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Understanding public acceptance of elite sport policy in Japan: a structural equation modelling approach

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Research question: Considering the current upward trend of public investment in elite sport, the importance of the public's acceptance cannot be ignored; however, little has been reported on the public's attitude towards elite sport policy. The present study seeks to answer the following research question: What are the significant socio-psychological determinants that influence public acceptance of the promotion of Japan's elite sport policy?

Research methods: Data were collected from 921 Japanese respondents by means of a Internet-based survey. Five socio-psychological constructs were analysed in order to identify their impact on public acceptance of elite sport policy: personal benefit, social benefit, risk, trust, and athletes as role models. Structural equation modelling was used to test the causal model consisting of 10 hypotheses.

Results and findings: Public acceptance is positively determined by their perception of personal/social benefits and negatively by perceived risks. These constructs are further determined by the public's trust in elite sport policy actors and athlete role model perception.

Implications: The present study deepens the discussion on, 'How a nation can increase the public acceptance of elite sport policy?' and found theoretical and methodological approaches to fill the research gap. To enhance public acceptance of elite sport policy, policy-makers should focus on the social benefits and values that stem from promoting the policy and variable measures. The development of athletes who act as role models is a crucial requirement of the current Japanese elite sport system, as this construct has the strongest total effect on public acceptance.

Keywords: elite sport policy; public acceptance; structural equation modelling; social benefit; athlete role model

Competition in international sport is increasing and more nations are adopting strategic approaches to developing world-class athletes. Over time, this phenomenon has resulted in increasing amounts of money being invested in elite sport development by many nations (De Bosscher, Bingham, Shibli, van Bottenburg, & De Knop, 2008). Characterised by this escalating 'global sporting arms race' (Oakley & Green, 2001), elite sport has evolved over time from a private affair (consisting of the effort and ingenuity of athletes, coaches, and sports organisations) to a public concern

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that involves government policy. In recent years, governments have intervened more directly in policies designed to improve their nations' international competitiveness and have increased the institutionalisation of the elite sport system (Bergsgard, Houlihan, Mangset, Nødland, & Rommetvedt, 2007; Green & Houlihan, 2005). At present, to establish and sustain successful elite sport systems, countries have to 'Pay up! Pay up! And play the game!' (Houlihan & Green, 2008, p. 291).

In Japan, it is clear that the government is now actively engaged in promoting elite sport as a national strategy (Funahashi et al., 2014). Since the Sport Promotion Advisory Panel¹ (2007) proposed that 'the only way Japan can be successful in the world elite sport is the state engagement' (p. 31), and since Japan was appointed the bid to organise the 2020 Olympic Games in Tokyo, government intervention has accelerated. The Japanese government's public expenditure on elite sport nearly doubled from around €62 million in 2002 to around €117 million in 2012 (Ministry of Education, Culture, Sports, Science and Technology [MEXT], 2012a). The ingredients that are commonly considered in literature to be key characteristics of a successful elite sport system (e.g. Andersen & Ronglan, 2012; De Bosscher et al., 2008; Green & Houlihan, 2005; Houlihan & Green, 2008), such as facilities, 'full-time' athletes, world-class coaching, science, medicine, and competition opportunities, have entered the current Japanese system (Yamamoto, 2008). This proactive governmental support has contributed to Japan's recent re-emergence as a strong nation. In the London Games, Japan's Olympic team won a total of 38 medals which represents the greatest number in history. In preparation for the 2020 Games in Tokyo, policy-makers have been continually discussing a further increase of the elite sport budget ('Kyokahi ohaba zougaku wo youbou he', 2014).

More often than not elite sporting success has been seen by governments as a resource valuable for its malleability and capacity to help achieve a wide range of non-sporting objectives (Green & Houlihan, 2005). This is related to the conviction that international success can be achieved through public policy by adopting a more strategic approach to elite athlete development. This has led to increasing competition in international sports with extensive investment by governments through their exchequer and lottery funding. As the supply of medals (success) remains essentially fixed (the International Olympic Committee has indicated that it would like the number of events to be capped at around 300), and the demand for success is increasing (more nations taking part and more nations winning medals), the 'market' adjusts by raising the 'price of success' (Shibli, 2003). Nations are required to invest even more just to maintain their success and standing still means going backwards because international success increasingly depends on the actions of rival nations (De Bosscher et al., 2008).

The current elite sport system's nature and increasing public investments worldwide highlight the importance of public/taxpayer support and understanding for several reasons. Firstly, because while it is well documented that increased funding is likely to improve a nation's sporting performance (Hogan & Norton, 2000; Li, Meng, & Wang, 2009), it is equally important to note that funds do not guarantee success (Mitchell, Spong, & Stewart, 2012). For instance, if a country doubles its elite sport expenditure and other nations do the same, it is unlikely that its relative performance will change. Secondly, because the recent upward trend in public investment in elite sport carries a political risk, excessive spending could lead to public disillusionment (Houlihan & Zheng, 2013). Lastly, gaining public acceptance of a policy is

considered important for the practical reason that an adopted policy cannot be implemented effectively and efficiently without public consent (King, Feltey, & Susel, 1998). Indeed, in Japan, a recent official report stated that it is indispensable for the government to secure stable revenue sources for elite sport development while obtaining the understanding of the entire society (MEXT, 2012a).

Therefore, understanding how the public's attitudes towards elite sport are formed is an important research subject to consider. It could provide valuable suggestions to policy-makers wanting to implement a publically supported policy. Recently, several studies have investigated the public's outcomes and value perception of elite sport success using empirical data (e.g. Dóczy, 2012; Hallmann, Breuer, & Kühnreich, 2013; Kavetsos & Szymanski, 2010; Wicker, Hallmann, Breuer, & Feiler, 2012; Wicker, Prinz, & von Hanau, 2012). While these studies have contributed to providing a rationale for public investment in elite sport which 'remained and remains unclear, under-researched and generally uncritically accepted' (Grix & Carmichael, 2012, p. 3), little is understood regarding how policy-makers can enhance the public's attitude of acceptance towards elite sport policy. Therefore, our research aims to examine the determinants that influence public acceptance of the promotion of Japan's elite sport policy.

Elite sport policy

During the past few decades, elite sport policy has attracted growing research attention concerning the decreasing predictive power of macro-economic factors (i.e. population and GDP) for Olympic success (De Bosscher, Shibli, Weterbeek, & van Bottenburg, 2015). Among these studies, the similarities and key characteristics that support different countries' elite sport systems have been identified through international comparison in order to focus on the strategic structural designs of different systems (e.g. Bergsgard et al., 2007; De Bosscher, De Knop, van Bottenburg, & Shibli, 2006; Green & Houlihan, 2005; Houlihan & Green, 2008; Oakley & Green, 2001). Houlihan (2009) identified three clusters of these factors: contextual factors (i.e. financial support), processual factors (i.e. talent identification and development system), and specific factors (i.e. training facilities). Recently, research has focused on sport-specific level analysis in order to explore potential diversity in elite sport policy (e.g. Andersen & Ronglan, 2012; Böhlke, 2007; Böhlke & Robinson, 2009; Sotiriadou, Gowthorp, & De Bosscher, 2014; Truyens, De Bosscher, Heyndels, & Westerbeek, 2014). This string of research has contributed to the knowledge and understanding of what specific policy factors can increase the chance of elite sporting success, that is the output of the system.

Even though the main purpose of the development of elite sport policy is to increase the level of a country's international sporting success (output), return on that public investment needs to be evaluated with a view to social and psychological 'outcomes' as long as it is a publicly funded service. Leaving aside the level of scientific evidence, different beliefs in regard to the outcome of elite sport can be identified from literature. These outcomes include economic development (Ashton, Gerrard, & Hudson, 2003; Houlihan & Green, 2008; Stewart, Nicholson, Smith, & Westerbeek, 2004), international prestige (Grix & Carmichael, 2012; Stewart et al., 2004), international and diplomatic recognition (Houlihan & Green, 2008; Stewart et al., 2004), international image (Grix & Carmichael, 2012), mass participation effect (De Bosscher, Sotiriadou, & van Bottenburg, 2013; Grix & Carmichael, 2012),

national identity and belonging (Hong, 2011; Stewart et al., 2004), social cohesion (Stewart et al., 2004), national pride (Allison & Monington, 2002; Denham, 2010; Dóczy, 2012; Hallmann et al., 2013; van Hilvoorde, Elling, & Stokvis, 2010), happiness, feel-good factor, and utility (Forrest & Simmons, 2003; Grix & Carmichael, 2012; Hallmann et al., 2013; Humphreys, Johnson, Mason, & Whitehead, 2011; Kavetsos & Szymanski, 2010; Wicker, Hallmann et al., 2012; Wicker, Prinz et al., 2012). The promotion of elite sport as a national strategy is usually justified on the basis that individual and team successes in major sport competitions have such wide-ranging outcomes listed above (Forrest & Simmons, 2003; Goodwin & Grix, 2011; Grix & Carmichael, 2012; Mitchell et al., 2012; Pringle, 2001). Unsurprisingly, this concept is reflected in many official documents to legitimise the public investment. However, most of these outcomes are difficult to quantify and, in some cases, the evidence to support the claims is weak (Stewart et al., 2004). Also, it is sometimes described disparagingly as the ‘usual suspect’ (Green, 2006) when used to make the case for funding elite sport or as a policy-maker’s ‘storyline’ (Fischer, 2003, cited in Houlihan, Bloyce, & Smith, 2009). Houlihan and Zheng (2013) warned that the government of one of the major sports countries will step off the elite sport policy path, facing the challenge of justifying its decision to the public in the medium-term future.

To meet the research demand, recent studies on sport management have applied the concept of consumer surplus to the social utility derived from elite sporting success, utilising a contingent valuation method to estimate the monetary value of the outcomes generated through athletic success (e.g. Funahashi & Mano, 2013, 2014, 2015; Wicker, Hallmann et al., 2012; Wicker, Prinz et al., 2012). By quantifying the value of elite sporting success using a monetary scale, these studies have contributed to policy-makers’ justification regarding taxpayers’ and sports-loving people’s (who purchase the government-controlled lottery) expenditure on elite sport programmes, by providing empirical evidence.

Whilst elite sport policy studies in the context of output and outcome have started to develop, another potential research field is seeking to understand the public’s attitude towards elite sport policy (see above). A high level of public support for elite sport success is regarded as one of the required resources for the successful development of an elite sport system (Houlihan & Zheng, 2013). According to the ‘Public Opinion Survey on Physical Fitness and Sports’, more than 90% of respondents thought that it is necessary to give some sort of public support to Japanese athletes so that they can perform outstandingly in international competitions (MEXT, 2013). However, as far as the authors know, there are no scientific articles that propose a theoretical approach to understanding the mechanism of public acceptance of elite sport policy; therefore, it is necessary to consider the conceptual framework for this study while taking the general theory in social psychology and the various findings regarding public acceptance in consideration.

Theoretical concepts of public attitude

In this study, we define public acceptance as a positive or favourable attitude towards the promotion of a specific policy held by the lay public (Oltra, Boso, & Prades, 2014). The present research draws on attitude formation theory from the field of social psychology. There are various types of definitions of attitude (e.g. ‘a psychological tendency that is expressed by evaluating a particular entity with some degree of favour

or disfavour' (Eagly & Chaiken, 1993, p. 1)). Most of these studies define attitude as an evaluative disposition (e.g. like or dislike; accept or reject) towards something. In social psychology, attitude is a significant predictor of behavioural intention and behaviour (e.g. Ajzen & Fishbein, 1980).

Empirical studies on public acceptance of a specific object have been conducted in various contexts, most of which have focused on social/consumer acceptance of technologies involving a certain amount of risk, namely nuclear technology, genetic modification, and so forth (e.g. Costa-Font & Gil, 2009; Siegrist, 2000; Visschers, Keller, & Siegrist, 2011). Behind this trend is the fact that several technologies have been developed and widely used in public; however, many of these have been associated with societal controversies, leading to public rejection of their use. A considerable number of studies aimed to understand the determinants of social/consumer acceptance with the growing public and research concern with how individuals respond to the risk attached when applying a new technology or policy. Although there have been mixed results depending on the particular object involved, most literature demonstrates a common understanding that public acceptance is associated with socio-psychological factors such as benefit perception, risk perception, and trust in related institutions (e.g. Chen, Lin, & Cheng, 2013; Siegrist, 2000; Visschers et al., 2011).

Most studies were concerned with perceived benefit and risk as the two main pillars for public acceptance of an issue and confirmed that each affects acceptance positively and negatively, respectively. The reason perceived benefit and risk are considered important antecedent variables is that attitudes towards a specific policy can be determined by the net sum of all positive and negative beliefs that the public has about the consequences or attributes of its outcome weighted by how they are evaluated (Fishbein, 1963). Fishbein's attitude theory (1963), also called the bottom-up approach (Scholderer & Frewer, 2003), is one of the most accepted and well tested theories about the formation of public attitudes. This model basically assumes that 'the more a person believes the object has good, rather than bad, attributes or consequences, the more favourable his or her attitude tends to be'. The resulting attitude towards the policy can be described as $\sum_{i=1}^N B_i a_i$, wherein ' B_i ' is a belief ' i ' about an object; ' a_i ' is the evaluative aspect of ' B_i '; and ' N ' is the number of beliefs (Fishbein, 1963). Some of these features may be perceived as good and others as bad. Consequently, the overall attitude will be the result of a trade-off between the perceived benefits and risks.

In some cases, it is not easy for the public to be well informed about some specific technologies, and, therefore, they showed very limited knowledge (e.g. Cobb & Macoubrie, 2004; Durant, Bauer, & Gaskell, 1998). One way to cope with a lack of knowledge is to rely on trust in the institutions involved to reduce the complexity of the risk management decision. In other words, instead of making rational judgements based on knowledge, trust is employed to select experts who are trustworthy (Siegrist & Cvetkovich, 2000). The other manner in which trust functions is the selection of a representative to act as spokesperson for one's viewpoint (Nakaya, 2012). No matter how much an individual may be familiar with a particular policy, unless he or she is a politician, bureaucrat, or the head of an affiliated organisation, the practical implementation of the policy is difficult. Therefore, he or she must trust related institutions and individuals who have control over that particular policy to act on his or her behalf. Observing these two ways that trust functions, one finds that raising the level of trust in the bodies concerned becomes important if one is to raise the level of public

acceptance of a particular policy. In fact, trust in the institutions and/or authorities involved in the technology has been shown to affect both the perceived benefits and risks directly as well as indirectly influence their acceptability (e.g. Siegrist, 2000; Tanaka, 2004). This construct may have relevance for elite sport policy, where many individuals are not acquainted with the policy and they do not have direct control over the policy's implementation. In fact, the Japanese public showed a substantially low level of knowledge about elite sport programmes (Funahashi & Mano, 2015).

Hypothesis development

Compared with science and technology policy, there is little direct risk to the public from promoting elite sports policy as a national strategy, and it goes without saying that in the event of application, care is needed. However, it has also been reported that elite sport-oriented policy is fraught with social risk (e.g. education problems among athletes, physical and sexual abuse, unethical practices, and an overemphasis on success), and this could also be considered as showing a tolerance for the applicability of the above-mentioned constructs on elite sport policy studies. In this study, we employ the construct of benefit and risk perception based on Fishbein's (1963) general theory of attitude and trust in the related institutions that build on the literature. In addition to these constructs, the concept of role modelling will be used since athletes are often considered as role models by the public (De Bosscher et al., 2013). This should help explain the context of elite sport policy. The rationale for these constructs is explained in the subsequent section along with 10 proposed hypotheses.

Perceived personal and social benefits and risks

Fishbein's attitude model (1963) implicates the importance of perceived benefit and risk associated with the active promotion of elite sport policy. Regarding benefit as an elite sport policy outcome, the potential benefits provided through athletic success can be classified into two dimensions: personal benefits (identification, social cohesion, and national pride) and social benefits (international prestige and economic development) (Stewart et al., 2004). Previous studies in sport management have investigated how the perception of the personal and social benefits of elite sport success are related to the public's willingness to pay (WTP: behavioural intention which is influenced by attitude). For example, Wicker, Hallmann et al. (2012) demonstrated that personal benefit perception, such as a feeling of happiness and pride, were related to the WTP for the achievement of elite sport success. Likewise, social benefit perceptions, such as the perceived importance of elite sport for the reputation (Wicker, Hallmann, et al., 2012) and prestige (Humphreys et al., 2011) of the nation, were found to be related to the WTP. Hence, the following hypotheses are proposed:

H1: When the public perceives that elite sport success provides an increase in *personal* benefit, the promotion of related policies will receive greater acceptance.

H2: When the public perceives that elite sport success will increase *social* benefits, the promotion of related policies will receive greater acceptance.

In contrast, it is presumed that the perceived risks of elite sport contribute negatively to public attitudes. In the past decades, we have been facing so-called 'unethical'

practices in elite sport, such as violence, performance enhancing drugs, and more (Volkwein, 1995). In some case, these negative aspects have created reluctance among societal funders to support elite sport development. For example, Green and Collins (2008) found that public outcry regarding the Finnish doping incident at the 2001 Nordic World Skiing Championships provided little political incentive to reinforce their elite sport policy. Similarly, these negative by-products are seen as social issues (Park, Lim, & Bretherton, 2012), which leads to speculation that the public does not accept elite sport-oriented policies when the perceived risks are high or when they outweigh perceived benefits. Therefore, the following hypothesis is proposed:

H3: When the public perceives more potential risks associated with elite sport development, it is less likely to accept the promotion of an elite sport policy.

Trust in elite sport policy actors and athlete role model

One area that may influence these personal and social benefits, and thus the public acceptance of elite sport policy, is the trust that people have in the institutions responsible for elite sport. Recently, trust in related institutions has been characterised as a crucial issue in risk management and technological policy (e.g. Siegrist, Cousin, Kasstenholz, & Wiek, 2007). The body of literature indicates that institutional trust has direct effects on the perceived benefits and risks of a given technology, as well as an indirect influence on public acceptance (Siegrist, 2000). When people are not very familiar with a topic, such as a technology, many will determine their acceptability based on (and trusting) the opinions and statements of authorities related to the technology. This can be applicable to the area of elite sport, where many individuals have limited knowledge of the topic (Funahashi & Mano, 2015) and no direct control over policy decisions. Thus, one way to cope with a lack of knowledge can be to employ trust in policy actors, who are associated with policy decisions and have control over their implementation, when assessing the benefits and risks of a policy. Accordingly, the public's attitude of acceptance towards an active promotion of elite sport-oriented policy will be affected not only by how people balance perceived benefits and risks of the policy's implementation but also by how they view the trustworthiness of the related organisations. Thus, the following hypotheses are proposed:

H4: When the public trusts key Japanese elite sports policy actors, it is more likely to perceive greater *personal* benefit from elite sport success.

H5: When the public trusts key Japanese elite sports policy actors, it is more likely to perceive an increase in *social* benefits from elite sport success.

H6: The public's feeling of trust towards key Japanese elite sports policy actors is likely to decrease its perception of the potential risks associated with elite sport development.

By some, the effect of athletes' role model function is considered to be an important outcome of elite sport (i.e. De Bosscher et al., 2013), and may thus be an even more important factor related to benefit and risk perception. Generally, a broad range of *social/personal* benefits is delivered through athlete performance or even behaviour, which leads to anticipation that athletes' role model perception will favourably influence the public's benefit perception and will negatively influence perceived risk. Meanwhile, Wicker, Hallmann et al. (2012) revealed that the public's perception of athletes

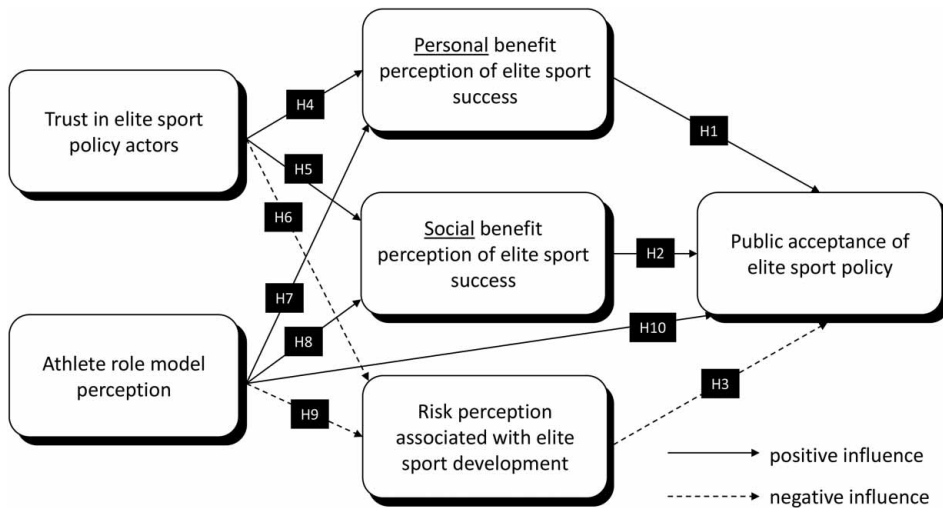


Figure 1. Hypothesis model of public acceptance of elite sport policy.

as role models, in terms of fairness, influences supportive attitudes towards elite sport. Based on the rationale described above, the degree of public acceptance of elite sport policy might be influenced both directly and indirectly (through perceived benefit and risk) by the role model perception of the athlete. Therefore, the following hypotheses are proposed:

H7: When the public considers Japanese athletes as role models, it is more likely to perceive greater *personal* benefit from elite sport success.

H8: When the public views Japanese athletes as role models, it is more likely to perceive greater *social* benefit from elite sport success.

H9: When the public considers Japanese athletes as role models, it is more likely to perceive fewer potential risks associated with elite sport policy.

H10: When the public considers Japanese athletes as role models, the promotion of related policies will receive greater acceptance.

In summary, these hypotheses regarding the public acceptance of the promotion of elite sport policy as a national strategy form a double-layered structure; public acceptance of elite sport policy is determined by the perceived (*personal* and *social*) benefit and risk, and, in turn, these factors are further determined by trust in elite sport policy actors and athlete role model perception. Athlete role model perception also has a direct effect on public acceptance (Figure 1).

Research methodology

Measurement

The present study analyses the causal relationships of the socio-psychological factors influencing the public acceptance of elite sport policy using the following constructs: (1) personal benefit, (2) social benefit, (3) risk, (4) trust, (5) athlete role model perception, and (6) public acceptance. To our knowledge, most of the above-mentioned

constructs have not been examined in a measurement scale in other elite sport studies. For each construct, a series of socio-psychological items was developed based on the earlier mentioned literature review. The initial pool of 31 items was first evaluated by an independent researcher with experience in elite sport policy to assess content validity. Ten post-graduate students specialised in sport policy tested the pilot survey to determine the clarity of the questions. Modifications were made based on their comments. A team of 18 experts, including the above-mentioned members, reviewed the revised version and minor amendments in wording were made until a consensus was reached. The final version included 27 items.

The items, used in the *personal* benefit perception scale, were extracted from literature related to the empirical analysis of elite sport success outcomes (Dóczy, 2012; Hallmann et al., 2013; Kavetsos & Szymanski, 2010; Wicker, Hallmann et al., 2012) and descriptive research referred to the outcomes (Allison & Monnington, 2002; Forrest & Simmons, 2003): pride, happiness, national identity, and national unity. The public's *social* benefit scale was constructed from five items based on the following concepts presented by Grix and Carmichael (2012), Houlihan and Green (2008), and the Sport Promotion Advisory Panel (2007) which explained why numerous countries are concerned with elite sport success: economic impact, international prestige, mass participation effect, international image, and international recognition. The public's risk perception was measured using five items that describe the negative aspects of elite sport investigated by Park et al. (2012) and Volkwein (1995): education problems among athletes, physical and sexual abuse, unethical practices, and an overemphasis on success. A significant volume of literature has suggested that a conflict exists between elite and grass-roots sports (Green, 2004a, 2004b, 2006; Green & Houlihan, 2004; Houlihan & Zheng, 2013). This inhibition risk was also added as an item, even though a similar item was included as a social benefit. These survey items were measured on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

The measurement of trust was conceptualised as trust in the key elite sport actors in Japan (Yamamoto, 2008), and the question's formulation was adapted from Visschers et al. (2011). Respondents were asked to indicate, using a 7-point scale (1 = 'no trust' and 7 = 'very high trust'), how much they trust the following organisations: the MEXT, the Japan Sports Council, the Japanese Olympic Committee (JOC), and National Governing Bodies. An 'I don't know' option was included in this scale, since several pilot test participants requested it.

The athlete role model influence was measured using the five items developed by Dix, Phau, and Pougnet (2010) and Rich (1997) with a minor change in wording from 'my favourite athlete' to 'Japanese athletes'. This modified version of the role model influence scale uses a 7-point scale (1 = 'strongly disagree' and 7 = 'strongly agree').

Finally, public acceptance of the promotion of elite sport policy was measured using Tokushige, Akimoto, and Tomoda's (2007a, 2007b) four semantic themes: personal acceptance, public acceptance, acceptance for the future generation, and advisability. In total, 27 items were measured. The detailed scale items of each construct are described in the appendix.

Data collection and sampling

Data were collected by means of an Internet-based survey conducted via a Japanese Internet research service company in February 2013. Stratified sampling based on

demographic variables (gender and age groups: 20s, 30s, 40s, 50s, and over 60) from the 2010 Population Census of Japan was conducted to establish a representative view of the sample. Because of the difficulties in obtaining samples from the older generation via the Internet, the 'over 60' group was stratified in the composition ratio of the 60s. To avoid self-selection bias (Heckman, 1979), the survey was named 'Questionnaire about life' rather than 'Questionnaire about the public's acceptance of elite sport policy'. The present study received prior approval from the Ethics Committee of the Faculty of Sport Sciences, Waseda University (Number: 2012-051). Out of 1050 surveys, 921 surveys were useful (successful response rate: 87.7%). An χ^2 test and *t*-test were conducted to confirm that the sample adequately represented the overall Japanese population. Table 1 shows the descriptive statistics of the sample and the results of both tests. Even after performing the stratified random selection procedure, the tests showed that the sample might not be completely representative of the Japanese population; compared with the population, the sample is significantly younger, has a higher educational and job status, and is disproportionately married. Some elements are possibly caused by the Internet survey, which is important to take into account when discussing the results.

Data analysis

In order to validate the results of this cross-sectional study, the final sample of 921 was randomly divided into a test sample ($n = 460$) and a validation sample ($n = 461$). This sample size exceeded the minimum recommendation of > 200 (Hoelter, 1983).

The preceding data analysis used the two-phase approach outlined by Anderson and Gerbing (1988). In the first phase, a confirmatory factor analysis (CFA) is used

Table 1. Descriptive statistics of the sample and general Japanese population.

Demographics	Item	Number	Sample percentage (%)	Population percentage (%) (over 20 years old)	χ^2 test
Gender	Male	471	51.1	48.0	3.638 ^{n.s.}
	Female	450	48.9	52.0	
Education	University degree and more	419	45.5	19.5	396.439***
	Others	502	54.5	80.5	
Marriage	Married	612	66.4	62.4	6.437*
	Single	309	33.6	37.6	
Job	Full-time	421	45.7	41.9	5.495*
	Others	500	54.3	58.1	
Age	Average age		46.3 ^a	52.1 ^b	-12.495 ^{c***}

Notes: Reference data: 2010 Population Census of Japan.

^aSample average.

^bPopulation average.

^c*t*-Statistics.

^{n.s.}Not significant.

* $p < 0.05$.

*** $p < 0.001$.

to assess the measurement model's adequacy using the test sample. Since the research model was theory driven and not exploratory, CFA rather than exploratory factor analysis seemed the most appropriate procedure to test the underlying model since a priori expectations of the factor structure exists. The adequacy of the measurement model is evaluated based on the criteria of overall fit with the data, convergent validity, discriminant validity, and reliability. Five common indices were used to test the fitness of the model: (1) $\chi^2/\text{d.f.}$ index (i.e., the chi-square value divided by the degree of freedom), (2) non-normed fit index (NNFI), (3) comparative fit index (CFI), (4) standardised root mean square residual (SRMR), and (5) root mean square error of approximation (RMSEA). Acceptable goodness-of-fit in this research was defined as a $\chi^2/\text{d.f.}$ of less than 5, an NNFI and CFI above 0.90, a SRMR below 0.10, and a RMSEA below 0.08 (Kline, 2005). In the second phase, structural equation modelling (SEM) was employed to examine the general fitness of the hypothesis model after testing the replicability of the factor structure using CFA. Since the independent and dependent variables were gathered from the same source, the possible effects of common method variance (CMV) for socio-psychological constructs and public acceptance were tested using Harman's single factor test (Podsakoff & Organ, 1986).² The analyses were done using SPSS 21 and AMOS 21.

Results

Testing the measurement model

CFA with maximum likelihood estimation was initially performed using the 27 items as indicators of the underlying six latent constructs to test the measurement model's adequacy by use of the test sample (Anderson & Gerbing, 1988). Skewness (−0.84 to 0.35) was less than 3, and kurtosis (−0.42 to 1.13) was less than 10 for all of the variables, which suggests that the data were normally distributed (Kline, 2005). The goodness-of-fit indices for the structural model were: $\chi^2/\text{d.f.} = 2.82$ ($\chi^2 = 871.73$, $p < 0.001$, $\text{d.f.} = 309$), NNFI = 0.94, CFI = 0.94, SRMR = 0.05, and RMSEA = 0.06 (90% CI: 0.06–0.07, p close = 0.00). P close is a ' p value' testing the null hypothesis that the population RMSEA is no greater than 0.05. Although the result rejected the null hypothesis at the 0.05 level, a collective assessment of the fit indices still indicates that the measurement model satisfactorily fits the data (Kline, 2005).

Convergent validity refers to the degree by which items comprising a scale behave when they are measuring the same underlying concept. The significance of the loading coefficients ($p < 0.05$) provided evidence of the construct's convergent validity (Anderson & Gerbing, 1988) (Table 2). Also, the average variance extracted (AVE) for all of the constructs was larger than the threshold value of 0.5 (Fornell & Larcker, 1981).

Discriminant validity shows the extent to which each construct is unique and different from the others. It was evaluated using the following approach: the correlation between constructs was lower than 0.85 (Kline, 2005); each construct's AVE was greater than the squared correlation between them (Fornell & Larcker, 1981). Although the correlation between personal and social benefit was relatively high (0.81) and the AVE of the social benefit construct (0.654) was almost equal to the square of the two benefits' correlation (0.649), Tables 2 and 3 show that discriminant validity was satisfactory because all of the inter-construct correlations were less than the cut-off point of 0.85, and each AVE was greater than the squared correlation for

Table 2. Overall reliability of the constructs and standardised loadings of indicators.

Construct	Mean	S.D.	Correlation matrix						
			1	2	3	4	5	6	
1. Personal benefit	5.37	1.22	1.00						
2. Social benefit	5.26	1.15	0.81	1.00					
3. Risk	3.77	1.38	-0.01	-0.01	1.00				
4. Trust	3.70	1.14	0.29	0.29	-0.02	1.00			
5. Athlete role model	4.29	1.10	0.50	0.51	-0.11	0.33	1.00		
6. Public acceptance	5.20	1.05	0.49	0.46	-0.16	0.22	0.51	1.00	
Construct	Number of items	Cronbach's α	CR	Item-to-total correlations	Standardised loadings	t -Value			
1. Personal benefit	4	0.92	0.92	0.79–0.85	0.83–0.90	21.49–24.40***			
2. Social benefit	5	0.90	0.90	0.70–0.81	0.72–0.89	17.46–23.79***			
3. Risk	5	0.87	0.87	0.53–0.76	0.57–0.84	12.72–21.40***			
4. Trust	4	0.91	0.92	0.71–0.87	0.74–0.92	18.14–25.37***			
5. Athlete role model	5	0.94	0.94	0.81–0.85	0.84–0.88	22.07–23.88***			
6. Public acceptance	4	0.93	0.93	0.74–0.90	0.76–0.96	19.01–26.66***			

Note: $n = 460$, $\chi^2(309) = 871.73$, $\chi^2/d.f. = 2.82$, $p < 0.001$; NNFI = 0.94; CFI = 0.94; RMSEA = 0.06 (90% CI: 0.06–0.07, p close = 0.00); SRMR = 0.05.

*** $p < 0.001$.

Table 3. Squared correlation of and AVE of the constructs.

Construct	Squared correlation matrix					
	1	2	3	4	5	6
1. Personal benefit	0.75 ^a					
2. Social benefit	0.649	0.654 ^a				
3. Risk	0.00	0.00	0.58 ^a			
4. Trust	0.09	0.09	0.00	0.74 ^a		
5. Athlete role model	0.25	0.26	0.01	0.11	0.75 ^a	
6. Public acceptance	0.24	0.21	0.03	0.05	0.26	0.77 ^a

^aAverage variance extracted.

each pair of constructs. Therefore, the two benefit constructs could be regarded as independent factors.

Reliability was examined using Cronbach's α and composite reliability (CR) scores. As shown in Table 2, both indices exceeded the recommended threshold values of 0.7 for all of the variables. This implies that the scale has excellent reliability (Nunnally & Bernstein, 1994).

Testing the structural model

Another CFA was performed with the validation sample to test the replicability of the factor structure constructed in the former CFA with the test sample. The result also showed a good overall fit to the data: $\chi^2/\text{d.f.} = 2.57$ ($\chi^2 = 799.12$, $p < 0.001$, d.f. = 309), NNFI = 0.95, CFI = 0.96, SRMR = 0.04, and RMSEA = 0.06 (90% CI: 0.05–0.06, p close = 0.00).

To account for the CMV problem, Harman's single factor test was performed. Following Podsakoff, MacKenzie, Lee, and Podsakoff (2003), all items ($k = 27$) were factor analysed using principal axis factoring with the unrotated factor solution. The value of Kaiser–Meyer–Olkin was 0.93, defined as 'marvellous' by Kaiser (1974), indicating that the sample was adequate for factor analysis. The Bartlett Test of Sphericity was performed to test the null hypothesis that the correlation matrix was an identity matrix. Since the observed significance level was $p < 0.001$ ($\chi^2 = 21387.11$, d.f. = 351), it indicated that the hypothesis was rejected and a factor analysis was appropriate. Principal axis factoring showed the existence of five unrotated factors with an eigenvalue greater than 1.0. These factors explained 75.05 of the variance among the 27 variables, and the first factor accounted for 39.44 of the variance. This factor analysis showed that more than two factors can be derived and that the first factor did not account for a majority of the variance. This implies that CMV bias was not a problem affecting the validity of this study; thus, it was appropriate to proceed with the SEM that examines the causal relationships between constructs.

The SEM results of the initial integrated model (Figure 1) did not provide a good fit to the data: $\chi^2/\text{d.f.} = 3.62$ ($\chi^2 = 1135.13$, $p < 0.001$, d.f. = 314), NNFI = 0.92, CFI = 0.93, SRMR = 0.16, and RMSEA = 0.08 (90% CI: 0.07–0.08, p close = 0.00). More specifically, the SRMR exceeded the proposed cut-off criterion of 0.10. Therefore modification indices were examined as a way of improving the model fit (Anderson

& Gerbing, 1988). A large modification index (86.07) suggested a covariance between the latent variables of ‘trust’ and ‘athlete role model’. We consequently set this covariance to be estimated in the model. Estimation of this modified model yielded a significant improvement ($\Delta\chi^2_{(1)} = 95.76, p < 0.001$) and a goodness-of-fit, as indicated by the following indices: $\chi^2/\text{d.f.} = 3.321$ ($\chi^2 = 1039.37, p < 0.001, \text{d.f.} = 313$), NNFI = 0.93, CFI = 0.94, SRMR = 0.09, and RMSEA = 0.07 (90% CI: 0.07–0.08, p close = 0.00).

The results of the SEM are summarised in Table 4. H1 and H2 suppose positive paths from both ‘personal’ and ‘social benefit’ to ‘public acceptance’. H3 supposes that the path from ‘risk’ to ‘public acceptance’ is negative. The data reveal that all three paths to public acceptance of elite sport policy are statistically significant ($\beta_{H1} = 0.14, t = 2.82; \beta_{H2} = 0.48, t = 9.51; \beta_{H3} = -0.22, t = -5.62$), providing evidence supporting these hypotheses. The results indicate that the higher the degree of *personal* and *social* benefit the public perceives, the more positive its attitude will be towards elite sport policy. Conversely, people are more likely to have a negative attitude towards this policy if they perceive a higher degree of risk.

H4–H9 examine the antecedent factors of public acceptance towards elite sport policy through the constructs of ‘personal benefit’, ‘social benefit’, and ‘risk’. The standardised path coefficient results shown in Table 4 indicate that paths from ‘trust’ to ‘personal benefit’ ($\beta_{H4} = 0.10, t = 2.33$) and ‘social benefit’ ($\beta_{H5} = 0.17, t = 3.62$) are

Table 4. Hypotheses results.

Hypothesised paths ^a	B	S.E.	t-Value	Result
H1: Personal benefit → Public acceptance	0.14	0.05	2.82**	Supported
H2: Social benefit → Public acceptance	0.48	0.05	9.51***	Supported
H3: Risk → Public acceptance	-0.22	0.05	-5.62***	Supported
H4: Trust → Personal benefit	0.10	0.04	2.33***	Supported
H5: Trust → Social benefit	0.17	0.04	3.62***	Supported
H6: Trust → Risk	-0.06	0.04	-1.05 ^{n.s.}	Rejected
H7: Athlete role model → Personal benefit	0.60	0.05	12.28***	Supported
H8: Athlete role model → Social benefit	0.50	0.05	9.59***	Supported
H9: Athlete role model → Risk	-0.18	0.04	-3.07***	Supported
H10: Athlete role model → Public acceptance	0.16	0.05	2.92**	Supported
Squared Multiple Correlations (SMC):				
Personal benefit	0.43			
Social benefit	0.36			
Risk	0.05			
Public acceptance	0.55			

Note: $n = 461, \chi^2(313) = 1039.37, \chi^2/\text{d.f.} = 3.32, p < 0.001$; NNFI = 0.93; CFI = 0.94; RMSEA = 0.07 (90% CI: 0.07–0.08, p close = 0.00); SRMR = 0.09.

^{n.s.}Not significant.

^aPersonal benefit: Personal benefit perception of elite sport success; Social benefit: Social benefit perception of elite sport success; Risk perception: Risk perception associated with elite sport development; Trust: Trust in elite sport policy actors; Athlete role model: Athlete role model perception; Public acceptance: Public acceptance of elite sport policy.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

statistically significant. Thus, H4 and H5 are supported. However, data regarding the path from ‘trust’ to ‘risk’ ($\beta_{H6} = -0.06$, $t = -1.05$) indicates that H6 is not supported. Consequently, if people have more trust in the related institutions of elite sport policy, they then perceive greater *personal* and *social* benefits from athletic success. Data regarding paths from ‘athlete role model’ to ‘*personal* benefit’ ($\beta_{H7} = 0.60$, $t = 12.28$), ‘*social* benefit’ ($\beta_{H8} = 0.50$, $t = 9.59$), and ‘risk’ ($\beta_{H9} = -0.18$, $t = -3.07$) indicate that H7–H9 are supported. Accordingly, the public’s high recognition rate of elite athletes as role models influences their *personal* and *social* benefit perception, as well as their perception of risks. It follows that trust in elite sport policy actors and the role model potential of elite athletes are the antecedents of both the perceived benefits of elite sport success and the perceived risks associated with elite sport development, except for the relationship of trust and risk perception.

Lastly, the data show that the path from a person’s ‘athlete role model perception’ to his/her acceptance of elite sport policy is significantly positive ($\beta_{H10} = 0.16$, $t = 2.92$). Thus, H10 is supported. This implies that if the public regarded the Japanese athletes as role models then it will have more acceptance of the promotion of elite sport policy.

The present study applies the mediating effect test proposed by Sobel (1982), Aroian (1947), and Goodman (1960) to analyse the mediating effect among constructs. These provide a statistical test of the indirect effect of an independent variable (‘trust’ and ‘athlete role model’) on the dependent variable (‘public acceptance’) through a mediator (‘*personal/social* benefit’ and ‘risk’). Table 5 shows the results of three equations assessing the mediating effects and the direct, indirect, and total effect of the five constructs of public acceptance. Generally, most mediating paths were statistically significant ($p < 0.001$), excepting the mediation effect of ‘risk’ between ‘trust’ and ‘public acceptance’. There seems little doubt of the mediation effect of ‘*personal* benefit’ between ‘trust’ and ‘public acceptance’. The significant p values strongly reveal the indirect effect of athlete role model perception on public acceptance through benefit and risk perception.

Consequently, this model explained 55% of the variance in public acceptance towards the promotion of elite sport policy. It is apparent that *social* benefit perception of elite sport success had the strongest direct effect on public acceptance among the four. Meanwhile, the results revealed that athlete role model perception had the largest total effect (direct and indirect) on public acceptance (Table 5).

Discussion

In this research, we examined the socio-psychological factors associated with the public acceptance of the promotion of elite sport policy and tested a causal model that explains how to increase the acceptance. The central concern of elite sport policy studies has been naturally focused on answering, ‘What specific policy factors can increase the chance of elite sporting success?’ With a growing need for robust and evidence-based empirical research to legitimise public investment in elite sport, researchers and policy organisations have launched discussions questioning, ‘What is the outcome of elite sport success?’ The present study deepens the discussion on, ‘How a nation can increase the public acceptance of elite sport policy?’ and found theoretical and methodological approaches that contribute to filling this research gap. From a methodological viewpoint, this model established the development of

Table 5. Mediation effects analysis and standardised direct, indirect, and total effect of the constructs (personal benefit perception, social benefit perception, risk perception, trust in elite sport policy actors, and athlete role model perception) on public acceptance.

Constructs ^a	Relationship of coefficients	Path constructs	S.E.	Mediation effects test		
				Sobel	Aroian	Goodman
Trust → Personal benefit → Public acceptance <small>H4 H1</small>	H4	0.10	0.04	1.90 ^{n.s.}	1.84 ^{n.s.}	1.97*
	H1	0.14	0.05			
Trust → Social benefit → Public acceptance <small>H5 H2</small>	H5	0.17	0.04	3.82***	3.80***	3.84***
	H2	0.48	0.05			
Trust → Risk → Public acceptance <small>H6 H3</small>	H6	-0.06	0.04	1.37 ^{n.s.}	1.34 ^{n.s.}	1.40 ^{n.s.}
	H3	-0.22	0.05			
Athlete role model → Personal benefit → Public acceptance <small>H7 H1</small>	H7	0.60	0.05	2.82***	2.81***	2.83***
	H1	0.14	0.05			
Athlete role model → Social benefit → Public acceptance <small>H8 H2</small>	H8	0.50	0.05	6.82***	6.81***	6.84***
	H2	0.48	0.05			
Athlete role model → Risk → Public acceptance <small>H9 H3</small>	H9	-0.18	0.04	2.99**	2.95**	3.04***
	H3	-0.22	0.05			
	Dirrect effect		Indirect effect		Total effect	
Personal benefit	0.14		-		0.14	
Social benefit	0.48		-		0.48	
Risk	-0.22		-		-0.22	
Trust	-		0.11		0.11	
Athlete role model	0.16		0.36		0.53	

^{n.s.}Not significant.

**p* < 0.05.

***p* < 0.01.

****p* < 0.001.

reliable and valid measurements for capturing key socio-psychological factors related to the public acceptance of Japanese elite sport policy. Theoretically, the study validated five relevant constructs that may influence the public's attitude towards the promotion of elite sport as a national strategy (*personal* benefit, *social* benefit, risk, trust, and athlete role model perception). Their effects on public acceptance were successfully established by the ten double-layered structure hypotheses tests performed. Moreover, the usefulness of applying the basic attitude formation theory (Fishbein, 1963) to the elite sport policy research field was supported. This study extends the research framework from the fields of consumer policy, energy policy, and risk analysis by adding a dimension regarding the public's perception level of athletes as role models to better explain public acceptance in the context of elite sport policy. Our empirical findings strongly revealed that role model perception was the most influential antecedent factor on public acceptance.

The results revealed that when Japanese people perceive more *personal* and *social* benefits of elite sport success, they will have more acceptance of elite sport policy promotion. This supports previous studies that investigated the importance of elite sport success for a country's prestige (Humphreys et al., 2011), and reputation (Wicker, Hallmann et al., 2012) positively influenced the WTP for elite sport success. Since the path from personal benefit perception to public acceptance was statistically significant and positive, the current study also supports Wicker, Hallmann et al. (2012) who found that individuals who perceived more personal benefit stemming from athletic success (i.e. happiness) were significantly more likely to state a WTP.

The negative influence of perceived risk on public acceptance can be understood based on previous works describing that doping corrupts the image and value of sport, as well as the public's supportive attitude towards the users (Kayser, Mauron, & Miah, 2007; Petróczy, 2007; Uvacek et al., 2011). Park et al. (2012) argue that elite sport-oriented policy in South Korea has led to social risks, including educational problems of athletes as well as physical and sexual abuse, and that it could hamper the country's sporting fortune. These negative dimensions of elite sport can clearly hinder the development of a favourable public attitude towards related policy. However, results showed that while 'risk' had significant negative effects ($\beta = -0.22$) on 'public acceptance', 'perceived social benefit' was the most important factor in the model ($\beta = 0.48$). This result can be interpreted as demonstrating that Japanese people generally accept the promotion of elite sport policy because of its potential social benefit and in spite of the risks involved with the elite sport-oriented policy's emphasis. This empirical result is consistent with Green's (2006) statement that:

'alternative voices' arguing for some perspective in respect of spending such large amounts of public money on the aspirational goal of a handful of Olympic medals, remain relatively suppressed [by a storyline that elite success motivates the generality of the population to participate and compete]. (p. 233)

On the other hand caution is also needed with the interpretation of these results towards other nations. Literature confirmed that Japan has relatively low number of doping violations (e.g. Asakawa, 2011). While at the same time, a recent report has raised public concern by revealing that more than 11% of Japan's elite athletes have suffered violence, sexual harassment, or other forms of abuse while competing in

their respective sport (JOC, 2013). Since the present survey was conducted before the public release of this report (19 March 2013) these facts were not reflected in our data (i.e. the data regarding the increased risk of physical abuse/harassment is equivalent to that of unethical practices [doping, fix-game, etc.]), however, the country-specific affair in sport may indicate that care should be taken in generalising these findings to other countries.

One clear point emerging from this study is that when people have more trust in elite sport policy actors, they perceive greater benefits, which is reflected in the public's acceptance of elite sport policy. This finding is consistent with a wide range of social acceptability literature (i.e. Bronfman, Jiménez, Arévalo, & Cifuentes, 2012; Siegrist et al., 2007). The predicted unfamiliarity people have regarding elite sport policy and its outcome reflects the great importance of trust in related policy actors when it comes to public acceptability of elite sport policy. Untrustworthy institutions might decrease their appraisal of benefits; accordingly, they may boost the number of alternative voices, who disagree with public investment in elite sport. Thus, it can be assumed that, though an expansion of elite sport funding should be accepted on the basis of its objective risks and benefits, it might be socially opposed based on the related organisations' credence and not necessarily on the policy's content. These are salutary lessons for Japanese policy-makers who intend to increase expenditures on elite sport in their quest for more medals in the international arena. Building a relationship of trust and credence in policy organisations may be a point of attention in developing future elite sport plans.

Surprisingly, the result also showed that the level of trust in elite sport policy actors has little to do with the risk perception of elite sport policy. Whether people trust these institutions or not bears little relation to the risk perception. A tentative explanation could be that the bid campaign for the Tokyo 2020 Olympic and Paralympic Games may have had some impact on the respondent's experience with the relationship between trust and risk. Another explanation could arise from the fact that trust is a broad, multidimensional and dynamic construct (Li, Hess, & Valacich, 2008). It is therefore recommended to further investigate the model with investigating trust as a multicomponent construct and measure the public acceptance at several points in time on a continuous basis.

Finally, our study did not merely reveal that athlete role model perception positively determined both personal and social benefit perception, and negatively influenced risk perception, but also that it can directly influence the public's acceptability of the promotion of elite sport policy. This positive effect supports the finding of Wicker, Hallmann et al. (2012), who found that athlete role model perception positively influences the public's positive attitude towards elite sport. Hence, future research should specifically focus on how trust in the related organisations and athletes' role model perception can be enhanced. In public administration research, accountability is considered to affect trust (i.e. Fard & Rostany, 2007), which will help interpret the recent focus on the principles of accountability (i.e. Canada, Australia) (Havaris & Danylchuk, 2007; Hoyer, 2003), transparency, and fairness/equity (i.e. Japan) (MEXT, 2012b) required to secure the public's positive attitude through enhancing trust.

This study lends theoretical credence to the input-throughput-output and outcome models that have been developed in elite sport policy literature over the past decades (i.e. SPLISS model, De Bosscher et al., 2006; Multidimensional

framework for elite sport policy evaluation, De Bosscher, Shilbury, Theeboom, Van Hoecke, & De Knop, 2011; Elite sport system as a process, Shibli, De Bosscher, & van Bottenburg, 2014). These models recognise the outcome of elite sporting success as an important but under-researched element of the elite sport development cycle. This paper shows that the public acceptance of elite sport is an essential ingredient for nations wishing to increase elite sport expenditure. The study empirically demonstrated that when the public perceives that elite sport success provides an increase in benefits, then the promotion of elite sport policy will receive greater acceptance. This finding endorses the opinion of other authors that a high level of public support for elite sport success is one of the required resources for a successful sport system (Houlihan & Zheng, 2013). Public acceptance has thus become a manageable factor that needs to be addressed in policy plans to legitimise new inputs. Specifically for Japan, with a growing need from the supply-side (i.e. policy-makers) to expand the national budget for high performance sport massively in order to achieve sporting success in the 2020 Games in Tokyo, the results revealed that consent of the taxpaying public will be inseparable.

The implications for policy-makers intending to implement a publically supported elite sport policy for the 2020 Games and beyond are clear-cut. In this study, perceived social benefit had the greatest effect on the acceptability of elite sport policy. Thus, those who want to contribute to its development should focus on public awareness of the social benefits and values that stem from policy promotion, as long as its risks are not too great. Meanwhile, controversial events could adversely affect public trust of related institutions and role model perception of elite athletes, resulting in a negative attitude towards the promotion of elite sport policy. Therefore, policy-makers should also be interested in tight regulations and governance designed to inhibit these undesirable effects. Even minor incidents reported in the media can dramatically change public perception. For example, Finland's policy priority shift, which began in the 1990s, from elite sport to sport-for-all was provoked by negative factors that did not favour societal funding of sports (i.e. doping and violence). This shows how much an event with negative consequences makes it difficult to justify public investment in elite sport and what an enormous policy impact it might have (Green & Collins, 2008; Vuori, Lankenau, & Pratt, 2004). Last, but not least, retaining athletes who act as role models for the public is an even more crucial requirement of the current elite sport system, since it has the greatest total effect on public acceptance. The message for the Japanese policy actors, coaches, and athletes is that not the winner but the 'champion' (Rogge, 2010)³ will play an important role for the sustainability of the Japanese elite sport system for the 2020 Games and beyond.

Some limitations also apply to this study. First, social/personal benefits and risk perception measurements are mainly based on expert descriptions rather than empirical evidence. Therefore, we cannot say with certainty that these benefits/risks are produced for the public in actuality. For instance, the evidence that elite success increases mass participation, which is chosen as a component of the social benefit construct, is still fragmented (De Bosscher et al., 2013). Second, 'trust' and 'athlete role model' could only explain 5% of the variance of the 'risk', which limited the overall explanation capability of the model. Future research, building upon the factors that emerged as antecedents of public acceptance, could include other items, such as attitude towards sport in general, using a top-down approach. In this study, we specifically conceptualised risks associated with encouraging high performance oriented sport

policy, however, further work is also required to consider the ‘disappointment risk’ specific to elite sport in which output is uncertain (i.e. zero sum structure) compared to other public-works projects such as funding for infrastructures (Knight, MacNeill, & Donnelly, 2005; Mitchell et al., 2012). Third, as previously mentioned, Japan may prove different from other contexts, since it is where the Olympic and Paralympic Games will be held in 2020. At the time when the survey was conducted, in February 2013, promotional campaigns to boost the support rate for Tokyo’s bid were accelerated. Further analysis must be performed using heterogeneous samples. Although the authors expect to observe similar tendencies, the standardised coefficient value of each path might vary from one country to the next according to cultural difference and whether the country’s sport policy focus is on elite sport or sport-for-all. Lastly, the current study was conducted in an Internet setting. Rhodes, Bowie, and Hergenrather (2003) mentioned that younger, educated individuals with higher income have greater access to the Internet. As indicated, the basic attributes of the sample are biased, implying that findings in this setting might not be completely applicable to the general population. Therefore, more research is needed in the future.

Conclusion

The present study is a first attempt to examine the socio-psychological mechanisms that underlie public acceptance of elite sport policy. Presently, there is a high degree of probability that Japan will further expand its elite sport expenditure to achieve great success in 2020. This paper found that in order to achieve this by gaining public acceptance, Japanese elite sport policy actors need to increase the public’s trust and cultivate athletes who act as role models for society. These actions will make people perceive greater (*personal* or *social*) benefits from elite sport success and fewer risks that can be potentially associated with the elite sport policy, which, in turn, leads to more acceptance of policy promotion.

Lastly, the authors have to mention that whether the public accepts or objects to using the taxpayers’ money for elite sport development, a path dependency story may exist: once a government has decided to give priority to elite sport (or community sport), this policy is unlikely to change for some time (Green & Collins, 2008).

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Hiroaki Funahashi designed this research, carried out data collection, analysed and managed the data, and wrote the paper. Veerle De Bosscher and Yoshiyuki Mano reviewed the paper and gave final approval.

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Notes

1. The Sport Promotion Advisory Panel (*Sports Shinko ni kansuru Kondankai*) is a personal consultation body formed by Toshiaki Endo, MEXT Senior Vice Minister at that time, who in December 2006 was also the minister in charge of sport. It was composed of six sport administrators and academic experts from the field.
2. If CMV is a significant problem, a single factor will emerge from a factor analysis or one general factor to account for most of the covariance among all independent and dependent variables.
3. Jacques Rogge delivered the following speech at the opening ceremony of the first Summer Youth Olympic Games in Singapore in 2010:

You will learn the difference between winning and being a champion. To win, you merely have to cross the finish line first. To be a champion, you have to inspire admiration for your character, as well as for your physical talent. You have to compete in spirit of fair play, respecting your opponents and the rules – without doping or any other unfair advantage. If you can reach that pinnacle, if you are ready to serve as role models for your generation, you will all be champions, irrespective of your rankings.

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Appendix. Survey items and their mean scores, standardised loadings, and *t*-values (final sample of *n* = 921).

Constructs	Items	Mean	SE	Standardised loadings	<i>t</i> -Value
Personal benefit perception of elite sport success ^a					
<i>PB1</i>	Elite sport success makes me feel pride	5.40	1.19	0.86	22.68***
<i>PB2</i>	Elite sport success makes me feel a feeling of happiness	5.29	1.22	0.88	23.56***
<i>PB3</i>	Elite sport success makes me feel national identity	5.26	1.21	0.88	23.64***
<i>PB4</i>	Elite sport success makes me feel local unity	5.22	1.27	0.90	24.77***
Social benefit perception of elite sport success ^a					
<i>SB1</i>	Elite sport success stimulates economies	5.08	1.22	0.75	18.26***
<i>SB2</i>	Elite sport success demonstrates national pride internationally	4.92	1.20	0.80	20.20***
<i>SB3</i>	Elite sport success makes Japan be recognised by other countries	5.36	1.15	0.85	22.11***
<i>SB4</i>	Elite sport success improves image of Japan internationally	5.33	1.11	0.85	22.35***
<i>SB5</i>	Elite sport success increases sport participation rate	5.37	1.14	0.80	20.04***
Risk perception associated with elite sport development ^a					
<i>R1</i>	Promotion of elite sport policy inhibits the promotion of grass-roots sport	3.33	1.23	0.61	13.89***
<i>R2</i>	Promotion of elite sport policy fuels overemphasis of success	3.99	1.34	0.80	19.64***
<i>R3</i>	Promotion of elite sport policy causes physical abuse and moral harassment	3.80	1.36	0.86	22.09***
<i>R4</i>	Promotion of elite sport policy causes educational problem of athletes	4.03	1.37	0.78	19.20***
<i>R5</i>	Promotion of elite sport policy causes unethical practices (doping, fix-game, etc.)	3.75	1.33	0.76	18.31***
Trust in elite sport policy actors ^b					
<i>T1</i>	... in the Ministry of Education, Culture, Sports, Science and Technology (MEXT)	3.62	1.26	0.77	19.13***
<i>T2</i>	... in the Japan Sport Council (JSC)	3.71	1.20	0.94	26.63***
<i>T3</i>	... in the Japanese Olympic Committee (JOC)	3.74	1.26	0.90	24.40***
<i>T4</i>	... in the National Governing Bodies (NGBs)	3.59	1.20	0.85	22.35***
Athlete role model perception ^a					
<i>ARM1</i>	Japanese athlete leads by example	4.21	1.16	0.88	23.85***
<i>ARM2</i>	Japanese athlete provides a good model for me to follow	4.32	1.11	0.89	24.03***

(Continued)

Appendix. Continued.

Constructs	Items	Mean	SE	Standardised loadings	<i>t</i> -Value
<i>ARM3</i>	Japanese athlete sets a positive example for others to follow	4.46	1.15	0.88	23.61***
<i>ARM4</i>	Japanese athlete exhibits the kind of work ethic and behavior that I try to imitate	4.16	1.17	0.88	23.75***
<i>ARM5</i>	Japanese athlete acts as a role model for me	4.07	1.17	0.87	23.19***
Public acceptance of elite sport policy					
<i>PA1^c</i>	To what extent is this acceptable to you? ^c	5.00	1.11	0.86	22.82***
<i>PA2^c</i>	To what extent is this acceptable to the Japanese society?	5.07	1.06	0.95	27.38***
<i>PA3^c</i>	To what extent is this acceptable for the future generation?	5.12	1.07	0.95	26.98***
<i>PA4^d</i>	How positively should the society promote this?	5.17	1.03	0.74	18.23***

^aSeven possible answers were given: 'strongly disagree' to 'strongly agree'.

^bSeven possible answers were given: 'no trust' to 'very high trust'.

^cSeven possible answers were given: 'totally unacceptable' to 'very acceptable'.

^dSeven possible answers were given: 'should never promote' to 'should aggressively promote'.

^e'This' refers to the promotion of elite sport policy as a national strategy.

*** $p < 0.001$.