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Sport Tourism, Regional Development, and Urban Resilience: A Focus on Regional Economic Development in Lake Toba District, North Sumatra, Indonesia

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Abstract: The focus of this research is to identify the dynamics of regional economic development through digital trends towards tourist visits and the promotion of tourist destinations in the Lake Toba area during the F1 Powerboat World Championship (F1H2O) event on Lake Toba, North Sumatra, Indonesia. Through the conduct of online research methods (ORMs) in diagnosing digital social issues and trends regarding the events, the results show that there was an effort to maximize the increase in regional economic development, by utilizing the potential and attractiveness of holding the F1 Powerboat as part of sports tourism. As an event aims to spur the movement of domestic tourists to super-priority destination areas, the implementation of the F1 Powerboat event is not only a driving force in the recovery and improvement of the local economy after the COVID-19 Pandemic, but also a venue for the promotion of other tourist destinations in North Sumatra. However, the positive impacts of this event organization on sustainable economic growth in the surrounding areas is not without reservations. The event has received some negative feedback, which include the problems of event preparation and implementation, and also the limited awareness of local community tourism. This research suggests that in order to achieve sustainable regional development and urban resilience, the future organization of sport tourism events should not only focus on the economic objectives, but also on the other aspects including socio-cultural and environmental perspectives.

Keywords: sport tourism; economic development; sustainability; urban resilience; Indonesia



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1. Introduction

Conceptually, regional economic development is defined as a process in which local governments and their communities manage existing resources and form a pattern of partnership between the local government and the private sector to create new jobs and stimulate the development of economic growth in the region [1,2]. Economic development is a multidimensional process that involves major changes in economic structure and social development, such as eliminating poverty, reducing inequality, and addressing unemployment in the context of economic growth [1,2], in order to be able to create resilience in the community, region, and country [3–6]. Based on these theoretical references, this study focuses on economic structure, regional economic growth, and the potential in the region to reduce development inequality and poverty and create regional and community resilience, using the example of the Lake Toba District.

Research on “urban resilience” initially did not gain much attention until the last ten years. The first document was first indexed in the Scopus database in 2004. Scopus data showed that the notion has been attracting much attention since 2012, with 31 published documents, and reached a peak in 2022, with 371 published documents. Among others, one of the most cited studies, Meerow et al. [7], argues that urban resilience involves understanding system equilibrium, positive vs. neutral conceptualizations of resilience, mechanisms for system change, adaptation versus general adaptability, and timescales of action [7]. Furthermore, urban resilience is also interpreted as an institutional resilience strategy and community adaptation effort to vulnerability and disturbances [8–13]. Traditionally, the notion of “resilience” has been linked to economic and social perspectives [7–9]. Eventually, the notion was also related to ecological resilience and urban infrastructure; there is a need to maintain a balance amongst economic, social, and environmental aspects [7–11]. The importance of ecological resilience is highly relevant with the recent SDGs agenda; for this, McIntyre-Mills et al. [13] and Widianingsih et al. [10] highlight the need to keep an ecological balance in addressing complex and wicked development problems.

The progress of the SDGs agenda was halted due to the COVID-19 pandemic. The World Bank found that the number of poor people had increased significantly, whereas the number of poor people now shares a similar profile as it did in 2015. Furthermore, the WHO mentions that the COVID-19 pandemic led to multiple crises [3,4]. The COVID-19 pandemic also influences the progress of regional development by slowing down creative economy innovation, deteriorating urban public facilities, and challenging environmental resilience. Consequently, all governments in the world adjusted most of their development policies and resource allocations [2,6,12,13]. This article is in line with the general idea of urban resilience, which is defined as the ability of a system to change, adapt, and transform in response to disturbances or problems that will be faced in the future [8,9,12], as well as the interaction of the resilience of urban areas in sustainable development [8,9,13]. In particular, this research focuses on the analysis of an area that was recently promoted through the F1 Powerboat (F1H2O) World Championship event, which was held in Lake Toba, North Sumatra, Indonesia. This Sport Tourism event is expected to have a positive economic impact on the regional and national development of Indonesia [14,15].

The holding of the F1 Powerboat (F1H2O) World Championship in Lake Toba, North Sumatra, Indonesia, on 24–26 February 2023, is expected to be the foundation for regional economic development in the Lake Toba region by spurring the movement of domestic tourists to this super-priority destination area in order to achieve the target number of tourists. The Ministry of Tourism and Creative Economy (*Kementrian Pariwisata dan Ekonomi Kreatif, Kemenparekraf*) stated that the target for domestic tourist visits was 1.2–1.5 million visitors at the F1 Powerboat (F1H2O) World Championship sport tourism event [14,15].

The F1 Powerboat World Championship (F1H2O) is an international motorboat racing competition for motorboats organized by the Union Internationale Motonautique (UIM). The event is promoted by H2O Racing, so it is often referred to as F1H2O. The championship is the highest class of coastal boat motor racing in the world. F1H2O championships are the ultimate adrenaline rush and are considered one of the most spectacular and exciting sports in the world. Over the last 35 years, there have been a total of 279 Grands Prix in 32 countries on five continents. A total of 14 riders have captured the world title. Of the 14 world champions, seven are double title winners. Guido Cappellini from Italy is the most awarded winner. Alex Carella from Italy and Scott Gillman from America with four awards. Philippe Chiappe from France and Renato Molinari from Italy with three awards each, Sami Selio from Finland, and Jonathan Jones from Wales with two awards each [14–16].

In the F1 Powerboat event (F1H2O) in Lake Toba, North Sumatra, Indonesia, the Archipelagic Marketing Director of the Ministry of Tourism and Creative Economy stated that the target of tourist visits at this event is 500 thousand to 1 million tourists [14,17], which is expected to boost the economy in the Lake Toba Region. For 2023, Indonesia was chosen as the host country to hold the opening competition of the season on Lake Toba. Lake

Toba was selected because it is considered a suitable location for the F1 Powerboat (F1H2O) Championship. Considering that the vehicles used in the competition are motorboats, Lake Toba is considered an ideal place for the event. The size of the lake and other aspects, such as the natural scenery and ease of access to locations that are quite supportive, are a few considerations when determining the location of the event [14,18]. Some of the targets of the Indonesian government, through the Ministry of Tourism and Creative Economy, in organizing the F1 Powerboat (F1H2O) sports event on Lake Toba, Indonesia, can be seen in Figure 1.

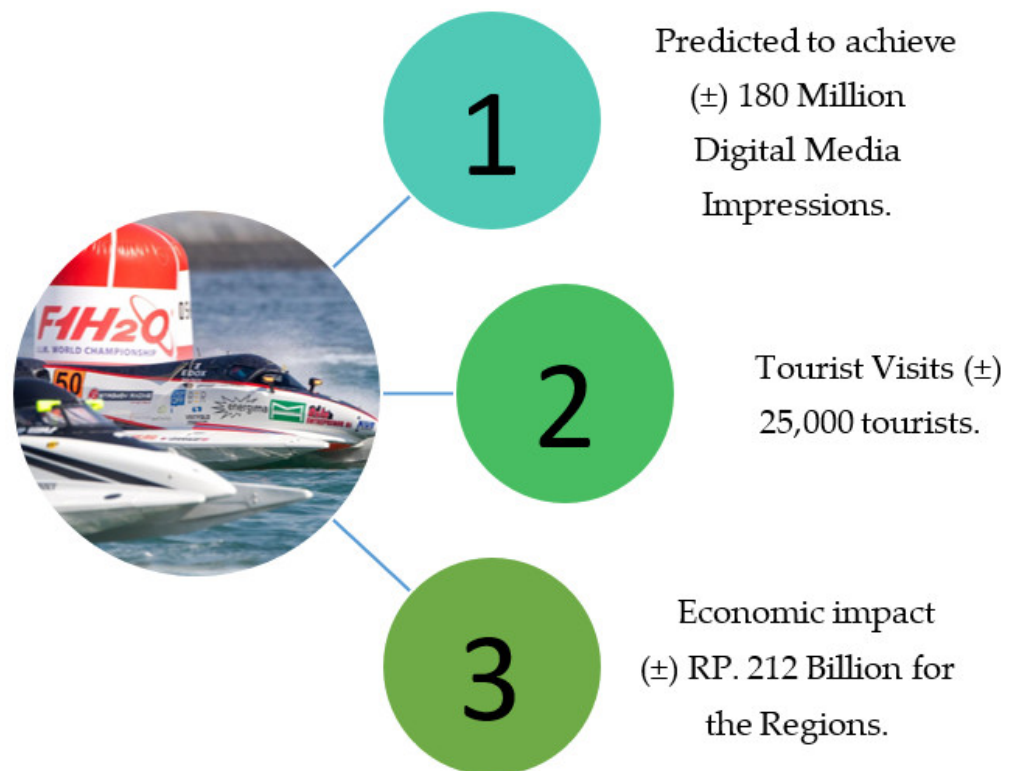


Figure 1. Targets for improving the regional economy in organizing the F1 Powerboat sports event (F1H2O) on Lake Toba, Indonesia. Source: Processed by the authors, 2023.

If we observe the organizing side of the F1 Powerboat event (F1H2O), we can see that it does not only increase economic growth in the Lake Toba area, but it also carries certain development dynamics that pose a challenge for development in the region. An example of several reports and mainstream media coverage online reported that the development of Lake Toba tourism seemed to ignore local culture and communities [19,20].

There are also some challenges in regard to carbon emissions from the F1H2O speedboat event, which might lead to environmental ecosystem problems in the Lake Toba region. Based on the Focus Group Discussion held in Medan on 23 February 2023, such an event would have caused water pollution and might threaten the environment. In the perspective of the Minister of Tourism and Creative Economy, any tourism event in Indonesia would recognize the importance of sustainable tourism and consider the carbon footprint. In regards to this event, the Ministry of Tourism and Creative Economy has planted around 2500 trees to reduce up to 1,709,600 increased carbon emissions during the F1 Powerboat (F1H2O) event [21].

During the COVID-19 pandemic, development in Indonesia seemed to ignore vulnerable minority groups in regional development, such as women and children [12,20]. This became a challenge in the development carried out in the Lake Toba region [22–25]. In addition, there is the issue of land use, which has the potential to bring conflict between local communities and the government if not handled properly in the Lake Toba area [26], as

well as challenges of effective national and regional policies in the process of infrastructure and tourism development in the Lake Toba region [27].

Several studies, such as Sidauruk [28], state that the Lake Toba area as a creative economy area provides added economic value and that even socio-cultural transformation occurs from a human development perspective. In their research [29], Dalimunthe also stated that the Lake Toba area had seen infrastructure development such as facilities and infrastructure, restaurants, and hotel accommodations. Research conducted by A. Maulana et al. [30] states that the implications of tourism policies in Indonesia, such as laws, presidential regulations, government regulations, and ministerial regulations, are intended to increase the competitiveness of Indonesian tourism in the world. Research by Taupikurrahman and Suwandana [18] states that the tourism industry in Indonesia still needs to be supported, and that we need to make sure that we promote tourism that has a positive impact economically and socially. The focus of this study is to find out the dynamics of regional economic development in terms of digital trends in the F1 Powerboat (F1H2O) event in the Lake Toba region. We analyze through “online content analysis” and “Social Network Analysis (SNA)” as digital identification and evaluation. The method is described in more detail in the research methods section.

The purpose of this study is to look at the dynamics of regional economic development in terms of digital trends towards tourist visits and the promotion of tourist destinations in the Lake Toba area during the F1 Powerboat World Championship (F1H2O) event on Lake Toba, North Sumatra, Indonesia. To better understand this issue, this study defines urban resilience as a theoretical framework to empirically test the impact of regional economic development on Lake Toba’s F1H2O event. The F1H2O event was held to address the dilemma of regional development in the socio-economic field in dealing with urban disturbances and vulnerabilities so that the development process can be carried out in a broader, planned, and integrated manner. This study includes two main stages. In the first stage, studies and discussions on the process of change in the local economy are carried out. In doing so, the investigation highlights the ongoing collaboration between local universities and regional or local government as one of the keys to this success story. Furthermore, in the second phase, research is built from the perspective of urban resilience and sustainable development in organizing the F1 Powerboat (F1H2O) sports event to increase regional economic development towards urban resilience. This can be seen in the process of designing and launching local tourism models.

2. Materials and Methods

Online research methods (ORMs) [31–33] were used in this study to look at the dynamics of regional economic development in terms of digital trends towards tourist visits and the promotion of tourist destinations in the Lake Toba area during the F1 Powerboat World Championship (F1H2O) event on Lake Toba, North Sumatra, Indonesia [31–34]. Many of these online research methods are related to existing research methodologies, but the tendency of these methods is to rediscover new facts, information, and conditions through technological and internet searches. Indeed, this method tends to be relatively new and is still developing. However, this research can provide new findings from various facts that have not been touched on in traditional research. This methodical approach is motivated by the growth of social media, information from online news, the level of complexity, and new opportunities that have been created on the internet. The inclusion of this research can provide unique insights into the evaluation segment and new knowledge for the community, allowing them to gain new insights and knowledge of the issues of interest. The location of the object of this research is in the development area of the Super Priority Area (*Daerah Super Prioritas*, DSP) and Priority Tourism Destination (*Destinasi Pariwisata Prioritas*, DPP) of Lake Toba, North Sumatra, Indonesia (see Figure 2).

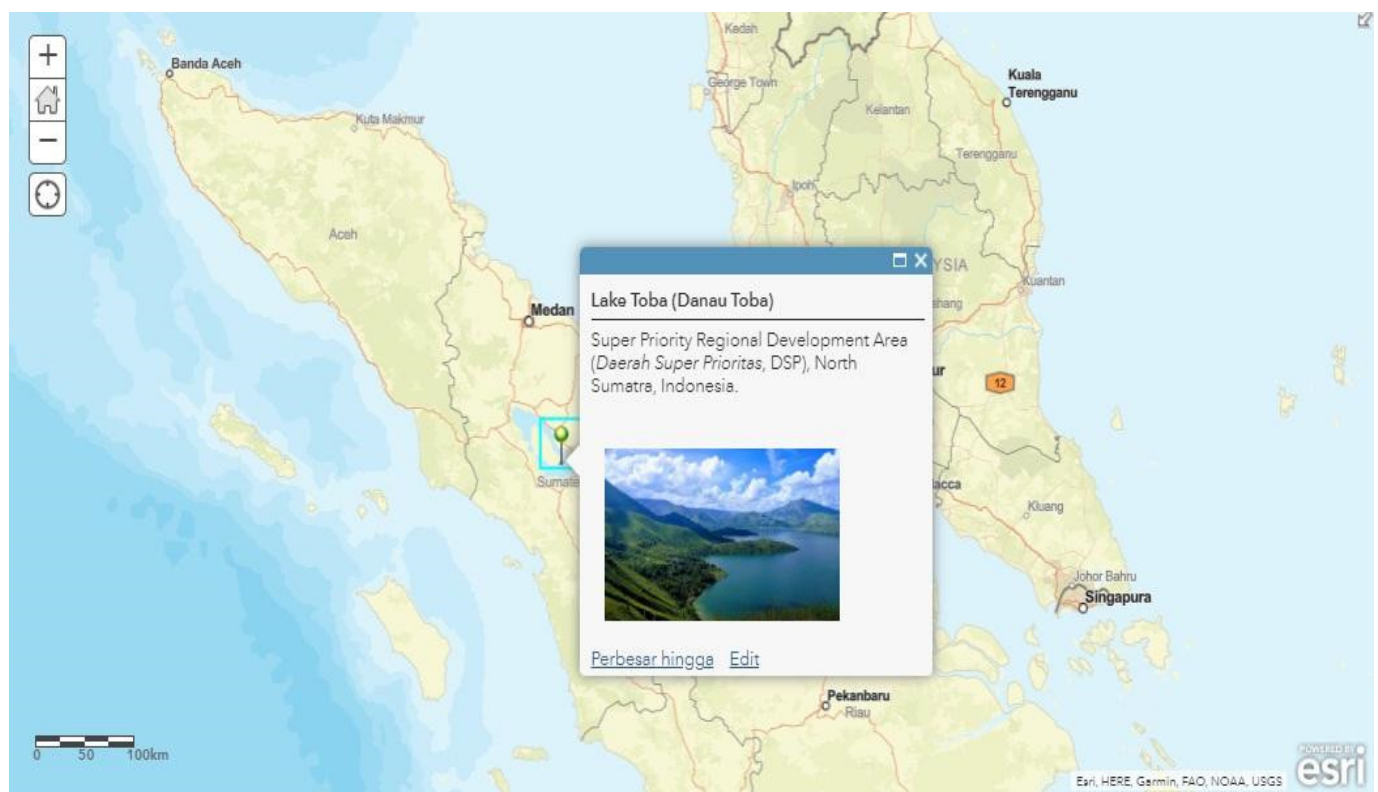


Figure 2. Location of the Development Area of the Lake Toba Super Priority Area (*Daerah Super Prioritas, DSP*) and Priority Tourism Destination (*Destinasi Pariwisata Prioritas, DPP*) Development, North Sumatra, Indonesia. Source: processed by the authors, 2023.

Data from this research was collected through “web-based experiments” [32,33]. Internet-based data collection differs from offline data collection, but it is not completely different from it either [32–34]. Data collection through Web-based experiments is carried out by tracing all digital data on tourism and its economic impact located on various websites, such as the Indonesian government website, previous research, digital documents, online media, and online mainstream media [32–34].

The data were analyzed using “online content analysis” [32,33]. This analysis technique refers to a collection of research techniques used to describe and draw conclusions about online material through systematic coding and interpretation so as to obtain new conclusions and insights in the cases studied [32,33]. Several types of data are also analyzed with Social Network Analysis (SNA), where the analysis process investigates social structures through the use of information/fact networks in structure and collection of digital information/facts spread across various digital platforms. It characterizes the network structure in terms of the nodes (individual actors, people, or things in the network) and the ties, edges, or links (relationships or interactions) that connect them [35,36]. Then the data analysis in this study was assisted by a qualitative analysis tool using Nvivo 12 Pro [37] (Lumivero, Denver, CO, USA), which was intended to dig deeper into the cases under study to get the best conclusions. The rarities in this research method can be seen in Figure 3.

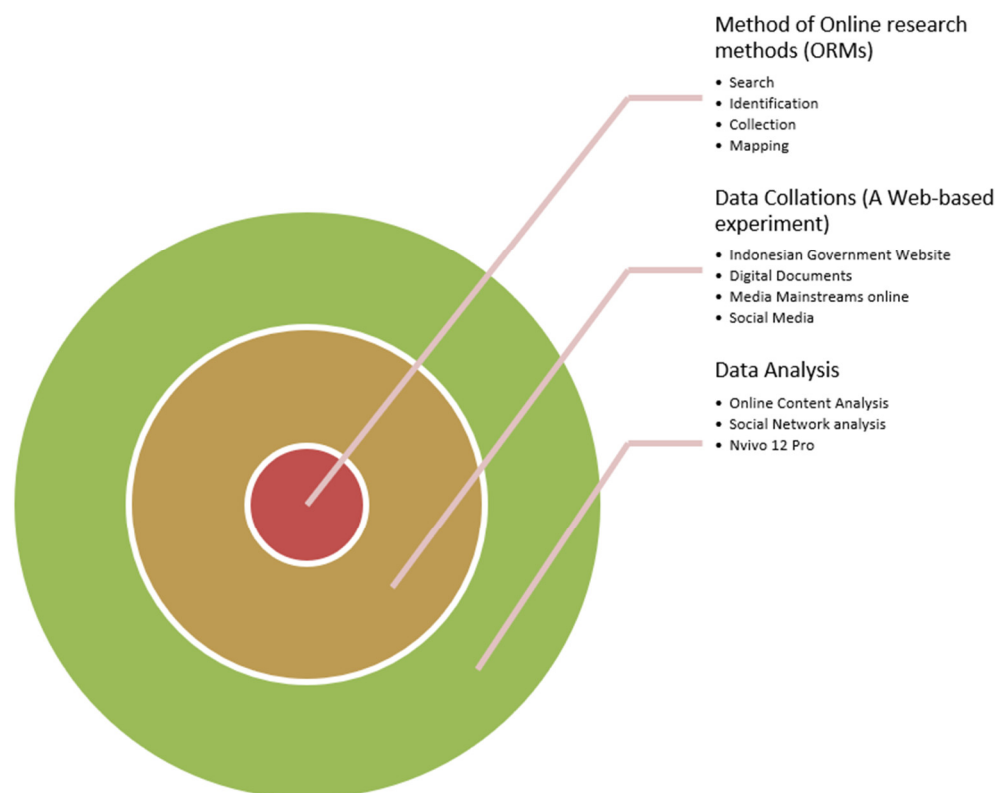


Figure 3. Research steps for Online Research Methods (ORMs). Source: processed through various sources, 2023.

The steps of this research originate from tracing, identifying, collecting, and mapping digital data originating from: government documents, such as reports on planning tourism event activities and evaluation reports on tourism events, taken from government websites such as <https://kemenparekraf.go.id/> (accessed on 22 February 2023), <https://sumut.bps.go.id/> (accessed on 22 February 2023); the Instagram account @kemenparekraf.ri, of the Indonesian ministry of tourism and creative economy; digital media, such as several mainstream media reporting on F1H20 sports tourism; and social media (Facebook, Twitter, and TikTok). Furthermore, the digital data collected was analyzed through Nvivo 12 Pro.

3. Results

3.1. Tourism Development Process and Tourism Transformation in Regional Economic Development in Indonesia

The development of tourism in an area is intended to increase economic benefits but should not ignore the various problems associated with existing vulnerabilities [25,38]. However, in its development, efforts must be made so as not to damage the social and environmental order. Maintaining the quality of the environment, especially in natural tourism, is absolutely necessary, because the attraction of natural tourism is in the environment [25,38].

There are two considerations in planning tourism development in provincial/municipal districts in Indonesia. First, to be guided by national and international development policies. Second, the paradigm that is developing in the region [39,40]. The potential possessed by each region and international tourism conditions will always influence the development of national tourism. The plans that have been set form the basis for regional tourism development. The planning refers to the vision and mission formulated from the changing trends of tourism and the socio-economic conditions of the community in the past. In a hierarchical manner, tourism planning starts at the national level, namely the Tourism Development Master Plan (*Rencana Induk Pembangunan Kepariwisata Nasional*, Ripparnas), which was compiled in 2011, and then moves down to the provincial, district, and city levels in the form of

Ripparprov/Ripparkab/city, known as “Meso” planning (the elaboration of policies that have been set at the macro level into small-scale programs) [38].

Furthermore, tourism development planning that is more detailed or at a lower level, namely regional planning, and more detailed planning is a tourist attraction that is often referred to as a Tourism Object Development (*Rencana Induk pengembangan Obyek Wisata*, Ripow) and the Master Plan. Ripow (*Rencana Induk pengembangan Obyek Wisata*) is basically a master plan, so for the benefit of implementing development, there still needs to be a plan called a site-plan. This site plan is a detailed design that produces three documents: working drawings, budget plans, and auction procedures. This planning is the basis for establishing regulations, which can be in the form of regional regulations or governor’s decrees for provinces, and, for districts, district/city regional regulations or district heads’ decrees [38]. The basic policies for preparing development plans and developing tourism areas in Indonesia can be seen in Figure 4.

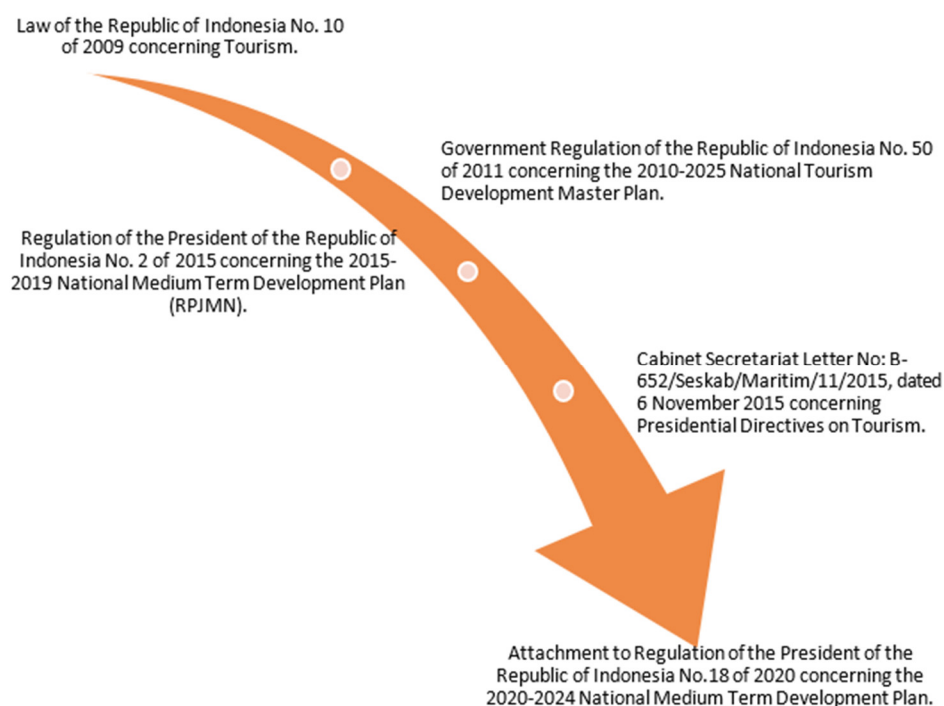


Figure 4. Legal basis for tourism development in encouraging regional economic development in Indonesia. Source: processed from various sources, 2023.

The basic policy in the process of tourism development planning and transformation in Indonesia at this time is spread across various regions, made into several Super Priority Areas (*Daerah Super Prioritas*, DSP) and Priority Tourism Destinations (*Destinasi Pariwisata Prioritas*, DPP), which refer to the implementation of Law of the Republic of Indonesia No. 10 of 2009 concerning tourism. This law was derived from the Government Regulation of the Republic of Indonesia No. 50 of 2011 concerning the 2010–2025 National Tourism Development Master Plan. Followed by Presidential Regulation of the Republic of Indonesia No. 2 of 2015 concerning the 2015–2019 National Medium Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional*, RPJMN) and Setkab Letter No. B-652/Seskab/Maritim/11/2015, 6 November 2015, concerning Presidential Directions regarding Tourism. The policy basis for planning and developing tourism areas in Indonesia forms a tourism model after the COVID-19 pandemic. Referring to this policy basis, the development and transformation of tourism in Indonesia encourages regional economic growth in Indonesia, as can be seen in Table 1.

Table 1. Tourism model based on Post-COVID-19 pandemic trends in Indonesia.

Dimensions		Old Tourism Model	New Tourism Model		Post-COVID-19 Pandemic Tourism Model
Requests from tourists	1.	Package form, entourage.	1.	Free travelers.	1. Individual travelers.
	2.	Satisfaction, pleasure.	2.	Life experience	2. Healing tourism (health and fitness).
	3.	Sunbathing, relaxing, or leisurely walk.		looking for attractions (special interest).	3. Small group tourists.
Offers and tourist objects and attractions	1.	Massive scale.	1.	Small scale.	1. Nature based.
	2.	European style.	2.	Local style.	2. Health Protocol.
	3.	Standard service.	3.	Local service.	3. Carrying capacity and capacity.
	4.	Associated with international companies.	4.	Local company.	4. Forest Ecosystem.
	5.	Depends on society.	5.	Depends on nature and culture.	5. Coastal ecosystem.

Source: processed from Direktorat Kajian Strategis [31], 2023.

Some of the factors driving this shift in tourism are the development of science and technology and the growth of tourism companies caused by very rapid economic changes in strategic tourism areas in Indonesia. The factors that have an influence on the change of old tourism to new forms of tourism can be seen in the tourism life cycle scheme in Table 1 above [38].

In reporting the study of the development and transformation of tourism in Indonesia [38], at this time there has been a shift from mass tourists toward special interest tourists. The existence of tourist destinations for foreign tourists has shifted to almost 65% for special interest tourism. There are many forms of special interest tourism, ranging from cultural tourism, culinary tourism, shopping tourism, educational tourism, animal husbandry tourism, agro-tourism, and ecotourism. Indonesia, which has a land area of 177 million hectares and 380 million hectares of sea, has tremendous potential. Moreover, Indonesia has a total of nearly 250 thousand villages, which are located in cities, villages, and on the edge of state forests. In fact, many tourist villages are in the forest [38].

So, based on this shared potential, there are many varied conditions. As independent tourist areas, several tourist areas have become national strategic destinations, such as Borobudur-Yogya-Prambanan (BYP), Lake Toba, and Lombok/Mandalika. These areas are already advanced at this time, but they still need to be supervised and controlled so that the economic impact can be maximized. The implementation of the F1H20 event in the Lake Toba region is directed at increasing regional and national economic growth. With the developments in global, regional, and national tourism, it is necessary to redesign tourism awareness as a campaign to encourage community participation in regional development through the management of nature tourism in the region. Especially now, after the appearance of the COVID-19 pandemic, this factor needs to be considered in redesigning tourism awareness. The success of the tourism awareness program has increased the ranking of Indonesia, from number two to number one in 2016 compared to other ASEAN countries [38].

The tourism sector has a legal basis based on tourism policies according to the direction of the President of Indonesia at point 5, namely Economic Transformation. It was stated that one of the strategies for economic transformation was the development of leading destinations through improved accessibility, attractions, and amenities in Priority Tourism Destinations (*Destinasi Pariwisata Prioritas*, DPP) in Indonesia. Meanwhile, in carrying out the development agenda (national priority) for 2020–2024, 41 Strategic Priority Projects (Major Projects) have been prepared. The 41 Strategic Priority Projects (Major Projects) include 10 Priority Tourism Destinations in the following areas: Lake Toba, Borobudur-Yogya-Prambanan (BYP), Lombok-Mandalika, Labuan Bajo, Manado-Likupang, Wakatobi, Raja Ampat, Bromo-Tengger-Semeru, Bangka-Belitung, and Morotai. Its development will be facilitated to increase the contribution of added value and tourism-related foreign

exchange according to its potential to increase economic development in each region. The tourism sector, with the development of priority tourism destinations in the RPJMN in 2020–2024 (*Rencana Pembangunan Jangka Menengah Nasional*, RPJMN), is a leading sector in achieving growth and equity in Indonesia. Priority Tourism Destinations (*Destinasi Pariwisata Prioritas*, DPP) are driving local economic development in Indonesia [38,41].

3.2. A New Economic Model in Regional Economic Development Design in the Lake Toba Region, North Sumatra, Indonesia

Nyikana and Tichaawa [42] stated that sports tourism tends to contribute to local economic development in the context of developing destinations. In addition, Higham and Hinch [43], and Hautbois [44] and Durand [45], mention that there is a dynamic reciprocal relationship between sport and tourism in economic development and the development of local identities. Also mentioned by Higham [45] is that large-scale sport tourism events have a significant impact on tourism development for the host city. In efforts to develop post-COVID-19 tourism development in Indonesia, the F1 Powerboat (F1H2O) event was held in the Lake Toba region of North Sumatra, Indonesia, which was aimed at encouraging regional economic growth. Starting now, we can look at trends in some data to gain knowledge about the economic impact that is underway from holding the F1 Powerboat (F1H2O) event on Lake Toba. From the start, we can see economic growth from pre- and post-activity, the number of foreign tourists, and the occupancy rate of hotels/inns at the F1 Powerboat (F1H2O) event on Lake Toba, North Sumatra, Indonesia.

Welcoming the implementation of the F1 Powerboat (F1H2O) event on Lake Toba, the North Sumatra regional government supported this activity to boost community income. This is intended to support North Sumatra's regional economic growth in the tourism sector. The tourism sector workforce was given tour guide training, guide education, and guide certification. Furthermore, strengthening tourism awareness groups, and providing infrastructure facilities and infrastructure to support strengthening the human resources of the tourism sector before and after the implementation of the F1 Powerboat sports tourism event (F1H2O) [46]. In Figure 5, the following can be seen as the trends in economic growth in North Sumatra in 2018–2022.

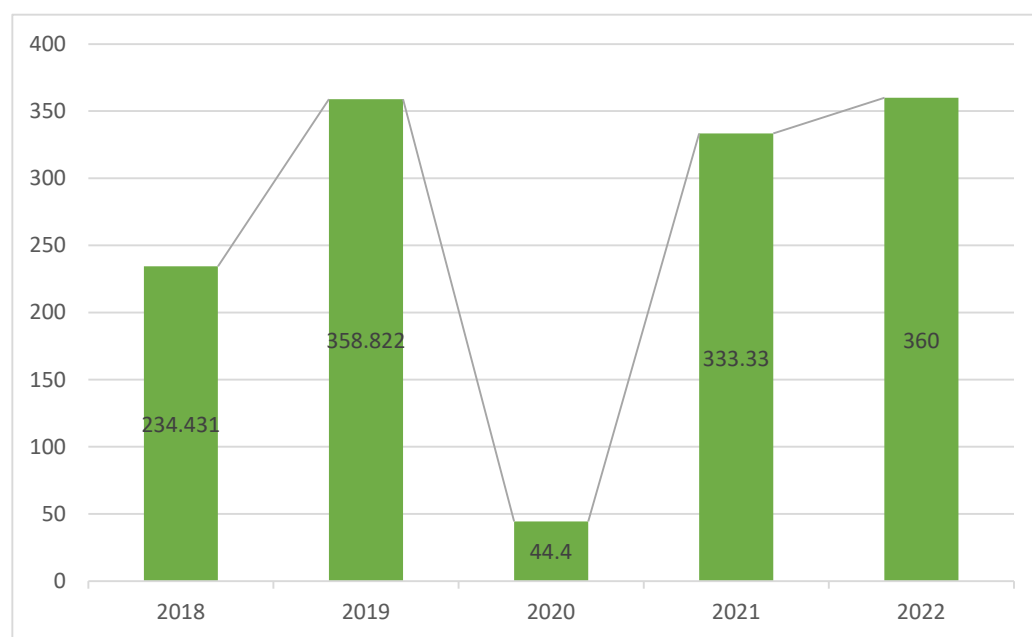


Figure 5. Economic growth in the Lake Toba region, Indonesia in 2018–2022. Source: processed from BPS North Sumatra [46], 2023.

Based on the data above, there appears to be a fluctuating trend in economic growth in North Sumatra during and after the COVID-19 pandemic in 2019–2022. The implementation of the F1H20 event on Lake Toba in February 2023 has encouraged an increase in the number of foreign tourist visits and is predicted to increase economic growth in the Lake Toba region. This can be seen from the decreasing trend in the number of foreign tourists visiting North Sumatra from 2019 to 2021 during the COVID-19 pandemic. However, after the announcement of holding the F1H20 event, in 2022, the economic movement of the tourism area has seen an increasing trend of tourist visits (see Figure 6) and hotel occupancy rates (see Figure 7) in North Sumatra. At the F1H20 event, it is targeted that there will be around 500 thousand to 1 million foreign tourists [14,17,46], which is expected to boost the economy in the Lake Toba Region, North Sumatra, Indonesia.

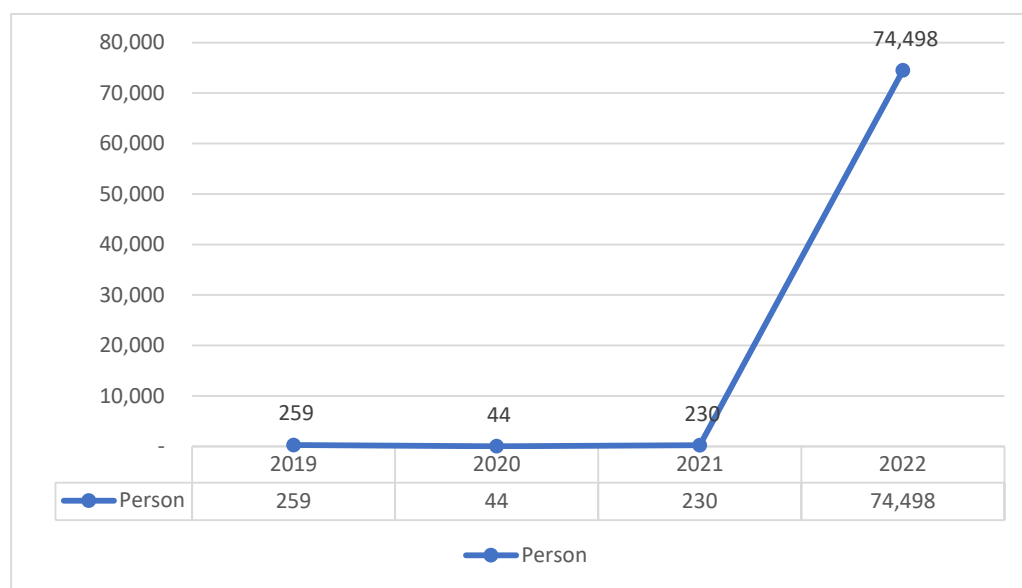


Figure 6. Number of international tourists in 2019–2021 Source: BPS North Sumatra [46], 2023.

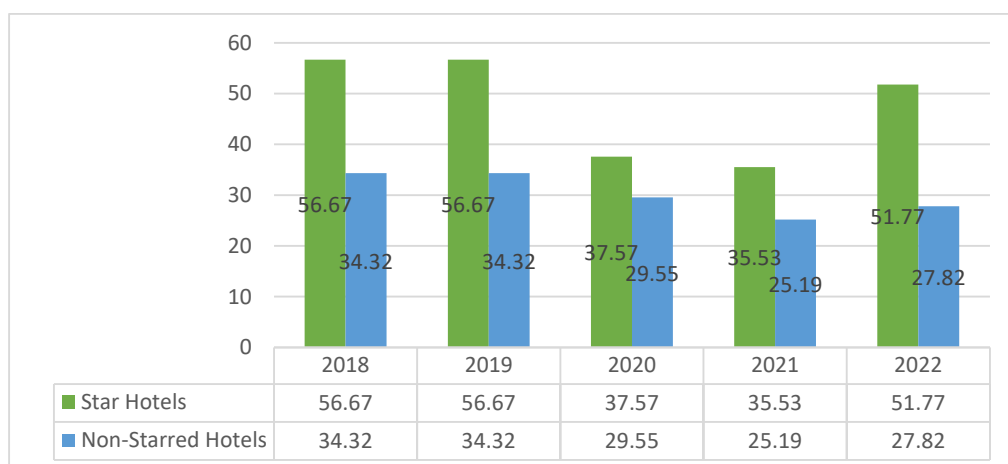


Figure 7. Hotel occupancy rate in North Sumatra (in %). Source: processed from BPS North Sumatra [46], 2023.

The F1H20 event on Lake Toba in February 2023 will affect the performance of the tourism economic sector in North Sumatra Province and the Lake Toba region. However, apart from the level of the workforce in North Sumatra, during the COVID-19 pandemic in Indonesia, the number of tourists as seen from the level of hotel occupants in North Sumatra experienced a decrease in hotel occupancy rates. This was due to various problems such

as the social restriction policy and the closure of tourist attractions during the COVID-19 pandemic in North Sumatra in 2019–2020; but from 2021 to the end of 2022 there was a significant increase compared to before. The increase in number of foreign tourists entering North Sumatra will increase significantly in 2022 from 230 visits to 74,498 visits. This increase is a positive signal for the rise of tourism in North Sumatra after being slumped by the pandemic. This increase in the number of tourists was driven by a decrease in COVID cases, as well as an easing of PPKM policies including easing activities in tourist attractions. The promotion of sports tourism at the F1H20 event in the Lake Toba region is also one of the causes [14,17,46]. There has also been an increase in visits by local tourists (domestic tourists) since 2021 in the Lake Toba area of North Sumatra after the COVID-19 pandemic, which has had an impact on increasing economic resilience around Lake Toba. In Toba Regency, there were 427,450 tourists, Simalungun Regency as many as 1,074,886 tourists, and in Samosir Regency as many as 463,148 tourists [46]. This can be seen in Figure 7.

Referring to the chart of hotel occupancy rates above, the COVID-19 pandemic drastically reduced the occupancy rate of star hotels in North Sumatra Province. Before the pandemic, the duration of tourists' vacations at star hotels was longer, with a higher budget spent. However, from the end of 2022 to early 2023, the occupancy rate of star and non-star hotels in North Sumatra, Indonesia, has increased, which can be attributed to the excitement surrounding the F1H20 event held in February 2023.

In the process of economic recovery, the North Sumatra Regional Government has predicted that there will be a wave of tourism on 24–26 February 2023, at the F1H20 event, which will be held in the Lake Toba region, and can attract tourists to visit North Sumatra, Indonesia [38]. In order to welcome this wave of tourism, the Regional Government of North Sumatra offers tour packages in the form of hotels, accommodations, and scheduled vacation plans, which are accompanied by the implementation of the CHSE (Cleanliness, Health, Safety, and Environment) program to support comfort and improve the quality of tourism trips for tourists and travelers [23,24,38]. The implementation of the F1H20 event in the Lake Toba Region, North Sumatra, has had an impact on increasing the need for accommodation, food, clothing, restaurants, cafes, hotels, and homestays [23,24].

In addition to the attractiveness of organizing the F1H20 event in the Lake Toba region for the development of tourist areas, the North Sumatra regional government is also building infrastructure to support easy access to tourist areas and promoting tourism through digitization to make it easier for tourists to be more interested in visiting. In addition, in the Lake Toba Super Priority Destination area, floating net cages are being prepared, and the application of an environmentally sound tourism industry will maintain its sustainability. Not only are we focused on tourism areas, but communities around the area are also empowered by providing convenience by strengthening access to finance for the community, fostering product innovation, and providing training for cooperatives and SMEs in the tourism area of Lake Toba [38]. With a population of around 180 thousand people, spending per capita reaches 12 million per year. This means that there is approximately Rp. 6.5 billion worth of money spent per day by the people around Lake Toba. Imagine if the circulation of money from the event reached more than Rp. 150 billion per day. Then the velocity of money in the Lake Toba region will increase 23 times more than usual, which can increase regional and national growth [47]. After the implementation of the F1H20 Lake Toba event, there was regional economic growth through the tourism-related sector in the North Sumatra region according to the PDRB Structure of Business Fields in North Sumatra 2022. A report from BPS 2023 [46] shows economic growth related to tourism and the creative economy which contributes to an increase in GRDP in North Sumatra of 33.81% (potential) [14,17,46], and the rest of the growth can be seen in wholesale and retail trade by 18.99%, transportation and warehousing by 4.53%, provision of accommodation and food and drink by 2.04%, real estate by 4.88%, company services by 1.05%, educational services by 1.77%, and other services by 0.55%.

4. Discussion

The pre-activity time of the F1H2O International in the Lake Toba region, North Sumatra province, reported a stretch of economic growth, both in the hotel business sector, MSMEs, homestays, and other tourism businesses [23,24,47]. We can see that now, in the Lake Toba Region, for example, in Toba Regency, since it was designated as a KSPN (National Tourism Strategic Area), economic growth is slowly increasing the more we see and feel it [23,24]. Various forms of support from the community for national and international activities carried out in the Lake Toba area have all opened up new opportunities for economic growth for the people of North Sumatra province in general, especially the Toba people. The implementation of F1H2O in the Lake Toba region has had an impact on increasing the need for accommodation, food, clothing, restaurants, cafes, hotels, and homestays. As an example, there is an increase in the economy of business actors, traders, MSME actors, farmers, hoteliers, culinary tour operators, homestay providers, and opportunity actors renting places for camping tents [23,24].

However, the most significant economic impact will be felt by viewing area owners or paid viewing spots built around the outskirts of Lake Toba, which were previously neglected and had relatively low economic value but now have high economic potential. On the other hand, it also has a significant impact on business actors, traders, or hoteliers by increasing orders for rice and vegetables to farmers, as well as orders to fishermen for side dishes (tilapia and carp) [23,24].

It is hoped that this first F1H2O activity will be a valuable experience for the Toba people and the Toba Regency government to innovate to open other opportunities and other events that have an impact on the economic growth of the local community. Lake Toba, as one of the Super Priority Tourism Destinations, is considered to have the potential for sports tourism, which can boost the local economy in North Sumatra province. Supported by natural, historical, and cultural riches, it is the largest volcanic lake in the world, a global geopark as designated by UNESCO, and a center for Batak crafts and Ulos cloth [22]. Support for Lake Toba as a DPSP is certainly needed by various parties, including the public, to support the government's efforts to encourage domestic tourist visits of up to 1.3 billion trips. Through the implementation of the 2023 Toba F1H2O, it is hoped that it will contribute to the local economic growth of up to 3.7%, provide a multiplier economic effect on the Lake Toba area, and advance local MSMEs [22].

The Government of Indonesia, in collaboration with various stakeholders, is trying to promote sustainable tourism, namely the development of a tourism concept that can have a long-term impact on the environment, society, culture, and economy for the present and the future, for all local communities and tourists who visit [4,5,22]. Some tourism in the Lake Toba Region, North Sumatra, Indonesia can be seen in Figure 8.

The implementation of the F1 Powerboat (F1H2O) event like this is not the same as other events, such as Mandalika. In Lake Toba, especially Balige Village, which is the main location, it is not possible to seat tens of thousands of spectators. Thus, efforts are being made to develop the land along the bay, which will become the installation location for stands for spectators [22]. This has received support from the community because it has economic benefits for them, but in this case only for certain communities in the Lake Toba region. However, what is interesting in the findings of this research is how to maximize the increase in regional economic development and the potential for holding the F1 Powerboat event as sports tourism combined with several existing tour packages in North Sumatra, to provide a wider economic impact. Therefore, the implementation of F1H2O in February 2023 at Lake Toba is not the only means of increasing the regional economy, but also an event for the promotion of other tourism destinations in North Sumatra, such as: (1) the Museum of TB Silalahi Bata; (2) the Tomb of King Sisingamangaraja XII; (3) Balerong Onan Balige; (4) Lumban Bulbul Balige Beach; (5) the HKBP Church in Balige City; (6) Liang Sipege; (7) Tarabunga; (8) Meat Village; and (9) Pakkodian Toba. Apart from that, repairing infrastructure such as the roads around Balige village can be of benefit to the community in the long term. Furthermore, empowering fishermen and farmers in the Lake Toba area,

such as encouraging the production of farmers' vegetables and the production of value fish in floating net cages (KJA) on Lake Toba as well as the consumption of side dishes. The following Figure 9 is a network of information on the results of digital identification and online content analysis through Nvivo 12 Pro regarding the growth and development of tourism, tour packages, and the impact that is given to business actors in encouraging increased regional economic development during the implementation of the F1 Powerboat event in the Lake Toba Region.

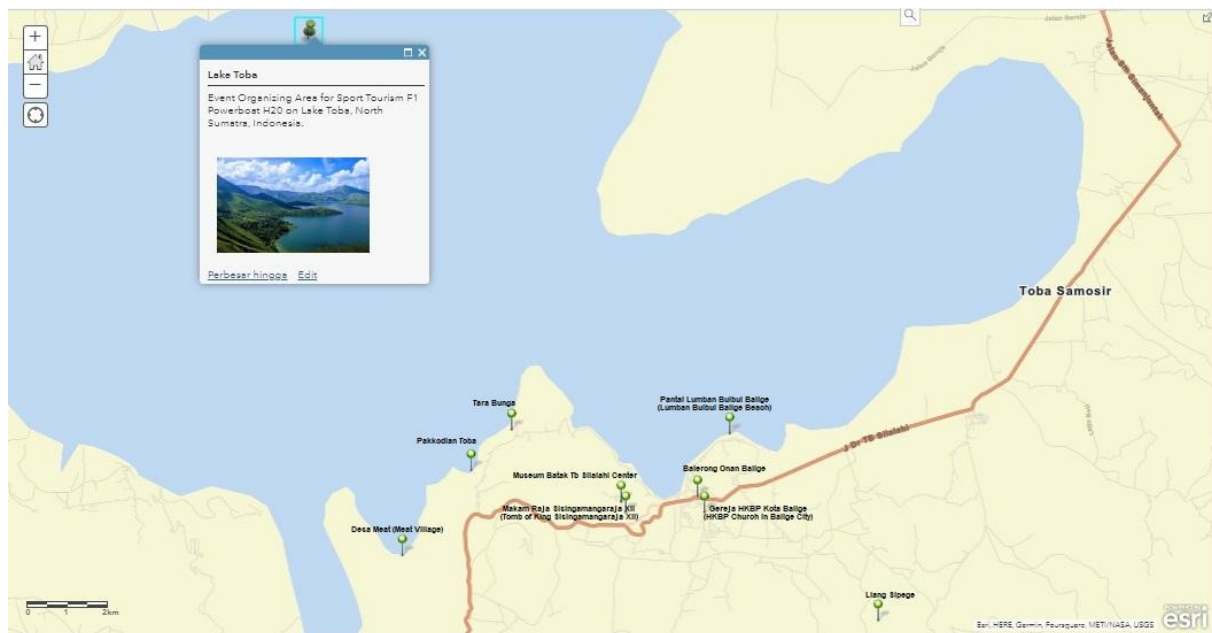


Figure 8. Tourist destinations promoted in organizing the F1 Powerboat event in the Lake Toba Rrgion, Indonesia. Source: processed by researchers, 2023.

Several studies conducted by Lin and Lu [48] and Kurtzman [49] show that event sport tourism (EST) has become a very important economic sector worldwide. As their magnitude continues to grow, attracting more tourists, media, and investment for host communities, many regions and countries have identified tourist spending as a potential source of economic growth and/or employment. Not much different from what was said by Homafar, F. et al. [50] that sport tourism contributes to local economic development in the context of developing destinations, so that is what is needed by the relevant authorities in the field of tourism and sports regarding the formulation of policies and planning around sports tourism events. In particular, there is a need for local authorities to further utilize sport tourism events to extend community benefits. Other studies, such as Morales-Baños et al. [51], and Sharei and Zare [52], also state that in the tourism context, sport is one of the main attractions that the country has to offer. Thus, sports tourism events play an important role in the regional economic development sector. However, according to Miregie and Cho [53], the COVID-19 pandemic created continuous uncertainty, and psychological and financial pressures were found to be the main challenges. Thus, planning for the development of local tourism during the difficult times due to the COVID-19 pandemic is a core element of the strategic response plan to encourage regional and state economic selection. Resilience management, especially social and financial, seems to be the key in the recovery process of a region or country.

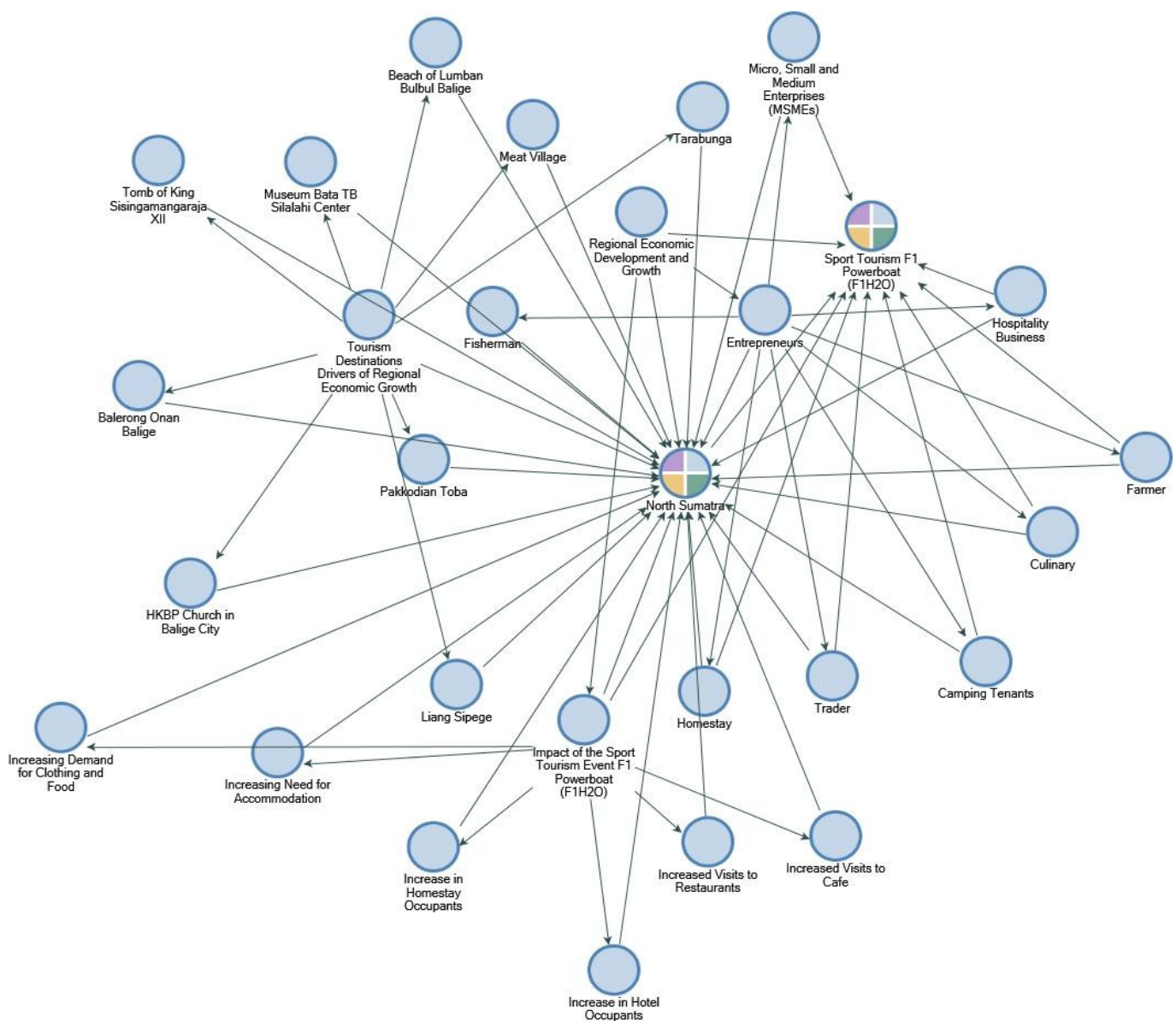


Figure 9. Results of digital identification and online content analysis regarding regional economic development and the impact of holding the F1 Powerboat (F1H2O) event in the Lake Toba Region. Source: analyzed using Nvivo 12 Pro, 2023.

According to Hutajulu et al. [54], the development of the Lake Toba area as a tourism business in Parapat City has experienced an increase, such as in the MSME, hospitality, and restaurant sectors. In developing the tourism potential of Lake Toba, Parapat City has strengths, weaknesses, opportunities, and challenges. Its biggest strength is natural tourism, artificial tourism, and cultural tourism. Weaknesses include human resources, facilities, and infrastructure that still need to be improved, and limited capital. This is not much different from what was said by Remus et al. [55], where the economic influence of sustainable tourism in the Lake Toba region has an impact on improving the local community's economy. According to Siregar et al. [56], accessibility support in the Lake Toba tourism area needs to be done. According to Simatupang [57], based on RI Presidential Regulation Number 49 of 2016 concerning the Lake Toba Tourism Area Management Authority Agency, it is important to see the Lake Toba area within the framework of the three pillars of sustainable development, namely: economic, environmental, and socio-cultural. The area also shows the important role of local wisdom (*dalilhan natolu*) as part of

the cultural aspect, having an important position within the framework of the three pillars of sustainable development in the Lake Toba area.

From these various studies, it can be concluded that the Lake Toba area is currently a place for economic recovery after the COVID-19 pandemic and is a strategic area for boosting the regional economy. Even though it is currently still experiencing various challenges and is still being developed by various authorities, both central and regional, the most important thing to note is that encouraging community and economic resilience through the development and promotion of regional tourism is a way for the Indonesian government to realize urban resilience where governance and society can face vulnerability problems in the future because urban resilience is intended to support broader development processes in regions and countries [10,11,58–63].

The positive impact on economic growth in the surrounding area from the success of organizing the Lake Toba F1H20 sports tourism event also has negative impacts, such as the problem of hasty committee management preparations, a lack of local community tourism awareness, and environmental problems such as increased carbon emissions and conflict surrounding land around Lake Toba. However, the Lake Toba F1H20 sports tourism event is intended to encourage community and economic resilience through the development and promotion of regional tourism, which is the Indonesian government's way of realizing urban resilience through policy support and encouraging the participation of all stakeholders. This is intended to jointly face the problem of vulnerability and create sustainability for regional and national economic growth after the COVID-19 pandemic in Indonesia.

The success of organizing the Lake Toba F1H20 sports tourism event on 24–26 February 2023, in North Sumatra, Indonesia, apart from having a positive impact on regional economic growth, also had a negative impact, as seen from the results of identifying negative trends in digital media on various digital platforms [64]. The results of the study found several conversations such as “limited audience ticket management”, “a lack of promotional activities”, “the impression of a lack of preparation for Lake Toba F1H20 activities”, “availability of accommodation infrastructure and supporting facilities were lacking”, “some MSME places were quiet”, “there was commotion due to expensive ticket prices and not in accordance with the facilities”, “the charm of the Toba Batak local wisdom lacks promotion”, and “strong winds and weather problems during the F1H20 preliminary round which resulted in a delay of the final race” [64]. This negative impact became a joint evaluation record; there are still things that need to be evaluated from the success of the F1H20 Lake Toba.

5. Conclusions

It is hoped that this first F1H2O activity will be a valuable experience for the Toba people and the Toba Regency government to innovate to open other opportunities and other events that have an impact on the economic growth of the local community. Lake Toba, as one of the Super Priority Tourism Destinations (DPSP), is considered to have the potential for sports tourism, which can boost the local economy in North Sumatra province. Supported by natural, historical, and cultural riches, it is the largest volcanic lake in the world, denoted as a global geopark by UNESCO, and also a center for Batak crafts and Ulos cloth. Support for Lake Toba as a DPSP is certainly needed by various parties, including the public, to support the government's efforts to encourage domestic tourist visits of up to 1.3 billion trips. Through the implementation of the 2023 Toba F1H2O event, it is hoped that it will contribute to the local economic growth of up to 3.7%, provide a multiplier economic effect on the Lake Toba area, and advance local MSMEs. The government is also trying to encourage sustainable tourism, namely through the development of the concept of tourism that can have a long-term impact on the environment, society, culture, and economy for the present and the future, for all local people and visiting tourists. Encouraging community and economic resilience through the development and promotion of regional tourism is the Indonesian government's way of realizing urban resilience through policy support and

encouraging the participation of all stakeholders. This is intended to jointly face the problem of vulnerability and create sustainability for regional and national economic growth.

In North Sumatra, as one of the Super Priority Areas (DSP) and Priority Tourism Destinations (DPP) determined through the Indonesian Government's policy, it is encouraged to take advantage of the potential of holding the F1 Powerboat Championship on Lake Toba as sports tourism in increasing regional economic growth. Therefore, various efforts to combine various tour packages in North Sumatra are the steps that are currently being pursued. Therefore, the implementation of F1H20 in February 2023 at Lake Toba is not only a means of increasing the regional economy, but also an event for the promotion of other tourism destinations in North Sumatra, such as: (1) the TB Silalahi Bata Museum; (2) the tomb of King Sisingamangaraja XII; (3) Balerong Onan Balige; (4) Lumban Bulbul Balige Beach; (5) the HKBP Church in Balige City; (6) Liang Sipege; (7) Tarabunga; (8) Meat Village; and (9) Pakkodian Toba. Apart from that, repairing infrastructure such as the roads surrounding Balige can be of benefit to the community in the long term. Furthermore, empowering fishermen and farmers in the Lake Toba area, such as encouraging the production of farmers' vegetables and the production of fish in floating net cages (KJA) as well as the consumption of side dishes. The results of identifying negative trends in digital media across various digital platforms show that the successful implementation of the Lake Toba F1H20 event on 24–26 February 2023 has had a negative impact in addition to having a positive impact on regional economic growth around the venue. The results of the study found several conversations such as “limited audience ticket management”, “a lack of promotional activities”, “the impression of a lack of preparation for Lake Toba F1H20 activities”, “availability of accommodation infrastructure and supporting facilities were lacking”, “some MSME places were quiet”, “there was commotion due to expensive ticket prices and not in accordance with the facilities”, “the charm of the Toba Batak local wisdom lacks promotion”, and “strong winds and weather problems during the F1H20 preliminary round which resulted in a delay and the cancellation of the final race the next day” [64]. This negative impact became a joint evaluation record; there are still things that need to be evaluated from the success of the F1H20 Lake Toba.

The limitations of this study are that it only examines the economic impact that was caused before and after the implementation of the F1H20 sports tourism event on Lake Toba, North Sumatra, Indonesia. It is still necessary to see the social and ecological impacts arising from the implementation of the F1H20 sports tourism event in encouraging regional economic development growth in North Sumatra, Indonesia. Therefore, future research can focus on the socio-ecological impact of organizing the F1H20 sports tourism event on Lake Toba, North Sumatra, Indonesia.

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