VALUING ELITE SPORT SUCCESS USING THE CONTINGENT VALUATION METHOD: A TRANSNATIONAL STUDY






*Hiroaki Funahashi * Simon Shibli * Popi Sotiriadou * Jarmo Mäkinen * Bake Dijke * Veerle De Bosscher*

ABSTRACT

This study presents an application of the contingent valuation method for valuing medal winning success on a transnational basis to test whether more medals won equates to more utility. To achieve this aim, a research project was set up in five countries: Belgium, Finland, Japan, the Netherlands, and the United Kingdom. Respondents were asked to state their willingness to pay to avoid a large-scale reduction in government funding for elite sport, resulting in a 50% reduction in medals won at the Tokyo 2020 Olympics. Results show that willingness to pay for avoiding reduced medal winning performance differs significantly between countries with the more successful countries reporting higher willingness to pay values than the relatively less successful countries. This finding indicates that more medals won appears to be linked with more utility. The validity tests on the regression models were generally consistent with the theoretical expectations. Implications are discussed in terms of how governments can promote elite sport development while being conscious of the public's acceptability of such investment.

This is a summary of a published paper, that should be **referred** as follows: Funahashi, H., Shibli, S., Sotiriadou, P., Mäkinen, J., Dijk, B., & De Bosscher, V. (2019). Valuing elite sport success using the contingent valuation method: A transnational study. Sport Management Review, in press.

More information:
www.SPLISS.net

STUDY HIGHLIGHTS

- The contingent valuation method was used to value elite sport success on a transnational basis.
- Samples of adults in five countries were asked for their willingness to pay for a 'high-performance sport fund' in order to avoid a decline in medal performance at the next Summer Olympic Games
- Respondents in the more successful medal winning countries reported higher willingness to pay than those in the relatively less successful countries.
- However, people's utility is not only a simple function of quantity of medals, but also an interaction with individual characteristics such as the use of, and attitude towards, the good.

IMPLICATIONS

- This paper offers the application of contingent valuation method to assess the monetary value of the public goods generated by elite sporting success and policy on a transnational basis
- Winning many medals is, unsurprisingly, highly effective for increasing the public's value of elite sporting success. However, for as long as policy level developments in isolation do not guarantee success, the recommendation made below, appears, at least in theory, to be a logical course of action.
- The value individuals attach to elite sport policy is most likely to be maximised if accompanied by interventions to enhance people's perceived benefits of national sporting success, such as a high profile victory parade for Olympic medallists.
- Key actors responsible for high performance sport need to engage with trust management initiatives (e.g., increased transparency, anti-corruption measures) to ensure sustainable elite sport policy development.

Willingness to pay for elite sporting success

How can we measure the value of non-market public goods generated by elite sporting success? The proposed answer is to create a hypothetical market in which people have the opportunity to state their willingness to pay (WTP) for a 'high-performance sport fund' in order to avoid a 50% reduction in medals won at the Tokyo 2020 Olympics. We considered the following hypothetical scenario.

Suppose that due to recent budgetary constraints, a large-scale reduction in government funding for all of elite sport expenditure is implemented after the Rio de Janeiro Games in 2016. Without the government's financial support for elite sports at the national level, it will be difficult to maintain current levels of sporting competitiveness. It is therefore highly likely that the country's performance at the Tokyo Games in 2020 will suffer.
To compensate for the reduction in government funding, suppose that a group of elite athletes proposes to establish a 'high-performance sport fund'. The fund would be appropriately implemented by a new and highly transparent organisation and will enable the continuation of a range of projects and policies designed to deliver elite sport success as described above. As a result of this project, current performance standards would be maintained.
By contrast, if the project is not implemented, we expect to see the number of medals won to fall to [#], only half as many, in the Tokyo Games in 2020 compared with the Rio de Janeiro Games in 2016.
Assume that the 'high-performance sport fund' is set up with funds consisting of donations from the public. In the event that the total amount of donations is not sufficient to implement the project, these donations will be returned to each donor. If you were asked to contribute, would you agree to make a donation?

Willingness to pay results

The 5% trimmed mean willingness to pay scores were 11.0 (± 21.3) (in $ PPP) for the UK, 5.3 (± 15.7) for Japan, 4.2 (± 13.8) for Belgium, and 2. 3 (± 6.4) for the Netherlands (Table1). The Kruskal-Wallis test indicates that there is a significant difference in mean rank between countries (Kruskal-Wallis $\chi^2 = 202.648$, $p < 0.001$). The UK (2259.6) obtained the highest mean rank followed by Japan (1925.8), the Netherlands (1855.4), and Belgium (1807.1).

Theoretical validation results

The regression models confirm that declaring willingness to pay and the stated amount of willingness to pay are positively related to: the frequency of watching the Rio 2016 Olympics on TV (*WatchtvRio2016*); and being an avid sports fan (*Avidfan*). Being a member of the high benefits perception group (*Benefit*); being a member of the low risks perception group (*Risk*); being a participant in competitive sport (*Athlete*); working in elite sport-related sectors (*Organisation*); and the high income group (*Income*) proved to be statistically significant in Probit and Tobit models, but not the ordinary least squares estimation for positive willingness to pay samples. With reference to the country dummy variables, the significant and positive coefficients in the both Probit and Tobit models imply that UK citizens (*UK*) value their sporting success more than other countries.

Table2. Results of the two-part and Tobit models

	Two-part		Tobit
	Probit	OLS	
Intercept	-2.219 ***	-125.975 $^{n.s.}$	-1073.386 ***
WatchtvRio2016	0.600 ***	31.061 *	220.412 *
Avidfan	0.528 ***	68.603 *	212.633 ***
Benefit	0.803 **	8.988 $^{n.s.}$	300.875 †
Risk	0.231 *	-18.586 $^{n.s.}$	62.151 †
Athlete	0.184 ***	12.279 $^{n.s.}$	65.825 ***
Organisation	0.437 ***	52.253 $^{n.s.}$	157.341 ***
Gender	0.073 ***	-30.377 $^{n.s.}$	7.923 $^{n.s.}$
Age	0.016 $^{n.s.}$	7.687 $^{n.s.}$	9.144 †
Age^2	0.000 $^{n.s.}$	-0.087 $^{n.s.}$	-0.106 †
Income	0.238 ***	77.606 $^{n.s.}$	118.964 ***
UK	0.252 ***	-2.923 $^{n.s.}$	57.895 ***
JPN	0.140 ***	-20.197 $^{n.s.}$	15.301 $^{n.s.}$
Observation	2,543	659	2,543
Log likelihood	-1065.975		-7389.241
Pseudo R^2	0.269	0.020	0.04

Data were weighted for gender and age structure according to national sample structure.
OLS refers to ordinary least squares.
Displayed are the coefficients and Tobit β-coefficient
$^{n.s.}$not significant, †<0.1, $^{*}p$<0.05, $^{**}p$<0.01, $^{***}p$<0.001.

Table1. Summary statistics of willingness to pay

			UK	Japan	Netherlands	Belgium	Finland	p value	Pairwise comparison
WTP[a]									
I would donate	(certainty≥6)	n (%N)	377 (35.0^{+++})	221 (20.2)	204 (17.5^{---})	146 (15.1^{---})		< 0.001[c]	
		M^b (SD)	11.0 (21.3)	5.3 (15.7)	2.3 (6.4)	4.2 (13.8)			
		Mean rank	2259.6	1925.8	1855.4	1807.1		< 0.001[d]	UK>JPN>NED, BEL
Zero WTP[a]									
I would donate	(certainty<6)	n (%N)	139 (12.9^{+++})	92 (8.4)	57 (4.9^{---})	78 (8.0)			
I would not donate		n (%N)	560 (52.0^{---})	780 (71.4)	905 (77.6^{+++})	746 (76.9^{+++})			
Exclusion									
I would donate	(warm glow)	n	142	78	19	41			
I would not donate	(protest zero)	n	286	379	512	580			
Missing		n	3	1	1,440	8			

[a] WTP refers to willingness to pay; Data were weighted for gender and age structure according to national sample structure.
[b] 5% trimmed mean in ppp$.
[c] Chi-square test was applied for nominal variable, i.e. I would donate (certainty≥6); I would donate (certainty<6); I would not donate.
[d] Kruskal-Wallis test was applied.
$^{+++(---)}$ Significantly higher (lower) proportion by residual analysis (p<0.001)
$^{++(--)}$ Significantly higher (lower) proportion by residual analysis (p<0.01)
$^{+(-)}$ Significantly higher (lower) proportion by residual analysis (p<0.05)