# A Leg(acy) to Stand on?

## A Non-Host Resident Perspective of the London 2012 Olympic Legacies


## Abstract

This study extended the temporal and spatial evaluation of mega-event impacts, by investigating residents' perceptions of the Olympic legacies from a non-host community perspective. The study site was the Borough of Weymouth and Portland in South West England, which hosted the sailing competitions of the 2012 Olympic Games. Cross-sectional data were collected at two post-event intervals in 2013 and 2016. Across the two stages, the overall perceived legacies improved, with the most significant change related to perceived economic legacies and community legacies at the national level. Since residents' attitudes toward the 2012 Olympic Games influenced their support for future event hosting, a strategic approach to event planning and leveraging is important to engender positive legacies that benefit broader communities than the host city. Future studies are recommended which replicate and extend this research to more fully understand resident support for mega-events.



Keywords: legacy; event impact; mega-event; resident; Olympics; longitudinal

## 1. Introduction

Mega-events are occasional large-scale events that command global attention and have major impacts for tourism and the development of the host destination (Getz & Page, 2016). Events such as the Olympic Games and FIFA World Cup not only attract a global audience, but also have the potential to yield legacies such as tourism gains and infrastructure upgrades for the host city and its neighbouring communities (Kaplanidou et al. 2013; Fourie & Santana-Gallego, 2010; Kim & Petrick, 2005). These events can also be powerful catalysts to stimulate economic development and engender social changes (Gibson et al., 2014; Prayag, Hosany, Nunkoo, & Alders, 2013; Ritchie, Shipway, & Cleeve, 2009). For example, when Beijing hosted the 2008 Summer Olympic Games, the government introduced several social initiatives such as campaigns to forbid spitting, littering, and queue jumping (Liu, Broom, & Wilson, 2014). Similarly, the 2010 FIFA World Cup in South Africa was conceptualized as the "African World Cup" because the event was perceived to help improve destination image and increase tourist arrivals (Fourie & Santana-Gallego, 2010).

Although mega-events can be viewed as a driver to prosperity through legacies, competition to host these events are diminishing in recent years, with Hamburg, Rome and Budapest all pulling out of the bid for the 2024 Summer Olympics (Axon, 2017). This may be in part due to challenges in determining the actual benefits of mega-events (Jones, 2001) and reported differences between pre- and post-event tourism benefits after the Beijing 2008 Olympics (Li, Blake & Cooper, 2011). Critics view the term 'legacy' simply as a way to justify the staging of mega-events (Minnaert, 2012) and point to the negative aspects such as displacement of residents (Thornley, 2012), marginalization of communities (Pappalepore & Duignan, 2016) and financial liabilities (Spracklen, 2012) resulting from hosting mega-events. Scholarly works have also highlighted a number of unintended consequences of event related policies and strategies such as debt associated with building new infrastructure and

construction that give birth to “white elephants” (e.g., Spracklen, 2012; Thornley, 2012). Other negative outcomes may include environmental damage, traffic congestion, and rising costs of living (Gursoy, Kim, & Uysal, 2004; Kim & Petrick, 2005; Prudnikova, 2012). Consequently, residents often find themselves in a dilemma where trade-offs need to be made between individual sacrifices in the short run and potential collective good of the community in the long run (Chien, Ritchie, Shipway, & Henderson, 2012). Given these observations, researchers have questioned if hosting a mega-event provides impetus required for economic or social changes and called for further empirical works to assess the value of mega-events (e.g., Li et al., 2011; Spracklen, 2012). Issues concerning how long should legacies last, where they should occur and at what cost are important to consider (Smith, 2014a). As Smith (2014b) argues, government needs to closely examine the circumstances in which events can achieve policy goals, such as improvement of image, urban regeneration, tourism promotion and the like. Our study was motivated by this continued debate among scholars, governments, and event practitioners to better understand the extent of mega-event legacies.

Community support plays a critical role in a city’s successful bid to host mega-events, in the sense that residents provide a welcoming atmosphere for visitors, participate in lead-in events, and contribute to the development of volunteering sources (Fairley, Cardillo, & Filo, 2016; Karadakis & Kaplanidou, 2012). The majority of research on residents’ reactions to hosting mega-events has typically focused on those living in the host destination (e.g. Gursoy & Kendall, 2006; Kim, Gursoy, & Lee, 2006; Prayag et al., 2013; Waitt, 2003). However, organizing of mega-events relies largely upon tax revenue derived from residents and businesses in regions or peripheral communities that are not per se hosting the event (Kellett, Hede, & Chalip, 2008). Subsequently, there is a growing sense that the impacts of event must also be understood from the non-host community’s perspective in order to assess the extent of benefit flow or spillover (Deccio & Baloglu, 2002). Moreover, as event outcomes are not

static but rather dynamic, residents' evaluations of event impacts change over time (Kaplanidou et al., 2013; Kim et al., 2006). As a result, measurement of legacies should not only take place at the successful bidding of the event or during the event. As highlighted by Hiller and Wanner (2011), mega-events are not just about urban and global processes, but also experiences people live through. Consequently, residents' interactions with the event and their experiences over time might change their evaluation of whether hosting the event is considered worthwhile.

The objectives of this study are twofold. First, it aims to extend temporal and spatial evaluation of event legacy, by examining perceptions of legacies associated with the 2012 London Olympic Games from a non-host community's perspective. While legacies generated from mega-events may appear obvious, empirical testing of this effect among non-host residents over an extended period post event has not been previously undertaken. As certain outcomes take time to cultivate, evolve and realize, it would be reasonable to assess the event impacts and legacies over a period of time, even after the event has finished. Our rationalization and development of the empirical investigation is informed by existing tourism literature, some specifically calling for further research to better understand legacy perceptions among non-host communities in a longitudinal study (e.g., Karadakis & Kaplanidou, 2012; Pappalepore & Duignan, 2016; Prayag et al., 2013). Second, this study aims to replicate the methods used in prior studies examining legacies at different event stages (e.g., Karadakis & Kaplanidou, 2012; Prayag et al., 2013; Ritchie et al., 2009). Because research on non-host residents' perceptions of mega-event legacies is still developing, a systematic approach is needed to understand how the planned legacies by the event organization and host nation government are assessed by residents. Part of this systematic approach needs to include extensive replication in different event contexts as it is essential to ensure the reliability and validity of measures and knowledge accumulation in

tourism research (Singh, Ang, & Leong, 2003). We adopt the measurement items from the stated legacy objectives from government policies to ensure consistency with previous investigations, supplemented by those used in past academic studies. To understand how enduring and sustained the legacies are, the examination draws on cross-sectional longitudinal data collected post-event using a questionnaire at two time intervals, 2013 (n =969 residents) and 2016 (n= 565 residents). Overall attitudes toward the event are also examined and used, along with perceived legacies and other factors, to understand resident support for hosting the 2012 London Olympics and support to host future events.

## 2. Literature Review

### *2.1 Mega-Event Legacies*

The concept of 'legacy', or the residual impacts of mega-events, is fraught with ambiguity and remains largely unexplored (Pappalepore & Duignan, 2016). The terms "impact" and "legacy" are often used interchangeably in sport and tourism literature, but legacy encompasses a broader spectrum of impacts that can be sustained after the event (Kaplanidou et al., 2013). Various authors (Cashman, 2006; Dickson, Benson, & Blackman, 2011; Shipway, 2007) have cautioned about defining legacy as only a positive concept, as hosting a mega-event can produce both intended and unintended consequences (Spracklen, 2012). According to Preuss (2007, p. 211), *legacy* can be defined as '*irrespective of the time of production and space, legacy is all planned and unplanned, positive and negative, tangible and intangible structures created for and by a sport event that remain longer than the event itself'*. The measurement of legacy often focuses on the economic impacts over time such as increased revenue, job creation, infrastructure development and commercial activities in the host destination (e.g., Lee & Taylor, 2005; Lorde, Greenidge, & Devonish, 2011). Given the growing importance of a triple bottom line approach to mega-event planning (Ritchie et al.,

2009), other studies have focused on tourism (e.g., Fourie & Santana-Gallego, 2011; Kim & Petrick, 2005; Preuss & Solberg, 2006), social (e.g., Gibson et al., 2014; Kaplanidou et al., 2013; Waitt, 2003), and environmental legacies (e.g., Jin, Zhang, Ma, & Connaughton, 2011; Karadakis & Kaplanidou, 2012; Preuss, 2013).

Although previous research has acknowledged some strong relationship between hosting mega-events and positive impacts such as direct tourism gains to the host destination, there have been debates about whether these benefits are long-lasting, with pre- and post-event studies showing actual losses rather than tourism benefits through more accurate computable general equilibrium (CGE) modelling techniques (Li et al., 2011). While evidence of positive economic benefits have been called into question (Balduck, Maes, & Buelens, 2011; Bell & Gallimore, 2012), measurement of social and cultural impacts is even more challenging as they are elusive and thus difficult to quantify (Jones, 2001; Minnaert, 2012; Ritchie et al., 2009). In practice, this may be due to ambiguity surrounding the legacy concept (Thornley, 2012), or gaps between expected and actual benefits (Li et al., 2011).

In the build-up to the London Olympic Games, for example, despite a lack of evidence of legacy in sport from previous games and poor understanding of the mechanisms by which legacy might be created, there was significant investment for legacy planning at national, regional, and sub-regional level (Bell & Gallimore, 2015). Subsequently, limited planning guidance and confusions over resources and responsibilities were suggested to produce uneven distribution of positive event impacts between the host city and non-host regions (Bell & Gallimore, 2015). Policies by the government and event organization can also create unintended consequences (Spracklen, 2012). Anecdotally, during the 2012 Olympic Games, London was described as a “ghost town” as locals were encouraged to avoid the transport system and regular visitors stayed away from the host city for fears of disruption, expense and overcrowding (Clark, 2012). Almost all tourist attractions, including

museums, theatres, zoo, and even pubs reported a drop of business (Clark, 2012). As pointed out by Pappalepore and Duignan (2016), there is often a conflicted relationship between Olympic rhetoric and local reality.

### *2.2 Host and Non-Host Residents' Perceptions of Mega-Event Legacies*

Any planning for positive and sustainable legacies should occur before the event and involve *"all important stakeholders who will be affected by - and benefit"* (Ritchie, 2000, p. 160). Residents in the mega-event host city provide vital input as they generate a hospitable atmosphere for visitors, support the building of facilities and infrastructure, and provide volunteer services (Fairley et al., 2016; Gursoy et al., 2004). Such involvement, in turn, can have a direct or indirect impact on their quality of life (Kaplanidou et al., 2013). Given residents' involvement and perceptions play a crucial role in making the event a success (Preuss & Solberg, 2006), extensive research has attempted to understand the magnitude of event legacy by assessing residents' perceptions towards hosting mega-events. Much of this research has been centered on the social exchange theory perspective that residents evaluate events as either positive or negative on the basis of expected return on investment (e.g., Deccio & Baloglu, 2002; Gursoy & Kendall, 2006; Lorde et al., 2011; Waitt, 2003). Residents may have more positive perceptions of the event if they perceive hosting the event will bring individual benefits and such benefits outweigh costs (Ritchie et al., 2009).

Empirical results, however, vary across papers. For example, Kim and Petrick (2005) investigated the perceived impacts of the 2002 FIFA World Cup and found that residents' perceptions differed across social-demographic variables. Residents living in Seoul indicated destination image enhancement and community consolidation as the most positive impacts of the World Cup. Other positive impacts included economic benefits, tourism development and urban revitalization, and increased interest in foreign country or culture. Residents also

reported negative impacts in terms of price increase, excessive spending for event preparation, and traffic problems. More importantly, Kim and Petrick's (2005) study showed that excitement wore off three months after the event, suggesting that attitudes towards the event are modifiable with the passage of time.

Other studies have focused on the event's social utility. Within the framework of social representations theory, Zhou and Ap (2009) investigated Beijing residents' perceptions of the 2008 Olympic impacts and suggested that residents derived meanings of the event through their interactions with the society and its value system. Those "embracers" perceived the event to have greater social-psychological impacts, urban development impacts and economic impacts, whereas the "tolerators" displayed concerns about the event's impacts on social life such as crime and disruption (Zhou & Ap, 2009). The disproportionally large number of embracers (n = 919) compared to tolerators (n = 121) suggested that hosting the Games symbolized the country's renaissance and renewed strength, and was therefore highly supported by local residents (Zhou & Ap, 2009).

In a similar study, Kaplanidou et al. (2013) explored South African residents' life satisfaction as a result of hosting the 2010 FIFA World Cup. The study revealed significant differences in perceived impacts pre- and post-event. While the political impacts, psychological impacts and social benefits significantly influenced perceived quality of life before the event, economic impacts emerged to be a key predictor of quality of life after the event. Such findings might be related to the pre-event anxiety about event-hosting costs, as well as the results of improved economic situation post-event (Kaplanidou et al., 2013). The findings echoed Kim and Petrick's (2005) study, suggesting that perceptions of event impacts are likely to change over time.

In recent years, environmental issues associated with mega-event have become increasingly important, and some researchers have argued that environmental impacts created

194 by event related consumption and travel activity need to be holistically measured and
195 quantified (Collins, Jones, & Munday, 2009; Preuss, 2013; Prudnikova, 2012). Jin et al.
196 (2011) applied theory of reasoned action to examine residents' perceptions, attitudes and
197 support of the Green Olympic concept initiated by the Beijing Olympic Games. Survey
198 responses from the city's residents suggested that hosting the 2008 Games contributed to
199 improved air and water quality, greater energy efficiency, enhanced management of industrial
200 pollution, higher rate of green coverage, and better environmental education. Such
201 perceptions generated favorable attitudes toward the Games and reinforced the desire to
202 support future mega-events. In contrast, in their investigation of London residents' attitudes
203 toward the 2012 Olympic Games, Prayag et al. (2013) did not find any relationship between
204 perceived environmental impacts and residents' attitudes toward the event. The authors
205 reasoned that this might be attributed to the timing of study which took place prior to the
206 event, when magnitude of environmental impacts might become more evident during or after
207 the event (Prayag et al., 2013). Results implied the need for a longitudinal approach to
208 provide accurate assessment of the event's environmental legacy.
209 Given the scope and size of certain mega-events such as the Olympic Games, their
210 impacts are likely to spillover to regional or distant communities (Deccio & Baloglu, 2002;
211 Liu et al., 2014). A growing body of literature (e.g., Beesley & Chalip, 2011; Kellett et al.,
212 2008; Ritchie, Shipway, & Chien, 2010) has shifted focus towards understanding the
213 perceptions and attitudes of non-host communities that are not hosting the event, but their
214 residents and businesses are often required to support the development of event related
215 facilities, services and infrastructure and to shoulder the post-event debt through tax payment.
216 Some researchers have demonstrated that depending on the city's proximity to the event,
217 residents' perceptions and support behaviors may vary (Ritchie & Inkari, 2006; Ritchie et al.,
218 2009). For example, residents who lived further away from the host city had more positive

perceptions of event impacts and showed greater support of the event compared to those who lived closer to the venue, possibly because of the negative impacts such as disruption to daily life that were experienced during the event (Cegielski & Mules, 2002; Ritchie et al., 2009).

Other studies have observed mainly unfavorable or ambivalent responses from non-host community residents. Deccio and Baloglu (2002) examined non-host community residents' perceptions of the spillover effect of the 2002 Winter Olympic Games in Salt Lake City. Although some residents felt that worldwide promotion of the city seemed to have increased visitation and produced long-term benefits on the region's tourism, most remained ambivalent towards the event's local impact. Fairley et al. (2016) investigated regional residents' perceptions towards volunteering at the 2018 Commonwealth Games. Results revealed that non-host community residents were largely unaware of the volunteering opportunities and displayed reluctance to volunteer, due to constraints related to distance, travel costs, time, and existing commitments. The historical rivalry between the host and non-host cities and perceived lack of benefit to the non-host region further acted as inhibitors. Fairley et al.'s (2016) findings resonated with Beesley and Chalip's (2011) study, highlighting that the historical competition between host and non-host cities might result in missed opportunity to realize positive impacts offered by the mega-event. These studies also shed light on the need to better communicate with and engage non-host communities in activities over time that would leverage opportunities of the event.

### *2.3 Legacy Perceptions Change Over Time and Space*

One of the justifications communicated to local communities hosting the mega-event is associated with the long-term benefits that will be left for the destination once the party is over (Dickson et al., 2011). As such, some studies have investigated how sustainable the positive impacts are with the passage of time (e.g., Kaplanidou et al., 2013; Lorde et al.,

2011; Ritchie et al., 2009). For example, Balduck et al. (2011) measured residents' perceptions of the social impacts created by the Tour de France using a pre- and post-design. Results revealed that residents' views changed over time, particularly with respect to the negative impacts. In general, the perceived costs of hosting the Tour de France were lower than the expected costs, but the perceived benefits such as city marketing and cultural benefits did not increase drastically, suggesting the need for event authorities to enhance and better communicate positive impacts associated with hosting the event. In a similar vein, Gibson et al. (2014) evaluated perceptions of psychic income and social capital among South African residents in a pre- and post- analysis of the 2010 FIFA World Cup. Consistent with other studies (e.g., Zhou & Ap, 2009), residents from five host cities reported relatively high levels of civic pride and event related euphoria prior to the event. Such perceptions could be attributed to social leveraging initiative enacted by the government that promoted a sense of community and brought people together in celebration. The psychological impacts further intensified eight months after the event. The authors reasoned that the importance of football to South Africans' identity, manifest through pride and patriotism during and after the event, was the key to the sustained psychological impacts (Gibson et al., 2014). Interestingly, perceptions of diversity tolerance, collective action, and social connections decreased after the event, implying the historical division and inequalities embedded in the South African society. The findings called for social legacy to be a long-term development agenda, where an active involvement of community members is needed.

In one of the first attempts to make a comparison between host and non-host cities over time, Karadakis and Kaplanidou (2012) examined the legacy perceptions of residents living in Vancouver (host city) and Ottawa (non-host city) during the 2010 Winter Olympic Games. Telephone surveys conducted six months prior, during and six months after the event showed that environmental impacts were considered as the most important legacy across

cities and over time. Perceptions, however, differed between host and non-host communities toward other legacies: whereas residents in Vancouver placed greater emphasis on economic legacies, residents in Ottawa felt socio-cultural legacies (i.e., improved cultural experiences and educational opportunities) as more important. However, such perception shifted after the event, as psychological legacies (i.e., community spirit) overtook socio-cultural legacies to become the second most significant legacies among Ottawa participants. The findings could be explained by the performance of Canadian teams during the Games, as well as opportunities to showcase the city's tourist attractions, which eventually boosted the psychological legacy evaluations (Karadakis & Kaplanidou, 2012). Contrary to previous literature, both host and non-host residents rated the outcome of economic legacies lower than expectations throughout the duration of the study, indicating that residents might be sceptical towards economic gains associated with hosting the Olympic Games. Results from the study highlight the potential differences between host and non-host city residents in their perceptions of event legacy. These perceptions may be experienced subjectively and are likely to evolve with the passage of time.

The measurement of mega-event legacies has proven to be complex, as they are multifaceted and dependent upon an array of local and global factors (Shipway, 2007). Spracklen (2012) and Thornley (2012) questioned if changes in government policies and institutional arrangements in the lead-up to the 2012 Olympic Games shifted the legacy approach and limited its ability to deliver the aspirations. Similarly, Bell and Gallimore (2015) indicated that the austere economic environment, compounded by post-event political instability and organizational change since the 2012 Games, might have diminished much of the momentum for post-event legacy. Certain event outcomes take time to cultivate or establish, and residents' interactions with the event are also likely to change over time (Hiller & Wanner, 2011). As such, some researchers have called for further studies to take into

consideration both the temporal and spatial aspects of legacy evaluation (Dickson et al., 2011; Preuss, 2007; Smith, 2014b). In relation to the temporal aspect, consideration must be given to the time frame over which legacy occurs beyond the immediacy of the event in order to determine the extent and impact of the legacy upon the community. For example, the event's impact on resident pride and self-esteem can be realized only after interactions between visitors and residents have taken place over the duration of the event. The renewed sense of pride may guide residents to re-evaluate their value, make them feel empowered, and possibly change their attitudes toward the event (Maruyama, Woosnam, & Boley, 2016). Thus, a longitudinal approach to track and monitor event legacies over a prolonged period of time would be considered reasonable.

In terms of the spatial aspect, to date, there has been a relative paucity of work to understand how mega-events impact on non-host communities. Increasingly, many government and event authorities are under the pressure to justify public investments and to ensure that event related benefits are maximized and extended beyond the immediate radius around the event (Fairley et al., 2016). In the case of the 2012 London Olympics, significant investment was made in planning for a participation legacy both in and outside of organized sports at national, regional, and sub-regional levels (Bell & Gallimore, 2015). Consequently, it is important to understand how non-host city residents' perceptions of event legacies evolve over time and whether they perceive legacies to exist across different scales. Planned legacies at the national level may be prominent given they receive the greatest media interest and funding priority (e.g., state-of-the art stadiums, Liu et al., 2014). Legacies at the local level might also be salient due to their relevance and proximity to residents' daily life (e.g., benefits to local business; Minnaert, 2012), as well as publicity from the local media (Chien et al., 2012). Alternatively, perceptions of legacies at the regional level might be ambivalent and challenging to assess because of complexities in resource allocation, insufficient

stakeholder engagement, or variability in decision-making processes (Bell & Gallimore, 2015). Identifying how perceived legacies vary over time provide government and event organizers insights into residents' willingness to host future mega-events, given the events are largely funded by taxpayer money (Ritchie et al., 2009). Perceived positive legacies have been found to influence residents' behavioral intentions towards the event (Jin et al., 2011; Liu et al., 2014; Prayag et al., 2013).

One of the main objectives of our study is to replicate the methods used by prior mega-event studies (e.g., Karadakis & Kaplanidou, 2012; Prayag et al., 2013; Ritchie et al., 2009), thus measures adopted in these studies are used to test their reliability and validity contributing toward knowledge accumulation and theory development. Specifically, residents' overall attitudes toward the event have been found to influence support of mega-event hosting (Prayag et al., 2013). Attitudes act as an important precursor to behavioral intentions such as volunteering (Jurowski, Uysal, & Williams, 1997) and could shed light on public interest such as future biding for other major events (Prayag et al., 2013). In addition, factors such as involvement in tourism, event attendance, and volunteering have been suggested to potentially influence legacy perceptions and support for hosting mega-events (Fairley et al., 2016; Gibson et al., 2014; Hiller & Wanner, 2011; Ritchie et al., 2009), as they provide opportunities for residents to experience the event first-hand. The research also sought to understand resident responses by considering socio-demographic factors such as age, gender, length of residence, and proximity to event venues. Perceptions of event impacts and support for mega-event development have been found to vary with socio-demographic factors as each segment has its own social exchange relations with the event and its stakeholders (Cegielski & Mules, 2002; Kim & Petrick, 2005; Ritchie et al., 2009; Waitt, 2003).

Researchers have argued for a holistic approach to understand mega-event legacies that integrate the assessment of economic, social, and environmental dimensions, and argue for a resident perspective given their crucial role in the successful hosting of mega-events. Existing findings, however, have been inconsistent, as the Olympic Games may generate relatively different legacy perceptions and support among host and non-host communities (Prayag et al., 2013; Zhou & Ap, 2009). Ongoing research across event contexts can provide accumulative knowledge to help build literature in this field. The review leads to the development of our research question: *What are non-host residents' perceived legacies and support for the 2012 Olympic Games?* We formally established our research propositions to guide our empirical investigation:

*Proposition 1*: Non-host residents' perceived legacies for the 2012 Olympic Games will change over time.

*Proposition 2*: Non-host residents' perceptions of legacies will vary across the national, regional, and local levels.

*Proposition 3*: There is a direct positive relationship between perceived legacies and non-host residents' support of the 2012 Olympic Games.

*Proposition 4*: There is a direct positive relationship between perceived legacies and non-host residents' support for future hosting of mega-events.

*Proposition 5*: Attitudes toward the event is positively related to event support.

### *2.4 Research Setting*

The present research uses the context of 2012 London Olympic Games to understand how residents' perceptions of the Olympic legacies at national, regional and local levels change over time. It formed part of a broader ongoing study examining non-host residents'

perceptions and support behavior towards the London Olympic Games in the Borough of Weymouth and Portland, which is located in the county of Dorset, England.

According to the 2011 UK population census, the Borough had a population of 65,167 residents (Office of National Statistics, 2017). It was in a unique position in that despite being a non-host city, it actually hosted the sailing competitions of the Games. The events provided opportunity for residents in the Borough to be involved in the Games that potentially enhanced civic engagement and assisted with strengthening community spirit (Shipway et al., 2010). While previous studies on the London Olympic Games have examined issues in relation to regeneration and creative industries (Pappalepore & Duignan, 2016; Smith, 2014a), as well as controversies over use of public space (Stevenson, 2013), the research attention has centered on London as the host city with limited considerations on peripheral communities in England. The present research addressed this gap.

In the earlier stages of preparing for the Games, the South West of England Regional Development Agency (SWRDA) and Sport England South West identified five key strategic areas for delivering legacy across the region that incorporated the Borough of Weymouth and Portland. These were business development, tourism and regional image, sporting opportunity, cultural celebration, and community engagement. At regional level, it was initially promoted that the involvement of the community would underpin their whole approach to the Games, with a range of initiatives to increase confidence, engagement, participation and skills of individuals (SWRDA, 2007). However, in the years leading up to the Games, due to changes in the political and economic landscape in the UK and subsequent changes in regional funding and organization, these legacy objectives were altered or realigned. Similarly, at a local county level, legacy objectives were amended in the lead-up to the Games between 2005 and 2010 (Shipway, Henderson, & Stuchberry, 2010), primarily due to funding and resourcing restrictions. At national level, between the summer of 2013

and 2016, the UK Government and Mayor of London published annual reviews on progress towards legacy objectives linked to the Games. For the purpose of their reports, legacies were categorized into five general areas: Sport and Healthy Living; Regeneration of East London; Economic Growth; Bringing Communities Together; and the Legacy for the Paralympics (DCMS, 2016). These criteria, however, were only partially aligned with the legacy objectives that existed at a regional level within the South West of England.

The data presented here was collected after the 2012 Games. The first phase of the post-Games study occurred approximately four months after the event concluded in January 2013, whilst the second post-Games study was conducted approximately 3.5 years after the completion of the Games, during April 2016. Over a period of time, this study sought to establish the extent to which the non-host communities of Weymouth and Portland have been impacted by the 2012 Olympic Games, by monitoring changes in residents' post-Olympic Games perceptions of legacy. Consequently, the study was able to establish links between residents' perceptions and legacy objectives of the 2012 Olympic Games ranging from sport and healthy living, to community engagement, regeneration initiatives and economic growth.

## 3.0 Methods

### *3.1 Sampling and Procedures*

A self-completion questionnaire was used to examine residents' responses to the 2012 Olympic Games and the Borough's hosting of the Olympic sailing events. Slightly different administering procedures were used in the 2013 and 2016 phases. In 2013 the "drop and collect" method (also referred to as drop-off delivery) was used. This involved the hand delivery and recovery of questionnaires. The technique proved to be reliable and cost effective while allowing respondents to complete the questionnaire in their own time (Prayag et al., 2013). Since this approach also included an element of personal contact, it could

potentially increase response rates (Chien et al., 2012). In 2016, due to time and resource constraints, a more standardized postal survey approach was adopted. For both phases surveys were equally distributed within the 15 wards of Weymouth and Portland. A random sample within Weymouth and Portland was drawn from the Royal Mail Postal Address File (PAF) and stratified to ward level based on the latest population figures (ONS, 2017) where streets were randomly selected after numbering. Each household received a covering letter detailing the study, a paper version of the survey, and a freepost return envelope to post responses back for processing. The questionnaire required approximately 10 minutes to complete. Respondents for both surveys received the opportunity to win a £50 store voucher.

In 2013, a total of 5000 questionnaires were dropped off to residents between 9th and 11th January 2013 and were collected 48 hours later. Where residents were not present, pre-paid envelopes were provided so the completed questionnaire could be returned by post. By 1st February 2013, 929 usable questionnaires were returned, providing a response rate of 18.6%. In 2016, because of the budgetary issue, a total of 3750 questionnaires were posted to residents together with a pre-paid envelope between the 12th and 14th of April. 565 usable questionnaires were completed by 6th May 2016, generating a response rate of 15.1%. This slightly lower response rate was anticipated due to the nature of postal survey, and other factors such as resident fatigue with 'Olympic' questionnaires as well as the time lapse and associated apathy after the Games ended in 2012. Nonetheless, the response rates were comparable with similar studies (Gursoy et al., 2010; Zhou & Ap, 2009). The final sample size also compared favorably to studies examining related phenomena (e.g., Lee at al., 2012; Prayag et al., 2013).

### *3.2 Measures*

The questionnaire consisted of two sections (see Appendix 1 in Supplementary Material). Respondents were asked to rate a number of measurement items including perceived event legacies, their attitudes toward the Games, and event support. A total of 14 perceived legacy items were included in the 2013 and 2016 studies as independent variables. Development of the items were informed by documents published by government departments responsible for the Olympic legacy planning at a national, regional and local level (DCMS, 2016; SWDRA, 2007) as well as the literature (Preuss, 2007; Ritchie et al., 2009; Shipway, 2007). Perceived legacies were further classified *a priori* into four key types: sporting (4 items), economic (4 items), community (4 items) and environmental (2 items). The face and content validity of the measures were confirmed by three experts in the field. For each statement, perceived legacies were presented with category titles followed by a sentence explaining the specific perceived legacy. Respondents were asked to indicate on a 5-point Likert scale (1 = extremely unlikely to 5 = extremely likely) how likely that these potential legacies have or will be met at a national, regional and local level.

Across the 2013 and 2016 data, Cronbach's alpha reliability coefficients were estimated at .95 for all perceived legacy items, while an analysis of the items by legacy scale (national, regional and local level) and legacy type (sport, economic, community and environmental) produced a Cronbach's α of above .70, except for the two items under environmental legacy which had a Cronbach's α of .64. It is not unusual, however, for scales with a smaller number of items to record lower α scores (Field, 2009). According to Nunnally and Bernstein (1994), the scores demonstrated a good level of internal reliability.

Two key behavioral outcome variables were measured in this study: (1) Residents were asked to indicate their overall support for hosting the 2012 Olympic events and associated development in Weymouth and Portland. Options included Yes, No or Don't

know. For the purpose of this analysis, No and Don't know options were combined as very few listed don't know as an option. (2) Residents' intentions to support the hosting of future events were considered a potential consequence of legacy perceptions and was measured on a three-item, 5-point Likert scale (1 = extremely unlikely/impossible/no chance and 5 = extremely likely/highly possible/sure to support; Cronbach's $\alpha$ = .97 for both studies; Chien et al., 2012). Residents were asked to rate their attitudes toward the 2012 Games using four 5-point semantic differential scales (negative/positive, unfavorable/favorable, undesirable/desirable, unnecessary/necessary; Cronbach's alphas = .97 and .95 for 2013 and 2016 respectively; Chien et al., 2012). Residents were also instructed to complete questions related to their event involvement, such as event attendance, actual event volunteering, as well as their involvement in sailing and tourism employment. Event attendance and event volunteering were recoded into yes or no. Residents also provided information about their socio-demographics such as gender, age, length of residence, and distance to the event venues.

## 4.0 Results

First, a compared means test was conducted to examine differences from perceived legacies, attitudes, and future event support between the 2013 and 2016 data. As these were conducted by separate samples they cannot be paired (Field, 2009). Second, relationships between the variables of interest were examined. Correlations and regression analyses were undertaken to understand whether the independent variables were associated with the dependant variables. Additional details of the items including descriptive statistics, skewness and normality assumptions are provided in Appendix 2 of the Supplementary Material.

### *4.1 Descriptive Statistics*

A total of 1,494 responses were recorded across 2013 and 2016, with 929 responses recorded in 2013 and 565 responses in 2016. The demographic profile was largely representative of the local population based on a comparison to census data (Office of National Statistics, 2017). For instance, 50% were female compared to 50.2% of the local census data (Office of National Statistics, 2017), although a Chi-square test showed a statistical difference ($\chi^2 = 18.713$, $p < 0.01$) with fewer females completing the study in 2016 (44%) compared with 2013 (53%). Age ranges were from 16 to older than 65 years, with the majority of respondents being older than 46 years in both 2013 and 2016 samples (60.9% and 70.6%) compared with 50% from the census figures (Office of National Statistics, 2017). A Chi-square test showed significant differences between age distribution of the two samples ($\chi^2 = 25.330$, $p < 0.01$) with the 2016 sample having a higher percentage of those aged over 65 years compared to the 2013 sample. Approximately 80% of the respondents had been a local resident for 11 or more years, while 40% lived four or more miles from the event venues. A total of 6% of respondents were employed in the tourism sector and 19% were involved in sailing or water sports. No statistical differences were found between samples based on these characteristics.

Compared to the local census data, the samples had a higher proportion of older respondents, while the 2016 sample was under-represented by females. It should be noted that the most recent census data were collected in 2011; thus, resident profile might have changed in recent years. The comparison might be revised once the census data are updated. Further, previous studies of this nature have reported variations in age and gender (see Lee et al., 2012), as well as differences between income and education across pre- and post-event samples (Kaplanidou et al., 2013).

### *4.2 Differences Between 2013 and 2016 Samples*

A total of 78% of respondents in 2013 supported the hosting of the 2012 Olympic Games and the development in Weymouth and Portland, compared to 82% of respondents in 2016, although the increase was marginally significant ($\chi^2 = 3.71$, $p = .054$). Respondents in the 2013 study indicated that they had attended more local Olympic events than the 2016 sample, $t$ (1003) = 3.115, $p$ = 0.002). There were no differences in volunteering at the 2012 Olympic Games between the 2013 and 2016 samples ($p$= 0.431), suggesting the sample was not different on this basis.

When comparing perceived legacies, the majority of scores were around the mid-point of the 5-point scale ($M_{2013}$ = 3.12 and $M_{2016}$ = 3.22), illustrating uncertainty over perceived legacies (see Table 1). This trend was evident even in 2016 – over three years after the Olympic Games ended. Table 1 shows that the two environmental legacies received the highest mean scores across both samples, while the economic legacies in general were rated lower across both samples. This could be related to the main aims of the 2012 Games, which were concerned with the regeneration of East London in particular (Smith, 2014b).

To check the difference between the two samples over time a multivariate analysis of covariance (MANCOVA) was conducted. MANCOVA has been used to examine resident attitudes and impact perceptions in past mega-event research to avoid Type I errors from conducting separate ANOVA tests (Lee et al., 2012; Kaplanidou et al., 2013; Gibson et al., 2014). Gender, age, length of residence and location were included as covariates. The independent variable was the year 2013 and 2016 group. Prior to conducting the MANCOVA assumptions concerning normality were tested. The Mahalanobis distance identified a number of outliers above the critical value. After examination 35 outliers were removed from the data file. Based on Levene's Test for Equality of Error Variance the homogeneity of variance could not be assumed for one of the DVs, therefore for further analysis Pillai's

Trace was examined as it accounts for the violation of assumption of equality of variance (Tabachnick & Fidell, 2013) and the outcome of the corresponding univariate ANOVA was evaluated at a stricter alpha level ($p < 0.001$) (Allen & Bennett, 2010). The result of the MANCOVA test on the individual 14 perceived legacy items showed a statistical difference in residents' legacy perceptions from 2013 to 2016 (Pillai's Trace $V = 0.080$, $F(14, 1280) = 7.968$, $p < 0.001$) and a significant Pillai's Trace statistic between 2013 and 2016 on the combined dependent variables after controlling for gender (Pillai's Trace $V = 0.039$, $F(14, 1280) = 3.719$, $p < 0.001$). On examination of the univariate results, the gender covariate was significant in 4 out of 14 legacy items. The comparison between the two samples (2013 and 2016) revealed differences only in 3 of the 14 legacy items after controlling for gender (See Table 1). An examination of the differences on gender through additional statistical tests showed that females had higher levels of perceived legacy than male respondents.

There was no statistically significant difference between 2013 and 2016 on the dependant variables (14 legacy items) after controlling for age, length of residency and location (see Appendix 3).

**Table 1: Estimated Marginal Means, Standard Errors and MANCOVA Univariate *F* Statistics for Perceived Legacy Items in 2013 and 2016**

| Items | Classification | 2013 Mean (SE) | 2016 Mean (SE) | Gender Univariate *F* | Year Univariate *F* |
|---|---|---|---|---|---|
| To create a sustainable sailing venue, whilst protecting the marine environment and Dorset coastline | Environmental legacy -local | 3.67 (.035) | 3.70 (.045) | 5.795 | 0.319 |
| Ensuring that the 2012 Olympics and the Olympic Park become key drivers of regeneration in East London | Environmental legacy - national | 3.43 (.031) | 3.57 (.040) | 0.485 | 7.333 |
| Ensuring that the tourism image is improved and that the 2012 Olympics delivers increased visitation to the South West | Economic legacy - regional | 3.42 (.037) | 3.34 (.048) | 0.788 | 1.742 |
| Encouraging the whole population to be more physically active and increasing sports participation from young people | Sporting legacy- national | 3.34 (.035) | 3.48 (.045) | 2.277 | 5.713 |
| Encouraging both elite and grassroots sports participation and the development of sporting facilities | Sporting legacy - regional | 3.19 (.035) | 3.36 (.045) | 2.448 | 8.67* |
| Using the 2012 Olympics to celebrate the diverse and rich cultural heritage in the region | Community legacy - regional | 3.15 (.037) | 3.09 (.048) | 13.898** | 1.192 |
| Promoting community engagement and achieving participation across all groups in society by hosting the 2012 Olympics | Community legacy - national | 3.11 (.035) | 3.31 (.045) | 12.61** | 12.253** |
| Leaving a lasting sporting legacy for young people, and providing opportunities to participate in new, non-traditional cultural & sporting activities | Sporting legacy - local | 3.11 (.039) | 3.27 (.050) | 7.362 | 6.317 |
| Enhancing the community through increased volunteering, sport development and improving equality and diversity | Community legacy - local | 3.01 (.036) | 3.18 (.047) | 16.384** | 7.854 |
| Using the 2012 Olympics to increase confidence, engagement, participation and skills of individuals to benefit people, businesses and the community | Community legacy – regional | 2.94 (.035) | 3.027 (.046) | 7.942 | 1.911 |
| Improving customer service skills, training volunteers and providing opportunities for young people to learn | Economic legacy -local | 2.93 (.036) | 3.09 (.047) | 10.748** | 6.807 |
| Exploiting to the full the opportunities for sustainable economic growth offered by hosting the 2012 Olympics | Economic legacy -national | 2.78 (.035) | 3.15 (.045) | 1.813 | 41.376** |
| Using the 2012 Olympics for regeneration, attracting inward investment and creating business development opportunities | Economic legacy - local | 2.77 (.039) | 2.93 (.050) | 1.06 | 6.135 |
| Capitalizing on the opportunities from the 2012 Olympics for local businesses and developing innovative and competitive businesses | Economic legacy -regional | 2.73 (.036) | 2.88 (.046) | 3.594 | 6.407 |

Notes: perceived legacies were measured on a 5-point scale where 1 = strongly disagree and 5 = strongly agree. Some legacies could have been classified in more than one category. However, their categorization was based on national, regional and local level strategy documents.

$^{*}p<.003$ $^{**}p<.001$

The largest increase was related to perceived economic growth at the national level, followed by community engagement at a national level and sports participation at the regional level.

Total composite scores were generated for each perceived legacy type (sport, economic, community and environment) as well as the scale of legacy (national, regional, local), and a MANCOVA was estimated which included gender, age, length of residence and location as covariates. The independent variable was the 2013 and 2016 group. The multivariate results showed a statistically significant Pillai's Trace statistic for the 2013 and 2016 groups (Pillai's Trace $V = 0.052$, $F(7, 1287) = 10.029$, $p < 0.001$) and significant difference between 2013 and 2016 on the combined dependent variables after controlling for gender (Pillai's Trace $V = 0.30$, $F(7, 1287) = 5.735$, $p < 0.001$). On examination of the univariate results, the only difference to reach statistical significance using Bonferroni adjusted alpha level of 0.007, were Community Legacies $F$ (1, 1310) = 16.156, $p = 0.001$, $\eta p^2 = 0.012$ and Local Legacies $F(1, 1310) = 9.752$, $p = 0.002$, $\eta p^2 = 0.007$ (See Table 2). There was no statistically significant difference between 2013 and 2016 on the dependant variables after controlling for age, length of residency and location (see Appendix 4).

An inspection of the mean scores indicated that resident's total perceived legacy scores increased from 2013 to 2016. In particular, scores of sport and economic legacies changed significantly across the two samples, while community and environmental legacies did not vary over time (See Table 2). With respect to scale of perceived legacies the results suggested an increase in perceived legacies at the national level between the 2013 and 2016 samples. No significant change was observed at the regional and local level. Findings suggested that the national and sporting legacies were perceived to be greater in 2016 than in 2013. The results are presented in Table 2 along with descriptive statistics of the variables in the study. Interestingly gender effects were identified in the MANCOVA and additional

statistical tests showed that female respondents perceived a higher level of community and local legacies than male respondents.

**Table 2: Estimated Marginal Means, Standard Errors and MANCOVA Univariate *F* Statistics for Perceived Legacy Type and Scale in 2013 and 2016**

| **Items** | **2013 Mean (SE)** | **2016 Mean (SE)** | **Gender Univariate *F*** | **Year Univariate *F*** |
|---|---|---|---|---|
| Sporting legacies | 3.22 (.032) | 3.37 (.041) | 4.904 | 8.733* |
| Economic legacies | 2.92 (.032) | 3.07 (.041) | 2.143 | 8.014* |
| Community legacies | 3.03 (.031) | 3.14 (.04) | 16.156** | 4.385 |
| Environmental legacies | 3.54 (.31) | 3.63 (.039) | 4.451 | 3.101 |
| | | | | |
| National legacies | 3.17 (.028) | 3.38 (.036) | 4.847 | 21.343** |
| Regional legacies | 3.09 (.031) | 3.14 (.04) | 6.284 | 0.957 |
| Local legacies | 3.10 (.032) | 3.23 (.041) | 9.752* | 6.666 |

Notes: perceived legacies were measured on a 5-point scale where 1 = strongly disagree and 5 = strongly agree.
*p<.007 **$p$<.001

Differences between residents' overall attitudes toward the 2012 Olympics and future event support were also conducted while including gender, age, residence and location as covariates. Assumptions concerning normality and linearity were tested and no outliers or violation of variances were found. A MANCOVA test on attitudes and event support was not statistically significant (see Appendix 5). The mean score for attitudes was 3.84 in 2013 and

606 3.88 in 2016, while the mean score for future event support was 3.67 in 2013 and 3.74 in
607 2016.
608
609 ***4.3 Regression Model Results***
610 Regression analyses were undertaken to explore the relationship between variables.
611 The means, standard deviations and correlations between the variables of interest are
612 provided in Table 3. Correlation analysis was first conducted to explore the relationship
613 between the variables before undertaking the regression analyses. The correlation showed
614 large positive relationships between attitudes and perceived legacies across both samples, and
615 between perceived legacies and future event support.

616 **Table 3: Descriptive statistics and associations**
617 **between variables for 2013 and 2016 samples**
618

| **2013 Variables** | **Mean** | **SD** | **1** | **2** | **3** |
|---|---|---|---|---|---|
| 1. Future event support | 3.66 | 1.28 | 1 | | |
| 2. Attitudes | 3.84 | 1.16 | .825** | 1 | |
| 3. Perceived legacies | 3.13 | 0.82 | .660** | .671** | 1 |
| | | | | | |
| **2016 Variables** | **Mean** | **SD** | **1** | **2** | **3** |
| 1. Future event support | 3.74 | 1.27 | 1 | | |
| 2. Attitudes | 3.88 | 1.14 | .783** | 1 | |
| 3. Perceived legacies | 3.22 | 0.80 | .649** | .606** | 1 |

619
620 Note: *N* ranged from 482-817 Strengths of association reported in this table are characterised using Cohen's (1988)
621 guidelines where *r* = .10 to .29 are small; *r* = .30 to .49 are medium; and, *r* = .50 to 1.0 are large associations.
622 ** Correlation is significant at the 0.01 level (2-tailed)
623

624 A binary logistical regression was performed to assess the influence of the
625 independent variables on residents' overall support for hosting the 2012 Olympic events. A
626 logistical regression was chosen because the recoded dependant variable was dichotomous
627 (Yes/No). A range of covariates were also entered into the regression model as control
628 variables, including socio-demographics (age, gender, length of residence, location), as well
629 as event attendance, actual event volunteering, involvement in sailing, and employment in
630 tourism industry. Categorical variables were transformed into dummy variables. The model

containing all the variables was statistically significant ($\chi^2$ = 182.072, $p < 0.001$) for the 2013 sample. The model as a whole explained between 28.1% (Cox and Snell R Square) and 51.2% (Nagelkerke R squared) of the variance in event support, and correctly classified 90.8% of cases. The results showed that two independent variables made a statistical contribution to the model. The strongest variable was perceived legacies, recording an odds ratio of 4.16, followed by attitudes with an odds ratio of 3.45.

For the 2016 sample the full model was statistically significant ($\chi^2$ = 92.125, $p <$ 0.001). The model as a whole explained between 25.0% (Cox and Snell R Square) and 53.1% (Nagelkerke R squared) of the variance in event support, and correctly classified 93.8% of cases. Three independent variables made a statistical contribution to the model, with attitudes being the strongest variable (odds ratio 5.19), followed by males (4.29) and perceived legacies (2.74).

A standard multiple regression model was conducted to measure support for future events because there was no theoretical reason for entering variables into specific blocks. Prior to the multiple regression several assumptions were tested. First, multicollinearity was checked and ruled out as the tolerance score was above .10 and the variance inflation factor was below 10. Second, the scatterplot showed no outliers and Cook's Distance was below 1, suggesting no major problems with the data for both samples.

The first regression analysis showed that three variables explained 71.1% of the variance in future event support in 2013 ($R^2adj$ = .711, $F$ (21, 770) = 97.241, $p < 0.001$) while four variables explained 67.5% of the variance in 2016 ($R^2adj$ = .675, $F$(21,451) = 48.791, $p$ < 0.001). Only statistically significant variables are in Table 4. To test for potential differences between the correlations in 2013 and 2016 the correlations were transformed into *z*-scores using Fisher's *r*-to-*z* transformation, as recommended by Paternoster, Brame, Mazerolle and Piquero (1998). Using a two-tailed test of significance, the difference between

656 the correlations were not statistically significant (see Appendix 6). This indicates that the
657 results are consistent across the two samples.
658
659 **Table 4: Linear regression model between independent variables and**
660 **support for future events (2013 and 2016)**
661
662
663
664
665

| **2013 Model** | **Unstandardized Coefficients** | | **Standardized Beta** | **t** |
|---|---|---|---|---|
| | **B** | **Std. Error** | | |
| **Future event support** | | | | |
| (Constant) | -1.87 | .192 | | -.976 |
| Perceived legacies | .312 | .041 | .199 | 7.545** |
| Attitudes | .736 | .030 | .662 | 24.301** |
| Event attendance (Yes = 1) | .158 | .061 | .057 | 2.570* |
| | | | | |
| **2016 Model** | **Unstandardized Coefficients** | | **Standardized Beta** | **t** |
| | **B** | **Std. Error** | | |
| **Future event support** | | | | |
| (Constant) | -513 | .271 | | -1.895 |
| Perceived legacies | .482 | .054 | .305 | 8.956** |
| Attitudes | .616 | .042 | .555 | 14.502** |
| Event attendance (Yes = 1) | .189 | .085 | .070 | 2.211* |
| Gender (Males = 1) | .162 | .071 | .063 | 2.278* |

666 * Regression is significant p <.05 level ** Regression is significant p <.001 level
667

668 Attitudes toward the event appeared to be the most important predictor for future
669 event support in both samples, followed by perceived legacies and event attendance (see
670 Table 4). Males were more likely to support future events in the 2016 sample ($\beta$ = .06, $p$ =
671 .023) compared to females.
672
673 **5.0 General Discussion and Conclusion**
674 This paper makes several key contributions to both theory and practice. Our study
675 extends the existing literature by: (1) filling the void of research on residents' perceptions of
676 mega-event legacies; (2) providing replication and extension of prior studies; (3) ensuring
677 methodological rigor across two cross-sectional studies; and (4) adhering to the parsimony
678 principle of research. While legacies generated from mega-events may appear obvious,

empirical testing of this effect among non-host residents over an extended period post-event has not been previously undertaken. Conceivably, once the mega-event is finished and the media and public interests surrounding the event have subsided, residents' support might plateau or even diminish after a certain period of time. There have been suggestions that perceived legacies are not static but could vary prior, during, and after the event, which in turn, influence their support for the event (e.g., Kaplanidou et al., 2013; Ritchie, Shipway, & Cleeve, 2009). A "cool down" period post-event might help event related development to be realized and allow residents to realistically reflect on their experiences. As the issue of non-host residents' perceived mega-event legacies has not been examined in a post-event longitudinal study beyond six months, there is strong reason to empirically test it across two longer time periods to make a contribution to knowledge. Replication and extension of this work provided not only parsimony but also demonstrated consistent findings over the two time periods.

Our first set of findings show that support for the hosting of the 2012 Olympic Games events in the destination were relatively high despite uncertainty around perceived legacies. Overall support did not change over time, but overall perceived legacies were found to have increased, partially supporting proposition one. The results still imply some degrees of uncertainty as the observed changes were relatively small. Residents reported greater perceived sporting and economic legacies in 2016 compared to 2013, while Kaplanidou et al. (2012) demonstrated that economic benefits decreased over time contrary to our findings. No changes were observed for community and environmental legacies in our study. Perceived environmental legacies might not have changed because they were already rated the highest across both 2013 and 2016 studies. Surprisingly, perceived community legacies were rated second lowest and did not improve over time. This contradicts previous studies showing the positive influence of social benefits from mega-events on residents' perceived quality of life

(e.g., Kaplanidou et al., 2012) and supports Thornley's (2012) call for social leveraging. Further, Lee et al. (2012) studied the perceived impacts of Beijing Olympic Games and found that perceptions of community benefits and improvements to infrastructure dropped over time, yet no declines were found in our study. Differences between the studies may be due to methodological and sampling differences as well as the different measurement items used.

The second major finding of this paper takes a spatial perspective by examining a non-host city perspective and perceived legacies at national, regional and local scales (proposition 2). This is important as future hosts look to extend event benefits to regional and distant communities in order to justify taxpayer money (Minnaert, 2012). Understanding how event impacts spill over and how residents in non-host cities perceive them is important. The present study showed that residents in the South West of England tended to perceive legacies accruing at a national level, not at a local or regional level. Although hard to explain, this might be due to the fact that media coverage was concentrated on the host city and key infrastructure development at the national level. A lack of leveraging at a local and regional level, and perhaps better communication of outcomes at a national level through media outlets, might have also contributed to the perceptions, which have been shown to influence resident support for events in previous studies (Pappalepore & Duignan, 2016; Chien et al., 2012). This point is elaborated on later in this section.

The third major finding relates to the examination of the influence of perceived legacies, attitudes toward the 2012 event and socio-demographics on resident support for the development and event hosting in Weymouth and Portland as well as the hosting of future events. This relates to our third, fourth and fifth research propositions. The studies provided initial evidence that perceived legacies and attitudes influenced support for the event. Attitudes also had a stronger influence on future event support across both samples, followed by perceived legacies and event attendance. Males were more likely to support the London

729 Olympics and the hosting of future events in the 2016 sample. The regression models over
730 the two time periods were not statistically different, suggesting that the patterns observed
731 were consistent over time. These findings are also consistent with Prayag et al. (2013), who
732 found that attitudes influence overall event support. Their study provided evidence that
733 attitudes mediated the relationship between perceived impacts and overall support. Our
734 findings are aligned with Hiller and Wanner (2011), which demonstrated that event
735 attendance positively influenced resident feelings and overall positive impressions of the
736 Vancouver Winter Olympics.
737 The lack of perceived legacies, especially community and environmental legacies,
738 could be attributed to several reasons, which also provide managerial implications. One
739 explanation relates to the lack of pre-planning and leveraging of initiatives before, during and
740 after the event (Beesley & Chalip, 2011; Bell & Gallimore, 2015). As Smith (2014b) argued,
741 mega-event leveraging requires adequate budgets and coordination between agencies in order
742 to maximize benefits from mega-event hosting. Pappalepore and Duignan (2016) found a
743 lack of leveraging for the London Olympics by creative organizations in London, despite
744 cultural legacies being an important part of the event bid. Apart from the copyright barriers,
745 which reduced operators' ability to conduct event-led theming using Olympic imagery, the
746 small size and nature of creative industries also presented difficulties in bidding for funding.
747 Finally, leveraging after the event may be challenging due to a loss of interest or 'hangover'
748 after the event and the subsequent disestablishment of key organizations tasked with running
749 the event (Smith, 2014b).
750 The extent to which Organising Committees for the Olympic Games (OCOG)
751 effectively engage with stakeholders has long been an issue of contention. Lockstone-Binney,
752 Holmes, Shipway and Smith (2016) indicated that many legacy objectives remain unrealized
753 due to the complexities and tensions between the overriding OCOG priority of delivering the

Games, compared with the planning of legacies and how they will be resourced. These conflicts and tensions were clearly evident in the years leading up to, and after, the hosting of the sailing events in Weymouth and Portland. Research also indicated a lack of legacy funding before and after the event (Lockstone-Binney et al., 2016). Such findings suggest dedicated plans and programs need to be developed for event leveraging, which are adequately resourced and structured to capitalize on opportunities offered by the event.

Furthermore, the lack of perceived legacies and limited changes over time, especially at a local and regional level, could be the result of a lack of identification with the region (South West of England) or poor communication from agencies. Pappalepore and Duignan (2016) found that poor communication and a lack of dialogue between creative organizations, event delivery and funding agencies led to a lack of leveraging of the 2012 Olympics in London. Past research has indicated that positive media portrayal can positively influence mega-event support (Chien et al., 2012), highlighting the value of communication. Kaplanidou et al. (2012) also acknowledge the importance of information and media and how it can shape resident support for mega-events. Further, trust in the organising committee has been shown to influence perceptions of positive impacts from mega sporting events (Gursoy, Yolal, Ribeiro, & Netto, 2017). Active engagement with the media is required to communicate to residents both the opportunities and challenges associated with mega-event hosting. Key messages and communication channels need to be developed for target groups and may need to change over time. Based on the findings of this study, a focus on females who did not attend Olympic related events would be recommended.

### *5.1 Limitations and Future Research*

Several limitations associated with this initial study need to be acknowledged. Since the present research employed cross-sectional studies there were some differences in the

sample composition across the two time periods. Although the analysis controlled for socio-demographic changes across the two studies, only gender was identified as a covariate. The z score tests also indicated consistency between the two regression samples. Nevertheless, it is recommended that future research on mega-event legacies establishes and uses a panel that tracks individual responses over time. Researchers should be careful to manage panel attrition and should report changes in panel composition. In our analysis, only a small number of potential influencers were found to be associated with overall and future event support. Based on the current findings, other factors such as identification with the event or community should be explored as this may explain why legacies were perceived more at a national level rather than at a regional scale. Furthermore, a larger set of outcome variables could also be examined such as intentions to volunteer at future events. Future studies could extend our initial work which used propositions, to test hypotheses using Structural Equation Models which can confirm relationships.

It would be beneficial to consider longitudinal studies that adopt similar measures to continue over an extended period time, as this would help to explain behavioral outcomes, rather than identify associations. Studies should also seek to identify objective data linked to perceived legacies rather than rely on subjective perceptions of legacies. This could include data related to economic growth from government statistics or research that examines actual economic impact and value-adding through economic modelling such as CGE models (e.g., Li et al., 2011). Replication of methods and measures in other mega-event settings (such as a comparison between host- and non-host cities) will further improve generalizability and facilitate comparison across contexts and could consider using explanatory models.

Future research should examine ways to better leverage mega-events as well as explore how to communicate legacies to local residents. Researchers have argued that social leveraging (Thornley, 2012) and communication strategies need to be examined at different

804 time periods and at geographical locations to be most effective (Bell & Gallimore, 2015).
805 Further research should critically examine whether events are an effective way to achieve
806 policy goals (Smith, 2014b). Involving the local community can help maximize the positive
807 legacies from mega-events, while better communication can help build trust with local
808 residents – the taxpayers that fund such events.
809 In conclusion, this study has sought to provide initial empirical evidence related to
810 perceived legacies and their changes over time, and to explore the factors that influence
811 overall support for hosting mega-events in a non-local host community. It is apparent that
812 research which evaluates aspects of Olympic legacies has not kept pace with the discourses
813 that surround them (Dickson et al., 2011), and as such it is imperative that legacies that
814 proclaim to be for the benefit of host nations are evaluated over a prolonged period of time
815 and at different locations. Only then can governments demonstrate that they have a leg(acy)
816 to stand on!
817

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