Original Research

Value of Sport for Development and Peace initiative for citizens: An examination using the Contingent Valuation Method

Hanae Endo[1] and Narumi Fujioka[2]

[1]Doshisha University, Japan
[2]Hosei University, Japan

Corresponding author email: hendo@mail.doshisha.ac.jp

ABSTRACT

Research surrounding Sport for Development and Peace (SDP) has examined the fund procurement for supporting sustainable activities. Even as importance is placed on sustainable SDP operation and the acquisition of financial resources for achieving the goals of a project, there is an emerging trend towards funding from the general public, who are not direct recipients of the SDP. Therefore, the purpose of this study was to investigate the evaluation of SDP projects from the perspective of citizens. We decided to apply Contingent Valuation Method (CVM) in this study, which enables evaluation including non-utilization values. The project subjected to a value estimation using CVM was a long-term project implemented in the city of Maebashi, Gunma Prefecture, which accepted athletes from South Sudan. The mean willingness to pay (WTP) with a certain degree of validity was calculated to be JPY 2,485, which we used to calculate the aggregate WTP for the study population (JPY [Japanese yen] 490 million). The fact that the funds collected for the implementation of this program was approximately 20 million yen per year suggests the possibility that more than ten times that amount in socio-psychological benefit was experienced by the citizens of the municipality.

Introduction

Since 2000, the use of Sport for Development and Peace (SDP) has been increasing globally, attracting widespread academic attention. Research surrounding SDP has examined not only the effectiveness of sports activities at locations where it is implemented, but also fund procurement (funding) for supporting sustainable activities (Svensson et al., 2017). Clutterbuck and Doherty (2019) identified the following factors related to the operational success of SDP organizations: success in procuring funds, obtaining subsidies, increased clarification of financial responsibilities, and sustainability of funding. Revenue generation, funding, fiscal management, and the creation of sustainable funding models have also been identified as important factors (Svensson et al., 2017). While it is considered important to obtain financial resources for the sustainable operation or achievement of the SDP, there have been cases of fundraising from the general public, who are not direct recipients of the SDP.

One of the examples is a project known as Jake's Farewell Gift to His School, where a nine-year-old student, who was blind due to a genetic condition, raised money by running a full marathon through the gofundme.com platform. The funds raised through this effort totaled US$ 10,100, which were used to provide opportunities to other deaf or blind children to participate in sports. On the youcaring.com platform in 2015, a group raised US$ 10,660 for an activity called Free to Run in New Zealand. They used the money to fund an activity that provided opportunities to adolescent girls and young women to advance their leadership and wellness through running in conflict areas.

While crowdfunding and other forms of support by people who do not directly participate in the activities are being explored for the SDP, no verification of the social value gained through the support of SDP has been conducted. In particular, the characteristic features of international cooperation through sports in Japan include the fact that the public sector (e.g., government development assistance) plays a leading role and that volunteers help in its

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implementation (Suzuki & Okada, 2015). Although Sports Global Strategy by Japan Sports Agency describes multiple benefits that the Japanese public can enjoy, such as increasing Japan's international presence and strengthening international relations (Japan Sports Agency, 2018), there is no empirical discussion on the appropriateness of public funding for SDP in practice. The concept of using the social value of projects to ensure accountability for public projects, which rely on taxpayer input, is not limited solely to SDP initiatives. It extends to the organization of mega-sport events and the formulation of elite sports policies (Bakhsh et al., 2023). Therefore, exploring the social value of SDP projects from the perspective of citizens, who are not direct recipients of SDP, will provide a basis for discussing the justification for investing public funds and new strategies for obtaining funds. Therefore, the purpose of this study was to investigate the evaluation of SDP projects from the perspective of citizens, who are not direct recipients of the SDP.

LITERATURE REVIEW

Methodology for Evaluating the Social Value Brought by Sports

Social value is defined as the exchange between the economic investment in a project and the social impact it generates, or alternatively, as the disparity between social impact and economic investment (Bakhsh et al., 2023). Studies have been conducted to quantitatively evaluate the social value of sports, such as the significance of holding sporting events, the existence value of professional sports clubs, and the appropriateness of public funding for elite sports (Wicker et al., 2012). Unlike the case of valuing the benefits that accompany direct consumer use, the social value of sports has been considered difficult to measure because of its character as a non-market good for which no market exists to trade the value.

Bakhsh et al. (2023) also observed that research on social value in the field of sports management frequently dissects social mechanisms and economic mechanisms independently. This approach results in a fragmented understanding that fails to capture the complete social value derived from the project under examination. To accurately calculate the social value of a project, it is essential to measure it using the same unit of analysis as the economic investment and to validate both the economic and social mechanisms through this process. To solve these problems, cost-benefit analysis, which uses the concept of "benefit" to evaluate social value by converting the effect of cost input on a certain good or service into money as consumer surplus or utility, has come into use (Bakhsh et al., 2023).

According to Hidano (1999), social benefits in cost-benefit analysis are defined as the utility to members of society brought about by government services. Various types of cost-benefit analysis have been utilized to the present date, depending on the type of beneficiary and the type of sport project to be measured (Orlowski & Wicker, 2019).

There are two major types of cost-benefit analysis: the revealed preference method is a method of evaluation based on data concerning people's economic behavior, and the stated preference is a method of directly asking people about the value of an object (Hidano, 1999). The revealed preference method is a method of evaluation based on data on people's economic behavior, while the stated preference is a method of directly asking people about the value of an object.

Typical examples of revealed preference methods include the travel cost method (TCM), the Hedonic pricing (HP) and the opportunity cost approach (OCA).

The TCM can be categorized into two types: one that assesses the value of visiting a destination indirectly by examining the relationship between the cost of travel to the destination and the number of visits, and another that estimates value by considering the presumed intention of the user to visit the destination. The HP approach operates on the principle that the price of a commodity (e.g., land) is influenced by its function and characteristics. However, these methods have limitations as they presuppose that the subject must be deemed "worth visiting" or linked to a "specific location."

The OCA is a method used to compare individual expenditures, such as travel expenses or the cost of time, with the private and public benefits acquired (consumer surplus), by converting them into monetary value. However, since the focus is primarily on costs such as time and money associated with the targeted projects, a drawback arises: not all social benefits can be fully captured (Orlowski & Wicker, 2019).

Therefore, output-oriented methods such as the Contingent valuation method (CVM), a beneficiary-focused social benefit approach (Salamon et al., 2011), are needed. The CVM is one of examples of the stated preference. The CVM is used to evaluate non-market goods and services and cost-benefit analyses and policy assessments, such as environmental impact analyses (Hidano, 1999). The CVM presents to consumers a virtual market of items that does not exist in conventional markets, such as urban parks and theaters. Specifically, the CVM presents respondents with virtual scenarios in which the object of the assessment exists and does not exist, asks them the maximum amount

of money they would be willing to pay to ensure that an item (goods or services) does not disappear from the market (i.e., willingness to pay, or WTP), and then calculates its monetary value. In addition to items that individuals use directly (e.g., libraries, parks), the CVM also allows evaluation of things that have significance owing to their existence alone, such as the natural environment, scenery (e.g., cityscapes), and historical and archaeological sites. The Reverse CVM, although based on the same principle as the CVM, is characterized by the fact that the goods and services to be evaluated are past events including sporting events (Bakhsh et al., 2022). Although it is difficult to apply in this study because applying this method to ongoing or future SDP projects presents challenges, it is a useful method for evaluation after the project is complete.

Application of CVM in the Field of Sports Management

The CVM has also been used in the field of sports management and to investigate various sports projects in the public and private sectors, including professional sports teams, natural sports parks, lifelong sports, attracting and organizing mega-sports events, and elite sports success (Orlowski & Wicker, 2019).

A study of elite sports success focused on the fact that, in the 2012 London Olympics, the mean WTP for the German national team placed first in the number of medals won was € 6.31 per person (Wicker et al., 2012) and on the Canadian public found that the annual WTP for the increased budget for an elite sports education program was $ 38.19 per person prior to the Olympics and $ 89.70 per person after the Olympics (Humphreys et al., 2018). According to Orlowski & Wicker (2019), the CVM accounts for about one-third of the cost-benefit analysis used in the sport management domain, and the method has academic implications in terms of its application The revealed preference method is limited to actual consumer decisions, whereas the CVM is more flexible because scenarios can be designed to fit more diverse policy changes (Owen, 2006).

Therefore, we decided to apply CVM in this study, which is easy to apply even when the context of SDP is different from that of conventional sports management research, and which enables evaluation including non-utilization values. We aimed to utilize CVM to determine a monetary estimate of the value to the public of SDP initiatives in Japan.

CVM-related issues in research that require re-evaluation are the consistency of the sample and study population (Carson, 2000). These select studies have utilized random sampling. However, the need to adjust WTP through a comparison of the study population and limited studies on the distribution of individual attributes have led to cases in which WTP estimates have been inaccurate. In addition, value may not be accurately estimated in cases where WTP is estimated without eliminating from the analytical sample resistant responses, or responses indicating unwillingness to pay for reasons other than economic ones, such as cases in which the respondent is unconvinced of the proposed hypothetical scenario or the payment method. Additionally, the validity of the monetary value calculated needs to be verified. Long-term studies may exhibit time selection bias within samples. In consideration of these potential pitfalls, we included the following procedures in our survey analysis: (1) a short study period that could minimize time selection bias in the sample; (2) appropriate elimination procedures for resistant responses within the recovered sample; (3) determination based on government statistics of any discrepancies between the sex, age, education, and other basic attributes in the population and the sample; (4) in cases of discrepancy, calculation of WTP after determining whether the attributes affect WTP; and (5) verification of the validity of WTP.

Hypothesis to Examine the Validity of the Calculated WTP

To verify the validity of the WTP indicated above, we decided to use variables that have been pointed out in existing studies; in previous studies on sports management using CVM, various variables have been put in to verify the validity of the calculated WTP (Funahashi & Mano, 2015).

In general, public WTP for a given subject is related to a variety of indicators, including experience using the asset or service, attitude, interest, and socio-economic characteristics of the respondent. Evaluating how consistent a study's results are to theoretical expectations is based on the expectations, it is an important approach for the purpose of judging theoretical validity (Carson, 2000). If it is found that an important variable is not significant, or that the specified values have been inexplicably affected, then the theoretical validity of the results would be questionable. For this reason, we identified the following items related to attitude and interest for the purpose of verifying the validity of WTP based on previous studies.

First, it has been noted that the perceived social and personal benefits of a policy are significantly related to WTP (Funahashi & Mano, 2015). Previous CVM studies on elite sport success have found that the social benefit of believing that it is important for a nation for its athletes to perform on the international stage (Wicker et al., 2012) or for the prestige of the nation (Humphreys et al., 2018) Cognitions have been reported to be associated with valuing

elite sport success (Wicker et al., 2012). Similarly, feeling that improving international competitiveness is important to oneself or feeling happy and proud due to elite sports success (Wicker et al., 2012), were found to be explanatory factors for WTP. WTP is a factor that is known to be an explanatory factor for WTP.

Also, the benefits of the enjoyment derived from the success of international cooperation through sports can be expected to have a positive effect on WTP. A survey of public attitudes toward international cooperation projects showed that it was evaluated from the dual perspectives of benefit to the recipient country/region and the donor country (Oyama, 2021).

It can also be assumed that, in conjunction with the perception of benefit provided by the project, the perception towards the direct recipients participating in the SDP project (i.e., the project's main actors) is related to WTP. As in studies on elite sports success and sporting events, this can be attributed to the fact that, since it is possible to consider that the project is for a small number of direct recipients receiving support and that some portion of public support has been provided to them through projects and the like, the benefit to the respondents may change based on their perception of recipients' performance, behavior, and conduct (Wicker et al., 2012).

Therefore, in this survey, four concepts were established: perceived personal benefits to the project, perceived social benefits to the donor, perceived social benefits to the recipient, and perception towards the direct recipients receiving support. Our hypotheses are as follows:

H_1: The perception of personal benefit will directly influence WTP.
H_2: The perception of social benefits to the recipient will directly influence WTP.
H_3: The perception of social benefits to the community will directly influence WTP.
H_4: The perception of social benefits to the community will directly influence WTP.

WTP changes in response to concerns about the risk to assets. Previous research has also found that respondents who do not have a sense of the potential risks to the development of sports such as doping, game-fixing, and overemphasis on a "victory is everything" attitude have increased WTP (Funahashi & Mano, 2015).

In addition, public support for municipality-led projects has been found to have a positive correlation to reliability in the municipality's ability to conduct the project (Levi & Stoker, 2000) and, regarding socio-economic variables, to the household income of the respondent (e.g., Wicker et al., 2012). To summarize, we can organize the hypotheses as follows:

H_5: Risk perception will directly influence WTP.
H_6: Confidence in the municipality will directly influence WTP.
H_7: Household income will directly influence WTP.

In general, there are no prior theoretical expectations related to other demographic variables, and normally there are no prior theoretical expectations regarding other demographic variables such as sex and age in surveys. The validity of the estimated WTP was verified using the above variables.

METHODS

Selection of the Project to be Surveyed

The program subjected to a value estimation using CVM was a long-term project implemented in Maebashi City, Gunma Prefecture, which accepted athletes from South Sudan planning to participate in the Tokyo Olympics and Paralympics. This project began in July 2018 when a representative from the Japan International Cooperation Agency visited Maebashi to discuss the prospect of the city accepting athletes and others from South Sudan, in the context of the unstable domestic conditions in South Sudan and their impact on the training environment of athletes who wanted to participate in the 2020 Tokyo Olympics. Maebashi decided to undertake the "Peace Promotion through Sports" effort. In November 2018, Maebashi representatives held discussions with the President and General Secretary of the South Sudan Olympic Committee. This marked the beginning of formal interactions with South Sudan and specific discussions for providing its athletes with a long-term camp in Maebashi. The project aimed to provide indirect support for South Sudanese athletes who visited Maebashi to engage in activities as their country's role models and promote peace education among Maebashi citizens through exchange and interaction with South Sudanese athletes. Although the project had the start of the 2020 Tokyo Olympics as a built-in time limit, decision-makers later announced that the project would continue until the 2024 Paris Olympics. In addition to municipal taxes, a part of the budget for the project was provided by crowdfunding by Maebashi, which covered the annual project cost of approximately ¥ 20 million.

Procedure for Establishing the Hypothetical Scenario used in CVM

The details of the evaluation, types of goods and services, and study duration to be used in CVM must be clarified (Hidano, 1999). A hypothetical scenario must be created based on minute value estimations and in a manner that facilitates specific responses not based on the imagination of those surveyed. Therefore, the conditions under which the project is to be implemented, method of payment, and form of payment must be clearly indicated. Accordingly, we conducted a preliminary interview survey of Maebashi citizens to support the formation of the hypothetical scenario to be used. The interview was conducted with 16 citizen-volunteers involved in the project. The interview items were designed to clarify the following: information on previous projects, information acquisition, the project's popularity, the project's effects on the public, awareness of the continuous duration of the project, and impressions regarding the methods used to collect the funds needed for the budget. Transcripts were made of the audio data collected via the interviews, and statements related to the study participants, goods and services, duration of the public policy, and contributions to the budget were extracted. The continuous acceptance of South Sudanese athletes was found to be an issue, in relation to the services and taxes generated by the project that citizens viewed as important. We, therefore, determined that a scenario in which the project was discontinued in March 2025 owing to depleting municipal finances would be appropriate. We also found that the budget was to be sourced using conventional crowdfunding—the intention was to fund the budget via citizen donations. Several payment procedures are used in CVM, including taxes, obligatory contributions, and fees. In our study, we utilized voluntary contributions because these represent a method that citizens could consider for themselves in detail. Considering the short project duration of approximately two years, the payment method we established was lump sum rather than installment payments.

Contingent Valuation Scenario and WTP

We created the following scenario based on the procedures indicated above:

Maebashi City will accept athletes from South Sudan who want to participate in the 2020 Tokyo Olympics to a long-term camp to be held from November 2019 until September 2021. The city will continue providing support to the athletes until March 2025. The plan calls for welcoming one athlete each for the April to September outdoor competition and the October to March indoor competition each year for a total of four athletes accepted into the program. Added support is to be provided for the purpose of competing in the 2024 Paris Olympics. The cost of the project is to be met via the Hometown Tax system.

We created the following hypothetical story:

Assume that this project was removed from the list of target projects of the Hometown Tax system owing to changes in the socio-economic circumstances of Maebashi City, and that these circumstances would otherwise force the discontinuation of the project. To prevent this, stakeholders established the "South Sudan Support Fund" to collect donations from citizens to support the project. This fund is operated by a newly created and highly transparent organization. This makes it possible for Maebashi City to accept a total of four athletes between 2023 and 2025 as planned.
If requested, would you provide a donation as long as you agree with the purpose of this project?

1. It will be a one-time payment.
2. The amount of money you contribute will reduce the proportion of your discretionary income.

Consider the aforementioned points before responding.
In addition, if the target is not met through contributions, the amount you contributed will be returned. Your contribution is not tax-deductible (you will not be returned a fixed percentage of your contribution).

Next, to eliminate strategic bias through selection according to the likelihood of payment (Funahashi & Mano, 2015), only those who were willing to make a payment were asked the following question: "If this hypothetical situation were to occur in reality, how likely would you be to make a contribution?" The responses were rated on a 10-point Likert scale ranging from 1 = *extremely unlikely* to 10 = *extremely likely*. The responses were used to determine their WTP using an open-ended format for the amount of money.

Measures of the Determinants of WTP

Following the hypotheses presented above, perception of the SDP project, perception of the risks of the SDP project, confidence in governmental administration of the SDP project, and household income (which is a socio-economic variable) were used to verify the validity of the estimated WTP and identify determinants.

The perception of benefits toward assets in the results of studies of the social acceptance of sports policies and policies in other fields (e.g., studies of the outcomes of science and technology policies and elite sports), as well as interview surveys of the public, were examined before deciding on the items for perception of benefits (e.g.,

Wicker et al., 2012). Specifically, there were six items on personal benefits, eight on the social benefits to Maebashi City, four on the social benefits to South Sudan, and three on perceptions towards South Sudanese athletes.

In addition, a one-factor structure was assumed for risk perception, with six items based on existing literature (Funahashi & Mano, 2015) and interview survey results. Finally, a two-factor structure was assumed for perceptions of trust, with two items for procedural fairness and three items for trust in the local government's implementation capacity, based on previous research (Baba et al., 2011).

Responses to each of the survey items were rated on a Likert scale, ranging from 1 = Strongly disagree to 5 = Strongly agree.

Implementation of the CVM survey

The survey was conducted from March 14–16, 2023, by a social survey monitor. The target number of responses was 500, based on the proportion of adults in Maebashi (aged 18 and older) at approximately 280,000. The age groups were stratified to ensure equal proportion with the population distribution shown in the National Census. The respondents were randomly selected, and the samples were collected by an internet survey company. Given the difficulty in obtaining a sufficient number of responses from older people, those in the 70 and older group were allotted to the "Seventies" component of the distribution ratio. Bias owing to the use of internet surveys is not a relatively important issue when the goal is to estimate WTP (Olsen, 2009). Meanwhile, to avoid sample selection bias considering the name of the survey (Carson, 2000), we ensured a wide range of respondents using a common survey title: "Questionnaire on Daily Life." This study was approved by the Human Subject Research Ethics Review Committee of Doshisha University (no. 22074).

In addition to the CVM items, we also included items regarding sex, age group, occupation, and annual household income. As mentioned above, the question regarding household income was used to verify the validity of the estimated WTP.

Analytical Methods

WTP Estimation Procedure

We discussed whether the respondents who were unaware of the policy should be included in the CVM estimate. Unlike public projects (e.g., construction of public facilities) regarding which a value judgment on the policy can be made upon reading a hypothetical scenario, this project was one that was difficult for the respondents to visualize. We then determined that those who responded "I don't know (about this project)" could not accurately evaluate the target project; and their responses were removed from the analytical sample. In addition, samples in which the respondent answered that they would not pay for a reason other than an economic one (e.g., they remained unconvinced of the circumstances indicated or the payment procedure) on items regarding WTP were removed from our analysis based on the CVM manual (Hidano, 1999). Given the importance of household income and other factors as economic indicators for estimating WTP, samples in which the respondent said "I do not want to respond" to items regarding household income were also removed from the analytical group. According to the above procedures, the final analytical group was N = 288. Since 288 cases for an adult population of approximately 280,000 in Maebashi City exceeded the 90% confidence level (5% acceptable error), we decided to proceed with the analysis as is. WTP estimates were performed using IBM SPSS Statistics for Windows, version 23, and the verification of the validity of the results used R.Verification of theoretical validity.

Regression analysis with estimated WTP as the dependent variable was performed to verify the theoretical validity of WTP. In the present study, given that WTP was identified using an open-ended question format, Tobit regression analysis was used, as recommended by a previous study (Hidano, 1999). The independent variables were income and a socio-psychological scale stipulating attitudes toward assets.

Confirmatory factor analysis (CFA) was performed on the socio-psychological scale to evaluate the validity of the construct using a goodness-of-fit index. The statistical software utilized in the analyses was IBM SPSS Amos 29. First, CFA was performed on 21 items of four factors: (1) Perception of personal benefit, (2) Perception of the social benefits to Maebashi City, (3) Perception of the social benefits to South Sudan, and (4) Perception towards South Sudan athletes. The results showed that model goodness-of-fit was χ 2 /df=2.997, GFI=0.839, AGFI=0.797, CFI=0.91, and RMSEA=0.083, indicating that goodness-of-fit was not achieved.

Therefore, CFA model was revised by removing four items: "My thoughts about my way of life are more positive" (factor loading = 0.66) and "Increased opportunities for me to learn a foreign language" (factor loading = 0.62) from the Perception of personal benefit factor, "Increased opportunities for the city to gain exposure in national media" (factor loading = 0.67) from the Perception of the

social benefits to Maebashi City factor, and "Contribution to peacebuilding in South Sudan" (factor loading = 0.69) from the Perception of the social benefits to South Sudan factor. These items had factor loadings less than 0.707, which Fornell and Larcker (1981) identify as the threshold for testing convergent validity. Although "The city will become an important partner for South Sudan" (factor loading = 0.70) and "It will lead to the revitalization of the whole city" (factor loading = 0.70) under Perception of the social benefits to Maebashi City not meeting the criterion value of 0.707, they were retained in CFA model as they closely approximated the criterion value.

Subsequent CFA indicated χ 2 /df =2.740, Goodness-of-fit index (GFI)=0.887, adjusted goodness-of-fit index (AGFI)=0.848, CFI=0.941, RMSEA=0.078. GFI and AGFI were under the standard value of ≧ 0.90 (Hair et al., 2005), but were similar to the standard value. However, since three GFIs—χ 2 /DF (2.00 ≦standard value≦ 3.00), CFI (standard value≧ 0.90), and RMSEA (standard value ≦ 0.08)—met the standard values (Hair et al., 2005), it was determined that the CFA model with the revised scales conformed to the data.

CFA was performed assuming one factor and six items for risk perception and two factors and five items for confidence. The model conformity for risk perception was χ 2 /df =1.735, GFI=0.983, AGFI=0.959, CFI=0.99, RMSEA=0.051. The model GFI for procedural fairness, which constitutes confidence, and confidence in the municipality's ability to conduct the project was χ 2 /df =2.17, GFI=0.988, AGFI=0.955, CFI=0.994, RMSEA=0.064. Although the χ 2 /df for perception of risk was marginally below the standard value, it was within the acceptable range, and thus the CFA model for the scales was judged to be in conformance.

Next, Cronbach's coefficient alpha, which is a reliability coefficient for the intrinsic reliability of the scales, was calculated. The results for all scales (Cronbach's alpha = 0.78–0.90) exceeded the value recommended (>0.70) by Nunnally (1967). Then, the mean extraction dispersion was calculated to verify the convergent validity. The results were values of between 0.50 and 0.78, which exceeded the standard value of 0.50 (Fornell & Larcker, 1981). Accordingly, sufficient reliability and validity were indicated. Based on the procedures described above, the mean values for the measured items, including all factors, were calculated as factor scores (Table 1).

Table 1. Socio-psychological Characteristics

Factor structure	M	SD	Factor loading	α	CR	AVE
Personal benefits				0.84	0.84	0.57
I feel happy	3.39	0.87	0.72			
It offers a chance for me to be acquainted with foreign cultures and customs	3.16	1.01	0.73			
I feel solidarity as a citizen of Maebashi City	3.05	0.91	0.73			
I started to think about peace	3.32	0.89	0.82			
Social benefits to Maebashi City				0.9	0.9	0.57
Leads to invigoration of the entire city	3.23	0.91	0.81			
Gives rise to diversity in the city	3.52	0.85	0.79			
The city becomes a vital partner to South Sudan	3.56	0.79	0.71			
The image of the city improves	3.64	0.8	0.77			
Leads to educating the citizens about peace	3.46	0.85	0.7			
Leads to the promotion of sports in the city	3.55	0.85	0.74			
Allows the city to be proud of this project	3.57	0.87	0.78			
Social benefits to South Sudan				0.88	0.88	0.71
Contributes to the promotion of sports in South Sudan	3.74	0.76	0.83			
Leads to the improvement of the potential competitiveness of South Sudanese athletes	3.77	0.74	0.86			

Is beneficial to the potential in the lives of South Sudanese athletes	3.76	0.76	0.84			
Perception towards South Sudan athletes				0.89	0.89	0.73
South Sudanese athletes are people whom the citizens [of Maebashi] should emulate	3.12	0.7	0.88			
South Sudanese athletes are making efforts in a way that I would like to imitate	3.3	0.78	0.84			
South Sudanese athletes are providing a good example that others should emulate	3.2	0.73	0.84			
Risks				0.86	0.86	0.5
The lifestyles of South Sudanese athletes will be negatively affected	2.38	0.86	0.78			
The training of sports athletes from Maebashi City will be hindered	2.28	0.94	0.73			
It will make the South Sudanese become accustomed to assistance	2.7	0.95	0.71			
It will cause a stagnation in international support for efforts that are more important than sports	2.51	0.9	0.71			
It will cause stagnation in other policies in Maebashi City that are of higher priority than this one	2.59	0.98	0.67			
This project provides merits to neither South Sudan nor Maebashi City	2.27	0.89	0.65			
Confidence in [the municipality's] ability to carry out the project				0.78	0.79	0.55
This South Sudanese athlete acceptance program is being carried out for the sake of the citizens of Maebashi City	3.46	0.8	0.83			
Maebashi City is likely to carry out this program to accept South Sudanese athletes with the citizens [of Maebashi] in mind	3.46	0.79	0.69			
This program to accept South Sudanese athletes is being carried out with the people of South Sudan in mind	3.37	0.78	0.7			
Procedural fairness				0.88	0.88	0.78
I think the way in which South Sudanese athletes are being accepted by Maebashi City is desirable	3	0.9	0.91			
I think the way Maebashi City is accepting South Sudanese athletes is fair	3.36	0.79	0.85			

RESULTS

Aggregate Results

Table 2 provides an overview of the respondents. Significant difference arose for the results on which the chi-squared test was applied compared with the values that reflected the study population, sex, age group, and household income ($p < 0.05$). Specifically, to address the discrepancy between the samples analyzed and the population of this study, we investigated the need to perform corrections when calculating WTP. We performed the chi-squared test on individual attributes (sex, age group, household income) that were found to have significant differences from the population to determine their relationship with WTP. The results showed no significant differences and no relationship with WTP (sex: $\chi^2(1)=0.816$, $p=0.366$; age group: $\chi^2(1)=0.312$, $p=0.077$; household income: $\chi^2(1)=0.310$, $p=0.578$). Therefore, a final correction for WTP was deemed unnecessary.

Table 2. Overview of the respondents

		sample		ref(a)		
		n	%	n	%	$\chi 2$
Gender	Male	162	57.3	169	48.5	***
	Female	126	42.7	180	51.5	
Age	18-29	17	5.9	40	13.7	***
	30-39	40	13.9	36	12.3	
	40-49	84	29.2	45	15.7	
	50-59	60	20.8	47	16.3	
	60-69	57	19.8	41	14.4	
	70 over	30	10.4	79	27.6	
House hold income	less than 500 million yen	153	53.1	187	64.9	***
	500 million yen or above	135	46.9	101	35.1	
Employment status	Full-time worker	151	52.4			
	Others	137	47.6		NA(b)	
Educational qualification	Degree level or above	163	56.6			
	Others	125	43.4			

(a): Reference numbers from census data

(b): NA indicates that there are no government statistics for occupational and educational categories like those in this survey.

Estimation of WTP

Respondents who indicated no willingness to pay or who had a low likelihood of paying were considered WTP = ¥ 0. Respondents who indicated their WTP were listed by the monetary amount indicated. The mean WTP for all samples in the analytical group was ¥ 2,485 (standard deviation: ¥ 525), and the trimmed mean was ¥ 1,396. Investigation of the validity of the results.

To verify the validity of the results obtained, the factors understood to be related to WTP were analyzed. Since the responses concerned amounts of money, the validity of WTP would be subject to suspicion if a relationship to household income were not found. Table 3 shows the results of Tobit regression analysis and the relationship between the variables and WTP. They indicate that, in this model, the income variable had a significant relationship, which means that the WTP is theoretically valid. It was additionally found that risk perception had a negative correlation and that procedural fairness had a positive correlation. Meanwhile, perceptions of personal benefit, social benefits, and attitudes towards South Sudanese athletes, collectively forming benefit perception, were not found to have a significant relationship with WTP. Consequently, hypotheses H1 to H4 were rejected, while hypotheses H5 to H7 were accepted.

Table 3. Results of the Tobit models

	Tobit model		
	Estimate		z value
Intercept	-41861	***	
Personal benefit	1264.551		0.515
Social benefit to Maebashi City	446.2623		0.121
Social benefit to South Sudan	305.199		0.112
Perception towards South Sudan athletes	3220.745		1.394
Confidence in [the municipality's] ability to carry out the program	607.4386		0.233
Procedural fairness	5705.897	*	2.202
Risks	-5478.28	***	-3.354
Household income (annual)	1407.449	***	3.842
R2	0.09		
Log-likelihood	-1280.364		

*p < 0.05, **p < 0.01, ***p < 0.001.

The WTP estimate was obtained using the procedures described. This value was multiplied by the size of the target population—the adult population—to calculate the estimated WTP for the target population (i.e., approximately 280,000 adults residing in Maebashi). Assuming that 70% of these were aware of the project, we calculated that the study population WTP was approximately ¥ 490 million based on the mean WTP of ¥ 2,485.

DISCUSSION AND CONCLUSION

In this study, the value to citizens of an international sports cooperation long-term camp program that accepted South Sudanese athletes was estimated. The mean WTP with a constant theoretical validity was calculated as ¥ 2,485 and the aggregate value of the WTP of the study population was approximately ¥ 490 million. The fact that the funds collected for the implementation of this program was approximately ¥ 20 million per year suggests the possibility that more than ten times that amount in socio-psychological benefit was experienced by the citizens of the municipality. Therefore, this study found that the citizens of Maebashi City had a certain WTP for the program to accept South Sudanese athletes.

Previous research of elite sports success focused on the fact that, in the 2012 London Olympics, the mean WTP for the German national team placed first in the number of medals won was € 6.31 per person (Wicker et al. 2012) and on the Canadian public found that the annual WTP for the increased budget for an elite sports education program was $ 38.19 per person prior to the Olympics and $ 89.70 per person after the Olympics (Humphreys et al., 2018). Although factors such as differences in the events, regional characteristics, social and cultural background, the competition results during the survey period, and the CVM survey design all had an effect, the WTP calculated in the present study was the same as or marginally higher than the monetary amounts reported in previous studies.

Maebashi City's program to accept South Sudanese athletes was not implemented in South Sudan but rather entailed Maebashi City accepting South Sudanese athletes and providing them with a support program within the city. Therefore, there was limited physical or psychological distance between the residents of Maebashi and South Sudanese athletes as there were opportunities to see and directly interact. In the literature exploring the social benefits of sports events for citizens, the concept of "closeness" has been highlighted. It is noted that residents residing in areas near the host city have greater opportunities to experience the event's value. For instance, Potwarka and Leatherdale (2016) propose the idea of an "epicenter effect," suggesting that residents living closer to the sporting venue are more susceptible to the social impacts of the event. Although this study did not conduct a comparative study of residents of municipalities in the prefecture other than Maebashi, we believe that the "closeness" to the WTP for citizens, fostered by the experience of interacting with the athletes and daily media coverage, had a positive impact on the WTP.

The results of Tobit regression analysis showed that the fact that the perception related to procedural fairness was high and there was low perception of risk was positively related to WTP. Past research indicated that public criticism of the risks of paying for sports-related programs and disappointment with such programs led to a decreased perception of the value of such programs (e.g., Funahashi & Mano, 2015). The results of this study suggest that, as in Event Management and Elite Sports Success, perceptions of negative aspects negatively influence citizens' supportive attitudes in municipal-led SDP. In addition, the procedural fairness of the municipality, as the policy actor, was found to be positively correlated with WTP. In previous studies, it has been demonstrated that those who have more trust in the implementation ability and fairness of the municipality that is the agent of the policy will express higher WTP toward the promotion of the policy in question. The results of this study suggest that increasing trust in local authorities is a major tailwind for gaining public support in the practice of SDP.

In contrast, no significant relationship was found for perceptions of personal benefit, social benefit, or role models, which were demonstrated in previous studies. Investigation of benefit perception (Baba et al., 2011) found that knowledge or familiarity with the project leads to understanding the benefits derived from it. For example, in the field of health, there is a high degree of perception regarding the importance and benefit in fields that are directly related to the fundamental benefit of the person involved but that the same tendency may exist in fields that are not directly related to individuals, such as the field of environmental policy. It has been shown that in sporting events, the subjects of research have seen various changes associated with the hosting of the event, such as construction projects and educational projects related to the event, and that social values are formed through the experiences derived from them (Bakhsh et al., 2023). However, there were no major changes affecting the lives of citizens, such as construction projects related to the targeted Maebashi project, and it is considered that the event did not provide sufficient experience to recognize the benefits. Since the present study focused on Maebashi

residents, who were not direct recipients of the international sports cooperation, it was expected that the socio-psychological mechanism in which the benefits were perceived based on the hypothetical scenario would produce results that differed from previous studies.

This study has several limitations. First, the payment method in the hypothetical scenario in this study was contributions, and the amount donated was reported in the form of open-ended responses. Previous research has pointed out that, when money was contributed via donations, the psychological hurdles to payment were lower as compared to other payment methods and that, when the amount of money donated was reported in the form of open-ended responses, higher amounts of money may be reported. The reason the project in the present study was not widely known by the general public and why a funding method that closely resembles contributions (namely crowdfunding) was utilized was that this study was designed so that the respondents could freely report the amounts of money to be donated via contributions. However, in the future, there is likely to be a need to verify the results of this study using a two-tiered selection method and a different hypothetical payment method.

Another limitation was the fact that there needs to be consideration of the possibility that the sample size may have affected the high mean value. To ensure an accurate perception of what was to be assessed by the subjects of this study, only the sample size that understood the project was subject to analysis. In addition, to verify the validity of the results, complete responses including household income and resistant responses were removed. This resulted in a reduction of the sample size, and although stratification at the same distributions as government statistics was performed at the survey stage, when actual analysis was performed distortions were detected. In the end, as it was determined that correction of these distortions was unnecessary and that the results reflected the prioritization of highly refined and detailed assessments, it cannot be ruled out that the results of this study may show major discrepancies with reality, and thus caution must be exercised when determining the sample sizes of future study of this topic.

In addition, the WTP calculated in this study was cross-sectional, which means that temporal reliability is weak. Previous research has pointed out that the period during which the survey is implemented has an effect on WTP, and that a comparative study of the periods before and after the Olympics and Paralympics are held shows that the mean WTP value was affected (Humphreys et al. 2018). The present study was implemented six months after the close of the 2020 Tokyo Olympics, but if the survey were conducted during the implementation of a project in progress after the acceptance of new athletes or during the 2025 fiscal year after the project was completed, there may be variations in the mean values obtained. Furthermore, the SDP that was the subject of the present study was an invitation project in which athletes from a developing country were accepted. Many of the venues for SDPs are the countries of those receiving support. It cannot be ruled out that this difference in the form of the activity may have affected value assessment.

It is imperative to conduct further investigation using different project forms and in larger regions of activity, focusing on the above-mentioned limitations. In addition, conducting research into what factors determine socio-psychological benefits will likely provide SDP groups and related government actors with useful methods of implementation.

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