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Sport legacy impact on ethnic minority groups: the case of London 2012 the sport mega-events of the 2020s: governance, impacts and controversies. Special issue in Sport in Society

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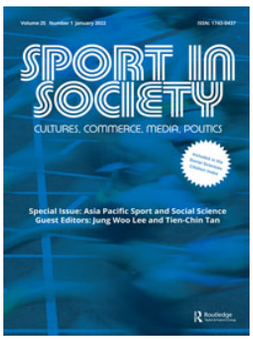

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Sport legacy impact on ethnic minority groups: the case of London 2012

The sport mega-events of the 2020s: Governance, impacts and controversies. Special issue in *Sport in Society*

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ABSTRACT

The sport legacy among ethnic minorities has been neglected despite the positive outcomes of active lifestyle and social inclusion. The current research, applying time series analysis, evaluates evidence of sport legacy among four English ethnic minorities regarding the hosting of Olympic Games (London 2012). A short-term association was found between hosting the Games and sport participation rates among ethnic groups, leading more to increasing frequency of engagement for existing participants than to attracting new participants. The results indicate differences among the ethnic groups and gender, showing that females from Asian ethnicities having the highest engagement. Practical implications for the governance of events in the future relate to improving the festival effect of the Games, to encourage social inclusion for ethnic minorities. Our results might encourage policy makers to maintain a sustained effort in the post-event period to capitalise on sport legacy.

KEYWORDS

Ethnic minorities; sport mega-events; sport legacy; Olympic Games; sport participation

Introduction

In the last ten years, a substantial amount of debate has been conducted about the potential benefits (legacy) of staging sport mega events (SMEs). Such events have delivered economic benefits (Firgo 2021) and positive sport legacies (Castellanos-García et al. 2021) for the hosting countries. Among the SMEs, particularly attention has been paid to the Olympic Games as the most famous SME (see, for example, Annear et al. 2021; Bauman et al. 2021; Scheu, Preuß, and Könecke 2021, for a recent review).

This interest has been closely associated with the global need to increase sport and physical activity (PA) levels and reduce the sedentary behaviour of individuals. International evidence shows that PA levels are falling in many countries and that inactivity is increasing. More than a quarter of the world's adult population (1.4 billion adults) and European adults are insufficiently active (European Commission 2018; World Health Organization 2020),

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having negative effects on health, estimated to be at least $67.5 billion annually (Ding et al. 2020).

In particular, ethnic minorities have shown less engagement in PA and sports than the majority of population (Strandbu, Bakken, and Sletten 2019). For example, data from Sport England's Active Lives Survey reveals significant and persistent differences in PA levels of adults from different ethnic backgrounds in England since 2005 (Sport England 2021). Politically, different voices haver argued against this gap, encouraging, as in the 2007 EU White Paper on Sport, 'a specific focus on access to sport for immigrant women and women from ethnic minorities…' and recognising the potential of sport for the integration of ethnic minorities (European Commission 2007, 8).

Consequently, the Olympic Games have been seen as an opportunity to promote physical activity in the hosting countries and a growing number of studies and reviews have been undertaken to explore the PA-related legacy of the Olympic Games. Recent reviews have shown limited evidence of change in PA participation immediately before or after Olympic Games as well as significant gaps in terms of methodologies used, the conceptualization of PA, long term analysis, and the lack of consideration of potential confounders since the 90s' (Annear et al. 2021; Bauman et al. 2021; Scheu, Preuß, and Könecke 2021).

In recent years, a research focus has been developed to consider sport legacy in some specific population groups. These range from the general perceptions of hosting cities' residents (Ribeiro, Correia, and Biscaia 2021), to a number of recent studies that considered the sport legacy among volunteers (Kim et al. 2019) or people with disabilities (McConkey and Menke 2020). Nevertheless, as far as we know no previous studies have considered the sport legacy of SMEs among ethnic minorities. The traditional smaller level of engagement in sport among ethnic minorities is associated with persistent negative effects on health (Sternfeld et al. 2020) and social inclusion (Dashper, Fletcher, and Long 2019), particularly among women.

Therefore, there is a gap in the analysis of the sport legacy of the Olympic Games among different ethnic backgrounds. This paper attempts to shed light on this potential sport legacy using the information provided by official national statistics about sport participation in England after the 2012 London Olympic Games. The aim of this research is to determine the sport legacy of London Olympic Games among ethnic minorities in England and to check potential differences by gender and ethnic groups. This analysis will contribute towards a better understanding of the SMEs' sport legacies among minority ethnic groups with significant health and social inclusion implications. For policymakers, this research might lead to new insights of social and sport legacy, for a better governance of the upcoming SMEs of the 2020s.

Literature review

Whereas governments and policy-makers emphasise the virtues of hosting the Olympic Games, the academic literature has been, in general, sceptical about the sport event legacy (Annear, Shimizu, and Kidokoro 2019; Annear et al. 2021; Bauman et al. 2021; Scheu, Preuß, and Könecke 2021; Thomson, Kennelly, and Toohey 2020; Weed et al. 2015). The recent increasing number of states hosting different SMEs and the rising costs of bidding for and hosting these SMEs, in particular, the Olympic Games, have increased the number of studies considering this type of legacy and their controversies (Byers, Hayday, and Pappous 2020;

Koenigstorfer et al. 2019; Potwarka and Wicker 2021; Preuss 2019; Thomson, Kennelly, and Toohey 2020). In fact, some poor legacy effects have encouraged opposition 'to large-scale sport event bids, resulting in the withdrawal of active bids for both Summer and Winter Olympic Games' (Thomson, Kennelly, and Toohey 2020, 2).

The Olympic Games account for various legacies in many different areas despite intrinsic difficulties for measuring this legacy (Scheu, Preuß, and Könecke 2021). Preuss (2019) has developed a framework, adopted by the International Olympic Committee, to classify the structural changes due to the Games into six different facets of legacy: urban development, environmental enhancement, policy and governance, human development, intellectual property and social development.[1] Some of these potential legacies could be intangible, such as knowledge and skills for hosting the event, intellectual property, happiness and nation pride, making difficult their evaluation due to their non-pecuniary nature (Schnitzer et al. 2017) Despite this difficulty, Seidl et al. (2021) analysed the intangible impact (perceived satisfaction) of the Innsbruck Youth Olympic Games 2012 among the young people involved in it.

Sport legacy: theoretical perspectives and empirical evidence

Sport legacy incorporates the most important change of habits included into the social development category (as presented in the previous paragraph) and it has been widely analysed in the last two decades. From a theoretical perspective, sport legacy, in general, considers different types of effects (Aizawa et al. 2018; Castellanos-García et al. 2021; Potwarka and Wicker 2021). Firstly, hosting the SMEs could increase the desire of individuals to be involved in an enjoyable sport event, often referred to as festival effect (Cleland et al. 2020; Ramchandani, Coleman, and Christy 2019). Secondly, individuals may be positively inspired by elite athletes as a consequence of their personalities and popularity, often referred to as role model effect (Storm et al. 2018). Two characteristics are relevant to develop the role model effect and influence individuals' behaviour. On the one hand, role models are typically characterised by outstanding sporting achievements. On the other hand, there should be a perception of similarity between the elite athletes and the observing individuals (Potwarka and Wicker 2021). Additionaly, national success in international competitions and SMEs may inspire individuals to be engaged in sport activities (Weed et al. 2015). Finally, hosting an SME implies an improvement in sport infrastructure and transportation (Veal, Toohey, and Frawley 2012) as well as mass media coverage (Misener et al. 2015) that could facilitate changes in behaviour and increase PA levels.

All these effects could generate a positive attitudinal change among spectators or general population towards sport participation. Generally speaking, two different attitudinal changes could take place: inspirational and motivational (Potwarka and Wicker 2021). Inspirational effects are associated to turning inactive and sedentary individuals into sport participants. Motivational effects are associated to behavioural changes within already active individuals by increasing the frequency of participation or by changing the types of sports. According to Weed et al. (2012), sporting success does not inspire individuals who are not emotionally engaged in sport. In other words, it requires already an individual to be a sport participant. From this point of view, it would be better for SMEs to generate a 'festival effect' rooted in local communities, that may have the potential to be harnessed to promote sport engagement among the least active.

From an empirical perspective, there are a growing number of studies and reviews that have been undertaken in the last two decades to analyse the sport legacy of SMEs. The majority of existing evidence and systematic reviews suggests limited PA effects associated with hosting SMEs (Annear, Shimizu, and Kidokoro 2019; Annear et al. 2021; Bauman et al. 2021; Mahtani et al. 2013; McCartney et al. 2010; Scheu, Preuß, and Könecke 2021; Weed et al. 2015). Nevertheless, the evidence is not totally conclusive. For example, some empirical studies have concluded positive short-term (Chen and Henry 2016; Hanstad and Skille 2010; Kokolakakis, Lera-López, and Ramchandani 2019; Potwarka and Leatherdale 2016) and long-term impacts (Aizawa et al. 2018).

Different arguments could be pointed out to explain this controversy of the empirical evidence. Firstly, different reviews, such as Annear et al. (2021) and Scheu, Preuß, and Könecke (2021), have argued that research shortcomings such as the data used (i.e. cross-sectional data and qualitative interviews), small sample sizes, lack of consideration of potential confounders and methods applied (i.e. correlations) have failed to find convincing evidence. Other authors have emphasised that the potential sport SME legacies could be associated with specific sports under consideration (Girginov and Hills 2008; Grix et al. 2017) and there are significant differences among types of sports (Veal, Toohey, and Frawley 2012). If this is the case, it would be more complicated to identify the sport legacy in the Olympic Games than in single-sport events (Annear et al. 2021). A number of studies have shown that these effects might be more pronounced within a youth population (Aizawa et al. 2018; Veal, Toohey, and Frawley 2012), arguing that sporting success and elite athlete role models seem to have a more inspirational effect in children and youth than in adults (Potwarka and Wicker 2020). Finally, a number of researchers have argued that the sport legacy is more likely to materialise in terms of increasing the participation frequency or in activity switching rather than increasing the number of participants (Kokolakakis, Lera-López, and Ramchandani 2019; Kokolakakis and Lera-Lopez 2020; Taks et al. 2014) because the legacy might require people to be engaged in sports, either by being active sport participants (Mutter and Pawlowski 2014) or by being engaged as sport spectators (in live events, through television or social media, etc.) (Hahm, Kang, and Matsuoka 2020). Lovett, Bloyce, and Smith (2020) have offered additional arguments about this lack of conclusive evidence, including the lack of sport infrastructure to absorb more and new participants.

Sport legacy of London 2012

Scheu, Preuß, and Könecke (2021) have accounted for 24 studies dealing with a potential legacy of increased PA in England for the Games in London 2012. Some studies found that the Games have significantly increased motivation to take part in PA (Darko and Mackintosh 2016; Mackintosh, Darko, and May-Wilkins 2016). Considering a medium-term period of 24 months after hosting London 2012, Kokolakakis, Lera-López, and Ramchandani (2019) obtained an increase in regular participation in the year immediately after the Games, with significant differences among socio-demographic groups. Young people, people aged 55–74 and wealthy socio-economic groups experienced greater growth. In contrast, Henry (2016), using a similar time-period, concluded a decrease in sport participation rates after the Games.

Some authors have emphasized that the sport legacy could depend on the type of sport, with significant differences among sports (Grix et al. 2017; Kokolakakis and Lera-Lopez

2020). In the case of specific sports, Brown et al. (2017) and Pappous and Hayday (2016) have shown increases of participation in swimming, and judo and fencing, respectively. Evidence about London 2012 has corroborated previous arguments about the sport legacy being more relevant to increase participation among existing participants than to attract new participants in sports and PA.

Finally, when considering participation in sports by ethnic minority groups after the Games, Sport England (2015) showed that engagement among black and ethnic minority groups had grown more substantially in the period 2006–2015 than was the case for the 'white British' population. Only Kokolakakis, Lera-López, and Ramchandani (2019) have focused on the sport legacy of some specific ethnic minorities (Black and Asian minorities), showing an increase in sport participation after the Games compared with the White British population. Taking into consideration that ethnicity has traditionally been a barrier in sport engagement, hosting the Games was associated with a reduction in the gap between white population and ethnic minorities in England.

Hence, we hypothesise the following:

H1a. London 2012 is positively associated with an increase in sport participations levels for English ethnic minorities.

H1b. Increases in sport participation rates among English ethnic minorities are more relevant for regular than for non-regular participants.

Minority ethnicities and sport participation

Participation in sports has been associated not only with improvement of health status but also with increased social inclusion, mainly because involvement in sport is a powerful way to develop extended social networks and effects on perception and opportunities to socialise (Pawlowski and Schüttoff 2019). This may be true in general, but even more so when considering marginalised or socially excluded groups (Sherry 2010). The 2007 European Union White Paper on Sport has recognised the potential of sport for the integration of ethnic minorities (European Commission 2007).

Consequently, there is wide empirical evidence about the relationship between sport engagement and minor ethnicity communities. Previous studies have indicated that these communities show lower levels of sport engagement than people of white ethnic background for adults, and adolescents (Breuer and Pawlowski 2011; Miller et al. 2019; Strandbu, Bakken, and Sletten 2019) in many European countries and the U.S. In the case of England, empirical evidence has also shown that there are significant differences among Black and Asian ethnic minorities (Long et al. 2009; Sport England 2020, 2021). Further, English data have shown a greater gender disparity among these communities than for white population (Sport England 2020, 2021; Stamatakis and Chaudhury 2008), mainly explained by the different role played by cultural, religious and social class barriers between males and females for these ethnic minorities (Snape and Binks 2008; Strandbu, Bakken, and Sletten 2019). Previous empirical evidence for general population has shown that females are more influenced by hosting the Games than males (Kokolakakis and Lera-Lopez 2020; Wicker and Sotiriadou 2013).

Hence, we hypothesise the following:

H2a. Different associations between London 2012 and engagement among ethnic minorities;

H2b. Different association between London 2012 and gender groups, with females likely to have greater association than males.

Method and materials

Dataset

We have selected the case of the Olympic Games in London 2012 for several reasons. Firstly, Olympic Games is the most worldwide important SME and London 2012 provided one of the first opportunities to examine the results of the planning for sport Olympic legacy (Lovett, Bloyce, and Smith 2020). An integral part of such planning was to increase sport participation among ethnic minority groups. Secondly, previous empirical evidence has shown major variations in the levels of sport participation for different ethnic groups in England (Higgins and Dale 2013; Sport England 2021). Thirdly, an official dataset in England, the Active People Survey (APS), provided detailed information about sport rates in the country.

The research was conducted by analysing the first eight waves of APS between 2005 and 2014, two years after the London Olympic Games. The APS was the largest survey of activity level in Europe: around 165,000 English adults (age 16 and over) were interviewed annually. The sample was randomly stratified, and the results were representative of the English adult population. The subsequent change from APS to Active Lives Survey makes the long-term analysis to the present less reliable and consistent. However, the two years that are included after the Olympic Games are sufficient to draw conclusions about the importance of an SME on the sport participation patterns of ethnic minorities.

We have estimated sport participation rates for four ethnic groups: Black, Mixed, Asian-Muslim, and Asian-other religions. Each of those groups was further subdivided into Males and Females. The classifications of Black, Mixed and Asian are the main headline classifications in the APS. The subdivision of the Asian group into religious grounds was made to take into account the findings of research into sport participation of ethnic groups. A SIRC research report (SIRC (Sport Industry Research Centre) 2021), for example, showed that ethnic minorities in the UK of Indian or Chinese origin are likely to participate more than ethnic minorities of Pakistani or Bangladeshi origin. Further, Higgins and Dale (2013) have pointed out the complex issues Muslim women may face in sport, including dress requirements.

In APS 'Black' is defined as 'Black British or other Black background'; Asian as 'Asian British or other Asian background'; and Mixed as 'other Mixed background'. Examples of Mixed background include: White and Black Caribbean, White and Black African and White and Asian. The Chinese background is identified separately within APS, but for the purpose of this research it is incorporated within the Asian background. Since the fourth wave of APS, religion has been identified explicitly and has been used, in this research, for the construction of required variables.

According to APS, black people are 3.4 percent of the population in England, followed by the Asian group (1.7%), Asian Muslims (1.5%) and Mixed (1.5%), as shown in Table 1 (these proportions are characteristics of the sample and may not reflect the UK proportions from a census). We have a total sample of 12,233 individuals. Finally, the gender distinction introduced in the variables between males and females is justified from the previous empirical evidence about the gender gap among these ethnic groups.

Table 1. Percentage structure of ethnic groups in England (in percentage, %) by overall and gender groups. Year 2012.

Ethnic groups	Total	Males	Females
Mixed	1.5	0.8	0.7
Black	3.4	1.7	1.8
Asian Muslims	1.5	0.7	0.8
Asian Other	1.7	0.9	0.8

Source: APS. Note: A total sample of 12,233 individuals.

The dataset used was constructed using quarterly sport participation rates, rather than months, in order to facilitate the use of seasonally adjusted Gross Domestic Product (GDP) figures from the English National Accounts, which are quarterly published. Since sport participation rates have a strong seasonal pattern with strong peaks during the summer months, they had to be seasonally adjusted to make any evaluation of sport legacy meaningful. This process facilitated comparisons with changes in GDP, which was a parameter affecting sport participation in 2012, as the economy was exiting one of the most important recessions of the post war era.

Measures

Since previous empirical evidence have found significant different legacy effects according to the frequency used in the sport participation definition (Kokolakakis, Lera-López, and Ramchandani 2019; Kokolakakis and Lera-Lopez 2020; Taks et al. 2014; Weed et al. 2015), three different variables were constructed, based on the definition of sport, including all sports and recreational activities around sports and walking for leisure at least 30 minutes long (Sport England 2015):

Regularly Active: The proportion of adults participating in at least 30 minutes of sport, at least moderate intensity, on at least 12 days out of the last 28 days (equivalent to 3 or more days a week).

Moderately Active: The proportion of adults participating in at least 30 minutes of sport, at least moderate intensity, on at least 4 days out of the last 28 days (once a week).

Slightly Active: The proportion of adults participating at least once a month for at least 30 minutes of sport, at least moderate intensity.

All the above definitions are consistent with participating in sport in general (among those aged 16+), including recreational walking, cycling and sport. Although new participants might start with different levels of frequency, we have assumed that new participants would be mainly engaged in sport within the slightly active group, following previous empirical evidence (Kokolakakis, Lera-López, and Ramchandani 2019).

Data analysis

To evaluate changes in sport participation for the minority ethnic groups after London 2012, we are going to compare their real participation rates in the 2012–2014 period with the forecasted participation had the Games not happened, following the trend in sport participation in England since 2005. For this reason, we have seasonally adjusted participation in order to include quarterly participation rates in the time series analysis.

By using regression models, we have forecasted the expected participation rates for the period 2012–2014 using the pre-Olympic participation trend adjusted for seasonality and changes in GDP. Excluding the impact of GDP was important because of the traditional association between income and sport participation (Cabane and Lechner 2015) and the 2009–2010 economic recession which had the strength to potentially change the structure of sport participation in England (Kokolakakis, Lera-López, and Ramchandani 2019).

For forecasting, the regression model applied is the adopted by Sport England from Gratton and Kokolakakis (2012), and it has participation regressed on a constant, a time trend and the percentage change of GDP three quarters before, across all indicators. For example, in the case of the Mixed group and 1 × 30 definition this model becomes:

$$P_t = 44.91 - 0.25xt + 3.10 \times \Delta G_{t-3}$$

(2.12) (0.09) (0.92) $R^2 = 39\%$, standard errors in brackets, (1)

where P and ΔG stand for percentage of sport participation and percentage change in GDP (between successive quarters) respectively.[2]

By applying this model, we obtained a set of regressions from 2005 Q4 to 2011 Q4. This time period creates a model that can help us trace the trend of sport participation in the subsequent period, 2012–2014, after the Games. To check the robustness and the accuracy of the forecast, we estimated the mean absolute percentage error statistic (MAPE), widely used for its intuitive interpretation (De Myttenaere et al. 2016). This measure can only by applied in the pre-Olympic period comparing real and 'forecasted' sport rates. For example, in the recessionary period 2009–2010 the values of MAPE for the regular, moderate, and slight participation definigions of the mixed ethnic group are 7%, 3% and 3% correspondingly. Most values of MAPE for the examined groups are below 5% which is a very good indication of the robustness of the forecasts.

By comparing the real participation rates with the expected/forecasted participation emanating from the pre-Olympic trend (2005–2011), we provide a measure of the Olympic Games association with sport participation, for the examined ethnic groups, in the period 2012–2014. Based on previous literature, if there is a sport legacy, this would be apparent in the full year of the Olympic Games and thereafter. Finally, the results must be interpreted with the caveat that they express associations between participation and the London Olympic Games; they do not, in this form, postulate a causality claim.

Results

Table 2 shows the increases in sport participation for the ethnic groups overall, without any differentiation into genders. The total sport effects column compares the real and expected participation curves for these communities, making a distinction among regular, moderate and slight participation levels. This column shows that across the ethnic groups the effect increases when switching from the regular frequency to moderate frequency and then reduces in size when the slight frequency definition is considered. In only one case (Mixed slightly active) the effect is non-existent. The 'Extra participants in average quarter' column measures the rise in absolute number of participants for each category of frequency, showing some significant differences. The greatest increase occurs in the Asian-others and Black

Table 2. Sport legacy effects by ethnic groups. Overall.

Ethnicity	Frequency of participation	Total sport effect (2012–14)	Extra participants in average quarter (2012–14)	Percentage point sport effect (2012–4),	Percentage point sport effect (2012)	Percentage point sport effect (2013)	Percentage point sport effect (2014, q1–3)
Mixed	Regular	0.93	600	0.30	None	17.60	None
	Moderate	2.27	1400	0.41	None	6.95	None
	Slight	None	None	None	None	5.35	None
Black	Regular	3.09	4200	1.64	None	15.23	None
	Moderate	3.57	4800	0.90	None	8.50	None
	Slight	3.03	4100	0.66	None	7.77	None
Asian Muslim	Regular	1.78	1100	0.93	None	9.27	None
	Moderate	3.44	2100	0.89	None	7.24	2.90
	Slight	0.72	400	0.16	None	9.22	None
Asian other	Regular	5.03	3400	2.55	None	18.77	None
	Moderate	5.03	3400	1.20	None	4.53	0.14
	Slight	3.13	2100	0.64	None	5.14	None

ethnic groups and the least in the Mixed group. Further, the 'percentage point sport effect' column shows the total sport legacy effect compared to the participation rates of the period 2009–11 for each sport frequency. The inclusion of this variable is important as the total sport legacy effect is likely to be greater in the ethnic groups with relatively high participation rates. This column reinforces these differences among the ethnic groups. Therefore, H1a and H2a are accepted.

The last columns in Table 2 shows the 'percentage point sport effect' for the individual years 2012, 2013 and 2014 in order to check the sustainability of the effect during the years following the Olympics. Our interest is to see how the sport legacy appears when the years are examined separately. The most striking result is that at the year of the Olympics (2012) there is no sport legacy effect among the ethnic groups. Almost all the legacy is produced in the next year, 2013, disappearing in 2014. Therefore, the sport legacy associated to London 2012 for the minority ethnic groups in England is a very short-term legacy, mainly based on existing participants increasing their frequent participation. Hence, H1b is accepted.

Tables 3 and 4 present the results for the sport legacy associated to London 2012 for males and females, correspondingly, for the minority ethnic groups. We have included for comparison purposes the figures for English males and females' groups.

From Table 3, we can see that for Asian Muslim and Asian other, there is no sport legacy, showing that for the period 2012–14, sport participation of the Asian males appears to be unaffected by the Olympic Games. Only, in the year 2013 a positive increase is obtained, mainly for existing participants. For the overall period, a legacy effect is shown for the Mixed group in regular and moderate participation and for the Black group in regular involvement. In both cases, the legacy is concentred in the year 2013. Comparing with males for the overall population, we can see two interesting results. Firstly, London 2012 is less associated with an increase in sport participation rates for the males of the ethnic minority groups than for the males of the overall English population. Secondly, for total males, sport legacy is shown for all the years, with a peak in 2013.

In Table 4, we can see the sport legacy of the Females among the examined ethnic groups. Whilst in the case of Males the positive associations with the Olympics were very limited, when considering the period 2012–14, the sport legacy among women is higher and much more widespread. All groups considered are associated with positive effects during the

Table 3. Sport legacy effects by ethnicity-males.

Ethnicity	Frequency of participation	Percentage point sport effect (2012–2014)	Total sport effect (2012–2014)	Percentage point sport effect (2012)	Percentage point sport effect (2013)	Percentage point sport effect (2014, q1–3)
Overall population (males)	Regular	9.97	27.14	5.19	15.39	8.83
	Moderate	None	None	None	1.93	None
	Slight	None	None	None	0.93	None
Mixed	Regular	0.49	1.82	None	26.00	None
	Moderate	0.35	2.29	None	10.78	None
	Slight	None	None	None	6.76	None
Black	Regular	0.22	0.58	None	12.38	None
	Moderate	None	None	None	5.73	0.11
	Slight	None	None	None	5.34	None
Asian Muslim	Regular	None	None	None	7.20	None
	Moderate	None	None	None	3.06	5.31
	Slight	None	None	None	7.25	None
Asian other	Regular	None	None	None	11.65	None
	Moderate	None	None	None	2.90	None
	Slight	None	None	None	3.06	None

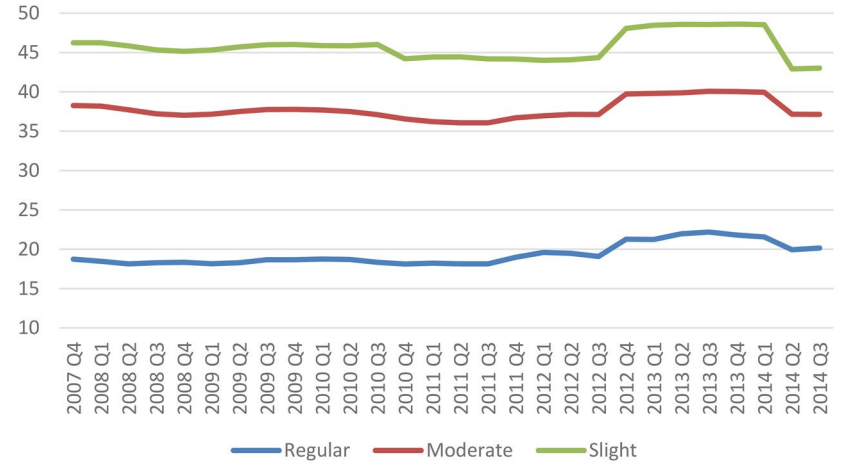
Table 4. Sport legacy effects by ethnicity-females.

Ethnicity	Frequency of participation	Percentage point sport effect (2012–2014)	Total sport effect (2012–2014)	Percentage point sport effect (2012)	Percentage point sport effect (2013)	Percentage point sport effect (2014, q1–3)
Overall population (females)	Regular	12.49	25.36	7.66	18.20	10.88
	Moderate	5.32	21.63	2.58	8.99	4.27
	Slight	3.35	16.66	0.52	8.47	0.52
Mixed	Regular	0.54	1.29	None	4.45	6.58
	Moderate	0.76	3.52	None	1.62	6.94
	Slight	0.39	2.03	None	3.38	2.72
Black	Regular	2.98	3.95	None	17.83	7.09
	Moderate	1.72	5.35	None	11.33	None
	Slight	1.43	5.29	None	10.23	None
Asian Muslim	Regular	6.04	6.93	15.25	13.61	None
	Moderate	5.61	14.67	6.12	18.72	None
	Slight	2.24	7.60	1.17	13.09	None
Asian other	Regular	7.62	10.06	3.29	31.08	None
	Moderate	4.85	15.0	4.90	6.69	2.03
	Slight	3.32	12.47	2.35	7.88	None

period 2012–14, showing that the ethnic group Asian-other has the highest increase in sport legacy under all participation definitions. Curiously, the sport legacy is higher among the Asian females than for Mixed and Black females, in contrast with the analysis performed for males. Therefore, H2b is accepted.

However, sport legacy for these ethnic groups among females is below the overall participation effect of females in England as a whole, as it has happened for males. Further, as in the case of males, all ethnic groups show positive effects in the year 2013 under all frequency definitions, strongly indicating the possibility of new sport participants associated with the Olympic Games. In the year 2014, some of the effects disappear, although not to the degree that is happening among males.

In Figure 1, female overall participation is compared with engagement in Asian Muslim women; it is also shown that the Games attract comparatively speaking more new participants among Asian Muslim women.



Asian Muslim Females, participation pattern

Figure 1. Overall female versus female Asian Muslins participation patterns. (A) Females participation pattern. (B) Asian Muslim Females, participation pattern.

Discussion and conclusions

This study has analysed the sport legacy in England associated to hosting the London 2012 Olympic Games over the period 2012 to 2014 among ethnic minorities. This research must be interpreted with the caveat that it shows associations between participation and the London Olympic Games and cannot suggest a causality claim. Sport legacy has become a recurrent issue in academic discourse about SMEs governance. In the case of London 2012, this sport legacy was a core component of the expected legacy of hosting the Games in England (Thorpe et al 2020). Making a distinction among different frequencies of sport engagement and between males and females, we have obtained significant results for the four ethnic minority groups under study.

Firstly, we have obtained a short-term sport legacy among ethnic minorities, confirming previous empirical evidence about the overall population for London 2012 (Downward, Dawson, and Mills 2013; Kokolakakis, Lera-López, and Ramchandani 2019). In comparative terms, this sport legacy is less intensive than for the overall population, showing that ethnic minorities are less attracted by inspirational and motivational factors associated to hosting the Games in the country. This could be associated to a western image of the Olympic Games, which is occasionally distant from the cultural diversity found in ethnic minorities. In terms of time, we have found that the main sport legacy occurred, mainly in the year after the Games, in 2013, among ethnic groups. This result is also consistent with the literature about sport Olympic legacy that holds that the effect mainly takes place in the year following the Games (e.g. Cashman (2006) for Sydney 2000 and Pappous (2011) for Athens 2004). Nevertheless, in the case of women, the sport legacy lasts during 2013 and 2014, although it is more moderate in 2014.

Secondly, the results show that the sport legacy is more significant in terms of increasing frequency of sport participation than attracting new participants. This is supported by previous studies that argued that SMEs are more likely to increase regular participation than to rise the number of new participants (Cleland et al. 2020; Kokolakakis, Lera-López, and Ramchandani 2019; Ramchandani, Coleman, and Christy 2019). Further, it could suggest, following Weed et al. (2012), that London 2012 has not generated a 'festival effect', bigger than and beyond sport but also rooted in local and cultural communities, that might promote sport engagement among these ethnic minorities, traditionally least active in sport than the overall population (Sport England 2021).

Thirdly, we have obtained differences in terms of sport legacy among the four ethnic minorities under study. Some ethnic minority groups, such as Black and Asian Other, show a higher sport legacy than Asian Muslims. This result is associated with the cultural and religious barriers that have been previously analysed for this group (Strandbu, Bakken, and Sletten 2019) and limit the sport legacy for hosting London 2012 among Asian Muslims.

Fourthly, the differentiated analysis between males and females show interesting differences on sport legacy. Among males, Mixed and Black ethnic groups seem to have the highest sport legacy, which is clearly lower among Asian minorities, particularly in the case of Asian Muslim group. Nevertheless, among females, Asian ethnicities show the highest sport legacy, particularly females of Asian Muslim origin. These results are also aligned with previous empirical evidence (Kokolakakis and Lera-Lopez 2020; Wicker and Sotiriadou 2013) that shows that females are more influenced by hosting the Games than males and emphasise gender differences in inspirational and motivational factors associated to the Games.

To sum up, the results suggest that hosting SMEs might have a positive but limited association with attracting new participants, re-engagement of lapsed sport participants and boosting sport participation frequency among ethnic groups. Further, hosting SMEs could contribute to reverse inequalities in sport participation rates among women and men of ethnic minority groups. The London 2012 sport legacy seems to have higher effect on women than on men. The sport legacy is maximised in the year following the Olympics which creates an opportunity for policy-makers and sport institutions to plan and 'capitalise' upon it.

These results could have some interesting management and practical implications for governance of SMEs in the recent future. Firstly, hosting SMEs, and in particular the

Olympic Games, would not by itself address existing inequalities in diverse ethnic backgrounds, a growing population in many Western countries[3]. Secondly, the sport legacy of hosting SMEs should be more associated to the festival effect, connecting the sport event to cultural and social activities, as a way to favour social inclusion in ethnic minority groups. Thirdly, some ethnic groups deserve special attention to develop sport legacy associated to SMEs. In particular, hosting SMEs could be a great opportunity to attract new sport participants among female Asian Muslims, a group traditionally associated to lower levels of sport engagement (Lenneis and Pfister 2017), but also associated more than Asian Muslim males to the Olympic sport legacy. This might imply that efforts to supply sport facilities for this group that allow them to maintain their embodied respectability (Thorpe et al. 2020) could become critical and should be under consideration for governance of future SMEs. Finally, our results might encourage policy-makers to maintain a sustained effort during the post event period to capitalise on the SME's legacy that is produced immediately after the events and avoid, in this way, a short-term sport legacy.

Limitations of the study and further research

Several limitations about the study need to be noted. The first limitation has to do with the nature of the data. The cross-sectional nature of the survey precludes us from establishing causal chains among the variables. Then, results must be interpreted with the caveat that they express associations between sport participation and the London Olympic Games. In the future, using longitudinal data would allow researchers to track changes over time in sport engagement and to relate them to hosting SMEs. Another limitation is the difficulty to draw definitive conclusions regarding the sport legacy of SMEs because a simple and unique cause cannot be established. For example, it is not possible to isolate the legacy of one SME in a country, in our case the London Olympic Games, with other SMEs hosted in England under the period of analysis. The potential influence of confounders has been limited in our case to the evolution of GDP, but there are other potential variables as government policy, urban development, etc. (Annear et al. 2021). Furthermore, this study has been restricted for methodological reasons[4] to only two years following the Olympic Games. Although a short-term impact has been established, further analysis should be developed to check the longer-term impact of hosting the Olympic Games.

Some research gaps are still open and thus raise interesting research question for further studies. Firstly, would the sport legacy be the same for a general SME, like the Olympic Games, as for a single SME (e.g. Football World Cup) among ethnic minorities? Further research should be focused on single SMEs to measure their legacy among ethnic groups. Another question is related to differences in sport legacy according to age in ethnic minorities. Would the gap shown in this research between males and females in sport legacy be similar through all age groups? Further research on sport legacy in ethnic minorities should consider age intervals. Finally, would the association between a SMEs and sport legacy for ethnic groups be necessary limited to the host nation or could be analysed as a global impact in many countries? These questions would undoubtedly alter SMEs' governance in the future and could offer new insights and opportunities to develop spot legacy among the ethnic minority groups.

Notes

1. See Scheu, Preuß, and Könecke (2021) for a recent review of the empirical evidence about Olympic legacy following the Preuss' framework.
2. The regressions for each ethnic minority group, gender and each variable of sport participation are available upon request.
3. For example, in 2011, 1 in 5 people in England were from Black, Asian, & Minority Ethnic groups; this is projected to increase to 2 in 5 people by 2051 (Sport England 2020).
4. The change from Active People Survey to Active Lives Survey at the end of 2014 in England makes the long-term analysis to the present less reliable and consistent.

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