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The impact of mega-sport events on tourist arrivals

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ABSTRACT

While a mega-sport event is scheduled at least once every year somewhere in the world, these events are rare occurrences for the host cities and countries. The benefits of such events seem lucrative; the very fact that many countries bid to host these events suggests that the benefits – be they tangible or intangible – more often than not outweigh the costs. Using a standard gravity model of bilateral tourism flows between 200 countries from 1995 to 2006, this paper measures a very direct benefit of such mega-events: the increase in tourist arrivals to the host country. In general, the results suggest that mega-sport events promote tourism but the gain varies depending on the type of mega-event, the participating countries and whether the event is held during the peak season or off-season.

1. Introduction

Tourism is one of the leading growth sectors in international services trade. While many factors influence tourism growth, one of the more perceptible contributions – at least, in the public eye – comes from global events, or mega-events. Mega-events, according to Roche (2000), are 'large-scale cultural (including commercial and sporting) events, which have a dramatic character, mass popular appeal and international significance'. These events, such as the Olympic Games and FIFA World Cup, have not only attracted an increasingly global audience (Horne & Manzenreiter, 2004), but also seem to have shaped world tourism patterns, highlighting new tourism destinations and creating so-called lasting legacies in the host cities or countries.

There is, however, little empirical proof of mega-events yielding cross-country tourism gains, as the existing literature usually evaluates only one event or, at most, one type of mega-event. The present paper empirically measures across different mega-events the change in tourism arrivals for a country hosting a mega-event. We use a gravity specification standard in the trade literature to estimate the increases in tourism from hosting six different mega-sport event types, namely the Summer and Winter Olympic Games, FIFA World Cup, Rugby World Cup, Cricket World Cup and British/Irish Lions Tour over the period 1995–2006.

In the empirical analysis we test six different hypotheses. First, we analyse the more general hypothesis that a mega-event increases the number of tourists in the year of the event is celebrated. Where this hypothesis is rejected, a strong case for displacement of tourists could be made. Second, the effects are disaggregated by type of mega-event to reveal if there is a systematic difference in impact between the six mega-event types considered in the analysis. Third, while it is often said that mega-events create a so-called lasting legacy, we attempt to quantify this by measuring the long-run impact on tourist arrivals, both before and after the event. Fourth, we test whether tourist arrivals from participating countries increases more than arrivals from countries not participating in the mega-event. This hypothesis suggests whether hosting an event results in tourism creation or tourism diversion. Fifth, we also distinguish between events held during the peak tourist season and off-peak season in order to search for possible evidence of differences in crowding-out given seasonal variation. Finally, Rose and Spiegel (in press) suggest that countries benefit from bidding for events even if they lose (the bid). Thus, we also evaluate Rose and Spiegel's signal theory in the context of tourism (rather than trade-in-goods, as they do).

To that end, this paper is organized as follows: Section 2 discusses recent literature on mega-events and their impact. Data and methodology used to ascertain our results are presented in Section 3. Section 4 presents the results of the analysis and finally some conclusions are drawn in Section 5.

2. Mega-sport events and their impact on tourism

The appeal of hosting a mega-event, or more specifically a mega-sport event, has grown significantly over the last two

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decades. Not only has the advent of professionalism in sport, combined with higher per capita income worldwide and improvements in broadcast technology, made mega-events a truly global experience (Horne & Manzenreiter, 2006), but countries and regions increasingly consider these events as possible lucrative opportunities, encapsulating large potential tangible and intangible benefits for the host.

What has been less apparent is the size of these benefits. Although scholars have attempted to measure the economic gains that result from hosting a mega-event since the 1980s, it is in the most recent decade that the debate about the potential gains, both in terms of economic returns and intangible benefits (including various non-quantifiable advantages as broad as national pride, patriotism and country image), has intensified. Comparisons are fraught with difficulties; ex ante studies differ from ex post analyses while methodologies depend on data availability and the skills of the researcher (Kesenne, 2005). However, the central problem remains similar across the spectrum: isolating the impact of one mega-event and determining its counterfactual. Put more plainly: Are the costs for infrastructure, stadia, security and marketing worth the gains from tourism, trade and tickets? And, if not directly, does the event spark – maybe indirectly – long-run economic development?

Empirical results vary considerably across papers. Measuring only the economic returns to host the Summer Olympic Games, Preuss (2004, 2007b) and Baade and Matheson (2003) show that the gains are ambiguous.[1] The benefits from hosting the FIFA World Cup are similarly doubtful (Allmers & Maennig, 2009; Baade & Matheson, 2004; Lee & Taylor, 2005; Szymanski, 2002). As the two largest mega-sport events on the planet and with a seemingly endless interest from countries in hosting these events, such results come as a surprise. 'Smaller' mega-events have received less attention. There are only a few recent articles, for example, reviewing the economic impact of the Winter Olympic Games (Rose & Spiegel, in press), Rugby World Cups (Jones, 2001), Cricket World Cups (Fourie & Spronk, in press) and British/Irish Lions tours (Fourie & Spronk, in press; Higham, 2005) which are some of the mega-events analysed in this study.

Yet, hosting these events is not only about the direct monetary gains. If the interest in hosting these events does not wane even in the face of negative financial returns, then surely some other positive, intangible gains must be at play. This view is purported by more recent work, mostly related to the two major global events, the Summer Olympics and FIFA World Cup (Maennig & Du Plessis, 2007; Maennig & Porsche, 2008).

While the costs and benefits (tangible and intangible) remain a source of debate, the focus has shifted recently towards those aspects of mega-events that are quantifiable, such as tourist behaviour (Preuss, 2007a; Solberg & Preuss, 2006). Preuss (2007a) argues that cost–benefit analyses or economic impact assessments on a macro-level relies too heavily on the assumptions to justify the outcomes and urges greater emphasis on a bottom-up approach. This usually involves contingent evaluation through questionnaires and surveys, directly assessing the behaviour of individuals. While also costly, this approach has other disadvantages, including the main pitfall of top-down studies, measuring the counterfactual. In that sense, our study attempts to bridge this problem by turning to a methodology now standard in the trade literature, the gravity model.

While the present paper is the first attempt to use the gravity model to assess the impact of mega-events on tourism, the approach of Rose and Spiegel (in press), who investigate the impact of hosting the Olympic Games on international trade flows, is followed. These authors find strong support for the view that hosting a Summer Olympic Games increases trade flows significantly. Furthermore, they posit a theory of signalling, whereby countries that bid for a mega-event send a 'policy signal that is followed by future liberalisation'. The benefits of the mega-event is therefore not through the increase in event-related activities (tourists visiting to support their teams, for example) but through the signal a country sends by hosting (or being willing to host) the event. More revealing, they find a similar impact on trade for those countries that won the bid to host the Olympics and those that lost.

Measuring the behaviour of tourists from a comparative perspective also allows for an examination of tourism displacement or crowding-out (Fourie, Siebrits, & Spronk, 2010; Matheson, 2002; Solberg & Preuss, 2006). Whereas some tourists may be attracted to an event (event-specific tourists), some 'normal' tourists visiting the region frequently, may opt to shift their visit when a mega-event occurs. This could be for a variety of demand- or supply-side reasons, including escalating prices, supply constraints in terms of accommodation and transport, security concerns, or visitor preferences (Fourie et al., 2010). However, quantifying these crowding-out effects is troublesome as tourist behaviour is determined by many different country- and time-specific factors. A comparative analysis, therefore, which includes a number of mega-events over different years, may provide a more consistent evaluation of its size.

3. Data and methodology

There are usually three different types of methodologies used to assess the impact of a mega-event on a country or region: input–output analysis, cost–benefit analysis, or computable general equilibrium modelling (CGE) (Andersson, Armbrecht, & Lundberg, 2008). Since this paper concerns only the impact on tourist arrivals, we use a different methodology to estimate the growth in tourism when hosting a mega-event, *ceteris paribus*. That is, a gravity equation model.

Traditionally, gravity models have been applied to explain country-pair flows, such as international trade (Armstrong (2007) and Fratianni (2007) provide two recent surveys on the broad use of gravity models on trade), foreign direct investment (Bergstrand & Egger, 2007; Eichengreen & Tong, 2007; Head & Ries, 2008) or migrations (Gallardo, Gil, Llorca, & Martínez-Serrano, 2006; Karemera, Oguledo, & Davis, 2000). Indeed, under the assumption of tourism as a particular class of trade, a gravity equation can be used to study the main determinants of its volume. Durbarry (2000), Gil, Llorca, and Martínez-Serrano (2006, 2007) and Santana-Gallego, Ledesma-Rodríguez, and Pérez Rodríguez (2010) have successfully applied gravity equations to explain international tourism flows.

In the present analysis, a similar methodology than the one adopted by Rose and Spiegel (in press) is used. These authors measure the effect of hosting the Summer and Winter Olympics between 1950 and 2006 on trade flows by defining a gravity equation for bilateral exports. Similarly, we employ a standard gravity model to measure the impact of mega-events on tourist arrivals. However, whereas Rose and Spiegel (in press) only considered the Olympics, we estimate the effects of six mega-sport events, namely Summer and Winter Olympic Games, FIFA World Cup, Cricket World Cup, Rugby World Cup and the Lions Tour. Thus, by using bilateral tourism flows between 200 countries from 1995 to 2006, we investigate whether tourist arrivals increase when hosting a mega-sport event. For that purpose, eighteen mega-sport events are registered in the study.[2]

[1] See also Kasimati (2003).

[2] Three of each of those listed above; see Table A.1 in the Appendix.