

Research Paper

Evaluating the Economic Impact of Sports Tourism in Buriram, Thailand, Mixed Method Study with Difference-in-Differences Estimation

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Abstract: This mixed-method study examines the impact of sports tourism development in Buriram, Thailand, by applying an econometric model, namely the difference-in-differences (DID) estimation technique. This technique examined Buriram's economic and tourism data with that of the neighbouring provinces by comparing the before and after treatment effects. The impact assessment was confirmed through the qualitative techniques of in-depth interviews and focus group discussions with Buriram residents on their perceptions of the impact of the sports tourism development. The results revealed that sports tourism development in Buriram, commencing in 2011 and up to 2018, significantly influenced the increase in tourism revenue ranging from 16.7% to 21.5%. The residents' perceptions conform with sports tourism's economic benefits through economic factors, which are employment and income generation, increase in job variation, business and economic growth, city and sports facility development, and tax revenue and land price increase. The indirect economic impacts discovered were higher job turnover rate, change in business administration to keep up with the development, and the labour movement of locals returning to their hometown for work.

Keywords: Sports tourism, economic impact, impact evaluation, difference-in-differences (DID), DID estimation

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Introduction

Sports tourism is one of the fastest-growing sectors in tourism (UNWTO, 2021) as sporting activities are becoming an indispensable feature of contemporary holiday motivations due to their recreational, glamorous, and health elements. Besides, the combination of sport experience and the thrill of discovering new territories for sporting activities are factors that motivate the flow of tourists and their time of stay. All these have created fascinating holiday experiences, especially in an active way that links a traditional stay with physical and sports activities such as golf, trekking, diving, cycling, canoeing, sailing, and kickboxing (Radicchi, 2013).

Thailand is a destination for sports tourism. Visitors actively travel for sporting purposes as players or learners (e.g., for scuba diving, golf, and Muay Thai boxing) and as passive spectators in sports events. The revenue generated has assured the sports tourism potential in Thailand. Besides fully supportive policies from the government, the promotion of Thailand as a future hub for sports tourism has also garnered the support of numerous organisations.

However, there have been no official reports on the total economic outcome of sports tourism of the country. In 2016, there was an attempt to collect the economic impact of sports tourism by estimating the revenue of international sports events held in Thailand and foreign tourist expenditure in sports activities. The estimated value was \$677.42 million although the actual figure could be much higher than this (Economic of Sport and Tourism Division, 2016). In light of this, the systematic assessment of the economic impact of sports tourism was explored especially in Buriram where sports tourism is continuously promoted prominently, with approximately a hundred sports events organised annually (Buriram: Economic rocket rising, 2015).

Buriram holds the distinction of being the first province in Thailand to employ sports tourism as a strategy to develop the city, and determinedly set its goal as a sports city in Thailand (Bangkokien, 2017; Buriram: Economic rocket rising, 2015). Buriram has a famous football club, Buriram United, which in the 2011 season became the first team in Thai football history to win all three domestic trophies. It has won six times in the Thailand Premier League. In 2011, the team chairman decided to build a world-class football stadium named Thunder Castle Stadium for their home game. This led to greater interest of the residents in sports, especially football. Since then, Buriram has continually promoted its sports tourism attractions. Its image as a sports tourism destination became even more prominent when in 2014, Buriram had the first certified FIA Grade I track. The two mega sports arenas have attracted many tourists to the city, which in turn significantly increased its revenue from the tourism sector (Buriram Provincial Government Offices, 2014).

One year after the inauguration of the football stadium, the number of visitors increased by 15%. Similarly, the total revenue since promoting sports tourism between 2011 and 2018 rose by over \$113.6 million compared with an increase of only \$10.5

million between 2001 and 2010 (Office of the Permanent Secretary, 2020). These results imply that sports tourism could help spur internal tourism activities and give a tourism multiplier effect through businesses and the economy of Buriram. The positive impacts of sports tourism are usually in the forms of high media coverage, increased employment opportunities, city reputation, direct spending, hotel and entertainment site development, and economic growth (Kurtzman, 2005). Among these, the economic outcome seems to be an exciting topic for tourism studies since its effect could generate essential contributions to the destination.

Many impact studies rely on a single mega sports event such as the Olympics or the FIFA World Cup (e.g., Lee & Taylor, 2005; Madden, 2002). Various economic methods have been used to calculate the impact, such as multiplier analysis, input-output modelling, and computable general equilibrium (CGE) modelling (Li & Jago, 2013). Li and Jago (2013) asserted that econometric models had been an emerging method in sport event studies since 2002 (see Baade & Matheson, 2002, 2004; Hotchkiss, Moore, & Zobay, 2003). However, this technique is not widely mentioned in the sports tourism context, especially the difference-in-differences (DID) estimation as compared with other techniques (Li & Jago, 2013; Pomeranz, 2015).

This study evaluates the overall economic impact of sports tourism in Buriram since 2011. After that time, many sports events have been held each year with other tourism activities, such as cultural and heritage tourism. Hence, the DID estimation was selected to estimate the overall impact of sports tourism. At the same time, this study applied the qualitative methods of in-depth interview and focus group discussion to assess the economic impact from all aspects more profoundly. The present study addressed the following research questions:

1. How can the economic impact of sports tourism in Buriram be evaluated?
2. What is the economic impact of sports tourism on Buriram residents?

City Background

Buriram is one of the 20 provinces in northeastern Thailand. Its socio-economic conditions are similar to those of the neighbouring provinces in that main earnings come from the agricultural and farming sector, local industry, and local services. Its tourism is mainly related to nature, culture, and historical heritage (Buriram Provincial Government Offices, 2014).

In the past, Buriram was a small transit city to other provinces. Or just a city for one-day visits with limited attractions. However, since 2011, the city has transformed tremendously. Marketed with a sports theme, the province today offers facility attractions for various sporting events, a great variety of accommodations, shops, and restaurants, as well as new tourist attractions (Buriram: Economic rocket rising, 2015). These transformations have significantly impacted Buriram's tourism businesses, society, and economy, which consequently affected its residents.

Literature Review

Sports Tourism

The relationship between sport and tourism has long been developed since 776 B.C. as the Olympic Games was the earliest documented example of sports tourism (Finley & Pleket, 1976). At that time, every self-respecting city in Greece had its stadium, and athletic games were a vital activity of the Greeks. Thousands of spectators travelled to cheer their sportsmen and the prestige of their city (Davies, 1997), similar to present day football fans who travel to support their favourite team (Weed & Bull, 2009). During the industrial revolution, national and international transportation supported sports participation. In the late 1800s, adventure sports like mountain climbing and skiing were popular in Europe, which led sports tourism facilitators to realise the potential growth and capability of the market and the natural environment. Hence, it would seem that the history of adventure tourism was related to sports tourism development (Southall & Phillips, 2012). The connection between sports and tourism continues to grow until today. Many people have participated in sports activities, both as active participants by being players and as passive participants by watching sports during their free time or a holiday (Standeven & De Knop, 1999).

In the 1990s, sports and tourism tended to be studied together in academic research—for example, studying the impact of a mega sports event like the Olympic Games. Researchers have tried to explain the conceptual foundations of sports tourism by considering each concept individually—sports and tourism, and the interrelationship between them. The concept and scope of sports tourism have been reviewed and developed from time to time by many scholars such as Glyptis, Kurtzman, and Zauhar; Gammon and Robinson; and Standeven and De Knop (Hinch & Higham, 2001).

Sports tourism today continues to grow as a major tourism product and could comprise a huge part of holiday activities in many countries, for example, the UK, USA, and European countries (Weed & Bull, 2009). Regarding sport-related motivation (McIntosh et al., 1995), a number of sport-related activities have been introduced, such as participating in sports events, and performing or spectating sports activities. These sports activities were developed into sports tourism products to attract tourists to experience and visit many country destinations. At the same time, such tourism could benefit the local people, including supporting local sports provision and the local economy (Weed & Bull, 2009).

Economic Impact of Sports Tourism and Its Assessment

The economic impact of sports tourism does not deviate much from the impact of tourism as a whole since its impact is derived from, or may be the subset of, the total economic impact of tourism. However in this case, sports tourism is a form of tourism that has sports as the main reason for travelling to a destination. According to Kurtzman

(2005), Solberg and Preuss (2007), and Standeven and De Knop (1999), the economic impact of sports tourism are as follows:

- Direct effects from the construction related to sports activities such as sport arenas, sport facilities, and hotels, which create jobs;
- Goods and services purchased locally, affecting manufacturing, businesses, and economic growth;
- Revenue from expenditure by tourists, spectators, sports staff, athletes, and volunteers, injecting directly into the local economy;
- City development in tourism infrastructure, for example, public transportation, parks, highways, tourist attractions, and entertainment sites; and
- Increase in tax revenue, allowing government sectors to have more budgets for city development and improving residents' quality of life.

For many years, studies on the economic impact of sports tourism have mainly commenced with major sports events assessing the economic benefits for the host destination. Early studies focused solely on the net financial impact. The trend moved to longer-term economic benefits through enhanced host image and revenue generation from subsequent tourism visitation. However, the impact of sports events is much broader than the economy. Sports tourism also has social, cultural, political, and environmental impacts on the host community. These effects need to be incorporated into holistic evaluations. Many approaches were adopted to search for the economic impact assessment with a wide range of assumptions, limitations, strengths, and weaknesses.

Since the beginning, depending on resources and assumptions, assessment tools have been developed and selected to study the economic impact of sports tourism. In early studies, multiplier analysis was widely adopted in the economic evaluation of tourism and sport events (see Archer, 1977, 1982; Gelan, 2003). Then, input-output models were developed to calculate multipliers and commonly assess the economic impact of major events, such as the 2002 Korea–Japan FIFA World Cup (Lee & Taylor, 2005). Meanwhile, a complicated and time-consuming technique was developed as a computable general equilibrium (CGE) model by adopting impact variables (i.e., Gross Domestic Product [GDP]) to examine the event's economic impact (e.g., Blake, 2005; Li, Blake, & Cooper, 2011). Lastly, different approaches like the econometric model, cost-benefit analysis (CBA), and statistics were noted as emerging methods to evaluate the economic impact of major events. Li and Jago (2013) reviewed the economic evaluation techniques of major sports events and found no mention of econometric modelling. Only a few econometric models were adopted, such as Kasimati and Dawson (2009) who applied a small macro-econometric model to assess the impact of the 2004 Olympics on the Greek economy. In conclusion, these evaluation techniques were developed and have been applied to major sports events since 1990. Each technique was selected due to the interest, trend, and data available to answer the research question regarding economic variables of interest.

Difference-in-Differences Estimation

Difference-in-differences (DID) estimation is one of the most popular impact evaluation techniques for applied research in economics to assess the effects or impacts of public interventions and other treatments of interest on relevant after-effect variables (Abadie, 2005). The main concept is to calculate the impact after the treatment—policies applied in place by measuring the change over time between the treatment and the comparison group (control group), and then comparing the difference between groups to see whether the treatment has any effects on the group. Following Pomeranz (2015), the concept conforms to two main assumptions of this technique which are as follows:

1. The control group (CG) and treatment group (TG) must be comparable; otherwise, the outcome of the impact evaluation will be biased, resulting in over- or underestimation of the true effect, which may interpret the event differently.
2. Without any programme or treatment, the trend of change over time for both groups would be the same, referred to as parallel trend assumption. Following this assumption, the treatment effect could be measured as the difference between the differences over time.

Applying the parallel trend assumption, researchers have tried to check the longer time series to see whether the treatment and control groups evolved in parallel before starting the treatment.

The advantageous aspects of this tool are its simplicity and its potential to overcome many endogenous problems that occur when making comparisons between heterogeneous groups (Bertrand, Duflo, & Mullainathan, 2004). This technique has not been used widely for the economic evaluation of major sports events (Li & Jago, 2013) but has been widely used by many academics and practitioners in economics, including industrial organisation, development economics, public finance, labour economics, and medical research (Casaburi & Troiano, 2015; Duflo, 2001; Naritomi, 2015; Stokes, Kristensen, Checkland, & Bower, 2016). For example, Naritomi (2015) applied DID technique to study the effectiveness of incentives for consumers to ask firms for a receipt by comparing the revenues of retail versus wholesale firms before and after the policy change. Casaburi and Troiano (2015) studied the local mayor's electoral response to the anti-tax evasion policy in Italy by adopting DID to compare municipalities with more or less "intensity" of anti-tax evasion intervention before and after the programme.

In this study, DID estimation was selected as an applicable instrument to assess the effect of sports tourism development. This technique could overcome all of the difficulties to distinguish the sports tourism transactions from other types of tourism and economic activities.

This DID technique applied the comparison between the CG and TG based on the assumption that without sports tourism development in Buriram, the comparison group of other provinces (CG) and Buriram (TG) must be the exact parallel of development over time. Therefore, should there be a significant impact of sports tourism development

in Buriram, the development rate after having treatment (sports tourism development) should differ from the control group (not showing the same trend over time).

Methodology

In this study, a mixed-method approach was applied for the economic evaluation of sports tourism. DID estimation was employed in the quantitative analysis, while in-depth interviews and focus groups were used for the qualitative part.

DID Design

In this study, the impact evaluation technique, DID estimation, was tested by using collected secondary time series data. The sampling technique complied with the assumption that all data of the selected provinces were comparable. Checking for parallel trends had been performed. Therefore, Buriram (the TG) and the neighbouring provinces (the CG) were selected based on the similarity of socio-economic environment. The CG group consisted of seven provinces: Nong Khai, Chaiyaphum, Yasothon, Ubon Ratchathani, Roi Et, Surin, and Si Sa Ket. In addition, the CG's compliance with the parallel trend assumption before sports tourism development was promoted in Buriram in 2011 was also checked. Subsequently, it was ensured that all CG data had the same trend over time as the Buriram data.

Data Collection

Secondary data from a government agency were applied to the DID technique. Those data were derived from the following sources:

1. Gross Provincial Product (GPP) prepared by The Office of National Economic and Social Development Board (NESDB). The GPP data were derived from the disaggregated annual Gross Domestic Product (GDP) to provide economic and social indicators at provincial levels for policymakers to plan or develop the area. The GPP data were divided into sections, such as agricultural and non-agricultural sections like manufacturing, construction, hotel, restaurant, and transport (NESDB, 2020b). The sections of GPP data selected for analysis were related to sports tourism industries which are as follows (NESDB, 2015, 2020a):
 - (a) Accommodation and food service activities
 - (b) Construction
 - (c) Electricity, gas, water, steam, and air conditioning supply
 - (d) Wholesale and retail trade; repair of motor vehicles, motorcycles; and personal and household goods
 - (e) Arts, entertainment, and recreation, including other service activitiesThe (a), (d), and (e) groups referred to the tourist expenditures in sports event economic impact study (Lee & Taylor, 2005), while groups (b) and (c) were

categorised as the direct expenditure of mega sports event (Li & Blake, 2009; Madden, 2002).

2. Tourism data gathered from the Ministry of Tourism and Sports and Tourism Authority of Thailand (Department of Statistic, 2004, 2005; Office of the Permanent Secretary, 2020; Tourism Authority of Thailand, 2006, 2007, 2008). The data of the northeastern provinces of Thailand comprised:
 - Total annual revenue per province from tourism sectors
 - The number of visitors (tourists and excursionists) annually
 - The number of rooms available in accommodation establishments
 - The number of guests staying in accommodation annually
 - Average visitor expenditure per person per day

Due to the limitation of secondary data available, all economic time series data from 2003–2018, with 128 data, were examined in the model. The treatment effect started when Buriram adopted sports tourism development in 2011. Thus, the before-treatment effect was from 2003 to 2010, and the after-treatment effect started from 2011 onward.

Data Analysis

First, all data were tested for the DID assumptions. For the before-treatment effect, the GPP of neighbouring provinces were compared to see whether they had the same trend as the GPP of Buriram. Then, the growth rates of all selected provinces derived from GPP data were examined by the statistical tool to assess whether all the growth rates of GPP data had a parallel trend.

Second, all data of the selected provinces were compared with those of Buriram. In this stage, a multiple linear regression model was applied. The model constructed the correlation between a dependent variable (*Y*) and independent variables (*X*). A relative model was created from many variables related to tourism sectors, and three dummy variables were added up. The dummy variables were used for checking the treatment effect of sports tourism development since 2011, distinguishing Buriram data from the other data, and dividing the time before and after treatment. A preliminary multiple regression equation was as follows:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_kX_k + c_1D_1 + c_2D_2 + c_3D_3 + \varepsilon$$

Referring to the equation above, *Y* represents the variable of interest influenced by each independent variable (*X*). However, when focusing on the DID technique, three dummy variables at the end of the equation (*D*₁, *D*₂, and *D*₃) were created to examine the treatment effect. A new equation to clarify the functions of each dummy is presented as follows (Pomeranz, 2015):

$$Y_{it} = \alpha + \beta_1T_i + \beta_2post_t + \beta_3T_i * post_t + \varepsilon_{it}$$

T_i = A binary variable (0,1) indicating whether each province participated in the programme or not

$post_i$ = A binary variable (0,1) indicating the period of time following the programme (treatment effect – Sports tourism development)

$T_i * post_i$ = The multiplication of T_i and $post_i$ resulting in a value of 0 or 1
 β_3 = The estimated coefficient, the DID estimation

All entered data were processed and finally produced a multiple regression model. The figure was verified for the evaluation of the treatment effect whether sports tourism development had a significant impact on the economy of Buriram.

Qualitative Design

This study applied semi-structured interviews and focus groups as modes of qualitative data collection.

For the interview, those who resided at least 10 years in Buriram from diverse careers with different experiences and perspectives were recruited using stratified and snowball sampling techniques until the data achieved the saturation point. They are interviewees who could provide information related to sports tourism development in Buriram and who are willing to participate. There was a total of 12 respondents and they were divided into three groups by the criterion of relevance in sports tourism: (1) four local authorities having backgrounds of policy, trend, and achievement and obstacles in sports tourism development; (2) four local people whose jobs are directly connected to sports tourism; and (3) four residents whose careers had an indirect connection with sports tourism. Each of the interviews lasted approximately two hours.

The focus group method concentrated on collecting information on the community's perspectives concerning the impact of sports tourism development. In this study, two discussion groups with six participants each were classified by diverse career themes. First was a group of entrepreneurs related directly to sports tourism, while the other group comprised residents whose careers had indirectly benefitted from sports tourism. The participants were heterogeneous but shared common attitudes or experiences concerning the effect of sports tourism development, which suited the research aim to explore maximised possibilities, perspectives, or views from different subjects (Kitzinger, 1995). Each session lasted, on average, 2.45 hours.

All participants were residents living at least 10 years in Buriram and had work experience not less than eight years with experience in sports tourism development in the area. Participant consent was obtained before each session. The interviews and focus group sessions were recorded with a digital audio recorder and transcribed with the participants' approval. Short notes during the interviews and focus groups sessions were also used to support the audio recording.

All collected data were transcribed verbatim for analysis and grouped by cases (groups of participants). The researcher systematically followed the flow of questions to ask the participants during the session, observing interactions and responses to determine codes, categories, and themes. Qualitative thematic analysis techniques were applied along with computerised application to reveal the patterns and themes in the data by sorting all statements under relevant themes (Krueger & Casey, 2000). This technique helps to examine commonality, differences, and relationships across a dataset to understand the issues and themes (Gibson & Brown, 2009). Then, the themes were validated, and cross-case synthesis was created by pattern matching using a word table (Yin, 2014). Ultimately, all evidence in any form of summaries, charts, and selected examples were gathered and connected to the research questions.

Results and Discussion

To evaluate the contribution of sports tourism towards Buriram’s economy, DID estimator technique was key in overcoming the difficulty of distinguishing the effect of sports tourism from the other kinds of tourism effects that existed in the province. The following chart shows the GPP of selected provinces as the control group (CG) and GPP of Buriram.

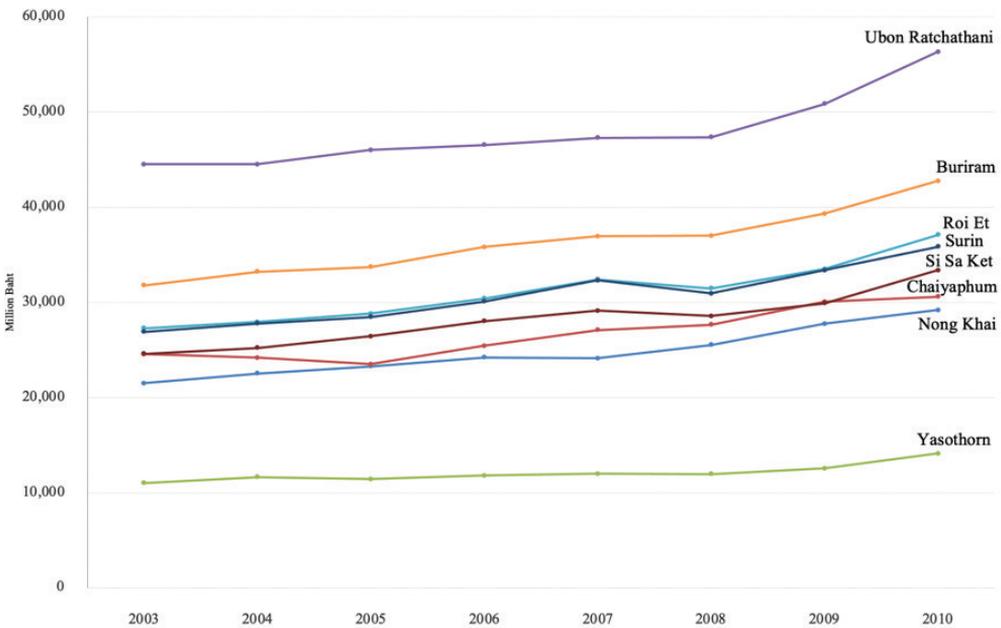


Figure 1. GPP of eight selected provinces during the years 2003–2010 (mil. Baht/year)

Seven provinces were compared with Buriram: Nong Khai, Chaiyaphum, Yasothon, Ubon Ratchathani, Roi Et, Surin, and Si Sa Ket. The provinces were firstly selected by GPP graph plotting to see the parallel trend line compared with the trend of Buriram. Then, the growth rates of the eight provinces were statistically examined by Analysis of Variances (ANOVA) to obtain empirical verification. The results shown in Table 1 indicate that there is no difference between the group in the growth rate of each province from 2003 to 2010 (before treatment). Thus, the data are comparable.

Table 1. ANOVA for the growth rate of GPP of the eight provinces

Provinces		S.D.	F	Sig
Nong Khai	4.53	2.57	0.13	1.00
Chaiyaphum	4.25	5.11		
Yasothon	4.23	4.67		
Ubon Ratchathani	3.88	3.94		
Roi Et	5.14	4.25		
Buriram	4.09	2.88		
Surin	4.58	4.12		
Si Sa Ket	5.39	4.47		
Total	4.51	3.88		

Tourism Models

Three tourism revenue models were created to test for DID. Regarding DID methodology, the dependent variable (*Y*) was an annual tourism revenue, while the independent variable (*X*) consisted of the economic data related to tourism sectors. The details of each model are shown in Table 2.

Table 2. Multiple regression analysis results for the tourism revenue model.

Variable	Tourism Rev. Model I		Tourism Rev. Model II		Tourism Rev. Model III	
	Coef. (Std. Err)	P-value	Coef. (Std. Err)	P-value	Coef. (Std. Err)	P-value
Accommodation and food service activities	0.034** (0.016)	0.035	0.021 (0.019)	0.267	0.031 (0.020)	0.126
Art, entertainment, recreation, and service activities	-0.289*** (0.073)	0.000	-0.226** (0.073)	0.003	-0.218** (0.074)	0.004
Wholesale and retail trade, and repair of motor vehicles	0.276*** (0.048)	0.000	0.378*** (0.073)	0.000	0.407*** (0.086)	0.000

Table 2 (con't)

Variable	Tourism Rev. Model I		Tourism Rev. Model II		Tourism Rev. Model III	
	Coef. (Std. Err)	P-value	Coef. (Std. Err)	P-value	Coef. (Std. Err)	P-value
Infrastructures services and sewage management activities			-0.186** (0.060)	0.002	-0.159** (0.063)	0.014
Construction					-0.085 (0.088)	0.333
Average visitor expenditure per person per day	0.876*** (0.068)	0.000	0.774*** (0.069)	0.000	0.799*** (0.073)	0.000
The number of visitors (tourists and excursionists) annually	0.955*** (0.038)	0.000	0.934*** (0.044)	0.000	0.902*** (0.051)	0.000
The number of rooms available in accommodation			0.090** (0.040)	0.025	0.041 (0.064)	0.527
The number of guests staying in accommodation annually					0.064 (0.066)	0.335
Buriram data	-0.118** (0.053)	0.028	-0.140** (0.052)	0.009	-0.133** (0.053)	0.014
Sports tourism effect	-0.183*** (0.033)	0.000	-0.146*** (0.038)	0.000	-0.160*** (0.040)	0.000
Tourism revenue after launch of sports tourism in Buriram	0.215*** (0.077)	0.006	0.172** (0.073)	0.021	0.167** (0.075)	0.027
Model I	$R = 0.987$	$R^2 = 0.974$	R^2	$adj = 0.972$	$f = 559.624$	$p = 0.000$
Model II	$R = 0.989$	$R^2 = 0.978$	R^2	$adj = 0.976$	$f = 508.566$	$p = 0.000$
Model III	$R = 0.989$	$R^2 = 0.978$	R^2	$adj = 0.976$	$f = 423.981$	$p = 0.000$

Number of data = 128

***: Significant at 1% of significance level ($P < .01$) **: Significant at 5% of significance level ($P < .05$)*: Significant at 10% of significance level ($P < .10$).

Table 2 summarises the determinants of perceived tourism revenue with three options: (1) overall Buriram tourism revenue; (2) overall tourism revenue since sports tourism took effect; and (3) specific Buriram tourism revenue since sports tourism took effect. The three models were created to present the consistent sports tourism effect promoted in Buriram since 2011. The significant levels of 1% and 5% were applied to verify a significant effect. The result could be interpreted from the estimated coefficient of dummy variables (β_3) in each model.

Perceived tourism revenue after sports tourism was launched in Buriram:

This is the key element of the DID estimation. The estimated coefficient from all models indicated that from 2011 to 2018, tourism revenue significantly rose by 21.5% in model I, 17.2% in model II, and 16.7% in model III, respectively. Ultimately, the sports tourism effect since 2011 influenced the increase in tourism revenue of Buriram, ranging from 16.7% to 21.5%.

Several research studies have assessed the economic impact of sports tourism through specific sports events using various methods (Li & Jago, 2013). Most economic assessments were aimed at a single sports event like the Olympic Games, LPGA Golf tournament, and the Superbowl (Kurtzman, 2005). In contrast, evaluating the economic impact of sports tourism as a whole in a destination where many events were arranged each year is quite challenging. In this study, DID estimation has been applied to overcome the limitations. Hence, the tourism revenue models were created to assess the impact by comparing the economic data of Buriram with the neighbouring provinces ever since the mega football stadium was inaugurated in 2011.

Since 2011, the tourism revenue of Buriram has continually increased. The economic models of tourism revenue indicated that sports tourism in Buriram from 2011 to 2018 contributed to increased tourism revenue from 16.7% to 21.5%. This finding supports the economic benefit of sports tourism in that sports events could generate revenue for the destination's economy. Kurtzman (2005) demonstrated the economic value in several sports events: the Superbowl in 1999 generated \$260 million for the city of Atlanta, and sports tourism activities in the Quebec Winter Carnival annually contributed around 40% which accounted for approximately \$13.2 million.

The DID model in this study used the tourism data and GPP data related to tourism segments to evaluate the economic impact of sports tourism on Buriram from 2011 to 2018. The approach outlined in this research should be replicated to assess the other effects of sports tourism in other dimensions, for example: tax revenue, employment, and the number of visitors, depending on the research questions.

The findings from the DID technique have provided evidence on the effects of sports tourism. Buriram has adopted sports tourism as the tool for its development since 2011 and it has contributed to Buriram's economy through tourism revenue.

In this study, economic impact from the residents' perspective was also gathered and presented via qualitative techniques, which could provide in-depth information and help better understand the economic impact of sport tourism.

Analysis of the Qualitative Results

Findings indicate that sports tourism positively impacted Buriram's economy in terms of employment and income generation, increasing job variation, business and economic growth, city and sports facility development, increasing tax revenue, and land price increase. Not surprisingly, the findings on the economic benefits of sports tourism in the present study were consistent with many studies in the field (L. Fredline, 2004; Kurtzman, 2005). Those impacts have supported and affirmed the economic impact of tourism as well as sports tourism and events thoroughly described in many tourism publications (Chan & Fiffy, 2021; Collado, 2019; E. Fredline, 2005; Inkson & Minnaert, 2012; Kurtzman, 2005; Standeven & De Knop, 1999; Vanhove, 2005; Williams, 2009). However, the qualitative method could perceive more dimensions and details rather than quantitative practice. The following are interesting findings reflecting other aspects of the economic impact of sports tourism.

Changes in Work Attitude, Business Practice, and Mode of Life

Due to the increase in job variation, the data from the interview group of local authorities showed that the employees seemed to have more work choices with better pay, resulting in a shorter working period. This could change the work attitude of local employees.

“The people had more jobs to pick from but they thought long and hard before accepting the job, which affects the turnover rate of the job. They worked only for a short time and changed jobs more frequently. Unlike the older generation, they won't work so hard. They keep changing the work, and look for the easiest one with no challenge” (Local authority No. 1).

From the business aspect, the hotel entrepreneurs group shared the feeling of change in business practice due to the economic growth, in that there was greater pressure to learn, manage, and cope with competition from other rivals in the market. It changed the way of working from a family-type business to a more professional one. The following are direct quotes from the participants in one of the focus group sessions:

“Before Buriram had stadiums, I ran a hotel in a family business style but gradually this had to change. When the city changed, what we had planned

and done was not practical anymore. We had to change and be concerned about target customers. Now our customers are not people who come here to visit their relatives but are groups of athletes, sport fans, and so on. Most are people we do not know. We work harder and have to make plans for the business, so our free time has gone” (Entrepreneur No. 6).

“Like what other people said, our city was changed to a city of sports and tourism. We might enjoy a higher income but it has made our life tougher. It is not a slow life anymore” (Entrepreneur No. 5).

This change in practice may affect the work attitude and practice of the local employees and business owners. Moreover, this new recruitment pattern is consistent with studies on residents’ attitude on the economic impact of sports tourism in that the residents also benefit since more opportunities are created to negotiate and build up the local business environment (Akis, Peristianis, & Warner, 1996; Garcia, Vazquez, & Macias, 2015). In this case, the opportunities to negotiate for a job could be better matched with competence and remuneration rather than income solely. On the other hand, business owners find it challenging to improve job benefits to attract staff and systematically adjust their work process to compete with the city’s development.

Labour Movement and Return to Hometown

The effect of the increase in job variation caused local labourers who left their hometown for work to move back for a job or start their own businesses. Besides, Buriram’s growth also attracted people from other areas in search of jobs. These effects encourage local business development and labour movement, which validate the employment generation effect. The following are quotes from entrepreneurs:

“New-gen residents who studied and graduated in Bangkok practically preferred to find jobs in the big city. But now they have decided to move back and help in their family’s business or even develop a new product or business of their own” (Interview Group 2: Hotel entrepreneur).

“Since we had the mega stadiums, the residents had more jobs to do. Even the local people who moved out to work in other provinces or to Bangkok decided to move back and work here. This group of people has grown larger and larger” (Focus Group: Entrepreneur No. 6).

Concerning the economic benefits of sports tourism, the connection between the increase in job variation and more business opportunities effected a higher employment rate. It attracted migrant labourers to the area. This effect is consistent

with Soontayatron (2014) that found migrant labourers in the tourist destinations. These labourers were in the tourism industry (Joppe, 2012). Additionally, the present study found that the opportunities also attracted local people who had migrated to work outside their hometown to move back and look for a job or start their own business. This consequence instils the residents' pride in their hometown to support the development. Besides, returning to their hometown also reunites and builds up a strong family relationship.

Consequently, human resources development should grow in tandem with sports tourism development so that the residents will have more skills to support the sports tourism activities and work opportunities. This suggestion supports the research outcome that major sports events can enhance citizens' knowledge and skills through sports event activities (Solberg & Preuss, 2007). Therefore, the local government and private organisations should create more opportunities for residents to participate in sports tourism businesses and activities. The residents can improve and learn new skills, such as language skills, IT skills, hospitality training skills as guides and volunteers so as to support business growth and city development.

Conclusion

This study assessed the economic impact of sports tourism in Buriram, Thailand. The mixed-method results of this study provide a significant contribution to the existing literature. DID estimation is an effective method to evaluate and reaffirm the overall economic impact through the increased tourism revenue in the destination. This technique overcomes the conditions and time constraints of evaluating each sport event. A total of nine independent variables in the DID model were selected from economic data in Gross Provincial Product (GPP) and tourism data related to sports tourism based on direct expenditure and tourist expenses of mega sports events. However, there may still be other variables that can be applied in sports tourism assessment along with other aspects depending on the study's aim and data availability.

Qualitative findings clarify residents' perception of the development of sports tourism from various aspects, such as employment and income generation, business and economy growth, city development, and sport facility development. The economic impact of sports tourism indirectly affects the socio-economic activities of the residents and community through lifestyle adjustment related to work experience and attitudes, as well as business administration in order to compete with other business rivals. The return of local people who had migrated to work outside may be seen as a positive reflection of community attachment, which could benefit the city development. In addition, the influx of migrant labourers into the city could also help alleviate labour shortage in some areas of business; however at the same time, this could escalate the rivalry in certain businesses.

This study continued with the examination of the impact of sports tourism from various aspects such as social impact, which offers interesting insights into residents' perspectives in their community. This can help us better understand how they react and adapt to sports tourism development in the area, which E. Fredline (2005) asserted is important since a myriad of possible impacts could be perceived from the unique characteristics of each destination and sports tourism activity. Further study will help understand why some regions are differently impacted than others.

Study Implication and Limitation

This study emphasised the contribution of sports tourism development to the economy and socio-economic conditions of the residents in the destination. Buriram, which was once only a small province in the rural areas of northeastern Thailand, was the subject of this study. Sports tourism has contributed to the flourishing economic growth and revenue of businesses in the city. In regard to the rapid changes in the city, all stakeholders must adapt to support the growth of sports tourism and the city. These include:

1. All tourism stakeholders should adjust their business administration and management to support the development;
2. Due to labour movement into the city and a higher employment rate, human resources development is essential for workers to develop their work potential and skills to support new tasks, especially in the tourism and hospitality fields;
3. The local government should acknowledge all of the impacts of sports tourism and provide support, collaborate with the private sector, and mitigate the negative effects of sports tourism development;
4. Synergise sport tourism activities with the local core values, such as cultural and heritage tourism, to help enhance and sustain the local development in the province.

Concerning the positive economic impacts of sports tourism, the study of Buriram could be a protocol for other areas to adopt sports tourism as a tool for city development. However, the present study was limited only to the economic aspect. Further studies on other aspects, such as social and environmental impacts, should be extended so that city developers and policymakers will perceive all aspects of outcomes locally and manage those impacts effectively. In the present study, the tourism revenue model was applied for the economic impact evaluation; however, the effects of sports tourism development may be tested by DID technique with other interesting subjects, such as local tax revenue and environmental cost, depending on the study's research questions.

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