not limit to the direct financially measurable outcomes. Forming the total legacy and following the theoretical framework by Virkkunen et al. (2015), the results of the remaining event impact areas are being considered next.

6.4.1 Employment impact

As EYOF 2022 was relying heavily on voluntary workers in staff resourcing, the direct employment effects of the games remained at a relatively low level. The general secretary of EYOF was the only full-time employee in the project and held the vacancy for approximately three years. Part-time, there was two more employees for the three-year time-frame of the project. As the games got closer, the number of part-time employees increased approximately half a year before the games.

Six months before EYOF 2022 took place, the organization started to receive additional help from 20-30 Sotkamo's municipal workers. In practice this was organized so, that Sotkamo municipality allowed its workers to assist on the request by EYOF 2022 organization. In the competition week, the number of Sotkamo's municipal workers grew to 80 which according to the organizers was a "remarkable help". (H2)

Towards the end of the EYOF 2022 project, the organizers staffed workforce also with hourly-based compensation model and according to the initial plans, the number of hourly compensated workers would have been even higher. As a negative impact, the burden on some staff members, which of many were volunteers, was mentioned. As the unexpected changes of Covid-19 and war in Ukraine added on the amount of tasks in the EYOF 2022 organization, hence tightening the resources more limited than expected, it was experienced that some individuals had to carry too much responsibility of the operational activities.

"It was planned that towards the end, there would have been more hired people to deliver the tasks. But when we began to see some challenges in the finances, it was one area we had to save costs. Then in some parts of the organization we were very at the

limit eventually. If would have the chance to do again, and even with risk of growing the deficit, there would have been needed more people hired.” (H1)

6.4.2 Image impact

Developing the image of Vuokatti was noted as the initial main driver for the municipality of Sotkamo to bid for becoming the host of EYOF 2022. The municipality saw the organizing of the games as an international marketing-window to increase the visibility and familiarity of the area. On one hand, the services in the area were wished to be exposed also to a broader audience, but another aim was to specifically reach a ‘winter-sport’ audience that could benefit from the services of Vuokatti area in the future. Hence organizing of international winter sports event was experienced as an appropriate way to reach these regional goals. The media-exposure of Vuokatti during EYOF 2022 was mentioned as one of the most prominent outcomes of the games and the organizers experienced the visibility to certainly promote travelling and business in the area in the future.

“One of the most important is that the event brought even more, especially when TV was there as well, then more visibility to Vuokatti and the whole region of Kainuu. It will bring new opportunities and new visitors to the area most certainly”. (H2)

Due to the importance of developing the regional image and visibility of Vuokatti, also the EYOF 2022 organization followed and measured the achieved results. Finnish National Broadcasting company, YLE, produced a live broadcast from the games each day and the broadcasts were made available to all European countries. Media coverage in total was reached in more than 25 countries. Live-streams from the games reached a total of 74,354 viewers in March.

“Today media coverage is possible to be followed and reported and we have a tool in the municipality as well. Was it altogether over 90 million views for the opening Monday, it is well the spike of all times in visibility. If thinking its value in money, perhaps quite a stack of euros will be needed to reach 90 million people in one day through some other means.” (H3)

EYOF 2022 was active also on social media. At the same time with the games, an international media camp of 49 participants was organized and carried the responsibility of coverage of the games on Instagram, Facebook, Youtube, Twitter, TikTok and EYOF website.

On top of the visibility in different medias, the organizers were satisfied also with the nature of it. Through long-lasting media coverage and broadcasts from the area highlighting the well-functioning services and delivering an image of well-organized international sporting event, the organizers experienced the delivered image to be prominently positive. Furthermore, the organizers expressed their satisfaction of being able to organize the most international winter-sports event in Finland, and the biggest Olympic-family sports event, that currently is being possible to be organized in the country. The positive image of Finland as an event host nation was experienced to be reinforced prominently by the successful organization of EYOF 2022 as well.

“Positive image is important also so that the teams participating, they were satisfied with the services and facilities of Vuokatti, it will certainly be followed with training camps for the international teams and even new games to be organized in the future.”
(H1)

6.4.3 Tourism impact

Examining data from Visitory.io, a service provider producing data and reports of the travel industry, the use-rate of registered accommodation services was at 82 percent in Sotkamo for March 2022. Starting from the first year of reporting in 2010, the use-rate was the highest ever registered in the service for Sotkamo. The number indicates however, that there would have been accommodation available for additional visitors as well. However, the possibility of temporarily sold-out services at the time of EYOF 2022, hence reducing the number of other visitors in the area cannot be absolutely excluded.

Gaining visibility to Vuokatti skiing center was one of the primary goals for Sotkamo to be involved into organizing of EYOF 2022. Through the goal, the municipality of Sotkamo aims to attract more visitors into the area and promote the facilities for winter sports activities that Vuokatti skiing center can offer. Hence the goal of “boosting” the local economy would rely on the increasing number of visitors in the area in the future, where Vuokatti skiing center is a central part of the development.

As the interviewees for this research were certain of the positive impact that organizing EYOF 2022 would have on tourism in the area and region, the timeframe to find evidence of such development is yet too short. As EYOF 2022 took eventually place in March, some analysis can be drawn comparing the winter-seasons where data until the end of February 2023 could be included in this research. Because of the availability of the data, the period for comparisons of the data was set to be from October to February. This period for analysis also increase the year-to-year comparability, as the spike of international visitors at the time of EYOF in March 2022, is not included in the comparisons either.

The recent events in the world have affected the travelling industry remarkably and comparison of yearly growth-rates is challenging due to the changing faces in travel industry due to Covid-19. Furthermore, the location of Vuokatti has promoted travel of Russian tourists in the area prior to the war in Ukraine. Therefore, the analysis of statistical information on travelling records of Sotkamo yields for meticulous analysis. For Figure 7 and Table 8, winters of 2017-2018 and 2018-2019 were included to add years prior to Covid-19 pandemic to be presented. For the revenue generation of accommodation sales in Figure 6, the development from last seven years were included in the table.

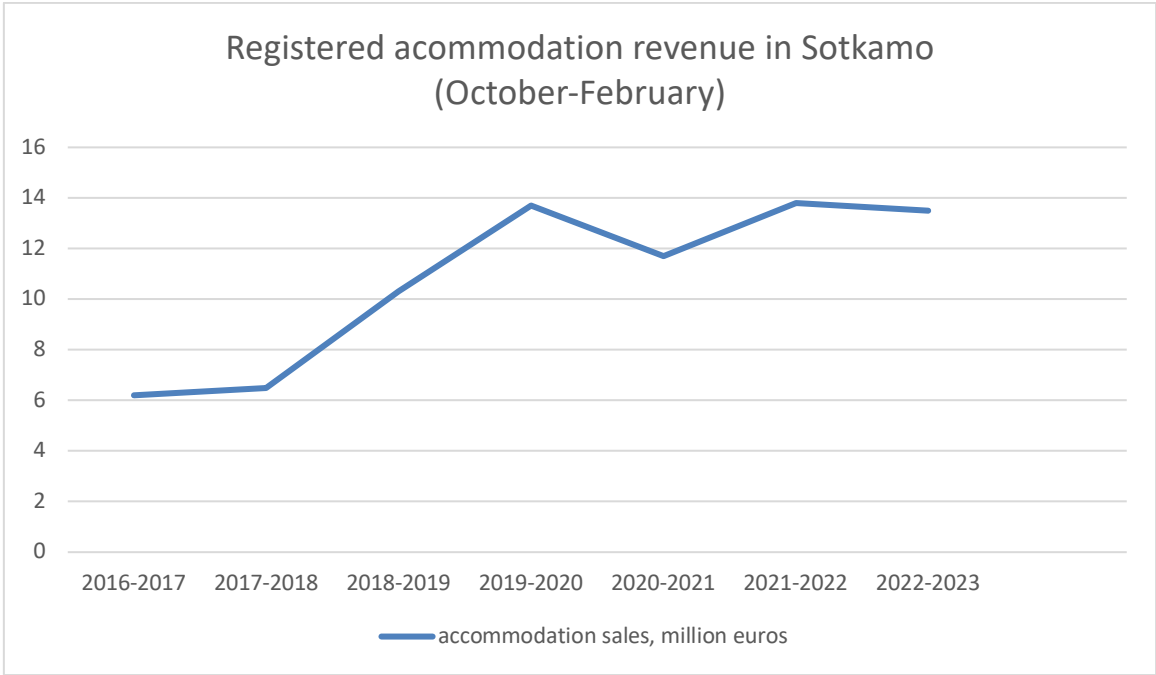


FIGURE 6 Accommodation sales in Sotkamo (Visitory.io, 2023)

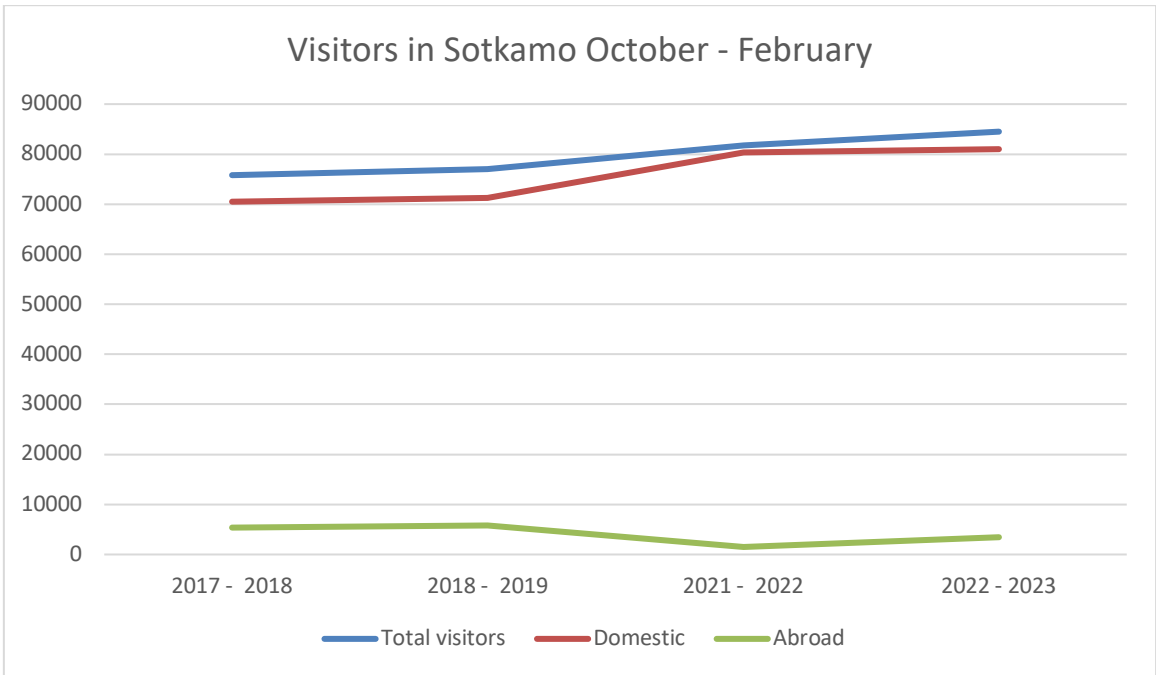


FIGURE 7 Number of visitors in Sotkamo (Visitory.io, 2023)

TABLE 8 Registered international sleepovers in Sotkamo, October- February (visitory.io, 2023)

| International registered sleepovers | | |
|-------------------------------------|--------------------|----------|
| | October - February | |
| | 2017-2018 | |
| Total | 33000 | |
| Russia | 18 400 | 55,76 % |
| China | 3600 | 10,91 % |
| Ukraine | 3600 | 10,91 % |
| | 2018-2019 | |
| Total | 45 900 | 39,09 % |
| Russia | 18 700 | 40,74 % |
| China | 14 400 | 31,37 % |
| Ukraine | 3000 | 9,09 % |
| | 2021-2022 | |
| Total | 12 900 | -71,90 % |
| China | 2700 | 20,93 % |
| Russia | 1700 | 13,18 % |
| Belarus | 1500 | 11,63 % |
| | 2022-2023 | |
| Total | 18600 | 44,19 % |
| Ukraine | 2300 | 12,37 % |
| Estonia | 2000 | 10,75 % |
| Germany | 1600 | 8,60 % |

The data gathered from Visitory.io presents that the revenue generation of registered accommodation in Sotkamo has been developing strongly in the past years. The effects of the pandemic are visible in the data, both indicating a decline yet fast recovery from 2019 to 2022. The impacts of global crisis on travelling indicate a prominent change in the number of Chinese and Russian visitors arriving to Vuokatti, as well as a decrease in the number of Ukrainians arriving into the region. From October 2018 to February 2019 Russian and Chinese visitors accounted for over 70 percent of the total sleepovers in Sotkamo, while neither of the countries placed in top three for the winter 2022-2023. The drop was however compensated with domestic visitors, and tourists from other countries arriving to Sotkamo.

6.4.4 Social impact

Involving young people in EYOF 2022 was one of the main themes of the event. As the participants of the games consisted of young athletes, the organizers aimed for the majority of the volunteers to consist of local youth as well. Through the event, the organizers wished that the volunteers would be able to share the feeling of success in organizing such big international sports event in a relatively small community. Furthermore, equality was a central value of the EYOF 2022,

and for the first time in the history of the games, both boys and girls competed in all the sports present at the games.

Altogether, there were nearly 1,400 volunteers in Vuokatti and Kajaani, of which approximately 950 were under the age of 29 and 270 under the age of 18. The amount of volunteers under the age of 30 totaled hence 87 percent of the total number of volunteers and the organizers reported their satisfaction for the outcome in the involvement of young people in the organizing of the games.

“The majority of the volunteers were young. Social cohesion and international interaction was a prominent value reached through the games. Especially for young people from Kainuu, international event of this size was something new and unexperienced for many and hopefully it brought pride and confidence for many individual volunteers.” (H1)

Aligned with the theme of inspiring young people, collaboration with education institutions was a central part of the strategy to find volunteers for EYOF 2022. The organizers succeeded to involve 352 students to participate in the organizing activities from the local schools. Through volunteering at the event, students at various phases of their education could receive credits from volunteering at the event and local schools and other educational institutions were pointed out among the most prominent collaborators of the games. Through for example international media camp and winter school, EYOF 2022 organization was able to receive voluntary workforce from higher education institutions for the event weeks of the games.

The positive feedback and willingness to volunteer again was experienced as a prominent intangible outcome from EYOF 2022. It was noted that event organizing at the scale of EYOF 2022 does not take place in Kainuu on a yearly basis and therefore the social capital obtained from event organizing experience, know-how of best practices, and engagement of volunteers would be essential to be cultivated in the future in form of organizing new events in the area.

6.4.5 Environmental impact

In addition to involving local youth and equality, also organizing environmentally responsible Olympic festival was highlighted as a central value of the organizers. EYOF 2022 organization implemented several initiatives, such as efficient waste management and recycling, initiatives aiming to save water, and planting an EYOF 2022 forest to absorb carbon dioxide to highlight responsible choices and support the sustainability of the games.

For an international sports event as EYOF 2022, travelling is an unavoidable necessity. Where the organizers can affect however, is the travelling during the games, and there the closely located services of Vuokatti served EYOF 2022 efficiently and sustainably. In the instance of actualization of the initial plans, participants of EYOF 2022 would have also been able to fly to the airport of City of Kajaani with a close proximity to Sotkamo and Vuokatti.

Together with travelling, construction of needed infrastructure can be a prominent source of emissions related to sports event organizing. As an event host, the “clear advantage of Vuokatti” (H1) was that the practically all the

facilities were already existing. The new ice-hall built, although only partially due to the games was the most significant construction investment in the area. Some minor improvements into the existing facilities were implemented and all these improvements will continue to serve the visitors of Vuokatti well in the future as well.

7 CONCLUSIONS

This chapter concludes the findings of the research and examine how they link to the theoretical framework of this study and further literature in the field of sports event organizing. Answers to the research questions are being provided first by re-stating “What kind of direct economic impacts did EYOF 2022 generate?”, and second by responding to “How do the organizers evaluate the effects of pandemic and disclosure of Russia and Belarus in relation to the economic outcome of the event?”

Evaluating how the results of EYOF 2022 compare to the internal goals and motives of the event organizers is of particular interest. While all events have an element of unforeseen factors and "what if" speculations, the impacts of both Covid-19 and the war in Ukraine were such prominent and out of control for the event organizers that an attempt to outline the financial result considering the effects of these two factors is presented to increase the comparability of this research.

Sports events are no longer organized for the sole purpose of establishing competitive circumstances for specific sports and competitions to take place. Rather, leveraging sports events for a variety of purposes has been increasing in recent decades and economic development has become a common motive behind sports event organizing (Chalip, 2014). Therefore, answering the research question "How is the event legacy of EYOF 2022 reviewed by the organizing committee?" is essential to comprehend the short- and long-term impacts resulting from EYOF 2022, and how the organizer's expectations align with further academic literature in the field of sports events organizing.

7.1 Direct economic impacts of EYOF 2022

The financial result of -192,718.70 euros of EYOF 2022 was presented in Table 4 in chapter 6.1. After the games, the organization received an additional grant from International Olympic Committee and applied for an additional grant from the Ministry of Education and Culture as well. After the final decision from the

Ministry, rejecting the last application, the confirmed operational loss from the games set to be -152,718.70 euros. The total investment into EYOF 2022 from the municipality of Sotkamo accumulated hence 333,848 euros.

The injection of new money into Sotkamo region due to organizing of EYOF 2022 was found to be 3,415,453 euros. The regional economic impact generated by EYOF 2022 was respectively found to be between 4,269,316 and 5,977,042 euros as presented in Chapter 6.2. The significance of the regional economic impact for Sotkamo region was evaluated to be prominent by the interviewees of this research. As the money circulates in the economy, the municipality of Sotkamo will eventually be a beneficiary of the regional economic impact derived from EYOF 2022 in terms of increased tax income. The direct impact of EYOF 2022 on communal tax for the municipality of Sotkamo was calculated at 30,000 euros, while the tax generation for the Finnish government was estimated between 370,000–420,000 euros.

As outlined by Preuss (2006), sports event organizing involves an element of unplanned factors in its nature. Naturally, the greater the unforeseen event, the larger also the derived impact. In the case of EYOF 2022, Covid-19 pandemic rescheduled the event twice, and resulted in alternative executive timeframe of the event. The uncertainty of the final realization of the games remained until the very last moments before the games were opened. Furthermore, the prolonged timeframe of the games, and operational changes due to Covid-19 required additional attention and resources from the organizers.

Respectively, the timing of the outburst of war in Ukraine and disclosure of Russian and Belarussian athletes left the organizers with limited time and resources to avoid costs from already reserved services. The organizers had practically no possibilities to reduce the impact on the decreased number of athletes attending the event and hence the war in Ukraine lowered the amount of received participation fees for the EYOF 2022 organization.

In the interviews of this research, the economic impacts of the aforementioned events was aimed to be comprehended. The detailed financial reporting of EYOF 2022 provides a reliable basis for evaluating the economic impact that Covid-19 and war in Ukraine generated to the organizers. To minimize potential errors caused by the research methods, the results presented in Table 9 were cross-checked with the interviewees to ensure that their understanding of the impacts aligned with the researcher's. By excluding the impacts of external global crisis, the comparability of this research for future events can be improved, while also enabling a more accurate assessment of the financial performance of the EYOF 2022 organization in areas, where the organization possibly could have control and influence.

TABLE 9 Covid-19, and war in Ukraine adjusted financial result of EYOF 2022

| | |
|---|-----------------|
| INCOME-EXPENDITURE BALANCE | |
| | -1 137 718,70 € |
| REVERSED NET EFFECT OF DISCLOSURE OF ATHLETES | |
| | 40 000,00 € |
| REVERSED COST OF COVID-19 | |
| | 150 000,00 € |
| REVISED INCOME-EXPENDITURE BALANCE | |
| | -947 718,70 € |
| ALL GRANTS | |
| | 945 000,00 € |
| REVISED RESULT OF EYOF 2022 | |
| | -2 718,70 € |

The adjusted result, excluding the effects of pandemic and war in Ukraine, shows a slightly negative result of -2,719 euros. Considering the total budget of EYOF 2022 and the organizers' aim for a zero-result, the revised result could be considered very close, if not at par with the goal. In the instance of EYOF 2022 been carried out without the global crises, the last rounds of grant applications would not have been necessary, and the total amount of grants would have remained at the level presented in the table.

It is important to acknowledge that any financial analysis comes with some level of error and potential limitations. However, it does appear that the organizers had a realistic understanding of the financial requirements of the event, and the final result of EYOF 2022 was in line with the initial budget, except for the unexpected crises.

7.2 Theoretical considerations of the legacy of EYOF 2022

In addition to the direct and indirect economic impacts, the total legacy of EYOF 2022 encompasses other impact areas of an event as well. Following the event impacts model by Virkkunen et al. (2015), the development of image, tourism and social capital can be concluded both as central aims and outcomes of EYOF 2022. Despite environmental aspects being an important factor in the organizing of the games, the environmental legacy could not be considered remarkable. Furthermore, the effects on employment remained relatively small and temporary, to a large extent as a result of successful integration of volunteers into the operative tasks of EYOF 2022. Given the prominent role employment has in the regional economic impact of event organizing, the employment related to

sports event organizing could be however a feasible aspect to consider for Sotkamo municipality, when evaluating the future decisions of events to be organized in the area.

The organizers of EYOF 2022 highlighted international visibility for Vuokatti as one of the main reasons to bid to become the host of EYOF 2022. Through the increased visibility, the ultimate goal could be seen to increase the attractiveness of Vuokatti, extending further to Sotkamo municipality and the whole Kainuu region. Towards the outcome of the generated visibility of EYOF 2022, the municipality of Sotkamo expressed its full satisfaction and for example the opening Monday reached over 90 million people around Europe and globally.

Evaluating the outcome of increased visibility in attracting more visitors for a region can be considered a complex task. One way to approach the issue is to compare or collect macro-economic data where the development could be verified (Preuss, 2014). However, as Zawadzki (2022) notes, measuring the legacy of a sporting event over time is complicated, as it may be difficult to distinguish the impacts of an event from other economic development in the region. In the case of EYOF 2022, being able to exactly separate the impacts of EYOF 2022 in tourism development in the region is hence arguably not a feasible approach towards the evaluation.

From travelling data gathered from Visitory.io (Figures 6 and 7, Table 8), it appears that Sotkamo municipality has managed to some extent compensate the reduced number of Russian and Chinese visitors with smaller number of visitors from diverse European countries and with domestic visitors. This subtly suggests that the efforts made to attract visitors from international markets are showing promising results for Sotkamo, although the total number of international visitors has not recovered from the disappearance of Russian and Chinese visitors. The timeframe to draw reliable and definitive conclusions from the data is yet too short, but it could be worthwhile for the organizers and the municipality of Sotkamo to follow the development in the future and follow for example how the countries present at EYOF 2022 will be visible in the travelling data of Sotkamo in Visitory.io.

Together with the increased visibility, the increase of social capital can be evaluated as a prominent outcome from EYOF 2022. The organizers set their goal of involving local youth in the organization of the games and succeeded to gather prominent number of young volunteers. This international collaboration was hoped to improve the self-esteem and confidence of the local youth in the area. Furthermore, social capital and know-how on event organizing, as well as collaboration with educational institutions were created and reinforced through organizing of EYOF 2022.

While the financial result of EYOF 2022 did not meet the goal of reaching a zero result, the expectations and goal setting of the organizers were based on sound reasoning and support for the desired impacts can be found from academic literature. The event organizers and Sotkamo municipality aimed to increase the economic activity in the area, improve the destination image of Vuokatti with the aim of eventually attracting more tourists in the future, and support the inclusion of local youth. All these goals are well recognized as

potential impact areas of sports event organizing in the academic literature as well. (e.g., Carbonell-García et al., 2022; MacKellar & Nisbet, 2017)

Academics, such as Chalip and Fairley (2019) and Ziakas (2023) have argued for the benefits of strategic approach to leverage smaller scale sports events and found that consistent activities are more likely to achieve and reinforce positive legacies from events, rather than just executing one-off, large scale events. In this regard, the nature of EYOF 2022 as a type C event (Duglio & Beltramo, 2017) could be evaluated appropriate and as a good ‘event fit’ for Sotkamo. Although being a one-off event, the size of EYOF 2022 as an event levels in line with the capacity and infrastructure present in Vuokatti and in Sotkamo. Similarly, Thomson et al. (2019) stress the need of strategic and thorough legacy planning before the event in order to secure the desired legacy outcomes. The nature of the services located in Vuokatti align to a great extent with the sports selection at EYOF 2022 and could be seen as a reinforcing factor to attract visitors, such as people spending their winter holidays or international winter sports teams. Therefore, the strategic decision of Sotkamo to host EYOF 2022, as well as continuously evaluate and organize various smaller-scale sports events in the region, seems reasonable and justified decision for the future.

As a recapitulation of the findings, the Table 7 is presented again to summarize the total legacy of EYOF 2022. Although all the long-term impacts of EYOF 2022 are not possible to be verified in the limits of this research, the researcher finds the positive impacts in the considered areas likely to take place in some extent and later proof for development in the areas possible to be found.

TABLE 7 Sotkamos investments into EYOF 2022, realized and possible outcomes

| EYOF 2022, REALIZED BUDGET = 2 925 000 € | | | |
|---|---------------------------------------|----------------------------|--|
| SOTKAMOS INVESTMENTS | TANGIBLE OUTCOMES | INTANGIBLE OUTCOMES | POSSIBLE LONG-TERM IMPACTS |
| SOTKAMOS FINANCING | REGIONAL ECONOMIC IMPACT | VISIBILITY | IMPROVED IMAGE OF SOTKAMO |
| 181 129,00 € | 5 123 179,50 € | SOCIAL CAPITAL | IMPROVED IMAGE OF FINLAND |
| | | | INCREASED CAPABILITIES FOR FUTURE EVENTS |
| FINANCIAL RESULT | IMPROVED INFRASTRUCTURE | | INCREASE IN TOURISM |
| -152 718,70 € | 100 000 - 120 000€ | | INCREASED INTEREST TOWARDS VUOKATTI |
| | | | IMPROVED CULTURE OF VOLUNTEER WORK |
| OPPORTUNITY COSTS | DIRECT COMMUNAL TAX GENERATION | | INCREASED SELF-ESTEEM |
| N/A | 30 000 € | | |
| TOTAL | | | |
| 333 847,70 € | | | |

7.3 Assessment of the research

As discussed in Chapter 2, it is important to acknowledge the complexity of the field and the need for careful consideration of contextual factors when interpreting the economic impacts of sports events. While it is important to report the economic impact of sports events to the public, the limitations of the variety of studies would be important to be considered. This would enable the public and decision makers to make more informed judgments of the true impacts of sports events organizing onto local economies.

The researcher believes that this master's thesis research has taken the above-mentioned considerations carefully into account and managed to provide a detailed and trustworthy description of the economic impacts of EYOF 2022. After familiarizing with the academic literature, interviews for this research, and the recent examples of the reporting of economic impacts of sports events in Finland, a conscious choice of abstaining from presenting numbers or estimations, that could not be supported by literature, was made. For the same reason, the researcher abstained from producing input-output analysis that would have depicted detailed estimations of economic impacts for specific industries or for instance tax generation of EYOF 2022 for the Finnish government or Sotkamo municipality. Overall, the researcher believes that the legacy of EYOF 2022 is truthfully presented in this research, and the researcher can commit himself to the results.

If given the chance to begin the process all over again, the researcher experiences that an interview with the Finnish government, possibly with the Ministry of Culture and Education could have created knowledge of the governmental goals and motives that sports event organizing in Finland currently has. Yet it can be mentioned, that when forming the legacy from the viewpoint of Sotkamo municipality, the role of public involvement in sports event organizing is already a central part of this research. Furthermore, the impacts and legacy of an event does not limit only to economic impacts, although this is the central sphere of research in this study. Limiting the research is however central part of reaching valid results, and the researcher is satisfied with the limitations of this research.

7.4 Suggestions for future research in the field

As the leveraging of sports events for strategic purposes is expected to persist in the future, it would be valuable to expand the understanding of small-scale sports event organizing and the impacts of them even further even on a global scale. Although several frameworks have been created and utilized, the lack of transparency surrounding the underlying factors of many input-output analyses hinders their critical evaluation. Furthermore, diverse economic contexts worldwide emphasize the importance of being able to tailor these models to fit the unique research objectives and economic circumstances of different countries.

Future research could continue to focus on refining and improving methods for measuring the impacts of sports events organizing, as well as further exploring the potential for using sports events as a tool for achieving a wider range of economic and social benefits. By continuing to build on the existing body of knowledge and collaborating across disciplines and sectors, the potential for sports events to make positive contributions to the society could be maximized.

From Finland's perspective, there is a need to define a model that can be used to analyze the impacts of sports event organizing in the country. While there is a significant amount of sports event organized in Finland on a yearly basis, the lack of an appropriate model for impact analysis is evident, given the current gaps in research and the predominant focus of existing models on large-scale events. Recent examples of reporting the economic impacts in the media also demonstrate an inconsistent use of different methods, leading to a lack of clarity in the narrative. Therefore, it would be beneficial to establish a clear and standardized approach to impact analysis in Finnish sports event organizing.

The Finnish government's emphasis on improving Finland's competitiveness in the event organizing sector highlights the potential value of conducting a cost-benefit analysis (CBA) or economic impact analysis (EIA) studies also from the governmental perspective. Such a study could inform decision-making and support in the allocation of grant funding for sports events organizing in Finland. It appears, that the government's financial involvement in sports event organizing in Finland is relatively low compared to other European countries. Partly this can be because of the efforts of volunteers and the efficiency that sports event organizers have accomplished in Finland. Development in the decision making in this sector would yield for further academic research acknowledging the involvement and the role of government in sports event organizing, as well as detailed understanding of the possible outcomes that the government could be aiming for in the strategic work.

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APPENDICES

APPENDIX 1: Framework for semi-structured interviews

Original questions translated in English.

1. What kind of event EYOF 2022 was from your own perspective?
2. How many athletes took part in the games?
 - How did Covid-19 and war in Ukraine impact this number?
3. How would you evaluate the number of international people travelling to the games in total?
4. How did Covid-19 impact the operational activities of EYOF 2022?
5. Who would you mention as the most prominent stakeholders of the games?
6. How much EYOF 2022 received grants, and from what sources?
7. What were the most prominent commercial sources of income and how prominent was the share of them?
8. What is the final profit/loss from the operations? How does the number relate to the budget?
 - What was the most prominent aspects inflating the deficit? Where do you see that there could have been potential to have a more positive economic impact?
9. What was the impact of the games in terms of employment and what was the timeframe for employed workers at EYOF 2022?
10. How would you assess the prominence of volunteer workers to EYOF 2022?
11. How would you evaluate the economic impact from Covid-19 and war in Ukraine?
12. How would you evaluate the regional economic impact of the games?
13. How do you evaluate the resource planning of EYOF 2022 organization?
14. What kind of tangible outcomes the games left behind?
15. What kind of intangible outcomes the games left behind?
16. What impacts from EYOF 2022 you consider to be the most prominent?
17. How would you yourself evaluate the “legacy” of EYOF 2022?
18. Did the organizing of the games surprise, either positively or negatively, at some point of the process?

19. How much did the municipality of Sotkamo participate in the organizing of the games and in what terms?
20. What kind of goals did Sotkamo municipality place for the organizing of the games, and how these goals were realized?
21. How would you evaluate the value of the games for the region in short and long term?
22. What was the final evaluation of the games from the side of Sotkamo municipality?
23. Did the organizing of the games generate opportunity costs for the municipality of Sotkamo?
24. Based on the experience, would you promote the organizing of future sports events in the area?
25. Are there areas where you find the model of public involvement could be different in sports event organizing in Finland?
26. Would there be something else you find important to add at this point?
27. Based on the interview, would you recognize other persons to be interviewed for this research?