Effects of the Olympics on Citizens' Interest in Foreign Cultures: Evidence from the Tokyo 2020 Games

Takumi Kato(✉)

Meiji University, Tokyo, Japan
takumi_kato@meiji.ac.jp

Abstract. Governments worldwide are competing to internationalize their cities. During the 2020 Tokyo Olympics and Paralympics, Japan promoted not only the construction of stadiums but also multilingual support of city facilities. However, to truly internationalize a city, considering the above facilities and systems alone is insufficient. The perspective of citizen consciousness is lacking. Existing literature on Olympic effects is largely limited to three aspects: development of urban facilities, economic effects, and strengthening of a city's brand. Academically, little has been discussed about the impact of the Olympics on the international consciousness of citizens. Thus, this study clarified the impact of hosting the Olympics on citizen's interest in foreign cultures. Online surveys conducted in 2019–2022 in Japan showed that, despite the COVID-19 pandemic and the Olympics, citizens' interest in foreign cultures and their overall happiness did not change. However, by applying a multiple regression analysis, a positive interaction was detected between holding the Olympics and citizens' happiness. Therefore, citizen's interest in foreign cultures brought by the Olympics is conditional on citizens' sense of happiness. Hence, public sentiment should be improved before the Olympics is held. Practitioners should not depend on the Olympics to instantly improve public sentiment across the board. Practitioners should consider facilities and public sentiment as two key components of urban design. Even if governments invest in equipment, if they do not obtain the cooperation of its citizens, trouble will occur, and sustainable growth will be difficult.

Keywords: Urban Planning · Internationalization · Olympic Effects

1 Introduction

Gaining competitive advantage through city internationalization has received considerable attention from academics and practitioners [1]. Many cities including Washington, D.C. [2], Frankfurt [3], Marseille [4], Barcelona [5], and Helsinki [6] have promoted urban planning aimed at internationalization. Governments and companies worldwide have started to explore city rating indexes, including Global Liveability Index by CNN [7], Global Cities Index by A.T. Kearney [8], and Global Power City Index [9].

© The Author(s), under exclusive license to Springer Nature Switzerland AG 2023
O. Gervasi et al. (Eds.): ICCSA 2023 Workshops, LNCS 14108, pp. 58–69, 2023.
https://doi.org/10.1007/978-3-031-37117-2_5

In Japan, the Tokyo Metropolitan Government has clearly expressed its intention to internationalize. Aiming to grow its tourism [10] and finance industries [11], the city is continuing to internationalize. One of its activities was the Tokyo Olympics and Paralympics 2020 (hereafter, Tokyo Olympics). By holding this mega event, the Tokyo Metropolitan Government aimed to realize multilingual support by constructing stadiums and other facilities, digital signages, and smartphone applications [12, 13].

However, to truly achieve city internationalization, considering only the above facilities and systems is insufficient owing to the lack of public awareness. For example, in the tourism context, frustrated locals have constantly voiced their complaints about the hordes of foreign tourists [14]. Residents have negative impressions of tourists for many reasons, such as rising land prices and some tourists' rude behavior. Some local governments have passed ordinances against using apartments for Airbnb at the behest of residents [15]. This state of over tourism is called "tourism pollution" [16]. However splendid the facilities are, internationalization remains difficult when such negative sentiments remain among citizens.

Therefore, this study clarified the impact of hosting the Olympics on citizen's interest in foreign cultures. Existing literature on Olympic effects is largely limited to three aspects: development of urban facilities, economic effects, and strengthening of a city's brand. This study complements Olympic effects with a new aspect of citizens' interest in foreign cultures.

2 Existing Literature and Hypotheses

This section derives hypotheses based on existing literature on Olympic effects.

2.1 Representative Olympic Effects

Despite the huge costs, countries have offered to host the Olympics to benefit from the Olympic effects. The following three are mainly known as Olympic effects.

Development of Urban Facilities. As the Olympics provides a great opportunity to improve cities, Olympic functions are key urban development strategies. Hence, the International Olympic Committee requires cities to bid for the Olympics to develop legacy strategies to create sustainable assets after the Olympics [18]. Particularly, the necessity for the Green Olympics, which emphasizes the development of environmentally friendly transportation and buildings, has been appealed [19]. Hence, to prepare for the 2008 Summer Olympics, Beijing made significant environmental cleanup efforts. This reduced deaths and outpatient visits in the city due to lower air pollution [20].

Economic Effect. Hosting the Olympics attracts tourists from around the world and contributes to related businesses [21]. The effect is not limited to the Olympic period. From 8 years before to 16 years after the Olympics, the arrival of tourists from abroad significantly increased [22, 23]. Moreover, hosting the Olympics stimulates the export industry. This is attributable to not the actual act of hosting a mega event but the contribution of the country's information to the world [24].

Strengthening of a City's Brand. The host country aims to promote the country's brand image (e.g., advanced industries and cultural history) [25]. By hosting the Winter Olympics in 2006, Turin transformed into an internationally recognized "cultural city" [26]. The 2008 Beijing Olympics also provided China with a marketing opportunity to globally enhance its brand [27].

2.2 Citizen's Interest in Foreign Cultures

On the public attitude aspect of Olympic effects, close exposure to sports can increase citizens' health awareness and frequency of sports participation [28]. Generally, the number of medals won at the Olympics reflects a country's economic scale. However, hosting a country leads to more medals than the economic scale [29, 30]. Hence, hosting events in one's own country tends to increase awareness of sports among citizens. Another aspect of civic attitudes is the culture of other countries. Athletes from many countries interact with citizens [31], and the media also introduces foreign cultures and cuisine [32]. Accordingly, following hypothesis was formulated in this study:

H1: Hosting the Olympics positively impacts citizen's interest in foreign cultures.

However, egoism is prevalent in modern society, and people focus on their own interests above all else [33]. People with low self-esteem are particularly concerned about themselves, which makes them more likely to be jealous of others [34]. Conversely, people with high self-esteem are more likely to be interested in others [35]. Hence, the magnitude of the effect on citizen's interest in foreign cultures changes depending on people's sense of well-being in life. Accordingly, the following hypothesis was proposed in this study:

H2: Hosting the Olympics positively impacts citizen's interest in foreign cultures among happy citizens.

3 Method

This section describes the survey and verification methodology.

3.1 Survey

This study used online surveys targeting Japan's capital (around Tokyo Prefecture) and Kansai (around Osaka Prefecture) areas. Surveys were conducted once yearly, four times in total from 2019 to 2022 (April 19–25, 2019; April 17–23, 2020; April 16–22, 2021; April 15–21, 2022) by the Yoshida Hideo Memorial Foundation. Table 1 shows that the total sample size is 13,131. Ages range from teens to 60s.

Table 2 shows the 12 questions used in this study: basic attributes (Nos. 1–5), happiness (No. 6), life values (Nos. 7–11), and interest in foreign cultures (No. 12). Questions about values include items related to money and shopping that affect life satisfaction.

3.2 Verification

Multiple regression analyses including interaction was adopted as the verification method. Table 3 shows that in addition to each survey item, after the COVID-19 dummy (1 for the 2020–2022 survey, and 0 for others) and after the Olympic dummy (1 for the 2021–2022 survey, and 0 for the others) were added. To verify H1, the objective variable included degree of interest in foreign cultures (No. 12), the explanatory variable was the Olympic dummy, and other variables were control variables (Model 1). For H2 verification, I applied interaction between and after Olympic dummy and happiness (Model 2). For the analysis, the statistical analysis software R was used.

Table 1. Respondent attributes.

Item	Content	Number of Respondents	Ratio
Year	2019	3,197	24.3%
	2020	3,379	25.7%
	2021	3,244	24.7%
	2022	3,311	25.2%
Age	10s (15–19)	587	4.5%
	20s	1,944	14.8%
	30s	2,721	20.7%
	40s	3,639	27.7%
	50s	2,913	22.2%
	60s	1,327	10.1%
Gender	Male	6,736	51.3%
	Female	6,395	48.7%
Marital Status	Married	8,365	63.7%
	Unmarried	4,766	36.3%
Residence	Capital Area (Around Tokyo)	8,559	65.2%
	Kansai Area (Around Osaka)	4,572	34.8%

Table 2. List of questions.

No	Question	Type	Option
1	Please choose your age	single answer	10s, 20s, 30s, 40s, 50s, 60s
2	Please choose your gender	single answer	Male, Female, Prefer not to say
3	Please choose your marital status	single answer	Married, Unmarried
4	Please choose your annual household income	single answer	1: Ten - twenty thousand USD, 2: Twenty - thirty thousand USD, 3: Thirty - forty thousand USD, 4: Forty - fifty thousand USD, 5: Fifty - sixty thousand USD, 6: Sixty - seventy thousand USD, 7: Seventy - eighty thousand USD, 8: Eighty - ninety thousand USD, 9: More than ninety thousand USD
5	Please choose your residence area	single answer	Capital Area (Around Tokyo), Kansai Area (Around Osaka)
6	I am satisfied with my life	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
7	Compared to the beginning of the year, the family budget situation has improved	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
8	I feel that the economy will improve in five years	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
9	I generally strive to buy products at the lowest price	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
10	I always strive for the best quality	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
11	I enjoy exchanging ideas with people from other cultures and countries	five-point Likert scale	1: Definitely not agree, 5: Definitely agree
12	I am interested in learning more about people who live in other countries	five-point Likert scale	1: Definitely not agree, 5: Definitely agree

Table 3. Variable list.

No	Variable	Description	Data Type	Mean	SD
1	Age	Age	1:10s, …, 6: 60s	3.787	1.335
2	Female	Female dummy	0/1	0.487	0.500
3	Married	Married dummy	0/1	0.637	0.481
4	Household_Income	Annual household income	1: Ten - twenty thousand USD, …, 9: More than ninety thousand USD	5.878	2.191
5	Capital	Dummy of living in capital area	0/1	0.652	0.476
6	Happiness	Degree of happiness	5-point Likert scale	2.874	1.086
7	Family_Budget	Family budget situation	5-point Likert scale	3.352	0.918
8	Economy	Economic outlook	5-point Likert scale	3.434	0.991
9	Low_Price	Degree of low price orientation	5-point Likert scale	2.869	1.016
10	High_Quality	Degree of high quality orientation	5-point Likert scale	3.282	0.981
11	Communication	Degree of interest in communicating with foreigners	5-point Likert scale	2.972	1.033
12	Foreign_Culture	Degree of interest in foreign cultures	5-point Likert scale	2.882	1.059
13	Covid19	After Covid19 dummy	0/1	0.757	0.429
14	Olympic	After Olympic dummy	0/1	0.499	0.500

4 Results and Implications

4.1 Results

The mean values of happiness and interest in foreign cultures by year were confirmed. Figure 1 shows that happiness in the years 2019 (2.837), 2020 (2.871), 2021 (2.877), and 2022 (2.911) show little fluctuation. Figure 2 shows that interest in foreign cultures also roughly has the same score as 2019 (2.866), 2020 (2.872), 2021 (2.888), and 2022 (2.901).

Table 4 shows that the results of Model 1's multiple regression analysis show no significant effect of the Olympics on interest in foreign cultures. Adjusted R-squared was 0.660, confirming the validity of this model. The maximum variance inflation factor of this model is 1.491, and there is little concern about multicollinearity. Hence, H1

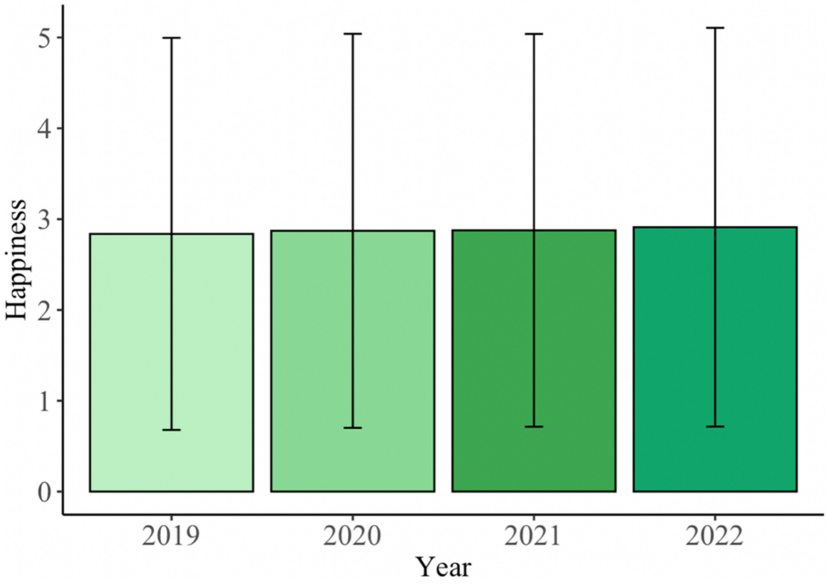

Fig. 1. Mean happiness by year.

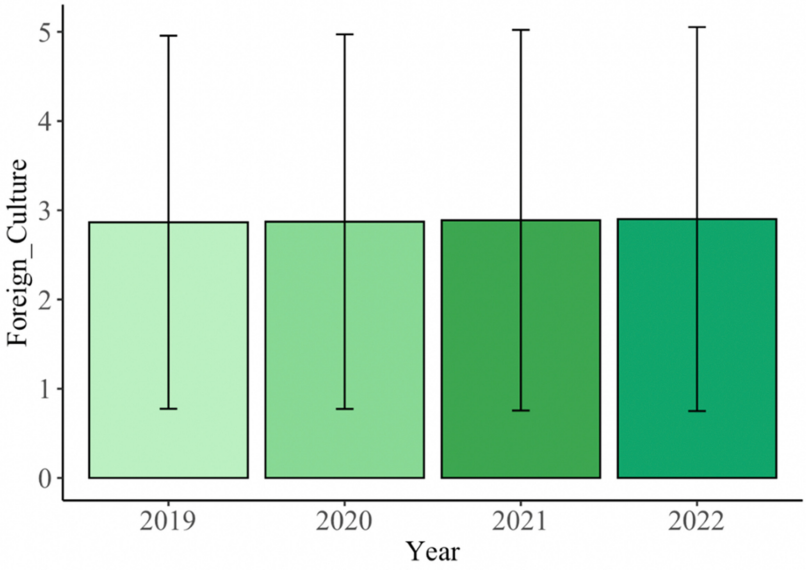

Fig. 2. Mean interest in foreign cultures by year.

Table 4. Results of regression analysis.

Variable	Model 1				Model 2			
	Estimate	SE	p-value		Estimate	SE	p-value	
Intercept	0.304	0.041	0.000	***	0.402	0.041	0.000	***
Olympic	0.016	0.013	0.237		0.015	0.013	0.242	
Happiness	0.031	0.006	0.000	***	0.031	0.006	0.000	***
Age	−0.002	0.005	0.710		−0.002	0.005	0.697	
Female	−0.040	0.011	0.000	***	−0.040	0.011	0.000	***
Married	0.023	0.013	0.085		0.023	0.013	0.079	
Household_Income	−0.005	0.003	0.091		−0.005	0.003	0.082	
Capital	−0.010	0.011	0.402		−0.009	0.011	0.423	
Family_Budget	0.023	0.007	0.001	**	0.023	0.007	0.001	**
Economy	0.002	0.006	0.804		0.001	0.006	0.853	
Low_Price	−0.007	0.005	0.216		−0.007	0.005	0.223	
High_Quality	0.015	0.006	0.012	*	0.015	0.006	0.013	*
Communication	0.815	0.006	0.000	***	0.815	0.006	0.000	***
Covid19	−0.008	0.015	0.624		−0.007	0.015	0.639	
Olympic * Happiness					0.022	0.010	0.029	*
Adjusted R-squared	0.660				0.661			

was unsupported. Model 2 shows that a significantly positive interaction was detected between the Olympics and happiness. Figure 3 shows that people with low (high) happiness exhibit a negative (positive) effect of interest in foreign cultures. Therefore, H2 was supported.

4.2 Implications

Existing literature on Olympic effects has been largely confined to three aspects: development of urban facilities, economic effects, and strengthening of a city's brand. This study focused on the citizen's opinions necessary for internationalizing cities and theoretically expanded the aspect of this effect.

The four main practical implications of this study are as follows. First, to internationalize a city, consideration should be given not only to physical facilities but also to citizens' feelings. Even if governments invest in equipment, if they do not obtain the cooperation of its citizens, trouble will occur, and sustainable growth will be difficult [14–16]. Hence, facilities and public sentiment should be considered as two key components of urban design.

Second, citizen's interest in foreign cultures brought by the Olympics is conditional on citizens' sense of happiness. Hence, public sentiment should be improved before the

Olympics is held. Practitioners should not depend on the Olympics to instantly improve public sentiment across the board.

Third, public well-being has not been significantly damaged by COVID-19. Despite the negative tone of the media on the impact of the pandemic, no change in consumer well-being responses was found. Making decisions based on objective data is essential, without being misled by the excessive discourse in the world.

Fourth, knowledge should be managed thoroughly by clarifying the basis of decision-making for mega-events such as the Olympics. In the case of large events, the wide variety of people involved makes the rationale for strategies ambiguous, and the fact that knowledge is not passed on is a major problem. Practitioners should take advantage of the data and analysis that technology brings and actively apply it to practical issues.

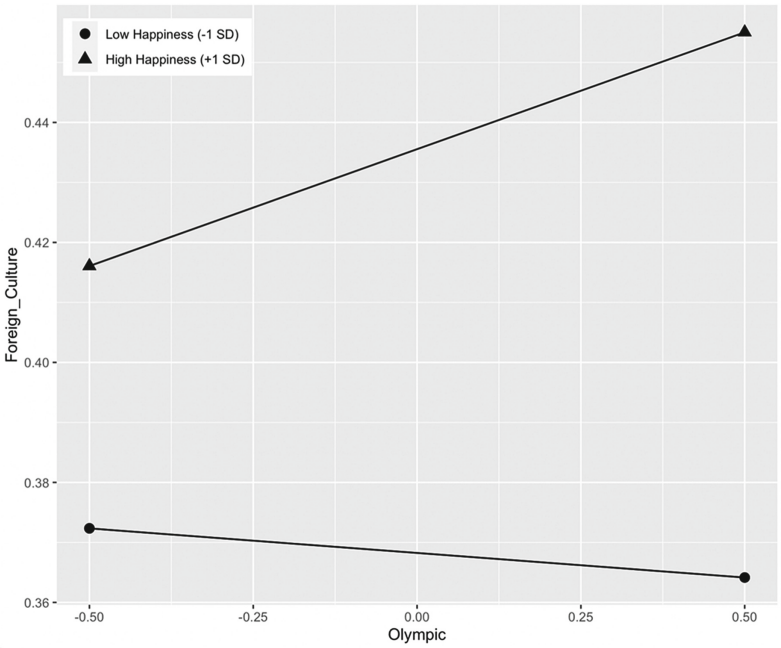

Fig. 3. Interaction between the Olympics and happiness on interest in foreign cultures.

4.3 Limitations and Future Work

This study has the following limitations. First, the results' generalization is limited because the study only targets the Japanese market. Second, this study is limited in that the evaluation results were obtained during the COVID-19 period. Many negative opinions were expressed about holding the Olympics during the pandemic [36]. The effect on citizens' interest in foreign cultures may be different from the regular Olympics. Therefore, conducting similar verification under normal circumstances may be an ideal topic for future research.

5 Conclusion

Academically, little has been discussed about the im-pact of the Olympics on the international consciousness of citizens. Thus, this study clarified the impact of hosting the Olympics on citizen's interest in foreign cultures. The result of applying multiple regression analysis to the multiple survey in Japan from 2019 to 2022 showed that citizen's interest in foreign cultures brought by the Olympics is conditional on citizens' sense of happiness. Hence, public sentiment should be improved before the Olympics is held.

Acknowledgement. This study uses data provided by the Yoshida Hideo Memorial Foundation.

References

1. Christofi, M., Iaia, L., Marchesani, F., Masciarelli, F.: Marketing innovation and internationalization in smart city development: a systematic review, framework and research agenda. Int. Mark. Rev. **38**(5), 948–984 (2021). https://doi.org/10.1108/IMR-01-2021-0027
2. Abbott, C.: The internationalization of Washington, DC. Urban Affairs Rev. **31**(5), 571–594 (1996). https://doi.org/10.1177/107808749603100501
3. Keil, R., Ronneberger, K.: Going up the country: internationalization and urbanization on Frankfurt's northern fringe. Environ. Plan. D: Soc. Space **12**(2), 137–166 (1994). https://doi.org/10.1068/d120137
4. Giovinazzi, O.: The internationalization of the Marseille waterfront: An integrated approach. Waterfronts Revisited, pp. 207–221. Routledge (2016)
5. Roig, A., Sun-Wang, J.L., Manfredi-Sánchez, J.L.: Barcelona's science diplomacy: towards an ecosystem-driven internationalization strategy. Human. Soc. Sci. Commun. **7**(1), 1–9 (2020). https://doi.org/10.1057/s41599-020-00602-y
6. Vanolo, A.: Internationalization in the Helsinki metropolitan area: Images, discourses and metaphors. Eur. Plan. Stud. **16**(2), 229–252 (2008). https://doi.org/10.1080/09654310701814538
7. Marcus, L.: The world's most liveable cities for 2022. CNN, June 23 (2022). https://edition.cnn.com/travel/article/economist-world-most-liveable-cities-2022/index.html. Accessed 10 Jan 2023
8. Kearney, A.T.: Readiness for the storm: The 2022 global cities report. A.T. Kearney (2022). https://www.kearney.com/global-cities/2022. Accessed 10 Jan 2023
9. Mori Memorial Foundation. Global power city index. Mori Memorial Foundation (2022). https://www.kearney.com/global-cities/2022. Accessed 10 Jan 2023
10. Reidy, G.: With Japan still shut to travelers, it is out of sight and out of mind. April 6) (2022). https://www.japantimes.co.jp/opinion/2022/04/06/commentary/japan-commentary/japan-tourist-trade/. Accessed 10 Jan 2023
11. CNN.: The Global Financial City of the Future. CNN) (2023). https://sponsorcontent.cnn.com/int/tokyo-sustainable-recovery/global-financial-city/. Accessed 10 Jan 2023
12. Tokyo Metropolitan Government. Policy for promotion of the global city strategy. Tokyo Metropolitan Government (2022). https://www.seisakukikaku.metro.tokyo.lg.jp/en/news/diplomacy/policy-for-promotion-of-the-global-city-strategy.html. Accessed 10 Jan 2023
13. Japan External Trade Organization. Tourism government initiatives. Japan External Trade Organization (2023). https://www.jetro.go.jp/en/invest/attractive_sectors/tourism/government_initiatives.html. Accessed 10 Jan 2023

14. Sugiyama, S.: Kyoto's love-hate relationship with tourists endures as yen weakens. Japan Times, July 4 (2022). https://www.japantimes.co.jp/news/2022/07/04/business/kyodo-tourism-uncertainty/. Accessed 10 Jan 2023
15. Reidy, G.: With Japan still shut to travelers, it is out of sight and out of mind. Japan Times, April 6 (2022). https://www.japantimes.co.jp/opinion/2022/04/06/commentary/japan-commentary/japan-tourist-trade/. Accessed 10 Jan 2023
16. Duignan, M.B., Everett, S., McCabe, S.: Events as catalysts for communal resistance to overtourism. Ann. Tour. Res. **96**, 103438 (2022). https://doi.org/10.1016/j.annals.2022.103438
17. Brasor, P.: Japan is struggling to deal with the foreign tourism boom. Japan Times, May 5 (2018). https://www.japantimes.co.jp/news/2018/05/05/national/media-national/japan-struggling-deal-foreign-tourism-boom/. Accessed 10 Jan 2023
18. Agha, N., Fairley, S., Gibson, H.: Considering legacy as a multi-dimensional construct: The legacy of the Olympic Games. Sport Manag. Rev. **15**(1), 125–139 (2012). https://doi.org/10.1016/j.smr.2011.08.004
19. Long, X., Chen, B., Park, B.: Effect of 2008's Beijing Olympic Games on environmental efficiency of 268 China's cities. J. Clean. Prod. **172**, 1423–1432 (2018). https://doi.org/10.1016/j.jclepro.2017.10.209
20. Schleicher, N., et al.: The effect of mitigation measures on size distributed mass concentrations of atmospheric particles and black carbon concentrations during the Olympic Summer Games 2008 in Beijing. Sci. Total Environ. **412**, 185–193 (2011). https://doi.org/10.1016/j.scitotenv.2011.09.084
21. Ferreira, R.R.: The location effect: How some Atlanta clubs won the "Olympic Ring." Cornell Hotel Restaurant Admin. Quart. **39**(5), 50–58 (1998). https://doi.org/10.1177/001088049803900510
22. Chong, T.T., Hui, P.H.: The olympic games and the improvement of economic well being. Appl. Res. Qual. Life **8**(1), 1–14 (2013). https://doi.org/10.1007/s11482-012-9176-8
23. Vierhaus, C.: The international tourism effect of hosting the Olympic Games and the FIFA World Cup. Tour. Econ. **25**(7), 1009–1028 (2019). https://doi.org/10.1177/1354816618814329
24. Rose, A.K., Spiegel, M.M.: The Olympic effect. Econ. J. **121**(553), 652–677 (2011). https://doi.org/10.1111/j.1468-0297.2010.02407.x
25. Kassens-Noor, E., Fukushige, T.: Olympic technologies: Tokyo 2020 and beyond: the urban technology metropolis. J. Urban Technol. **25**(3), 83–104 (2018). https://doi.org/10.1080/10630732.2016.1157949
26. Bondonio, P., Guala, C.: Gran Torino? The 2006 Olympic Winter Games and the tourism revival of an ancient city. J. Sport Tourism **16**(4), 303–321 (2011). https://doi.org/10.1080/14775085.2011.635015
27. Berkowitz, P., Gjermano, G., Gomez, L., Schafer, G.: Brand China: using the 2008 Olympic Games to enhance China's image. Place Brand. Publ. Dipl. **3**(2), 164–178 (2007). https://doi.org/10.1057/palgrave.pb.6000059
28. Contreras, J.L., Corvalan, A.: Olympic Games: No legacy for sports. Econ. Lett. **122**(2), 268–271 (2014). https://doi.org/10.1016/j.econlet.2013.12.006
29. Weed, M., et al.: The Olympic Games and raising sport participation: a systematic review of evidence and an interrogation of policy for a demonstration effect. Eur. Sport Manag. Q. **15**(2), 195–226 (2015). https://doi.org/10.1080/16184742.2014.998695
30. Choi, H., Woo, H., Kim, J.H., Yang, J.S.: Gravity model for dyadic Olympic competition. Physica A **513**, 447–455 (2019). https://doi.org/10.1016/j.physa.2018.09.045

31. Rice, C.: Culture, exchange and equality: How Tokyo 2020 is crafting its legacy. University of Southern California Center on Public Diplomacy (2021). https://uscpublicdiplomacy.org/blog/culture-exchange-and-equality-how-tokyo-2020-crafting-its-legacy. Accessed 10 Jan 2023
32. International Olympic Committee. The press at Tokyo 2020. International Olympic Committee (2021). https://olympics.com/ioc/news/the-press-at-tokyo-2020. Accessed 10 Jan 2023
33. Clohesy, W.W.: Altruism and the endurance of the good. Voluntas: Int. J. Volunt. Nonprofit Organiz. **11**(3), 237–253 (2000). https://doi.org/10.1023/A:1008923809507
34. Parker, J.G., Low, C.M., Walker, A.R., Gamm, B.K.: Friendship jealousy in young adolescents: individual differences and links to sex, self-esteem, aggression, and social adjustment. Dev. Psychol. **41**(1), 235–250 (2005). https://doi.org/10.1037/0012-1649.41.1.235
35. Mendiburo-Seguel, A., Páez, D., Martínez-Sánchez, F.: Humor styles and personality: A meta-analysis of the relation between humor styles and the Big Five personality traits. Scand. J. Psychol. **56**(3), 335–340 (2015). https://doi.org/10.1111/sjop.12209
36. Kato, T.: Opposition in Japan to the Olympics during the COVID-19 pandemic. Human. Soc. Sci. Commun. **8**(1), 1–9 (2021). https://doi.org/10.1057/s41599-021-01011-5