A TICKET TO THE OLYMPICS:

AN ASSESSMENT OF THE "OLYMPIC EFFECT" ON TOURISM

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ABSTRACT:

Previous studies on the topic of the "Olympic Effect" and its impact on tourism reveal both positive and negative returns for host countries as well as unsuccessful bid host countries. The returns experienced, as explained by subject scholars, are greatly dependent on a variety of factors, many of which are uncontrollable. Therefore, it is an undeniable risk for a country to host a sporting mega-event; however, the potential successful outcome generally overshadows any concern. Building off of previous research conducted, this paper explores the effects host countries and unsuccessful bid host countries of sporting mega-events experience in regards to tourism after an event takes place. It not only examines the Olympics, but also observes the FIFA Men's World Cup, since it is considered the second largest sporting mega-event after the Olympics.

In this analysis, hosts and unsuccessful bid hosts were observed under a variety of controls to fully understand factors that affect outcomes on tourism. The majority of results show a positive increase in tourism for hosts and unsuccessful bid hosts. However, it is apparent that many of these results are byproducts of a naturally occurring time trend that causes sectors such as tourism to increase over time.

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I. INTRODUCTION

Every year or two, a sporting mega-event, such as the Olympics or FIFA Men's World Cup occurs somewhere in the world. A sporting mega-event differs from a typical sporting event in several ways including: it tends to last longer, it has greater preparation and execution costs, there is government influence over the event, world-wide publicity is generated, and a long-term economic impact is created. As Burbank, Andranovich, & Heying (2001) state:

> "The mega-event strategy is unique, however, because it depends fundamentally on bringing an external event to the city. The mega-event strategy thus entails greater risk than a typical consumption-oriented development project because it requires a city first to obtain the external event and then to stage it in such a way as to achieve the city's goals of attracting tourists and positive publicity" (p. 44).

Sporting mega-events can create significant economic benefits to the host city/country although the downside risk can be devastating. While hosting such an event involves tremendous preparation and funding, the motivation for locales to assume such a challenge is the hope they will showcase themselves to the world, thereby attaining not only international recognition, but also economic and political stimulation and growth.

This paper aims to explain the magnitude of what is often referred to as the "Olympic Effect" on tourism for the host city/country. More specifically, it examines if an increase in tourism occurs for the host, and if so, the magnitude of this effect. It also investigates whether there is a significant difference in tourism generated between the summer and winter Olympics, since the winter Olympics are typically held in smaller cities that require less infrastructure development and funding. As Weed (2008) notes: "Although sharing the name 'Olympic Games' with the summer event, the Winter Games are a very different animal. Their organizational requirements, the economics of hosting the Games and the nature of tourism impacts vary considerably from the Summer Games" (p. 119). Additionally, besides looking at the impact of

the "Olympic Effect" on tourism for host cities/countries, a comparison will also be made with cities/countries that bid unsuccessfully to host the Olympics. Such a comparison is appropriate as any city/country that is granted a bid still receives international attention, which may have a bearing on total tourism for that region. As Rogerson (2009) states: "…bidding for the right to host sport 'mega-events' is considered a critical element of urban place entrepreneurialism as cities seek to take advantage in the global economy" (p. 337). Lastly, the FIFA Men's World Cup, which is often regarded as the second largest sporting mega-event after the Olympics, will also be used in analysis to assess whether similarities can be drawn between the two.

It is important to recognize that each Olympics or sporting mega-event is unique in its timeframe as well as its economic and social context, which makes it hard to compare data and overall effects for all events equally (Chalip, 2002, p. 7). There are numerous variables that affect tourism to various countries and throughout the world such as: the world's and country's economic health, currency buying power and related fluctuations, weather, terrorism profile, and so on. These variables all fluctuate by time and country thus generating different effects on tourism throughout the world and specific countries affected by them. It is therefore necessary to control for these factors in order to create consistency for comparison purposes; this is achieved primarily by including year and country dummies in the regressions. Beyond controlling for these factors, it is also important to qualitatively evaluate the entire context and location of each sporting mega-event to better understand tourism results.

The results from this study find significant increases in tourism for countries that are hosts as well as unsuccessful bid hosts. In most scenarios, the summer Olympics prove to have larger impacts on tourism than the winter Olympics do. Moreover, it can also be concluded that the being a World Cup host generates similar, and at times, greater effects on tourism than the

Olympics do. The conclusions drawn from this study are greatly dependent and influenced by various country and year factors. Outcomes from regression analysis reveal that most of the results produced are effects of time progression and global advancement that causes sectors such as tourism to increase over time. This is important to understand, as otherwise, associations between variables would be misleading. Overall, the findings in this study are useful in understanding the impact of hosting or bidding to host a sporting mega-event on tourism, and allow for comparison with previous scholarly literature on this topic.

II. LITERATURE REVIEW

While research has been done connecting the Olympics with tourism, the studies that have been conducted tend to be more theoretical than empirical, and all in all, are limited. Lack of empirical research stems from a variety of factors including lack of funding for longitudinal studies (Roche, 2000, p. 140) as well as disregard by researchers and agencies of the post-Olympic phase. As Chalip (2002) notes: "The Games enjoy substantial media attention, particularly while they are taking place and in the period immediately preceding, but they do not obtain sustained international attention beyond that period" (p. 140). Kasimati (2003) touches upon this factor by noting that "*ex-ante* assessments" of the Olympics and their economic impact are prominent while "*ex-post* assessments" are significantly inadequate (p. 438). As a result, total evaluation of the Olympics through all three Olympic phases (pre, current, and post) is hard to obtain. Outside of studies conducted solely for the Olympics, or other mega-events, general city or regional tourism numbers are also extremely limited and hard to find. Therefore, country data is used to make up for this deficiency, as it is more readily available and accessible. Once datasets are found, it is difficult to distinguish whether they are reliable, as many factors can

cause them to be miscalculated. Authors Tyrell and Johnson believe that proper datasets are only possible to achieve when "tourists directly attributable to an event" are "distinguished from those who merely stop by or visit regardless of the event" (qtd. in Lee and Taylor, 2004, p. 596). This along with other factors makes it difficult to accurately compute the percentage of tourism and associated calculations for expenditures generated by a sporting mega-event. Such miscalculation problems are avoided by running regressions that use country and year dummies as well as take into consideration the occurrence of a possible time trend.

A theoretical concept that often affects empirical results is what is known as the "stay-away effect." This terminology refers to the decision by tourists, as well as inhabitants of a given locale, to stay away from or leave their hometowns and surrounding areas during the Olympics or other mega-events to avoid crowds, increased security, and elevated costs. The stay-away effect plays an undetectable role in the estimated revenues that should be generated during a mega-event, therefore making tourism numbers hard to calculate. Press (2004) notes that the stay-away effect partially offsets any boost in consumption generated by the Olympics for the given host city/country. Hughes endorses Press' acknowledgment of the stay-away effect, concluding that it can easily affect the correct prediction of tourism numbers (Roche, 2000, p. 142). This study however does not attempt to distinguish the types of tourists entering and leaving a country, but rather examines the net effect a sporting mega-event has on tourism.

While the stay-away effect contributes to the actual attendance of tourists to a locale where a mega-event is held, empirical studies provide examples of the inaccuracy that exists between projected and actual number of tourists. Pyo, Cook, and Howell (1988), in their focused study on the summer Olympics, provide several examples to support this point. Using data from the Tokyo and Los Angeles Olympics, they found that "only 54% of the projected tourists

actually visited Tokyo during the 1964 Olympic games, while during the 1984 Games, 64% of the visitors forecasted came to Los Angeles" (Pyo *et al.*, p. 137). Raw statistics such as these reveal the total attendance miscalculation that arises in the pre-Olympic phase that ultimately affects overall predicted economic benefit. To correct for this inaccuracy, Lee & Taylor (2005) demonstrate a proper way to ascertain information on tourism, specifically tourism generated by the 2002 FIFA Men's World Cup in South Korea. Questionnaires written in five languages (Korean, English, Japanese, Chinese, and Spanish) were distributed during the 2002 World Cup dates June 1–June 30, at the arrival gates of the three largest international airports as well as the two largest international seaports in South Korea. The purpose of the questionnaire was to categorically break down the types of tourists entering South Korea into three groups: "(1) the football tourist whose main purpose was to attend the World Cup; (2) the indirect World Cup tourist who traveled for World Cup related purposes (e.g., World Cup family and their companions) and for enjoying the World Cup festivities; and (3) the ordinary tourist who traveled for purposes other than the World Cup" (p. 597). By distinguishing these types of tourists, misrepresentation of tourism generated by the World Cup is, if not eliminated, greatly reduced. A second questionnaire was then distributed at the departure gates of the given locations with the intent of surveying expenditures by each type of the three tourists. From results, Lee & Taylor found that during the 2002 World Cup timeframe, 57.7% (232,800/403,466) of tourists to South Korea were from groups (1) and (2), who they classified as overall "World Cup tourists." Furthermore, they also noted that expenditures by these tourists amounted to $522 million US dollars (p. 597).

Similar to empirical studies conducted, most theoretical studies relating the Olympics and their impact on tourism involve case studies, focusing on either a specific Olympic occurrence or

specifically on either the summer or winter Olympics. Studies that take this approach include Kang & Perdue (1994), who provide a case study of the 1988 Seoul Olympics, and Pyo, Cook & Howell (1988), who draw on past empirical and theoretical research to examine the significance of the summer Olympics. Additionally, Weed (2008) uses various Olympics as case studies and provides significant historical comparison between the magnitude of the summer and winter Olympics.

Although these sources provide most of the empirical and theoretical substance for this paper, this thesis is most closely related to Rose & Spiegel (2009), who examined country-level effects on trade making several comparisons between Olympic host countries and Olympic unsuccessful bid host countries. Although Rose & Spiegel analyzed the effects of the Olympics on trade, the dataset they used is one of the most comprehensive datasets available and provides several similarities with the tourism dataset I am using. They based their study on data for 196 countries from 1950 to 2006. On the basis of their country-level data, they concluded "trade is around 30% higher for countries that have hosted the Olympics" (abstract), and that this increase in trade lasts indefinitely. While Rose & Spiegel claim an everlasting increase in trade for countries that are Olympic hosts as well as countries that are Olympic bid hosts, other research conflicts their findings. Kang & Perdue found that the impact of the "Olympic Effect" on tourism is most profound in the year following the event and decreases in significance thereafter (Roche, 2000, p. 141). Hughes also sides with Kang & Perdue in their assessment that tourism generated during the Olympics decreases following the event. As Hughes states: "…'there is little evidence that visits increase' and 'It is unrealistic to expect tourism flows to stay at the Olympic level"' (qtd. in Roche, 2000, p. 142).

Rose & Spiegel (2009) also compared countries that hosted the Olympics and countries that were unsuccessful bid hosts, and found that the effects experienced by host countries are also shared by unsuccessful bid hosts, and are of similar size. They state:

> "Signaling that the country is capable and willing to host the Olympics through a highly visible international bid for a mega-event seems to be associated with a sizable trade-expanding effect. Indeed, the effect of sending this signal seems broadly comparable in size to actually hosting the games" (p. 16).

One can hypothesize that if the Olympics have a positive effect on trade, they too might provide benefits to other sectors such as tourism. Rose & Spiegel also tested a contrast between the summer and winter Olympics and found the coefficients on winter Olympics variables' to be small and insignificant, allowing them to conclude that the winter Olympics do not have a great impact on trade as the summer Olympics do. They found that this reveals "considerable heterogeneity in the Olympic effect" (p. 10). This finding aligns closely with those of Weed (2008) on a theoretical basis. Lastly, Rose & Spiegel observed the effects of the FIFA Men's World Cup on trade and were able to conclude that hosting the World Cup creates "equal trade effects" as hosting the Olympics (p. 14).

Most of the theoretical research on this topic focuses on the long-term impacts of hosting a sporting mega-event. Roche (2000) refers to authors Yong Soon Kang and Richard Perdue in their paper 'Long-Term Impact of a mega-event on international tourism to the host country: A conceptual model and the case of the 1988 Seoul Olympics' to provide insight on this topic. They believe long-term impact on tourism is "generated primarily through improvement of facilities and services, [positive] media coverage, and word-of-mouth communication" (qtd. in Roche 141). Roche also refers to author Howard Hughes' writing titled 'Olympic Tourism and Urban Regeneration' to provide an additional opinion with regards to the long-term impact of the

Games. Hughes believes that the long lasting effect is most profound for places "which have an undeveloped sport infrastructure and which have high unemployment" (qtd. in Roche 142). For a country to maximize its tourism numbers before, during, and after a mega-event, strategic tourist planning efforts must be implemented.

No event provides a better example of effective tourism advertisement and preparation than the 2000 summer Sydney Olympics. The 2000 Olympics served as the first example of a host country that made the most of its privilege to maximize the tourism benefit not only to a city or region, but to the entire country as well. A brief synopsis by Chalip, quoted in Weed (2008) is provided:

> "In the years leading up to the Sydney Olympics…the Australian Tourist Commission (ATC)…worked with journalists by helping them to find stories about Australia, by facilitating familiarization visits and by providing the necessary introductions to enable stories that showcased the country. During the Olympic Games, they provided press conferences to journalists to help them write interesting stories about Sydney and Australia. Before, during and after the Games, the ATC provided event broadcasters with video postcards (short visuals of Australian icons) that could be inserted into telecasts" (p. 91).

The carefully planned advertisement and publicity executions positioned the 2000 Sydney Olympics to be the paradigm of Olympic advertisement success. Unfortunately, the overall success of these efforts was never fully acknowledged as many pre-Olympic and Olympic-phase researchers and agencies moved onto other activities, which is typical of such mega-event studies. Although a 23% tourism boost was noted in the 2000 Olympic year, global events such as September 11, 2001, coupled with the outbreak of SARS in Asia, caused tourism to decline throughout the world negatively affecting the anticipated tourism returning to Australia following the Sydney Olympics (Weed, 2008, p. 151)

While it is unclear whether the Olympics and other sporting mega-events such as the FIFA Men's World Cup have a definite impact on tourism for a given city/country,

several scholars offer their opinions in relation to the planning, understanding, and execution of a successful mega-sporting event. In regards to planning Pyo *et al*. (1988) states:

> "The short term objective of the tourism sector during the Olympic Games is to attract a large number of tourists to offset part of the financial burdens of the host country's taxpayers. The long-term goal should be to upgrade the popularity of the host city as a desirable tourist destination through comprehensive public relations during the Olympic Games. Above all, the Olympic Games should be recognized as an investment for the future and an image-building event rather than a profit generating opportunity" (p. 144).

While it cannot be assumed that a city that hosts the Olympics or a similar mega-event will experience positive results as dictated by several mega-events with negative outcomes, Roche (2000) examines the general attitude and impression hosts have:

> "One of the main impacts the Olympic Games and other mega-events are assumed to have on their host cities is in terms of the short- and long-term economic impact of the event on the flow of tourists into the city, and also the long-term cultural impact of the event on the image of the city nationally and internationally by potential tourists and private sector decision-makers and investors" (p. 140).

Overall, various opinions in studies and several incongruities in the data make it hard to fully conclude whether hosting the Olympics or being a bid host guarantees positive returns specifically in relation to tourism. However, it is important to note the contextual aspect of mega-event hosting. Press (2004) states:

> "The economic impact of the Games is very dependent on the number of foreign tourists because they bring fresh money into the city and region. The total number of tourists heavily depends on the attractiveness of the region and other conditions such as the political or economic situation" (p. 51).

Moreover, it is difficult to identify the lasting effect of a mega-event, as it is difficult to distinguish their effects from development advancements that occur with time progression and improved technology (Conrady and Buck, 2007, p. 88) There is an expectation that numerous sectors such as trade and tourism experience upward trends on an annual basis as a result of these advancements. To account for the possible time trend in this analysis, year dummies are used to

control for this potential problem. Furthermore, regressions use a modified version of a dependent variable that measures its deviations from the trend.

III. DATA / METHODS

The original aim of this paper was to identify the impact the Olympics have on the tourism of the host city. In order to assess this impact, my research was geared toward finding an aggregate measure of tourism such as total expenditures by tourists and/or the total number of tourists visiting a given city for as many years as possible. However, after much research, it was clear that there is no consolidated database for city tourism and it becomes very difficult to find individual sources for it, let alone reliable and comparable ones, as many cities hire private agencies to report figures that can be skewed in their favor. Even when such data is available, it only comprises a couple of years. To accommodate this lack of data, I shifted the focus of this paper toward examining countries rather than cities. This is consistent with the approach of Rose and Spiegel (2009) who studied the effects of hosting the Olympics on a country's level of trade. Moreover, I wanted to find monthly data to best understand the timeframe during an Olympic year when a spike in tourism occurs (e.g. six months before the games, one month before the games). Unfortunately, this too was unavailable so I became reliant on using annual data in my thesis.

The data used in this thesis comes from the World Development Indicators (World Bank, 2009). From this source, it is possible to obtain and/or construct several variables related to tourism. These variables are reported by country and year. There are two variables obtained from the World Development Indicators that most align with my hypotheses and will serve as the dependent variables in the regressions. The first, is an international tourism variable called *ARRIVALS* which represents the numbers of arrivals into a country by international visitors for a

stay period of no longer than twelve months. Unfortunately, data for this tourism variable only dates back to 1995 and covers the period through 2007. Therefore, a travel variable called *REAL_TRAVEL_MIL*, is also used which represents total expenditures (in millions) on all goods and services obtained from a country's economy by travelers within that country for a stay of twelve months or les (World Bank, 2009). This variable has been deflated to constant 2007 USD, using GDP deflators reported in the World Bank. Originally, it was difficult to distinguish whether a variable for transport should be included too which would measure all modes of transportation expenditures as well as the transportation of goods and necessary repair services. However after reading through IMF (2008), which provides information on variables from the World Development Indicators, it was clearly noted that the variable for travel services is a better measure of tourism than the variable for transport services. Data on travel services dates back to 1975 and therefore will be instrumental in filling the gap of missing years for the international tourism *ARRIVALS* variable. However, it is important to note that there are several missing values for both of the variables mentioned.

The dataset being used includes 112 countries all with 2006 populations of three million people or more. This inclusion criterion was set primarily because it can be assumed that any country with populations under three million are not large enough and do not have the financial capability and infrastructure necessary to host the Olympics. As Short (2008) notes:

> "Because of the heavy infrastructural requirements of hosting such a large international event it is only the larger and richer cities that are serious candidates to host…Small cities and cities from developing countries tend to be cut early from the bidding process…The possibility of cities from poor developing countries with limited existing facilities hosting the Games is rapidly diminishing in this new era" (p. 334).

Furthermore, although the population data spans to 2008, 2006 was chosen as the baseline year for population count because it is the most recent year for which relatively complete data is

available. The data for population is from the Rose & Spiegel dataset with values provided by the World Development Indicators. Countries with ten or more missing values of *REAL_TRAVEL_MIL* were excluded from the analysis. The entire dataset extends through the years 1975 to 2008 and includes several missing values. Given these dates, the Olympics that are used in this study begin with the 1976 summer and winter Olympics and include every Olympics thereafter until the 2006 winter Olympics. The frequency of Olympics held varies. Before 1994, the summer and winter Olympics occurred in the same year in four-year cycles. Through 1992, the summer and winter Olympics shifted to alternating even years, beginning with the winter Olympics held in 1994 followed by the summer Olympics held in 1996. With regard to the FIFA Men's World Cup, which occurs every four years, the 1978 World Cup is the initial World Cup event used in this study and will go through the 2006 World Cup.

The dummy variables I created are for mega-event host (*MEGAHOST*), Olympic host (*OLYMPICHOST*), summer Olympic host (*SUMMERHOST*), winter Olympic host (*WINTERHOST*), and FIFA Men's World Cup host (*WORLDCUPHOST*). The variable *MEGAHOST* along with the other *MEGA-* variables used in this study represent a consolidated mega-event variable, therefore including every mega-event used in this study in their respective ways. To note, hosts for the Olympics are cities while hosts for the FIFA Men's World Cup are countries. However, as mentioned prior, due to the unavailability of city data, country data is used for Olympics hosts. Beyond these host variables, I generated dummy variables for unsuccessful bid hosts of these events, which are the first and second host runners up for each mega-event. These variables are denoted as *MEGABID*, *OLYMPICBID*, *SUMMERBID*, *WINTERBID*, and *WORLDCUPBID*. The values assigned to all of dummy variables in this study are 0 or 1. "0" represents a country not being a host or unsuccessful bid host of a specific event

during a given year, with "1" representing a country being a host or unsuccessful bid host during a specific year.

In the Rose & Spiegel dataset, dummy variables were created to denote whether a country has ever been a host or unsuccessful bid host for a mega-event, meaning that a value of "0" would represent a country that was never a host or unsuccessful bid host throughout history, and "1" would represent a country that was a host or unsuccessful bid host at least once throughout time. To follow their path, I generated dummy variables similar to those of Rose & Spiegel called: *MEGAHOSTPAST*, *OLYMPICHOSTPAST*, *SUMMERHOSTPAST*, *WINTERHOSTPAST*, *WORLDCUPHOSTPAST*, *MEGABIDPAST*, *OLYMPICBIDPAST*, *SUMMERBIDPAST*, *WINTERBIDPAST*, and *WORLDCUPBIDPAST*, with values of "0" and "1" that represent the same concepts as Rose and Spiegel laid out for each respective variable.

Additional dummy variables were created for each type of event representing whether a country was either a host or unsuccessful bid host in a given year. If so, the variable would receive a value of "1", while a country that was neither a host or unsuccessful bid host in the given year would be assigned "0" as a value. These variables are denoted as: *MEGAHOSTBID*, *OLYMPICHOSTBID*, *SUMMERHOSTBID*, *WINTERHOSTBID*, and *WORLDCUPHOSTBID*. Similar to the other dummies created for analysis, a past version is also assigned to each of these host/unsuccessful bid host dummies. They are referred to as: *MEGAHOSTBIDPAST*, *OLYMPICHOSTBIDPAST*, *SUMMERHOSTBIDPAST*, *WINTERHOSTBIDPAST*, and *WORLDCUPHOSTBIDPAST*. A value of "1" is assigned to a country that was ever a host or unsuccessful bid host in the past, while a "0" is given to a country that was never a host or unsuccessful bid host in the past.

IV. DESCRIPTIVE STATISTICS

Using the two dependent variables obtained from the World Development Indicators, which are *ARRIVALS* and *REAL_TRAVEL_MIL*, graphs were generated country-by-country for each respective dependent variable over their respective time frames. The graphed countries that received the most attention were countries that were ever hosts or unsuccessful bid hosts of any type of sporting mega-event (mega, Olympics, summer Olympics, winter Olympics, or FIFA Men's World Cup). These graphs were used to notice if any particular country was visibly different from the majority, or whether on a whole, preliminary conclusions could be made. They serve as basic observations to understand before regression analysis is used.

Graphs created using *ARRIVALS* as the dependent variable spanned the years 1995 to 2007. Overall, the majority of countries graphed display positive trends for arrivals over time. Examples include graphs for Japan and Sweden (*see figures 1 & 2*). Mexico seems to display the least consistency in *ARRIVALS*, as its graph continuously spikes up and down over the years (*see figure 3*). Dips that do occur for each country reveal uniqueness in the economic and social make-up of the particular country during a given period. However, it is also visible that many of the dips for countries that arise seem to be centered around the year 2001, which is when September 11th occurred. Graphs that most clearly display this occurrence are for the United States, the United Kingdom and Switzerland (*see figures 4-6*). Besides September 11th occurring within this time frame, as Weed (2008) notes, the outbreak of SARS in Asia also was taking place (p.151).

Graphs that used *REAL_TRAVEL_MIL* as the dependent variable cover a greater period since data for this variable begins in 1975. In a sense, one would expect more fluctuations to occur within these graphs due to more years being included. Similar to the observations from

above, the majority of countries exhibit increasing trends in relation to their travel expenditures over time. This can be displayed by graphs for Australia and Canada (*see figures 7-8*). Only two countries, Mexico and Russia, reveal completely decreasing trends, which are particularly unusual, however must have to do with specific country factors (*see figures 9-10*). Again, visible dips for several countries are illustrated around 2001. Such examples include graphs for the United States and Korea (*see figures 11-12*).

After observing general patterns and trends for countries, it is important to notice whether countries experience positive increases in their tourism after they are hosts or unsuccessful bid hosts of an event. A boost in *ARRIVALS* is seen for several countries after they are hosts or unsuccessful bid hosts of an event; such countries include China (2000 summer Olympic unsuccessful bid host), South Africa (2004 summer Olympic unsuccessful bid host, and 2006 World Cup unsuccessful bid host), and France (1998 World Cup host) (*see figures 13-15 & table 4*). Similar patterns are also exhibited with the use of *REAL_TRAVEL_MIL* as the dependent variable. Countries that reveal increases in travel expenditures after being a host or unsuccessful bid host of an event include Australia (1992 summer Olympic unsuccessful bid host, and 2000 summer Olympic host), Canada (1996 summer Olympic unsuccessful bid host, and 1988 winter Olympic host), and the United States (1976 and 1980 summer Olympic unsuccessful bid host, 1994 winter Olympic unsuccessful bid host, 1994 World Cup host, 1996 summer Olympic host, and 2002 winter Olympic host) (*see figures 7, 8, & 11 & table 4*).

Besides looking at specific country graphs, general bar graphs of the dependent variables and some independent variables serve to reveal magnitude and general conclusions. *Figure 16* displays the mean of *ARRIVALS* over time. As one can notice, *ARRIVALS* seem to increase over time, which can most likely be attributed to time progression and technological advancement.

During 1995, it appears that mean of ARRIVALS is around 5,000,000 people and increases to over 8,000,000 people in 2007. Looking at a similar graph for mean of *REAL_TRAVEL_MIL* more fluctuations are present. Most of the rises and dips occur earlier in time and seem to show increasing numbers in more current years (*see figure 17*). Starting in 1975, the mean of *REAL_TRAVEL_MIL* appears to be around $7,000 millions of 2007 inflation-adjusted USD and in 2008, is around $12,500,000 millions of 2007 inflation-adjusted USD.

Figures 18 through 21 are bar graphs that make comparisons for *OLYMPICHOST* and *OLYMPICHOSTPAST* with both tourism variables. All four graphs show greater increases in tourism variables generated for countries that are either current or past Olympic hosts versus countries that are not current or were never past Olympic hosts. Furthermore, the current Olympic host increases the two tourism variables with larger magnitude than the past Olympic host variable.

Figures 22 through 25 use similar comparison with the focus on current and past FIFA Men's World Cup host. Comparable conclusions can be drawn. Being a current or past World Cup host impacts *ARRIVALS* and *REAL_TRAVEL_MIL* more significantly than not being a current or past host. It also appears that being a past World Cup host tends to lead to a greater increase in *ARRIVALS* and *REAL_TRAVEL_MIL* than being a current World Cup host.

V. DATA ANALYSIS

The primary analysis used in this study is a variety of OLS regressions. In all the regressions presented in this thesis, the standard errors are calculated using White's heteroskedasticity correction and with clustering on countries to take into account the possibility of within-country correlation in the errors. Also, country and year dummies are included at

different points in testing to control for any variation that may occur as a result of country or year fixed effects.

The first regressions used the variable *REAL_TRAVEL_MIL* as the dependent variable, which represents the amount of travel expenditures by visitors within a destination economy for a stay of a year or less in millions of 2007 inflation-adjusted constant US dollars. The basic regression of this type included one independent variable, either a dummy variable representing whether a mega-event (*MEGAHOST*), Olympics (*OLYMPICHOST*, *SUMMERHOST*, *WINTERHOST*) or FIFA Men's World Cup (*WORLDCUPHOST*) was hosted in each country in each year.

Equation 1:

$$REAL\_TRAVEL\_MIL_{it} = \beta_0 + \beta_1(host\ dummy)_{it} + e_{it}$$

In all five regressions (*see table 1. A. i. a-e*), the coefficients on the current host dummy variables are positive and all have p-values statistically significant at the 95% level except for *WORLDCUPHOST*, which has a p-value that is marginally significant at the 90% level. In the regressions with the past versions of these dummies, all coefficients are positive, and have p-values statistically significant at the 95% level except for *WINTERHOSTPAST,* which is marginally significant with a p-value of .065. From these results, which do not take into consideration country and year variation, as well as time trend, there is a positive association between being a current or past host on travel expenditures. The current and past summer Olympic host dummies reveal a larger impact on travel expenditures than the current and past winter Olympic host dummies. Furthermore, the current and past World Cup host dummies show the greatest impact on travel expenditures out of all other event dummies with a $27,047.23 millions of 2007 inflation-adjusted USD increase (current version), and an increase on travel

expenditures of $30,868.75 million of 2007 inflation-adjusted US dollars (past version) (*see table 1.A. i. a-e*).

After these preliminary basic regressions, it is necessary to add additional dummy variables that take into consideration any change that can be caused by year or country variation to make results more accurate. The first form of this altered regression uses the same host dummy variables but includes a dummy variable X_i for every country (*labeled in tables by ii*). The excluded country was Albania.

Equation 2:

$$REAL\_TRAVEL\_MIL_{it} = \beta_0 + \beta_1(host\ dummy)_{it} + \sum_{i \neq 1} \partial_i X_i + e_{it}$$

Unlike the first set of regressions, which did not include dummies, results with the country dummies did not generate the same results. None of the current host dummies came back significant (*see table 1. A. ii. a-e*). The past versions of mega host, Olympic host, and winter Olympic host came back with p-values statistically significant at the 95% level with *WINTERHOSTPAST* being marginally significant with a p-value of .056 (*see table 1. A. ii. a-e*). From these findings, one can see that when country variation is controlled for, there is no evidence of association between being a current host and the amount of travel expenditures by tourists within a given country.

Instead of using country dummies for the next set of regressions, a year dummy Y_t is included for every t (excluding the year 1975) (*labeled in tables by iii*).

Equation 3:

$$REAL\_TRAVEL\_MIL_{it} = \beta_0 + \beta_1(host\ dummy)_{it} + \sum_{t \neq 1975} \partial_t Y_t + e_{it}$$

Results found positive coefficients on all of the independent variables. Moreover, all of the coefficients on the current dummies were found to have p-values statistically significant at the

95% level (*see table 1. A. iii. a-e*). These findings were similar to the results found using the simple regression as shown in *equation 1*. Results on the past versions of the host dummies, illustrates comparable results with all host past dummies having p-values statistically significant at the 95% level, except for *WINTERHOSTPAST* which has p-value of .065, making it marginally significant at the 90% level. This set of regressions reveals a positive association between being a current or past host and travel expenditures, when year controls are used. This conclusion aligns with results found when the same regression without country or year dummies was used. Again, the current and past summer Olympic host has a greater effect on travel expenditures than a current or past winter Olympic host does. Furthermore, the current and past host of the World Cup creates the largest impact on travel expenditures, as seen before.

The last regression of this type included both country and year dummies (excluded is year 1975 and country Albania) (*labeled in tables by iv*).

Equation 4:

$$REAL\_TRAVEL\_MIL_{it} = \beta_0 + \beta_1(host\ dummy)_{it} + \sum_{i \neq 1} \partial_i X_i + \sum_{t \neq 1975} \partial_t Y_t + e_{it}$$

With the use of country and year dummies, all host dummies came back insignificant (*see table 1. A. iv. a-e*). This most likely has to do with the presence of the country dummy, which as noted before, caused current host dummies to become insignificant. Observing the past versions of these dummies finds *MEGAHOSTPAST*, *OLYMPICHOSTPAST* and *WINTERHOSTPAST* to be significant at the 95% level and *WORLDCUPHOSTPAST* to be marginally significant with a p-value of .051 (*see table 1.A. iv. a-e*). Both the results of current host and past host dummies parallel the findings from the regressions ran with the country dummies. The results presented in *Table 1.A.iv. a-e* shows that being a current host of any mega sporting-event has no impact on travel expenditures when country and year characteristics are controlled for. However, the past

host versions reveal that having a hosted a mega sporting-event in the past is positively associated with travel expenditures, and this association is statistically significant for all of the past host dummies except one (*SUMMERHOST*), even when controlling for country and year fixed effects.

The four versions of the regression using *REAL_TRAVEL_MIL* as the dependent variable were then tested with a modified version of the travel variable to account for a possible time trend that is naturally-occurring which can account for the continual increase of the dependent variables used in this study. This new variable, *RTREND_DEV_TRAVEL*, is also measured in millions of 2007 inflation-adjusted US dollars, and is used to determine whether the dummy variables generate different results when a time trend is removed. This new variable was constructed by using the real travel variable's deviations from their fitted values generated by an OLS regression of *REAL_TRAVEL_MIL* on time.

The basic regression (*similar to equation 1*) without the use of country or year variables, but now using *RTREND_DEV_TRAVEL* as the dependent variable, found all signs on coefficients of event host dummies to remain positive except for *WINTERHOST (see table 2. A. i. a-e)*. However, all are insignificant except for *SUMMERHOST*, which has a p-value close to zero (*see table 2. A. i. c*). Past versions of these host dummies with the new dependent variable, show positive signs on all coefficients. In this case, they all appear to be statistically significant at reasonable levels of confidence (p-values ≤ .075 for all cases) except for *WINTERHOSTPAST,* which has a p-value of .116 *(see table 2. A. i. a-e)*. This reveals a positive association between past host dummies and travel expenditures when the time trend is considered (except for *WINTERHOSTPAST*).

The next regressions (*similar to equation 2*), with *RTREND_DEV_TRAVEL* as the

dependent variable and country dummies included, yield similar results for host dummies mentioned above, with *SUMMERHOST* having a p-value near 0 (*see table 2. A. ii. a-e*). With the country dummies implemented, all past host dummies are significant with four of the five p-values significant at the 95% level (*see table 2. A. ii. a-e*). This reveals that even when the time trend is accounted for and country variation is considered, there is a positive association between being a past host and travel expenditures. *SUMMERHOSTPAST* generates greater increases on travel expenditures than *WINTERHOSTPAST*, and being a past World Cup host creates the largest effect on travel expenditures.

The same regressions with year dummies, but without the country dummies, shows all current host and past host dummies to be insignificant except for *SUMMERHOST,* which again is highly significant with a p-value close to 0 (*see table 2.A. iii. a-e*). From these findings, it is plausible to state that when time variation is controlled for, there is no association between being a current or past host of a mega sporting-event on travel expenditures by visitors within a country, except for a current host of the summer Olympics.

Lastly, regressions with *RTREND_DEV_TRAVEL* as the dependent variable and both year and country dummies included, finds significant results for *SUMMERHOST* with a p-value of .001 (*see table 2. A. iv. a-e*). Results on past versions of these dummies show *MEGAHOSTPAST*, *OLYMPICHOSTPAST*, and *SUMMERHOSTPAST* to all have positive signs on their coefficients as well as p-values that are significant above the 95% level (*see table 2. A. iv. a-e*). *WINTERHOSTPAST* is marginally significant with a p-value of .051. From these results, it is clear that there is a positive association between being a past host and travel expenditures even when time trend is removed and country and year factors are controlled for (except for *WORLDCUPHOSTPAST*). For example, being a *MEGAHOSTPAST* shows an increase in travel

expenditures for the host country of $1,473.134 millions of 2007 inflation-adjusted USD. Again, the effect of being a past summer Olympic host is far greater than that of being a past winter Olympic host ($,3284.337 versus $818.778, respectively).

This complete set of regressions using the two versions of the travel variable as the dependent variables as well as using various country and year controls, is used for current unsuccessful bid host dummies and past unsuccessful bid host dummies. With REAL_TRAVEL_MIL as the dependent variable and no control dummies included, signs on all current unsuccessful bid host coefficients are positive with *SUMMERBID* to be statistically significant at the 99% level with a p-value of .001 (*see table 1. B. i. c*). *MEGABID* and *OLYMPICBID* show p-values marginally significant, passing the 90% level (*see table 1. B i. a & b*). Past versions of these unsuccessful bid host dummies, also all have positive coefficients. Only *MEGABIDPAST*, *OLYMPICBIDPAST*, and *SUMMERBIDPAST* are statistically significant with p-values clearing the 95% level (*see table 1 B. i. a - c*).

Implementing a country dummy reveals a change of signs on some coefficients, and all to be insignificant (*see table 1. B. ii. a-e*). This allows one to conclude that when country variation is controlled for, there is no association between being a current unsuccessful bid host and travel expenditures. Looking at the past versions of the unsuccessful bid host dummies reveals significance of p-values for *MEGABIDPAST*, *OLYMPICBIDPAST*, and *SUMMERBIDPAST,* all at the 95% level (*see table 1. B. ii. a - c*).

With year dummies included, and country dummies not, *MEGABID*, *OLYMPICBID*, and *SUMMERBID* are statistically significant, all with positive coefficients (*see table 1. B. iii. a - c*). Past versions of these unsuccessful bid hosts' yields similar results, with *MEGABIDPAST*, *OLYMPICBIDPAST* and *SUMMERBIDPAST,* to have p-values significant at the 95% level (*see*

table 1. B. iii. a – c).

Lastly, adding both year and country dummies changes signs on some of the coefficients of the current unsuccessful bid host dummies which all have insignificant p-values (*see table 1. B. iv. a – e*). Again, *MEGABIDPAST*, *OLYMPICBIDPAST* and *SUMMERBIDPAST* return with significant p-values, all above the 95% level (*see table 1. B. iv. a – c*). These results are similar with the results from the regression used with county dummies.

The same regressions with *RTREND_DEV_TRAVEL* as the dependent variable found no impact on current unsuccessful bid hosts on travel expenditures even when year and country controls were used (*see tables 2. B. i-iv*). One can conclude that when time trend is removed, and country and year controls are used together as well as interchangeably, there is no association between being a current unsuccessful bid host and travel expenditures. Looking at the past versions of these dummies shows *SUMMERBIDPAST* to be significant except for when only year dummies are included (*see table 2. B. i-iv. c*). *OLYMPICBIDPAST* and *WINTERBIDPAST* are also statistically significant at the 90% level when country and year dummies are included (*see table 2 B. iv.*).

The third set of regressions used the joint host/unsuccessful bid host dummies as independent variables. The basic regression using *REAL_TRAVEL_MIL* as the dependent variable without the addition of dummies (*similar to equation 1*), found all positive signs on variable coefficients. Furthermore, all are statistically significant (*OLYMPICHOSTBID* is marginally significant with p-value of .057) except for *WINTERHOSTBID,* which has a p-value of .151 (*see table 1. C. i. a-e*). The past versions of these dummies also have positive coefficients and all are statistically significant at the 95% level, except for *WINTERHOSTBIDPAST*, which is marginally significant with p-value of .052 (*see table 1. C. i. a-e*).

Adding country controls to the regression changes coefficients on the current dummies and also makes their p-values insignificant (*see table 1. C. ii. a – e*). The past versions of these dummies all have positive coefficients, with p-values that are all significant at the 95% level except for *WORLDCUPHOSTBIDPAST,* which is marginally significant at the 90% level with a p-value of .073 (*see table 1. C. ii. a - e*).

Using year dummies without country controls produces all positive signs on the dummies' coefficients. All of them are statistically significant at the 95% level except for *WINTERHOSTBID* (*see table 1. C. iii a – e*). Similar results are found when using the past versions of these dummies except for *WINTERHOSTBIDPAST,* which is marginally significant with a p-value of .051 (*see table 1. C. iii. a – e*). These results mirror the outcomes from the regression when no country or year dummies were included.

Lastly, including both year and country dummies reveals no association between being a current host/unsuccessful bid host and travel expenditures due to the coefficients on these dummies not having significant p-values. However, all past versions come back statistically significant with p-values that all pass at the 95% level except for *WORLDCUPHOSTBIDPAST,* which is marginally significant with a p-value of .065 (*see table 1. C. iv. a – e*). These results align closely with the findings when only country controls were implemented.

The regressions for the combined host/unsuccessful bid host dummies reveal a positive association between being a past host/unsuccessful bid host and travel expenditures across the board regardless of the use and removal of country and year controls. Such a conclusion is not possible to make in regards to the current versions of these dummies. It appears that a positive association between the current versions of these dummies (except for *WINTERHOSTBID*) and travel expenditures only occurs when country dummies are not present.

The same regressions with the use of *RTREND_DEV_TRAVEL* as the dependent variable reveal results that are somewhat ambiguous. Out of all of the current host/unsuccessful bid host dummies only *SUMMERHOSTBID* is statistically significant at the 95% level when country and year dummies are not present, or only when country controls are included (*see tables 2. C. i. c & table 2. C. ii. c*). All other current versions of these dummies are insignificant across all regressions used with various controls (*see tables 2. C. i – iv*). Results generated by the past versions of the host and unsuccessful bid host dummies produce slightly less vague results. When year and country controls are not included, *SUMMERHOSTBIDPAST* and *WORLDCUPHOSTBIDPAST* are marginally significant with p-values of .073 and .061 respectively. Adding country dummies finds *OLYMPICHOSTBIDPAST*, *SUMMERHOSTBIDPAST* and *WORLDCUPHOSTBIDPAST* to be marginally significant as well. Year dummies without country controls produces all insignificant results for the past host/unsuccessful host dummies. Lastly, when both country and year dummies are included, *MEGAHOSTBIDPAST*, *OLYMPICHOSTBIDPAST*, and *SUMMERHOSTBIDPAST* are statistically significant, with SUMMERHOSTBIDPAST generating the largest increase in travel expenditures of $1,303.374 millions of 2007 inflation-adjusted US dollars (*see table 2. C. iv. a-c*).

With regressions and conclusions drawn from testing both *REAL_TRAVEL_MIL* and *RTREND_DEV_TRAVEL*, the final set of regressions use *ARRIVALS* as the dependent variable, which measures the amount of visitors entering a country for a stay of a year or less. The time frame of this variable spans from 1995 to 2007. Conclusions from these regressions serve to further emphasize significant results found prior in relation to tourism and help to make general conclusions on the topic.

The basic regression without dummies on the current host variables show all signs on coefficients to be positive. *MEGAHOST*, *OLYMPICHOST*, and *WINTERHOST* are the only current dummies that have p-values that are statistically significant (*see table 3. A. i. a – e*). Past versions of these host variables are all significant with p-values above the 95% level (*see table 3. A. i. a – e*). This reveals a positive association between a country being a past host of an event and arrivals generated for that country. What is interesting from these results is that *WINTERHOSTPAST* causes a greater increase in arrivals than *SUMMERHOSTPAST* (20,800,000 arrivals versus 20,200,000 arrivals) (*see table 3. A. i. c & d*). Also, it is apparent that *WORLDCUPHOSTPAST* creates the largest impact on arrivals with an increase of 28,900,000 arrivals (*see table 3. A. i. e*).

Adding country dummies to the regression causes all signs on the current host dummies to become negative and makes them all insignificant as well (*see table 3. A. ii. a – e*). Therefore, one can conclude that when country-level factors are present, there is no association between being a current host of an event and arrivals into a specific country. The past versions of these host dummies reveal the complete opposite result. They all have positive coefficients with p-values that are statistically significant at the 95% level, except for *WORLDCUPHOSTPAST,* which is marginally significant with a p-value of .090 (*see table 3. A. ii. a – e*). Again, a positive association is seen between past host dummies and arrivals. *WINTERHOSTPAST* still produces larger effects than *SUMMERHOSTPAST*, while *WINTERHOSTPAST* carries the most weight for increase in arrivals.

The regression with year dummies, excluding country dummies, shows positive coefficients on all variables and three of the five host dummies' p-values to be significant at the 95% level (*see table 3. A. iii. a – e*). These three current host dummies are: *MEGAHOST*,

OLYMPICHOST, and *WINTERHOST*. Past versions of these dummies are also positive with p-values all statistically significant as that 95% level (*see table 3. A. iii. a – e*). The association stated in the previous two regressions as well as general observations made for the past host dummies and arrivals into a country also hold true for these regressions as well.

Lastly, regressions that include both year and country dummies on the host variables show insignificant results for all current host dummies and past host dummies except for *OLYMPICHOSTPAST* (*see table 3. A. iv. a – e*). This variable has a positive coefficient and is statistically significant at the 95% level with a p-value of .046. One can conclude from these findings that when year and country controls are implemented, there is no positive association between being a current or past host of an event and arrivals except for *OLYMPICHOSTPAST,* which increases *ARRIVALS* for the host country by 1,476,007 people.

Shifting the focus from host dummies to unsuccessful bid host dummies finds four out of the five dummies to be significant with p-values significant above the 95% level (except for *WORLDCUPBID,* which is significant at the 90% level) when the basic regression is used (*see table 3. B. i. a – e).* They also all have positive signs on their coefficients. From these results, it can be acknowledged that a positive association exists between current unsuccessful bid hosts and arrivals, except for *WINTERBID*. The past versions of the unsuccessful dummies yield comparable results with *MEGABIDPAST*, *OLYMPICBIDPAST*, and *SUMMERBIDPAST* all significant at the 95% level (*see table 3. B. i. a – e).*

Adding country dummies to the regressions, only finds *OLYMPICBID* and *SUMMERBID* to be significant with p-values at the 95% level. Interestingly, the signs on these significant coefficients are negative (*see table 3. B. ii. b & c*). This is the first occurrence of a negative association between being an unsuccessful bid host and tourism, in this case, upon arrivals. From

these results, it appears that being an unsuccessful bid host of the Olympics when country dummies are present, causes there to be a loss of 1,092,162 arrivals into the given country. This is somewhat surprising. In the other scenario, being an unsuccessful bid host of the summer Olympics causes arrivals to decline by 1,744,847 people when country dummies are included. When looking at the past versions of the unsuccessful bid host dummies in these regressions to see if comparable results are generated, they are not (*see table 3. B. ii. a – e*). All past dummies come back marginally significant at the 90% level except for *WINTERBIDPAST,* which has a p-value close to zero. All of the coefficients on these variables have positive signs. This shows a positive association between past unsuccessful bid hosts and arrivals when country factors are controlled for. As noticed prior, *WINTERBIDPAST* has a greater impact on *ARRIVALS* than *SUMMERBIDTPAST* (47,500,000 versus 5,877,295, respectively).

With the removal of country dummies and the addition of year dummies, *MEGABID*, *OLYMPICBID*, and *SUMMERBID* all come back statistically significant with p-values above the 95% level and *WORLDCUPBID* is marginally significant with a p-value of .075 (*see table 3. B. iii. a – c*). A positive association is noticed between these variables with *SUMMERBID* generating the largest increase in arrivals (15,400,000 people). The past versions of these dummies also come back statistically significant at the 95% level for *MEGABIDPAST*, *OLYMPICBIDPAST*, and at the 99% level for *SUMMERBIDPAST (see table 3 B. iii. a – e).* All of the signs on both the current and past dummies have positive coefficients.

When adding both year and country dummies, similar results as to when country dummies were included occur for *OLYMPICBID* and *SUMMERBID*. Both are significant at the 95% level with p-values of .015 and .003, respectively, and both have negative signs on their coefficients (*see table 3. B. iv. b & c*). This again reveals a negative association between being an

unsuccessful bid host and its impact on tourism, specifically arrivals. From these results, it appears that being an unsuccessful bid host of the Olympics in a given year when year and country factors are controlled for cause arrivals to drop by 988,772.8 people. Being an unsuccessful bid host of the summer Olympics in a given year with the same controls finds arrivals decrease by 1,551,717 people for a given country. This negative association seems to be a byproduct of the addition of the country dummies. The past versions of these dummies reveal only *WINTERBIDPAST* to be statistically significant with a p-value close to zero (*see table 3. B. iv. d*). Unlike the current dummies, this past dummy has a positive coefficient.

Lastly, regressions using *ARRIVALS* as the dependent variable and using the joint host/unsuccessful bid host dummies as the independent variables, finds similar results to other regressions to occur. The basic regression without any additional dummies causes *MEGAHOSTBID*, *OLYMPICHOSTBID*, and *SUMMERHOSTBID* to have positive coefficients as well as have p-values that are statistically significant at the 95% level (*see table 3. C. i. a – c*). *WORLDCUPHOSTBID* is found to be marginally significant with a p-value of .071. All of the past versions of these dummies are significant at either the 99% or 95% level, all with positive signs on their coefficients *(see table 3. C. i. a – e*). This allows one to conclude that being a current or past host/unsuccessful bid host of an event has a positive association with arrivals into a country when year and country factors are not controlled for, except for *WINTERHOSTBID*. Larger increases are noticed on both current and past summer host/unsuccessful bid host dummies versus current and past host/unsuccessful bid host dummies.

Adding country dummies to these regressions reveals more negative associations that are similar to the regressions ran for the unsuccessful bid host variables. In these regressions, *SUMMERHOSTBID* comes back statistically significant with a p-value of .002, however with a

negative sign on its coefficient (*see table 3. C. ii. c*). From this result, one can conclude that being either a current host/unsuccessful bid host of the summer Olympics in a given year causes arrivals into a specific country to fall by 1,264,773 people when country-level variation is controlled for. *OLYMPICHOSTBID* is marginally significant with a p-value of .091 and also has a negative coefficient. From this result it is apparent that being a current host/unsuccessful bid host of the Olympics causes arrivals into a country to fall by 891,964.2 people, when country dummies are included. Yet again, this result is surprising and seems somewhat incomprehensible. Past versions produce different results with *WINTERHOSTBIDPAST* being significant with a p-value close to zero and *WORLDCUPHOSTBIDPAST* to be significant at the 95% level with a p-value of .025. The other three past version dummies are marginally significant with p-values passing the 90% significance test (*see table 3. C. ii. a –e*). Again, a positive association is noticed between past host/unsuccessful bid host dummies and ARRIVALS when country variation is controlled for. As before, *SUMMERHOSTBIDPAST* has a larger impact than *WINTERHOSTBIDPAST* on arrivals (6,178,921 people versus 143398.6 people, respectively) (*see table 3. C. ii. c & d*).

When removing country dummies and adding year dummies, *MEGAHOSTBID*, *OLYMPICHOSTBID* and *SUMMERHOSTBID* are statistically significant, with WORLDCUPHOSTBID being marginally significant with a p-value of .074 (*see table 3. C. iii. a – c*). All of these coefficients are positive. The past versions of these dummies also come back statistically significant with three of the five dummies being significant at the 99% level (*see table 3. C. iii. a - e*). Furthermore, all coefficients on these dummies have positive signs. Same associations that were drawn above for the current and past host/unsuccessful host dummies when no dummies were added, hold true here as well.

Finally, observing regressions of the host/unsuccessful bid host dummies when both year and country dummies are added, reveals only *OLYMPICHOSTBID* and *SUMMERHOSTBID* to be significant with p-values of .028 and .009, respectively (*see table 3. C. iv. b & c*). They however have negative signs on their coefficients. This shows that if a country is a current host/unsuccessful bid host of the Olympics, arrivals for that country will fall by 819,313.4 people. Being a current host/unsuccessful bid host of the summer Olympics shows an even greater decrease in arrivals into the specific country (1,048,558 people). These negative coefficients seem to be a result of the addition of country dummies, which was experienced in previous regressions. Regressions with the past versions of these dummies reveals all insignificant coefficients, except for *WINTERHOSTBIDPAST*, which is marginally significant with a p-value of .098 (*see table 3. C. iv. a – e*). This dummy also has a negative coefficient and reveals that if a country was ever a host/unsuccessful bid host of the winter Olympics in the past, arrivals for that country will fall by 80,809.92 people.

When no dummies are included in the regression analysis, the adjusted *R*-values are very small. Nonetheless, as discussed in this section, the event variables come back with significant coefficients and are of appreciable magnitude. When dummies are included, the adjusted *R*-values are greater (*see tables 1-3*).

VI. CONCLUSION

The results generated from the various regressions serve to highlight similar findings to those of Rose and Spiegel's. As Rose and Spiegel (2009) found several positive undertones associated with being a host or unsuccessful bid host of the Olympics as well as a host of the FIFA Men's World Cup, conclusions in this study did as well. The most accurate results from the

regression analysis in this paper are shown by regressions that use the modified version of the travel variable which is *RTREND_DEV_TRAVEL*. This is because this variable accounts for the possible naturally occurring time trend that can cause continual increases in the event dummies used in this study if not removed. With the addition of year and country dummies, the results become even more accurate as these regressions then also take into consideration any outside factors that vary by country and year.

Results from regressions explained above (using *RTREND_DEV_TRAVEL*) reveal that with the most accurate analysis (both dummies included), a country that is a current summer Olympic host will experience a $3,764.335 millions of 2007 inflation-adjusted USD increase in travel expenditures (*see table 2. A. iv. c*). It also further reveals that when time trend is taken into consideration as well as other variables, there is no positive association between being a current host of an event and travel expenditures which goes against Rose & Spiegel's findings. Past host dummies in the same regressions show a majority of these dummies to have positive associations with travel expenditures except when solely year dummies are used. Aligning with ideas of Rose & Spiegel in regards to the summer Olympics having more profound impacts than the winter Olympics, these results show that being a *SUMMERHOSTPAST* generates significantly greater results for travel expenditures than *WINTERHOSTPAST* (*see table 2. A. iv. c & d*). *SUMMERHOSTPAST* increases travel expenditures by $3,284.337 millions of 2007 inflation-adjusted USD when time trend and country and year factors are controlled for, versus *WINTERHOSTPAST,* which creates an increase of $818.778 millions of 2007 inflation-adjusted USD.

When shifting to results generated from the use of *REAL_TRAVEL_MIL*, all current host dummies (without presence of country dummies) and nearly all past host dummies show positive

associations with travel expenditures. Although more significant results and positive associations arise for these host dummies, it is understood from the previous conclusions made above, that they must by a byproduct of time trend and thus not as reliable as the deductions using *RTREND_DEV_TRAVEL* as the dependent variable.

Changing the focus from host dummies to unsuccessful bid hosts dummies when making final conclusions, again it is necessary to first look at results from regressions ran with *RTREND_DEV_TRAVEL.* No significant results arise for current unsuccessful bid hosts thus implying that when time trend is accounted for, there is no association between being a current unsuccessful bid host and travel expenditures. The past versions of these dummies in the same regression generate similar results with significant dummies scattered through, but not enough of a pattern for a general conclusion to be made.

These results are once again different from effects generated when *REAL_TRAVEL_MIL* is used as the dependent variable. Although current and past versions of mega bid, Olympic bid, and summer bid show various positive associations with travel expenditures, they are not reflective of results generated without the time trend included (with few exceptions). Again, the significant results occur when the time trend is not removed.

Similar to results generated for unsuccessful bid host dummies when the time trend is accounted for, results from the use of the joint host/unsuccessful bid hosts dummies do not provide enough significant results to draw general noteworthy conclusions. It is noticed that with time trend removed and country variation controlled for, being a current summer Olympic host/unsuccessful bid host causes a country to experience an increase of $1,613.372 millions of 2007 inflation-adjusted USD. Past host/unsuccessful bid host dummies show that when all factors are controlled for, including time trend, *SUMMERHOSTBIDPAST* generates the greatest

increase in travel expenditures ($1,303.374 millions of 2007 inflation-adjusted USD) with *OLYMPICHOSTBIDPAST* and *MEGAHOSTBIDPAST* creating increases of $997.431 million and $877.5888 million 2007 inflation-adjusted USD, respectively.

Reverting back to regressions with *REAL_TRAVEL_MIL*, which again are less accurate than results produced with time trend removed, show positive associations for all past host/unsuccessful bid host dummies as well as for several current versions (when country controls are not in place). Although, these results do produce significant results, when comparing them with the most accurate regressions (using *RTREND_DEV_TRAVEL*) results do appear to be misleading, if time trend was never accounted for.

Besides travel expenditures being used a measure of tourism in this study, arrivals were as well. Unfortunately, there is no comparison made between arrivals with and without time trend, as this variable covers a short span of years (1995-2007). However as mentioned above, country and year variables are used to account for a significant portion of variation. Results from regressions focused on current and past host dummies show a positive association between countries that were past hosts of any event and arrivals (except when both year and country dummies are implemented). Current host versions in this regression show positive associations for a few event hosts but not enough to provide substantial insight or to claim no general association between these variables.

Results on *ARRIVALS* do show many positive associations between being a current or past unsuccessful bid host and *ARRIVALS*. However, the most noteworthy results produced in these regressions are the negative associations that arise for *OLYMPICBID* and *SUMMERBID* when country dummies are present. These results are somewhat unexpected and are worthy of note as they provide a result that has not been mentioned in past scholarly research, especially

anything mentioned in Rose and Spiegel.

Lastly, when comparing the joint host/unsuccessful bid host dummies with *ARRIVALS*, positive associations on current dummies are primarily noted when country dummies are not present. When they are, a negative association occurs which are similar to prior findings for current unsuccessful bid hosts. Past versions show positive associations for all events, except when country and year dummies are both included. These associations reveal the greater impact being a summer host/unsuccessful bid host of the Olympics has compared to being a winter host/unsuccessful bid host of the Olympics which follows with reasoning of Rose and Spiegel.

Overall, the results from this study find significant increases in tourism for countries that are hosts as well as unsuccessful bid hosts of the Olympics. Similar results arise in the analysis of the FIFA Men's World Cup. Many of the conclusions follow closely with those made by Rose & Spiegel, as well those of other scholarly research, while other results provide new insight that is worthy of mention. From these results, it is visible that increases in tourism for host or unsuccessful bid host countries are greatly dependent and influenced by various country and year factors. Beyond these variables, most of the significant results and positive associations made are found to be byproducts of a naturally occurring time trend, which causes sectors such as tourism to increase over time. This is important to recognize in order to fully understand the context of results produced. In other words, while a country that hosts or bids unsuccessfully to host the Olympics or FIFA Men's World Cup expects positive economic outcomes in sectors such as tourism, both external and internal factors weigh heavily on actual results produced. In a sense, there is unpredictability in the "Olympic Effect."

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IX. Data Appendix

Variable name: country
Data source: [4]
Missing observations: 0/3808
Variable description: String variable – represents a country
Variable values and coding:

Full name of country (ex: Italy)

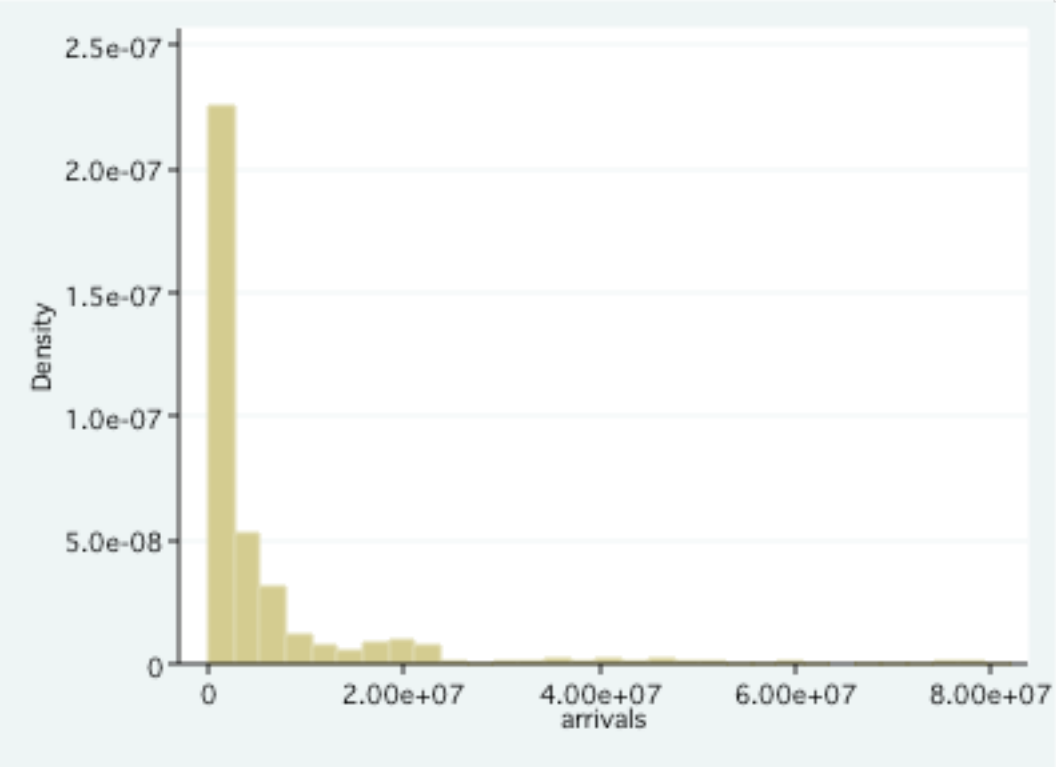
Variable name: isocode
Data source: [4]
Missing observations: 0/3808
Variable description: String variable – represents country code
Variable values and coding:

3 letter code for a country (ex: "ITA" for Italy)

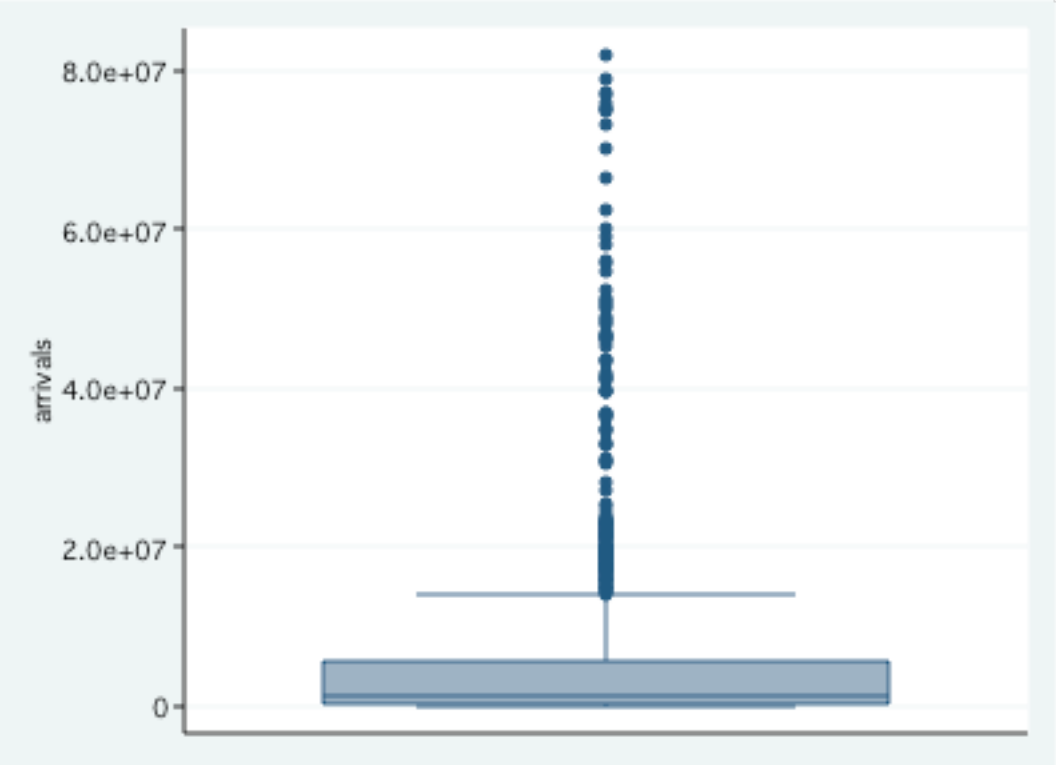
Variable name: arrivals (*ARRIVALS*)
Data source: [4]
Missing observations: 2475/3808
Variable description: International tourism, number of arrivals: Number of tourists who travel to a country other than their own, for a period of no longer than 12 months.
Descriptive statistics:

Mean: 5.9e+06
Median: 1.4e+06
Standard deviation: 1.1e+07
Minimum: 3000
Maximum: 81,940,000

Histogram:



Box Plot:



Variable name: comserexp
Data source: [4]
Missing observations: 607/3808
Variable description: Commercial service exports (current US$): Total service exports not including government service exports.
Descriptive statistics:

Mean: 1.0e+10
Median: 1.1e+09
Standard deviation: 3.0e+10
Minimum: 0
Maximum: 5.206e+11

Variable name: gdp_deflator
Data source: [4]
Missing observations: 290/3808
Variable description: GDP deflator (base year varies with country)
Descriptive statistics:

Mean: 2113.51
Median: 83.6329
Standard deviation: 35767.6
Minimum: 6.400e-11
Maximum: 1103322.4

Variable name: def2007
Data source: [4]
Missing observations: 0/3808
Variable description: GDP deflator with base year of 2007. Created with gdp_deflator.
Descriptive statistics:

Mean: 8830.34
Median: 159.516
Standard deviation: 87913.7
Minimum: 92.017822
Maximum: 934861.5

Variable name: travel
Data source: [4]
Missing observations: 645/3808

Variable description: Travel services (% of commercial service exports): All goods & services obtained by visitors in the destination economy for their use during visits of a year or less. Expressed as a percentage of commercial service exports.
Descriptive statistics:

Mean: 37.2622
Median: 34.9858
Standard deviation: 21.3318
Minimum: .11335149
Maximum: 100

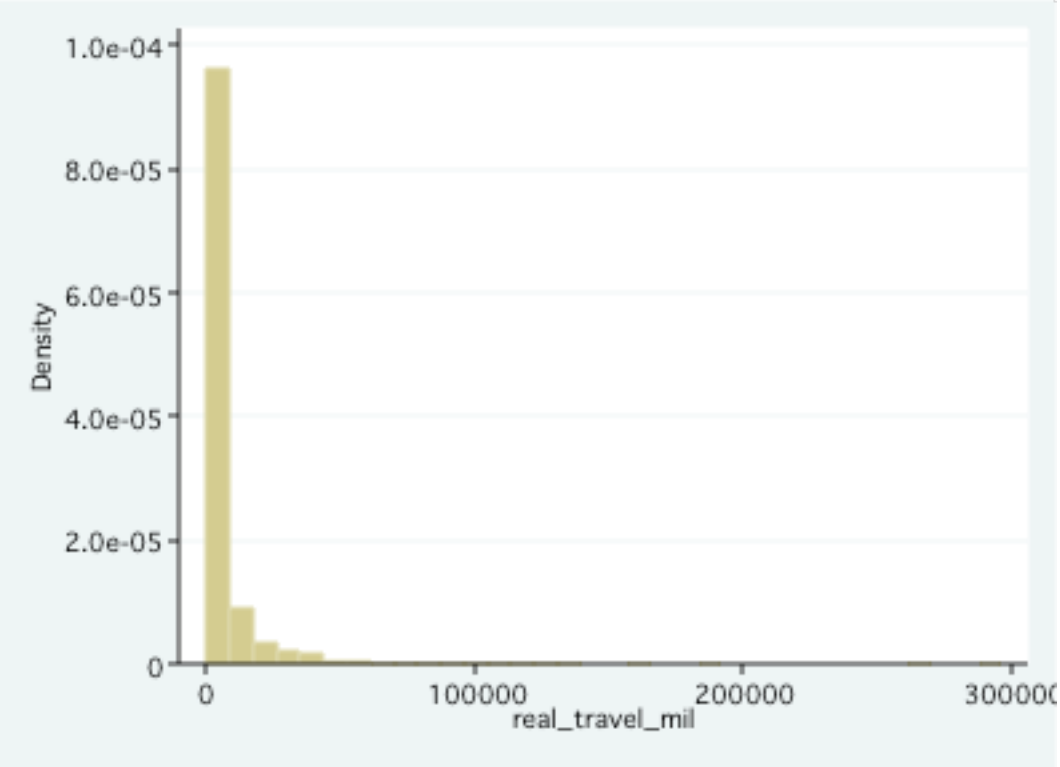
Variable name: travel_million_usd_current
Data Source: [4]
Missing Observations: 645/3808
Variable Description: Travel services measured in constant 2007 USD (reported in millions of dollars). Generated using travel variable and commercial service export variable.
Descriptive Statistics:

Mean: 3156.77
Median: 398.26
Standard Deviation: 8930.03
Minimum: .08180762
Maximum: 134293.09

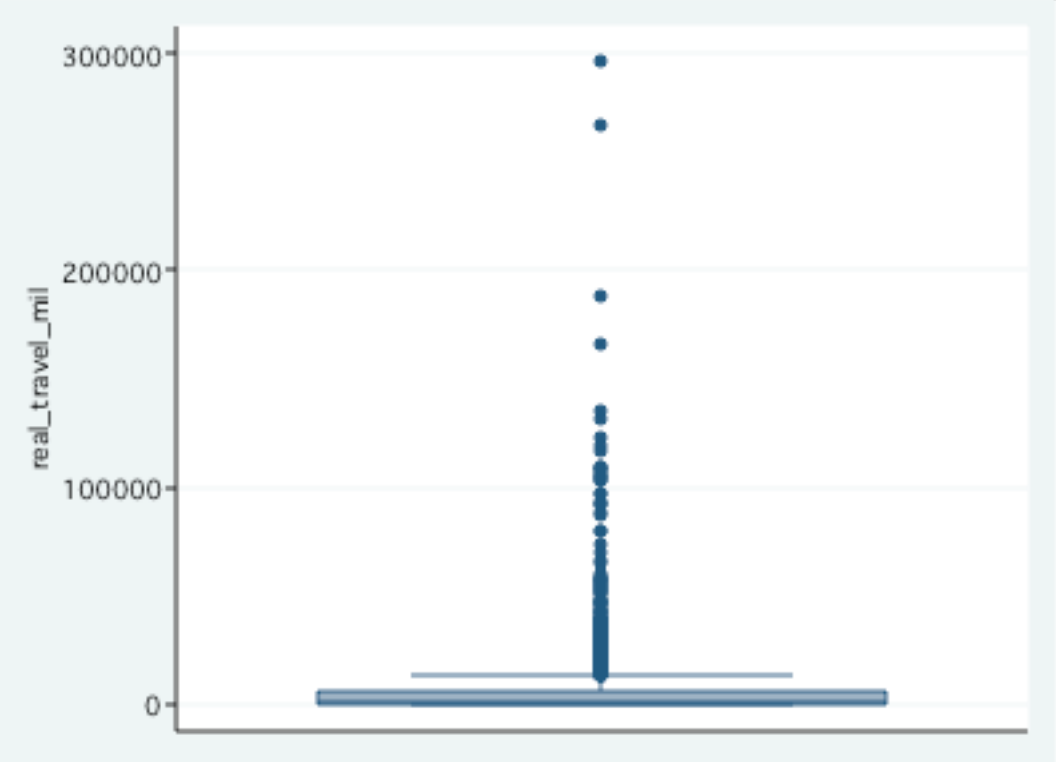
Variable name: real_travel_mil (*REAL_TRAVEL_MIL*)
Data Source: [4]
Missing Observations: 912/3808
Variable Description: Travel services measured in inflation-adjusted 2007 current USD (reported in millions of dollars). Generated with def2007 variable.
Descriptive Statistics:

Mean: 5974.09
Median: 1509.97
Standard Deviation: 15130.8
Minimum: .19
Maximum: 296855.06

Histogram:



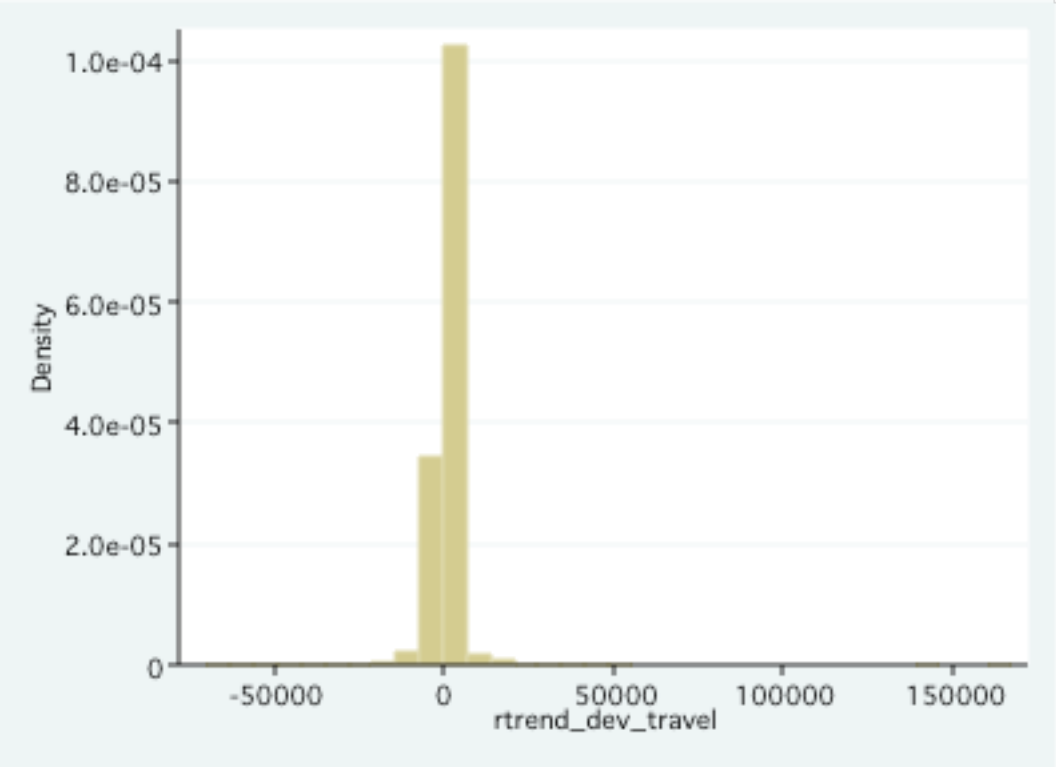
Box plot:



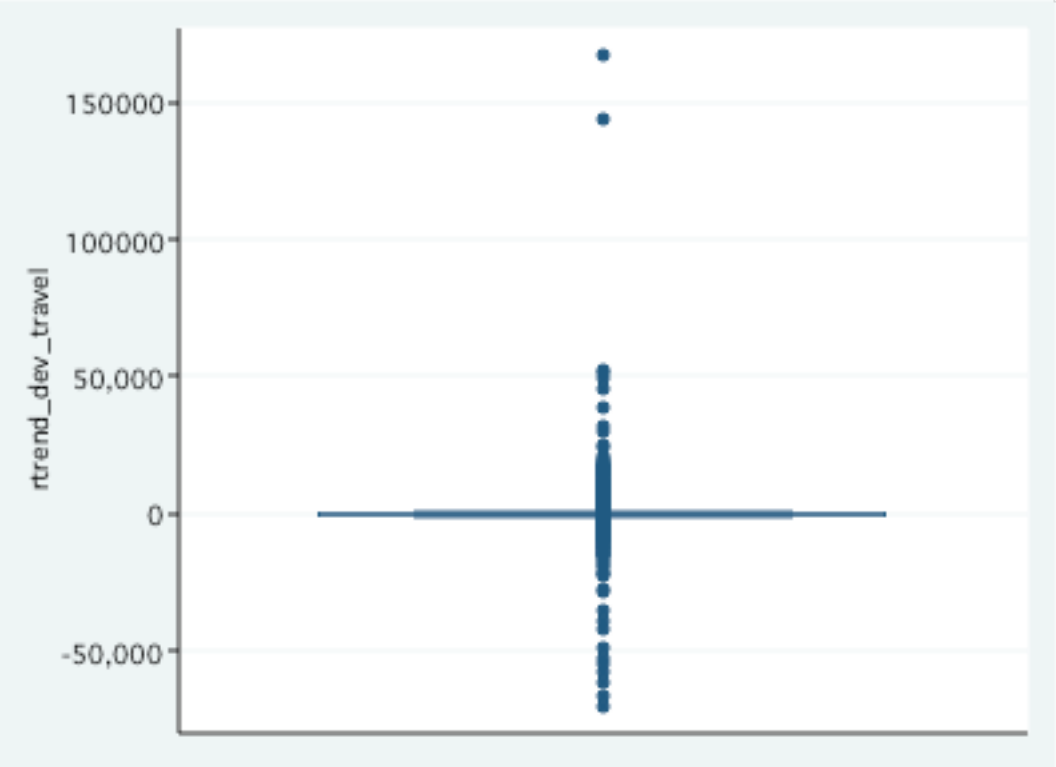
Variable name: rtrend_dev_travel (*RTREND_DEV_TRAVEL*)
Data Source: [4]
Missing Observations: 912/3808
Variable Description: Travel measured in inflation-adjusted 2007 current USD accounted for annual time progression (time trend).
Descriptive Statistics:

Mean: -8.0e-07
Median: -7.77862
Standard Deviation: 6413.36
Minimum: -70103.859
Maximum: 167011.47

Histogram:



Box Plot:



Variable name: mega (*MEGAHOST*)
Data source: [1] & [2]
Missing observations: 0/3808
Variable description: Dummy variable – for mega-event host in current year
Variable values and coding:

0: country did not host a mega-event in current year
1: country did host a mega-event in current year

Frequency distributions:

megahost	Freq.	Percent	Cum.
0	3,791	99.55	99.55
1	17	0.45	100.00
Total	3,808	100.00	

Variable name: mega_past (*MEGAHOSTPAST*)
Data source: [1] & [2]
Missing observations: 0/3808

Variable description: Dummy variable –for a country that was ever a mega-event host
Variable values and coding:

0: country was never a mega-event host
1: country was a mega-event host

Frequency distributions:

megahostpast	Freq.	Percent	Cum.
0	3,561	93.51	93.51
1	247	6.49	100.00
Total	3,808	100.00	

Variable name: megabid (*MEGABID*)
Data source: [1] & [2]
Missing observations: 0/3808
Variable description: Dummy variable –for mega-event unsuccessful bid host in current year
Variable values and coding:

0: country was not a mega-event unsuccessful bid host in current year
1: country was a mega-event unsuccessful bid host in current year

Frequency distributions:

megabid	Freq.	Percent	Cum.
0	3,782	99.32	99.32
1	26	0.68	100.00
Total	3,808	100.00	

Variable name: megabid_past (*MEGABIDPAST*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a mega-event unsuccessful bid host
Variable values and coding:

0: country was never a mega-event unsuccessful bid host
1: country was a mega-event unsuccessful bid host

Frequency distributions:

megabidpast	Freq.	Percent	Cum.
0	3,538	92.91	92.91
1	270	7.09	100.00
Total	3,808	100.00	

Variable name: mega_bh (*MEGAHOSTBID*)
Data source: [1] & [2]
Missing observations: 0/3808
Variable description: Dummy variable – for mega-event host or unsuccessful bid host in current year
Variable values and coding:

0: country was not a mega-event host or unsuccessful bid host in current year
1: country was a mega-event host or unsuccessful bid host in current year

Frequency distributions:

megahostbid	Freq.	Percent	Cum.
0	3,753	98.56	98.56
1	55	1.44	100.00
Total	3,808	100.00	

Variable name: mega_bhpast (*MEGAHOSTBIDPAST*)
Data source: [1] & [2]
Missing observations: 0/3808
Variable description: Dummy variable – for a country that was ever a mega-event host or unsuccessful bid host
Variable values and coding:

0: country was never a mega-event host or unsuccessful bid host
1: country was a mega-event host or unsuccessful bid host

Frequency distributions:

megahostbid past	Freq.	Percent	Cum.
0	3,313	87.00	87.00
1	495	13.00	100.00
Total	3,808	100.00	

Variable name: olymph (*OLYMPICHOST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for Olympic host in current year
Variable values and coding:

0: country did not host the Olympics in current year
1: country did host the Olympics in current year

Frequency distributions:

olympichost	Freq.	Percent	Cum.
0	3,791	99.55	99.55
1	17	0.45	100.00
Total	3,808	100.00	

Variable name: olymph_past (*OLYMPICHOSTPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever an Olympic host
Variable values and coding:

0: country was never an Olympic host
1: country was an Olympic host

Frequency distributions:

olympichost past	Freq.	Percent	Cum.
0	3,561	93.51	93.51
1	247	6.49	100.00
Total	3,808	100.00	

Variable name: olymp23h (*OLYMPICBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for unsuccessful Olympic bid host in current year
Variable values and coding:

0: country was not unsuccessful Olympic bid host in current year
1: country was an unsuccessful Olympic bid host in current year

Frequency distributions:

olympicbid	Freq.	Percent	Cum.
0	3,782	99.32	99.32
1	26	0.68	100.00
Total	3,808	100.00	

Variable name: olymp23h_past (*OLYMPICBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever an Olympic unsuccessful bid host
Variable values and coding:

0: country was never an Olympic unsuccessful bid host
1: country was an Olympic unsuccessful bid host

Frequency distributions:

olympicbidpast	Freq.	Percent	Cum.
0	3,538	92.91	92.91
1	270	7.09	100.00
Total	3,808	100.00	

Variable name: olymp_bh (*OLYMPICHOSTBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for Olympic host or unsuccessful bid host in current year
Variable values and coding:

0: country was not a host or unsuccessful bid host of the Olympics in current year
1: country was a host or unsuccessful bid host of the Olympics in current year

Frequency distributions:

olympichost bid	Freq.	Percent	Cum.
0	3,767	98.92	98.92
1	41	1.08	100.00
Total	3,808	100.00	

Variable name: olymp_bhpast (*OLYMPICHOSTBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for a country that was ever an Olympic host or unsuccessful bid host
Variable values and coding:

0: country was never a host or unsuccessful bid host of the Olympics
1: country was a host or unsuccessful bid host of the Olympics

Frequency distributions:

olympichost bidpast	Freq.	Percent	Cum.
0	3,407	89.47	89.47
1	401	10.53	100.00
Total	3,808	100.00	

Variable name: solymph (*SUMMERHOST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for summer Olympic host in current year
Variable values and coding:

0: country did not host summer Olympics in current year
1: country did host summer Olympics in current year

Frequency distributions:

summerhost	Freq.	Percent	Cum.
0	3,799	99.76	99.76
1	9	0.24	100.00
Total	3,808	100.00	

Variable name: solymph_past (*SUMMERHOSTPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a summer Olympic host
Variable values and coding:

0: country was never a summer Olympic host
1: country was a summer Olympic host

Frequency distributions:

summerhostpast	Freq.	Percent	Cum.
0	3,668	96.32	96.32
1	140	3.68	100.00
Total	3,808	100.00	

Variable name: solymp23h (*SUMMERBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for unsuccessful summer Olympic bid host in current year
Variable values and coding:

0: country was not an unsuccessful summer Olympic bid host in current year
1: country was an unsuccessful summer Olympic bid host in current year

Frequency distributions:

summerbid	Freq.	Percent	Cum.
0	3,794	99.63	99.63
1	14	0.37	100.00
Total	3,808	100.00	

Variable name: solymp23h_past (*SUMMERBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a summer Olympic unsuccessful bid host
Variable values and coding:

0: country was never a summer Olympic unsuccessful bid host
1: country was a summer Olympic unsuccessful bid host

Frequency distributions:

summerbidpast	Freq.	Percent	Cum.
0	3,633	95.40	95.40
1	175	4.60	100.00
Total	3,808	100.00	

Variable name: solymp_bh (*SUMMERHOSTBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for summer Olympic host or unsuccessful bid host in current year
Variable values and coding:

0: country was not a host or unsuccessful bid host of the summer Olympics in current year
1: country was a host or unsuccessful bid host of the summer Olympics in current year

Frequency distributions:

summerhostbid	Freq.	Percent	Cum.
0	3,785	99.40	99.40
1	23	0.60	100.00
Total	3,808	100.00	

Variable name: solymp_bhpast (*SUMMERHOSTBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for a country that was ever a summer Olympic host or unsuccessful bid host

Variable values and coding:

0: country was never a host or unsuccessful bid host of the summer Olympics
1: country was a host or unsuccessful bid host of the summer Olympics

Frequency distributions:

summerhostbidpast	Freq.	Percent	Cum.
0	3,575	93.88	93.88
1	233	6.12	100.00
Total	3,808	100.00	

Variable name: wolymph (*WINTERHOST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for winter Olympic host in current year
Variable values and coding:

0: country did not host winter Olympics in current year
1: country did host winter Olympics in current year

Frequency distributions:

winterhost	Freq.	Percent	Cum.
0	3,799	99.76	99.76
1	9	0.24	100.00
Total	3,808	100.00	

Variable name: wolymph_past (*WINTERHOSTPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a winter Olympics host

Variable values and coding:

0: country was never a winter Olympics host
1: country was a winter Olympics host

Frequency distributions:

winterhostpast	Freq.	Percent	Cum.
0	3,654	95.96	95.96
1	154	4.04	100.00
Total	3,808	100.00	

Variable name: wolymp23h (*WINTERBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for unsuccessful winter Olympic bid host in current year
Variable values and coding:

0: country was not an unsuccessful winter Olympic bid host in current year
1: country was an unsuccessful winter Olympic bid host in current year

Frequency distributions:

winterbid	Freq.	Percent	Cum.
0	3,794	99.63	99.63
1	14	0.37	100.00
Total	3,808	100.00	

Variable name: wolymp23h_past (*WINTERBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a winter Olympic unsuccessful bid host
Variable values and coding:

0: country was never a winter Olympic unsuccessful bid host
1: country was a winter Olympic unsuccessful bid host

Frequency distributions:

winterbidpast	Freq.	Percent	Cum.
0	3,672	96.43	96.43
1	136	3.57	100.00
Total	3,808	100.00	

Variable name: wolymp_bh (*WINTERHOSTBID*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for winter Olympic host or unsuccessful bid host in current year
Variable values and coding:

0: country was not a host or unsuccessful bid host of winter Olympics in current year
1: country was a host or unsuccessful bid host of winter Olympics in current year

Frequency distributions:

winterhostbid	Freq.	Percent	Cum.
0	3,785	99.40	99.40
1	23	0.60	100.00
Total	3,808	100.00	

Variable name: wolymp_bhpast (*WINTERHOSTBIDPAST*)
Data source: [2]
Missing observations: 0/3808
Variable description: Dummy variable – for a country that was ever a winter Olympic host or unsuccessful bid host
Variable values and coding:

0: country was never a host or unsuccessful bid host of the winter Olympics
1: country was a host or unsuccessful bid host of the winter Olympics

Frequency distributions:

winterhostbidpast	Freq.	Percent	Cum.
0	3,547	93.15	93.15
1	261	6.85	100.00
Total	3,808	100.00	

Variable name: mcuph (*WORLDCUPHOST*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable – for FIFA Men's World Cup host in current year
Variable values and coding:

0: country did not host FIFA Men's World Cup in current year
1: country did host FIFA Men's World Cup in current year

Frequency distributions:

worldcuphost	Freq.	Percent	Cum.
0	3,800	99.79	99.79
1	8	0.21	100.00
Total	3,808	100.00	

Variable name: mcuph_past (*WORLDCUPHOSTPAST*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a FIFA Men's World Cup host
Variable values and coding:

0: country was never a FIFA Men's World Cup host
1: country was a FIFA Men's World Cup host

Frequency distributions:

worldcuphostpast	Freq.	Percent	Cum.
0	3,668	96.32	96.32
1	140	3.68	100.00
Total	3,808	100.00	

Variable name: mcup23h (*WORLDCUPBID*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable –for FIFA Men's World Cup unsuccessful bid host in current year
Variable values and coding:

0: country was not an unsuccessful bid host of FIFA Men's World Cup in current year
1: country was an unsuccessful bid host of FIFA Men's World Cup in current year

Frequency distributions:

worldcupbid	Freq.	Percent	Cum.
0	3,801	99.82	99.82
1	7	0.18	100.00
Total	3,808	100.00	

Variable name: mcup23h_past (*WORLDCUPBIDPAST*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable –for a country that was ever a FIFA Men's World Cup unsuccessful bid host
Variable values and coding:

0: country was never a FIFA Men's World Cup unsuccessful bid host
1: country was a FIFA Men's World Cup unsuccessful bid host

Frequency distributions:

worldcupbid past	Freq.	Percent	Cum.
0	3,621	95.09	95.09
1	176	4.62	99.71
2	11	0.29	100.00
Total	3,808	100.00	

Variable name: mcup_bh (*WORLDCUPHOSTBID*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable – for FIFA Men's World Cup host or unsuccessful bid host in current year
Variable values and coding:

0: country was not a host or unsuccessful bid host of FIFA Men's World Cup in current year
1: country was a host or unsuccessful bid host FIFA Men's World Cup in current year

Frequency distributions:

worldcuphos tbid	Freq.	Percent	Cum.
0	3,793	99.61	99.61
1	15	0.39	100.00
Total	3,808	100.00	

Variable name: mcup_bhpast (*WORLDCUPHOSTBIDPAST*)
Data source: [1]
Missing observations: 0/3808
Variable description: Dummy variable – for a country that was ever a FIFA Men's World Cup host or unsuccessful bid host
Variable values and coding:

0: country was never a host or unsuccessful bid host of FIFA Men's World Cup
1: country was a host or unsuccessful bid host FIFA Men's World Cup

Frequency distributions:

worldcuphostbidpast	Freq.	Percent	Cum.
0	3,621	95.09	95.09
1	187	4.91	100.00
Total	3,808	100.00	

Variable name: pop
Data Source: [3]
Missing Observations: 224/3808
Variable Description: Population, PWT>WDI (measured in thousands)
Descriptive Statistics:

Mean: 44055.5
Median: 10184.9
Standard Deviation: 136797
Minimum: 1360.1851
Maximum: 1,311,798

Table 1 A i.					
Dependent Variable: REAL_TRAVEL_MIL **No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		24036.03		0.0173	
		0.027**			
MEGAHOSTPAST		19456.35		0.1389	
		0.008**			
b. OLYMPICHOST		22945		0.0119	
		0.027**			
OLYMPICHOSTPAST		20626.5		0.1299	
		0.018**			
c. SUMMERHOST		26114.06		0.0082	
		0.015**			
SUMMERHOSTPAST		27412.66		0.1366	
		0.047**			
d. WINTERHOST		20830.89		0.0052	
		0.031**			
WINTERHOSTPAST		23062.26		0.1069	
		0.065*			
e. WORLDCUPHOST		27047.23		0.0055	
		0.051*			
WORLDCUPHOSTPAST		30868.75		0.1508	
		0.010**			

Table 1 A ii.					
Dependent Variable: REAL_TRAVEL_MIL **Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		59.56004		0.5267	
		0.994			
MEGAHOSTPAST		11655.96		0.5382	
		0.018**			
b. OLYMPICHOST		-1597.893		0.5268	
		0.311			
OLYMPICHOSTPAST		12492.57		0.5386	
		0.021**			
c. SUMMERHOST		2349.562		0.5286	
		0.455			
SUMMERHOSTPAST		21195.84		0.545	
		0.111			
d. WINTERHOST		-2308.096		0.5268	
		0.397			
WINTERHOSTPAST		144467.72		0.5391	
		0.035**			
e. WORLDCUPHOST		4881.077		0.5269	
		0.247			
WORLDCUPHOSTPAST		22653.8		0.5537	
		0.056*			

Table 1 A iii.					
Dependent Variable: REAL_TRAVEL_MIL **Year dummies included**					
**2896 observations*		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		24723.1		0.0288	
		0.002**			
MEGAHOSTPAST		19795.11		0.1500	
		.008**			
b. OLYMPICHOST		23452.27		0.0230	
		0.023**			
OLYMPICHOSTPAST		20782.24		0.1396	
		0.018**			
c. SUMMERHOST		26081.2		0.0188	
		0.016**			
SUMMERHOSTPAST		27536.67		0.1468	
		0.049**			
d. WINTERHOST		20925.11		0.016	
		0.026**			
WINTERHOSTPAST		23112.57		0.1167	
		0.065*			
e. WORLDCUPHOST		28124.99		0.0166	
		0.042**			
WORLDCUPHOSTPAST		31463.03		0.1623	
		0.009**			

Table 1 A iv.					
Dependent Variable: REAL_TRAVEL_MIL **Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		490.2892		0.5349	
		0.616			
MEGAHOSTPAST		12215.15		0.5465	
		.010**			
b. OLYMPICHOST		-1297.093		0.5349	
		0.469			
OLYMPICHOSTPAST		12868.76		0.5466	
		0.013**			
c. SUMMERHOST		2412.078		0.5349	
		0.357			
SUMMERHOSTPAST		21750.47		0.5534	
		0.108			
d. WINTERHOST		-2347.57		0.5349	
		0.445			
WINTERHOSTPAST		14953.16		0.5473	
		0.025**			
e. WORLDCUPHOST		5642.618		0.5351	
		0.148			
WORLDCUPHOSTPAST		23175.7		0.5617	
		0.051*			

Table 1 B i.					
Dependent Variable: REAL_TRAVEL_MIL **No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		12335.48		0.0066	
		0.051*			
MEGABIDPAST		17408.36		0.1134	
		0.015**			
b. OLYMPICBID		14744.18		0.0072	
		0.073*			
OLYMPICBIDPAST		19902.13		0.1305	
		0.013**			
c. SUMMERBID		15474.69		0.0043	
		0.001**			
SUMMERBIDPAST		27301.04		0.1620	
		0.008**			
d. WINTERBID		16182.04		0.0047	
		0.296			
WINTERBIDPAST		17954.27		0.0554	
		0.143			
e. WORLDCUPBID		4616.689		0.0002	
		0.296			
WORLDCUPBIDPAST		1496.179		0.0002	
		0.521			

Table 1 B ii.					
Dependent Variable: REAL_TRAVEL_MIL **Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		-1650.924		0.5268	
		0.368			
MEGABIDPAST		7040.877		0.5328	
		0.006**			
b. OLYMPICBID		-2624.012		0.5269	
		0.221			
OLYMPICBIDPAST		8245.617		0.5338	
		0.004**			
c. SUMMERBID		-5669.011		0.5273	
		0.538			
SUMMERBIDPAST		9425.788		0.5347	
		0.003**			
d. WINTERBID		4157.728		0.527	
		0.435			
WINTERBIDPAST		21624.03		0.5466	
		0.151			
e. WORLDCUPBID		1332.544		0.5267	
		0.473			
WORLDCUPBIDPAST		1394.353		0.5268	
		0.372			

Table 1 B iii.					
Dependent Variable: REAL_TRAVEL_MIL **Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		12781.47		0.0177	
		0.040**			
MEGABIDPAST		17842.7		0.1251	
		0.013**			
b. OLYMPICBID		15222.13		0.0183	
		0.060*			
OLYMPICBIDPAST		2024.12		0.1418	
		0.011**			
c. SUMMERBID		14509.73		0.0145	
		0.002**			
SUMMERBIDPAST		27753.57		0.1727	
		0.006**			
d. WINTERBID		17109.11		0.0159	
		0.275			
WINTERBIDPAST		17688.37		0.0662	
		0.142			
e. WORLDCUPBID		4692.46		0.0110	
		0.284			
WORLDCUPBIDPAST		840.1451		0.0108	
		0.727			

Table 1 B iv.					
Dependent Variable: REAL_TRAVEL_MIL **Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		-1501.004		0.5349	
		0.5			
MEGABIDPAST		7454.28		0.5409	
		0.009**			
b. OLYMPICBID		-2402.524		0.5350	
		0.351			
OLYMPICBIDPAST		8751.434		0.5421	
		0.005**			
c. SUMMERBID		-6726.624		0.5356	
		0.49			
SUMERBIDPAST		9553.504		0.5424	
		0.004**			
d. WINTERBID		4997.968		0.5333	
		0.333			
WINTERBIDPAST		23061.76		0.5564	
		0.115			
e. WORLDCUPBID		1296.951		0.5349	
		0.482			
WORLDCUPBIDPAST		500.0752		0.5349	
		0.813			

Table 1 C i.					
Dependent Variable: REAL_TRAVEL_MIL **No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		15504.82		0.0164	
		0.037**			
MEGAHOSTBIDPAST		14054.19		0.1133	
		0.005**			
b. OLYMPICHOSTBID		17947.17		0.0168	
		0.057*			
OLYMPICHOSTBIDPAST		16550.43		0.1287	
		0.005**			
c. SUMMERHOSTBID		19799.85		0.0117	
		0.000***			
SUMMERHOSTBIDPAST		23598.66		0.1637	
		0.007**			
d. WINTERHOSTBID		18103.35		0.0098	
		0.151			
WINTERHOSTBIDPAST		16355.53		0.0872	
		0.052*			
e. WORLDCUPHOSTBID		13994.72		0.0035	
		0.043**			
WORLDCUPHOSTBIDPAST		22405.84		0.1104	
		0.016**			

Table 1 C ii.					
Dependent Variable: REAL_TRAVEL_MIL **Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		-492.1378		0.5267	
		0.535			
MEGAHOSTBIDPAST		6740.587		0.5327	
		0.005**			
b. OLYMPICHOSTBID		-1018.761		0.5268	
		0.177			
OLYMPICHOSTBIDPAST		7250.034		0.533	
		0.005**			
c. SUMMERHOSTBID		-2527.514		0.5269	
		0.67			
SUMMERHOSTBIDPAST		9125.767		0.5343	
		0.004**			
d. WINTERHOSTBID		1472.137		0.5268	
		0.434			
WINTERHOSTBIDPAST		11661.22		0.5369	
		0.038**			
e. WORLDCUPHOSTBID		2827.884		0.5268	
		0.192			
WORLDCUPHOSTBIDPAST		15312.61		0.5461	
		0.073*			

Table 1 C iii.					
Dependent Variable: REAL_TRAVEL_MIL **Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		16336.75		0.0284	
		0.031**			
MEGAHOSTBIDPAST		14956.52		0.1256	
		0.004**			
b. OLYMPICHOSTBID		18750.39		0.0286	
		0.050**			
OLYMPICHOSTBIDPAST		16855.97		0.1400	
		0.004**			
c. SUMMERHOSTBID		19435.51		0.0218	
		0.000***			
SUMMERHOSTBIDPAST		23925.28		0.1743	
		0.006**			
d. WINTERHOSTBID		18847.78		0.0212	
		0.137			
WINTERHOSTBIDPAST		16506.93		0.0981	
		0.051*			
e. WORLDCUPHOSTBID		14629.13		0.0145	
		0.034**			
WORLDCUPHISTBIDPAST		23086.58		0.1220	
		0.016**			

Table 1 C iv.					
Dependent Variable: REAL_TRAVEL_MIL **Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		-110.7079		0.5349	
		0.918			
MEGAHOSTBIDPAST		7326.981		0.5411	
		0.010**			
b. OLYMPICHOSTBID		-620.7105		0.5349	
		0.548			
OLYMPICHOSTBIDPAST		7825.653		0.5414	
		0.008**			
c. SUMMERHOSTBID		-3166.994		0.5351	
		0.612			
SUMMERHOSTBIDPAST		9332.572		0.5421	
		0.005**			
d. WINTERHOSTBID		1953.224		0.5350	
		0.216			
WINTERHOSTBIDPAST		12890.7		0.5464	
		0.019**			
e. WORLDCUPHOSTBID		3159.151		0.5350	
		0.114			
WORLDCUPHOSTBIDPAST		15835.48		0.5539	
		0.065*			

Table 2 A i.					
Dependent Variable: RTREND_DEV_TRAVEL**No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		633.5663		0.0001	
		0.26			
MEGAHOSTPAST		335.3229		0.0002	
		0.059*			
b. OLYMPICHOST		663.6436		0.0001	
		0.503			
OLYMPICHOSTPAST		394.0058		0.0003	
		0.075*			
c. SUMMERHOST		3600.835		0.0009	
		0.000***			
SUMMERHOSTPAST		702.3834		0.0005	
		0.074*			
d. WINTERHOST		-1796.528		0.0002	
		0.371			
WINTERHOSTPAST		230.708		0.0001	
		0.116			
e. WORLDCUPHOST		537.0722		0.0000	
		0.837			
WORLDCUPHOSTPAST		414.5861		0.0002	
		0.064*			

Table 2 A ii.					
Dependent Variable: RTREND_DEV_TRAVEL**Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		681.7394		0.0001	
		0.269			
MEGAHOSTPAST		1448.763		0.0010	
		0.028**			
b. OLYMPICHOST		702.0548		0.0001	
		0.508			
OLYMPICHOSTPAST		1575.005		0.0011	
		0.042**			
c. SUMMERHOST		3747.283		0.0009	
		0.000***			
SUMMERHOSTPAST		3132.399		0.0022	
		0.019**			
d. WINTERHOST		-1862.133		0.0002	
		0.382			
WINTERHOSTPAST		783.5552		0.0002	
		0.098*			
e. WORLDCUPHOST		553.5257		0.0000	
		0.84			
WORLDCUPHOSTPAST		1248.378		0.0005	
		0.024**			

Table 2 A iii.					
Dependent Variable: RTREND_DEV_TRAVEL**Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		769.6064		0.0385	
		0.206			
MEGAHOSTPAST		199.5623		0.0000	
		0.214			
b. OLYMPICHOST		643.9512		0.0384	
		0.581			
OLYMPICHOSTPAST		229.9683		0.0385	
		0.218			
c. SUMMERHOST		3603.153		0.0392	
		0.000***			
SUMMERHOSTPAST		623.6509		0.0388	
		0.124			
d. WINTERHOST		-2128.656		0.0387	
		0.372			
WINTERHOSTPAST		116.1241		0.0384	
		0.326			
e. WORLDCUPHOST		1132.785		0.0384	
		0.655			
WORLDCUPHOSTPAST		157.2847		0.0384	
		0.533			

Table 2 A iv.					
Dependent Variable: RTREND_DEV_TRAVEL**Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		945.505		0.0392	
		0.154			
MEGAHOSTPAST		1473.134		0.0400	
		0.021**			
b. OLYMPICHOST		791.6975		0.0391	
		0.531			
OLYMPICHOSTPAST		1462.358		0.0399	
		0.038**			
c. SUMMERHOST		3764.335		0.0400	
		0.001***			
SUMMERHOSTPAST		3284.337		0.0414	
		0.025**			
d. WINTERHOST		-2086.823		0.0393	
		0.413			
WINTERHOSTPAST		818.778		0.0393	
		0.051*			
e. WORLDCUPHOST		1289.996		0.0391	
		0.626			
WORLDCUPHOSTPAST		825.4505		0.0392	
		0.268			

Table 2 B i.					
Dependent Variable: RTREND_DEV_TRAVEL**No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		409.7609		0.0000	
		0.641			
MEGABIDPAST		274.2115		0.0002	
		0.155			
b. OLYMPICBID		123.8516		0.0000	
		0.908			
OLYMPICBIDPAST		309.3553		0.0002	
		0.16			
c. SUMMERBID		104.2763		0.0000	
		0.925			
SUMERBIDPAST		637.0498		0.0005	
		0.076*			
d. WINTERBID		663.1382		0.0000	
		0.749			
WINTERBIDPAST		40.2324		0.0000	
		0.777			
e. WORLDCUPBID		1297.427		0.0001	
		0.259			
WORLDCUPBIDPAST		430.4813		0.0001	
		0.381			

Table 2 B ii.					
Dependent Variable: RTREND_DEV_TRAVEL**Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		445.9713		0.0000	
		0.647			
MEGABIDPAST		838.283		0.0005	
		0.121			
b. OLYMPICBID		135.3829		0.0000	
		0.909			
OLYMPICBIDPAST		971.0869		0.0006	
		0.117			
c. SUMMERBID		108.7352		0.0000	
		0.927			
SUMERBIDPAST		1538.682		0.0012	
		0.032**			
d. WINTERBID		745.4558		0.0000	
		0.753			
WINTERBIDPAST		169.6657		0.0000	
		0.773			
e. WORLDCUPBID		1362.467		0.0001	
		0.266			
WORLDCUPBIDPAST		939.7188		0.0002	
		0.385			

Table 2 B iii.					
Dependent Variable: RTREND_DEV_TRAVEL**Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		498.7917		0.0384	
		0.483			
MEGABIDPAST		127.8105		0.0384	
		0.439			
b. OLYMPICBID		260.8589		0.0384	
		0.76			
OLYMPICBIDPAST		195.0222		0.0384	
		0.286			
c. SUMMERBID		-656.9691		0.0384	
		0.584			
SUMERBIDPAST		365.7375		0.0385	
		0.227			
d. WINTERBID		1283.74		0.0385	
		0.528			
WINTERBIDPAST		58.96427		0.0384	
		0.595			
e. WORLDCUPBID		1226.537		0.0385	
		0.195			
WORLDCUPBIDPAST		-35.03755		0.0384	
		0.935			

Table 2 B iv.					
Dependent Variable: RTREND_DEV_TRAVEL**Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		617.6185		0.0391	
		0.435			
MEGABIDPAST		747.485		0.0394	
		0.123			
b. OLYMPICBID		352.6753		0.0391	
		0.712			
OLYMPICBIDPAST		945.8587		0.0395	
		0.078*			
c. SUMMERBID		-682.0601		0.0391	
		0.594			
SUMERBIDPAST		1128.131		0.0396	
		0.082*			
d. WINTERBID		1556.451		0.0393	
		0.501			
WINTERBIDPAST		787.7335		0.0392	
		0.063*			
e. WORLDCUPBID		1376.081		0.0392	
		0.177			
WORLDCUPBIDPAST		140.0187		0.0391	
		0.883			

Table 2 C i.					
Dependent Variable: RTREND_DEV_TRAVEL**No dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		317.3567		0.0000	
		0.556			
MEGAHOSTBIDPAST		199.4139		0.0001	
		0.137			
b. OLYMPICHOSTBID		416.9872		0.0001	
		0.473			
OLYMPICHOSTBIDPAST		231.5055		0.0001	
		0.134			
c. SUMMERHOSTBID		1509.084		0.0004	
		0.021**			
SUMMERHOSTBIDPAST		482.8835		0.0004	
		0.073*			
d. WINTERHOSTBID		-322.62		0.0000	
		0.504			
WINTERHOSTBIDPAST		12.42816		0.0000	
		0.826			
e. WORLDCUPHOSTBID		982.4677		0.0001	
		0.442			
WORLDCUPHOSTBIDPAST		439.5727		0.0002	
		0.061*			

Table 2 C ii.					
Dependent Variable: RTREND_DEV_TRAVEL**Country dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		350.3779		0.0000	
		0.565			
MEGAHOSTBIDPAST		812.7751		0.0005	
		0.109			
b. OLYMPICHOSTBID		462.4915		0.0001	
		0.485			
OLYMPICHOSTBIDPAST		906.8367		0.0005	
		0.099*			
c. SUMMERHOSTBID		1613.372		0.0004	
		0.024**			
SUMMERHOSTBIDPAST		1562.173		0.0012	
		0.026*			
d. WINTERHOSTBID		-356.8546		0.0000	
		0.513			
WINTERHOSTBIDPAST		53.7697		0.0000	
		0.828			
e. WORLDCUPHOSTBID		1021.582		0.0001	
		0.451			
WORLDCUPHOSTBIDPAST		1171.106		0.0006	
		0.051*			

Table 2 C iii.					
Dependent Variable: RTREND_DEV_TRAVEL**Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		503.9232		0.0001	
		0.281			
MEGAHOSTBIDPAST		83.14155		0.0384	
		0.49			
b. OLYMPICHOSTBID		596.4835		0.0385	
		0.223			
OLYMPICHOSTBIDPAST		132.5405		0.0384	
		0.32			
c. SUMMERHOSTBID		1071.765		0.0386	
		0.109			
SUMMERHOSTBIDPAST		296.4774		0.0385	
		0.192			
d. WINTERHOSTBID		-89.008		0.0384	
		0.83			
WINTERHOSTBIDPAST		12.90495		0.0384	
		0.831			
e. WORLDCUPHOSTBID		1199.465		0.0385	
		0.32			
WORLDCUPHOSTBIDPAST		133.0756		0.0384	
		0.594			

Table 2 C iv.					
Dependent Variable: RTREND_DEV_TRAVEL**Country & Year dummies included**					
2896 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		651.9632		0.0392	
		0.221			
MEGAHOSTBIDPAST		877.5888		0.0396	
		0.069*			
b. OLYMPICHOSTBID		750.3978		0.0392	
		0.196			
OLYMPICHOSTBIDPAST		997.431		0.0397	
		0.049**			
c. SUMMERHOSTBID		1155.584		0.0393	
		0.115			
SUMMERHOSTBIDPAST		1303.374		0.0398	
		0.034**			
d. WINTERHOSTBID		18.74459		0.0391	
		0.969			
WINTERHOSTBIDPAST		613.6111		0.0392	
		0.102			
e. WORLDCUPHOSTBID		1351.438		0.0392	
		0.288			
WORLDCUPHOSTBIDPAST		649.2467		0.0392	
		0.349			

Table 3 A i.					
Dependent Variable: ARRIVALS **No dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		2.02E+07		0.0208	
		0.019**			
MEGAHOSTPAST		1.94E+07		0.3243	
		0.001***			
b. OLYMPICHOST		1.97E+07		0.0132	
		0.024**			
OLYMPICHOSTPAST		1.98E+07		0.2771	
		0.004**			
c. SUMMERHOST		1.56E+07		0.0041	
		0.132			
SUMMERHOSTPAST		2.02E+07		0.1660	
		0.005*			
d. WINTERHOST		2.37E+07		0.0096	
		0.022**			
WINTERHOSTPAST		2.08E+07		0.2034	
		0.029**			
e. WORLDCUPHOST		2.10E+07		0.0075	
		0.226			
WORLDCUPHOSTPAST		2.89E+07		0.3861	
		0.000***			

Table 3 A ii.					
Dependent Variable: ARRIVALS **Country dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		-604610.5		0.9700	
		0.459			
MEGAHOSTPAST		2257139		0.9702	
		0.001***			
b. OLYMPICHOST		-421918.5		0.4700	
		0.711			
OLYMPICHOSTPAST		2944992		0.9704	
		0.000***			
c. SUMMERHOST		-21478.1		0.9700	
		0.515			
SUMMERHOSTPAST		2443919		0.9701	
		0.010**			
d. WINTERHOST		-596444.4		0.9700	
		0.768			
WINTERHOSTPAST		3486750		0.9702	
		0.011**			
e. WORLDCUPHOST		-924000		0.9700	
		0.325			
WORLDCUPHOSTPAST		4753526		0.9711	
		0.090*			

Table 3 A iii.					
Dependent Variable: ARRIVALS **Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		2.06E+07		0.0281	
		0.019**			
MEGAHOSTPAST		1.93E+07		0.3287	
		0.001***			
b. OLYMPICHOST		1.99E+07		0.0202	
		0.025**			
OLYMPICHOSTPAST		1.97E+07		0.2808	
		0.005**			
c. SUMMERHOST		1.60E+07		0.0111	
		0.137			
SUMMERHOSTPAST		2.01E+07		0.1713	
		0.005**			
d. WINTERHOST		2.38E+07		0.0164	
		0.020**			
WINTERHOSTPAST		2.08E+07		0.2082	
		0.031**			
e. WORLDCUPHOST		2.16E+07		0.0147	
		0.223			
WORLDCUPHOSTPAST		2.88E+07		0.3896	
		0.001**			

Table 3 A iv.					
Dependent Variable: ARRIVALS **Country & Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOST		-518562.4		0.9758	
		0.387			
MEGAHOSTPAST		866235.6		0.9758	
		0.137			
b. OLYMPICHOST		-397927.8		0.9758	
		0.627			
OLYMPICHOSTPAST		1476007		0.9759	
		0.046**			
c. SUMMERHOST		1066701		0.9758	
		0.154			
SUMMERHOSTPAST		1066701		0.9758	
		0.154			
d. WINTERHOST		-826636.7		0.9758	
		0.624			
WINTERHOSTPAST		1898454		0.9758	
		0.125			
e. WORLDCUPHOST		-719030.8		0.9758	
		0.339			
WORLDCUPHOSTPAST		3415043		0.9763	
		0.225			

Table 3 B i.					
Dependent Variable: ARRIVALS **No dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		1.05E+07		0.0099	
		0.006**			
MEGABIDPAST		1.65E+07		0.2503	
		0.002**			
b. OLYMPICBID		1.16E+07		0.0083	
		0.014**			
OLYMPICBIDPAST		1.90E+07		0.2829	
		0.002**			
c. SUMMERBID		1.49E+07		0.0076	
		0.001***			
SUMERBIDPAST		2.39E+07		0.3256	
		0.001***			
d. WINTERBID		7440463		0.0016	
		0.345			
WINTERBIDPAST		1.23E+07		0.0062	
		0.108			
e. WORLDCUPBID		79707615		0.0018	
		0.082*			
WORLDCUPBIDPAST		2686445		0.0018	
		0.322			

Table 3 B ii.					
Dependent Variable: ARRIVALS **Country dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		-337757.3		0.9700	
		0.571			
MEGABIDPAST		5258945		0.9722	
		0.094*			
b. OLYMPICBID		-1092162		0.9700	
		0.030**			
OLYMPICBIDPAST		6649086		0.9727	
		0.069*			
c. SUMMERBID		-1744847		0.9701	
		0.010**			
SUMERBIDPAST		5877295		0.9726	
		0.053*			
d. WINTERBID		-247970.1		0.9700	
		0.338			
WINTERBIDPAST		4.75E+07		0.9700	
		0.000***			
e. WORLDCUPBID		1316656		0.9700	
		0.339			
WORLDCUPBIDPAST		2295592		0.9702	
		0.078*			

Table 3 B iii.					
Dependent Variable: ARRIVALS **Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		1.07E+07		0.0170	
		0.005**			
MEGABIDPAST		1.64E+07		0.2538	
		0.002**			
b. OLYMPICBID		1.19E+07		0.0155	
		0.014**			
OLYMPICBIDPAST		1.89E+07		0.2867	
		0.002**			
c. SUMMERBID		1.54E+07		0.0148	
		0.001***			
SUMERBIDPAST		2.38E+07		0.3282	
		0.001***			
d. WINTERBID		7625642		0.0084	
		0.358			
WINTERBIDPAST		1.23E+07		0.0691	
		0.109			
e. WORLDCUPBID		7846633		0.0085	
		0.075*			
WORLDCUPBIDPAST		235577.8		0.0082	
		0.369			

Table 3 B iv.					
Dependent Variable: ARRIVALS **Country & Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGABID		-352785		0.9758	
		0.434			
MEGABIDPAST		3918709		0.9769	
		0.21			
b. OLYMPICBID		-988772.8		0.9758	
		0.015**			
OLYMPICBIDPAST		5303905		0.9774	
		0.15			
c. SUMMERBID		-1551717		0.9758	
		0.003**			
SUMERBIDPAST		4503612		0.9773	
		0.139			
d. WINTERBID		-270178.4		0.9758	
		0.396			
WINTERBIDPAST		4.75E+07		0.9758	
		0.000***			
e. WORLDCUPBID		1061596		0.9758	
		0.311			
WORLDCUPBIDPAST		728711.5		0.9755	
		0.556			

Table 3 C i.					
Dependent Variable: ARRIVALS **No dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		1.41E+07		0.0278	
		0.002**			
MEGAHOSTBIDPAST		1.54E+07		0.2924	
		0.000***			
b. OLYMPICHOSTBID		1.45E+07		0.0202	
		0.012**			
OLYMPICHOSTBIDPAST		1.76E+07		0.3222	
		0.000***			
c. SUMMERHOSTBID		1.52E+07		0.0118	
		0.001***			
SUMMERHOSTBIDPAST		2.40E+07		0.4014	
		0.000***			
d. WINTERHOSTBID		1.36E+07		0.0084	
		0.117			
WINTERHOSTBIDPAST		1.59E+07		0.1804	
		0.023**			
e. WORLDCUPHOSTBID		1.29E+07		0.0075	
		0.071*			
WORLDCUPHOSTBIDPAST		2.08E+07		0.2820	
		0.003*			

Table 3 C ii.					
Dependent Variable: ARRIVALS **Country dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		-448148.8		0.9700	
		0.379			
MEGAHOSTBIDPAST		7107898		0.9728	
		0.072*			
b. OLYMPICHOSTBID		-891964.2		0.9700	
		0.091*			
OLYMPICHOSTBIDPAST		7107898		0.9728	
		0.072*			
c. SUMMERHOSTBID		-1264773		0.9700	
		0.002**			
SUMMERHOSTBIDPAST		6178921		0.9727	
		0.056*			
d. WINTERHOSTBID		-393408.9		0.9700	
		0.669			
WINTERHOSTBIDPAST		143398.6		0.9700	
		0.000***			
e. WORLDCUPHOSTBID		475680.3		0.9700	
		0.638			
WORLDCUPHOSTBIDPAST		416692		0.9714	
		0.025**			

Table 3 C iii.					
Dependent Variable: ARRIVALS **Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		1.46E+07		0.0358	
		0.002**			
MEGAHOSTBIDPAST		1.53E+07		0.2964	
		0.000***			
b. OLYMPICHOSTBID		1.49E+07		0.0277	
		0.012**			
OLYMPICHOSTBIDPAST		1.57E+07		0.3259	
		0.001***			
c. SUMMERHOSTBID		1.58E+07		0.0193	
		0.001***			
SUMMERHOSTBIDPAST		2.39E+07		0.4041	
		0.000***			
d. WINTERHOSTBID		1.39E+07		0.0153	
		0.12			
WINTERHOSTBIDPAST		1.59E+07		0.1867	
		0.023**			
e. WORLDCUPHOSTBID		1.31E+07		0.0145	
		0.074*			
WORLDCUPHOSTBIDPAST		2.07E+07		0.2846	
		0.003**			

Table 3 C iv.					
Dependent Variable: ARRIVALS **Country & Year dummies included**					
1333 observations		coefficient		adjusted *R*-value	
		p-value			
a. MEGAHOSTBID		-4319819		0.9758	
		0.247			
MEGAHOSTBIDPAST		5755633		0.9776	
		0.147			
b. OLYMPICHOSTBID		-819313.4		0.9758	
		0.028**			
OLYMPICHOSTBIDPAST		555633		0.9776	
		0.147			
c. SUMMERHOSTBID		-1048558		0.9758	
		0.009**			
SUMMERHOSTBIDPAST		4799551		0.9774	
		0.139			
d. WINTERHOSTBID		-506300.2		0.9758	
		0.491			
WINTERHOSTBIDPAST		-80809.82		0.9758	
		0.098*			
e. WORLDCUPHOSTBID		396391.5		0.9758	
		0.619			
WORLDCUPHOSTBIDPAST		2746601		0.9764	
		0.137			

Table 4

YEAR	OLYMPIC HOST summer	BID FINALISTS
1976	Montreal, Canada	Moscow, USSR & Los Angeles, Ca, USA
1980	Moscow, Russia	Los Angeles, Ca, USA
1984	Los Angeles, Ca, USA	
1988	Seoul, South Korea	Nagoya, Japan
1992	Barcelona, Spain	Paris, France & Brisbane, Australia
1996	Atlanta, Ga, USA	Athens, Greece & Toronto, Canada
2000	Sydney, Australia	Beijing, China & Manchester, UK
2004	Athens, Greece	Rome, Italy & Cape Town, S. Africa
YEAR	**OLYMPIC HOST winter**	**BID FINALISTS**
1976	Innsbruck, Austria	Sion, Switzerland
1980	Lake Placid, Ny, USA	
1984	Sarajevo, Yugoslavia	Sapporo, Japan & Gothenburg, Sweden
1988	Calgary, Alberta, Canada	Falun, Sweden & Cortina d'Ampezzo, Italy
1992	Albertville, France	Sofia, Bulgaria & Falun, Sweden
1994	Lillehammer, Norway	Ostersund, Sweden & Anchorage, Ak, USA
1998	Nagano, Japan	Salt Lake City, Ut, USA & Ostersund, Swed
2002	Salt Lake City, Ut, USA	Ostersund, Sweden & Sion, Switzerland
2006	Torino, Italy	Sion, Switzerland
YEAR	**M. WORLD CUP HOST**	**BID FINALISTS**
1978	Argentina	
1982	Spain	
1986	Mexico	
1990	Italy	
1994	USA	Morocco & Brazil
1998	France	Morocco & Switzerland
2002	Korea Republic & Japan	Mexico
2006	Germany	South Africa & England

Figure 1: Japan

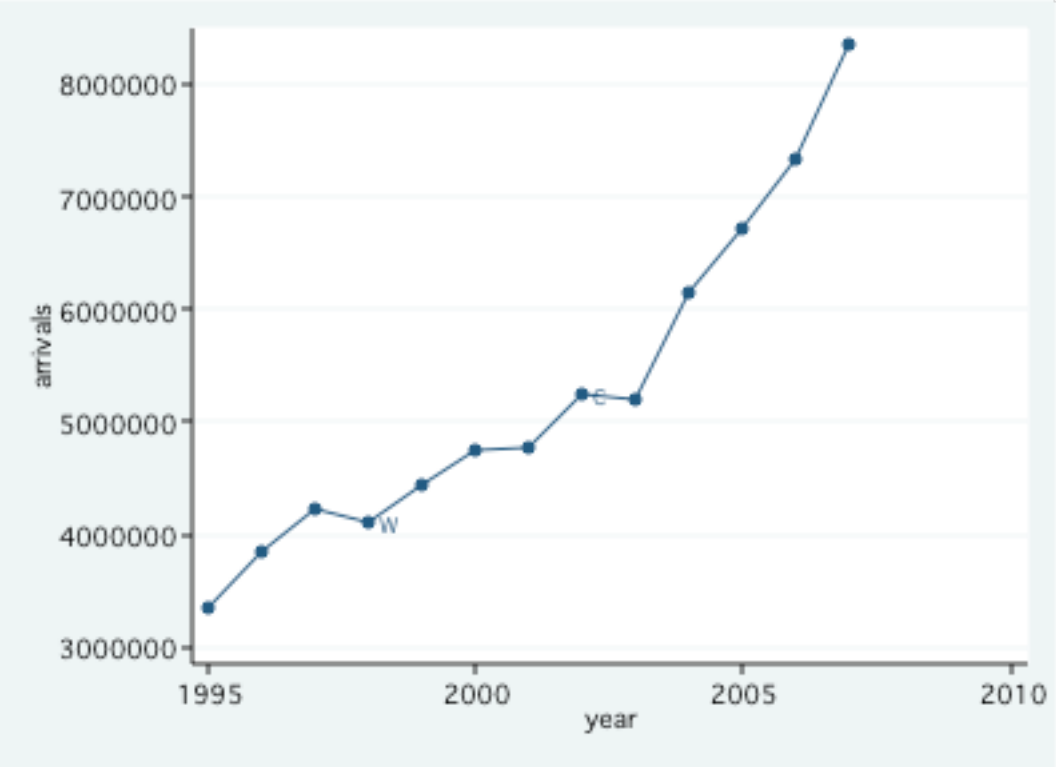


Figure 2: Sweden

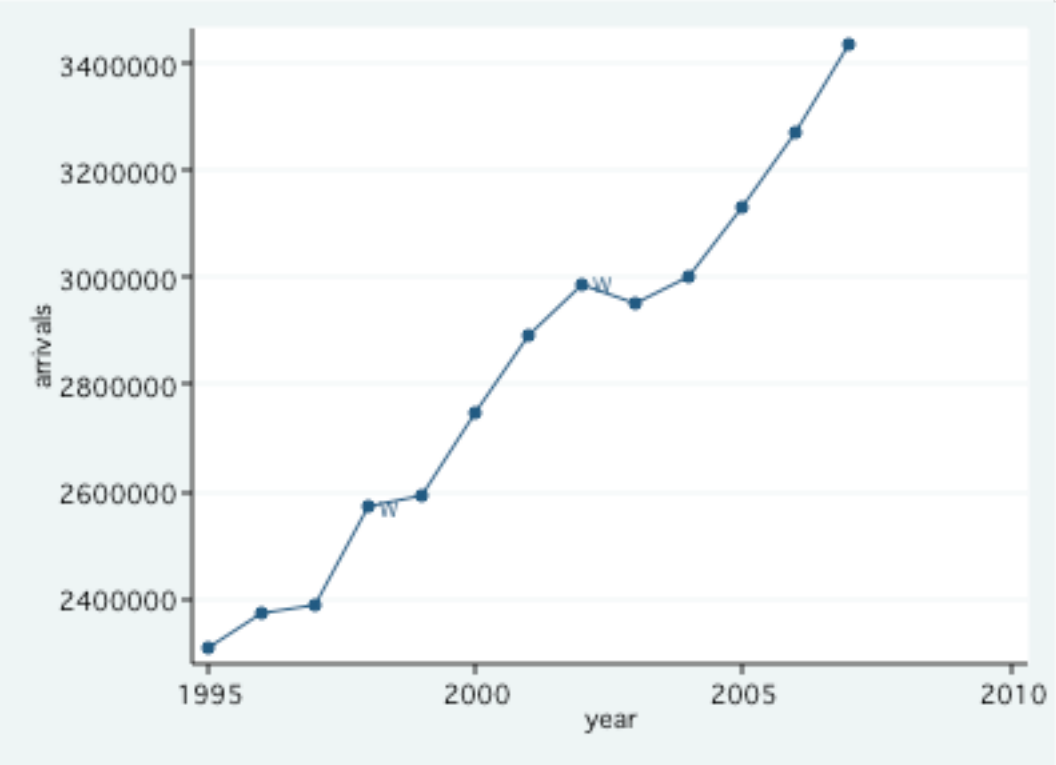


Figure 3: Mexico

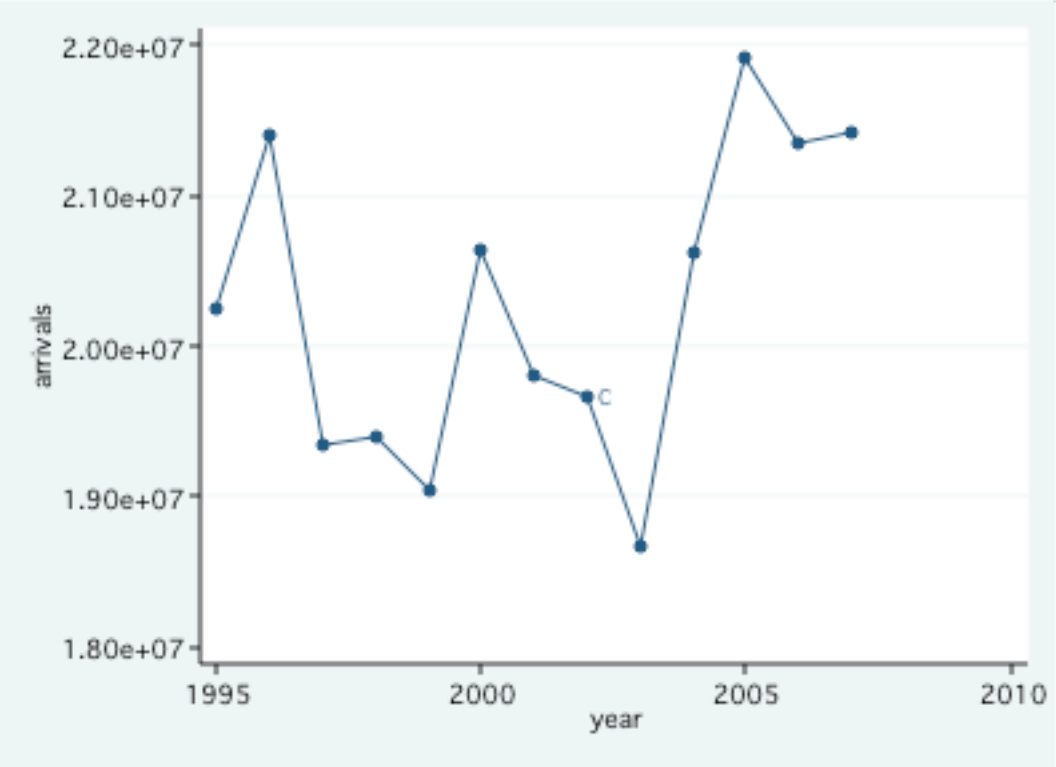


Figure 4: United States

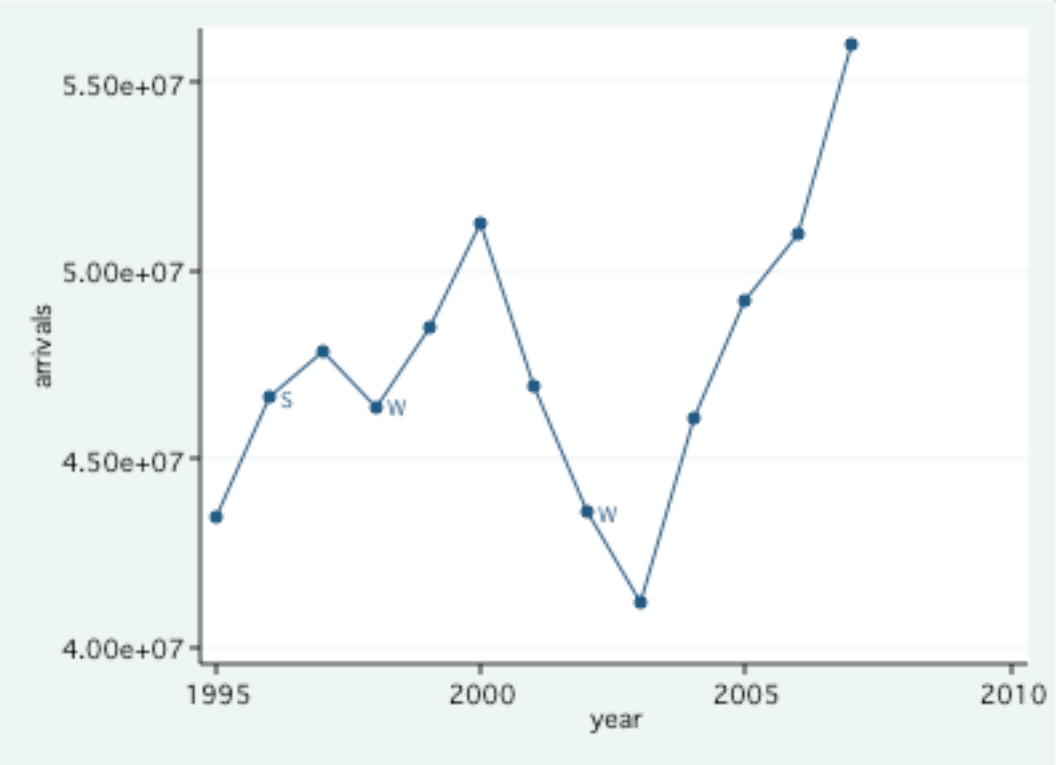


Figure 5: United Kingdom

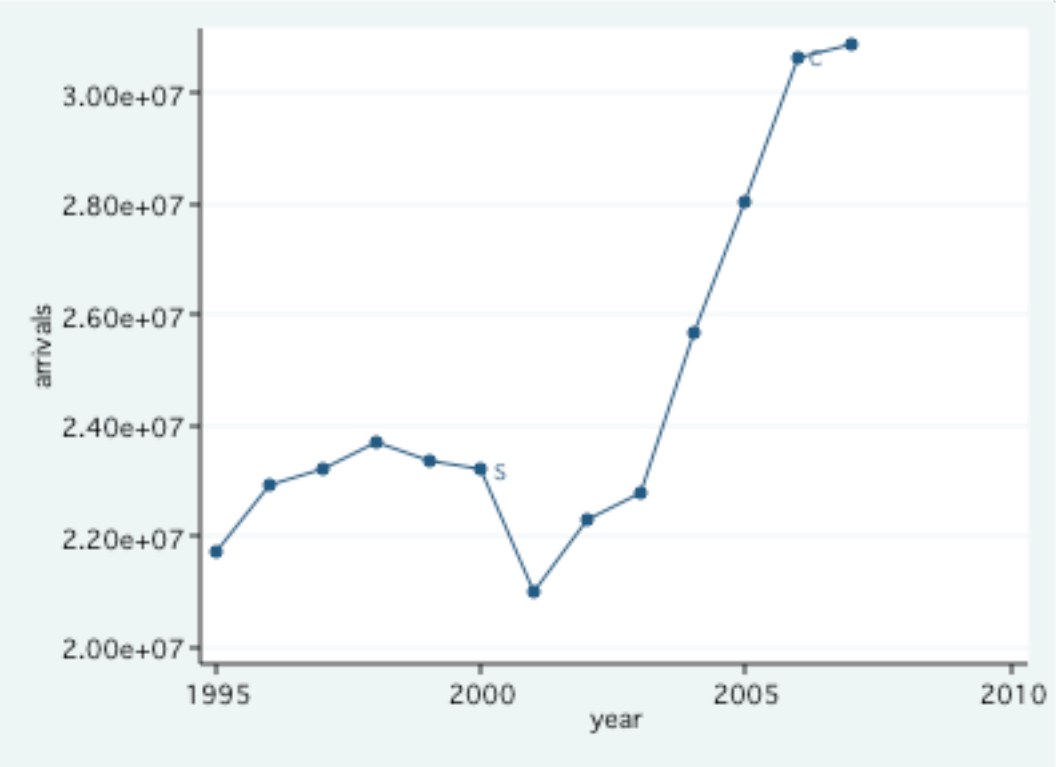


Figure 6: Switzerland

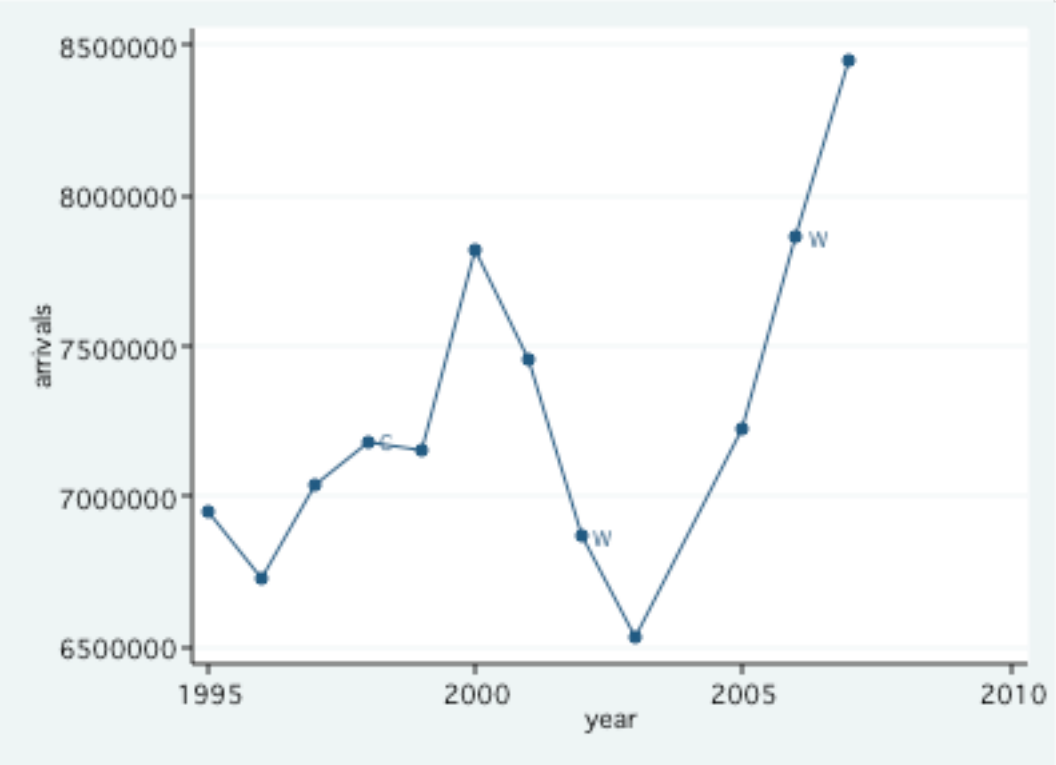


Figure 7: Australia

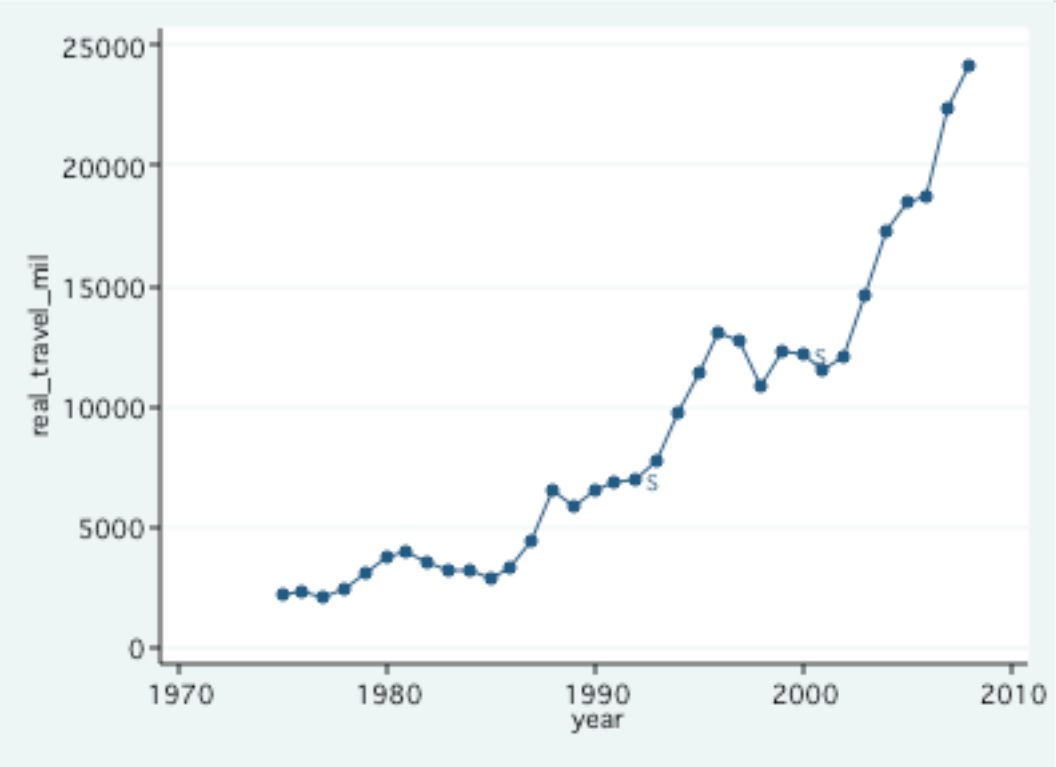


Figure 8: Canada

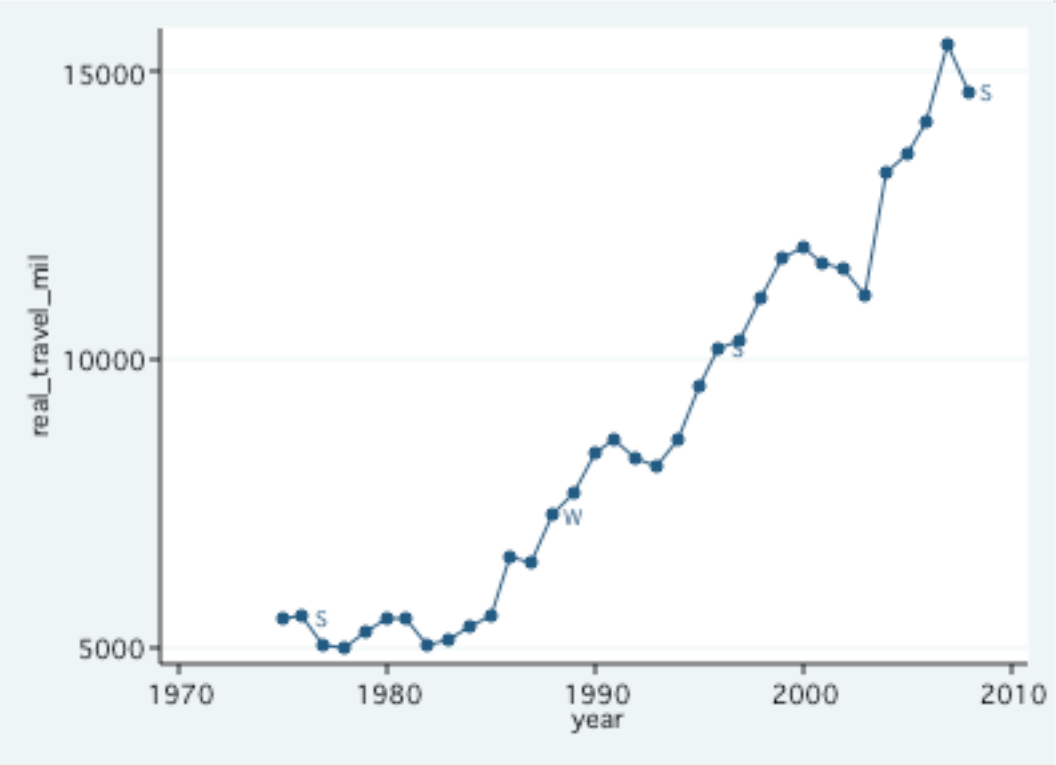


Figure 9: Mexico

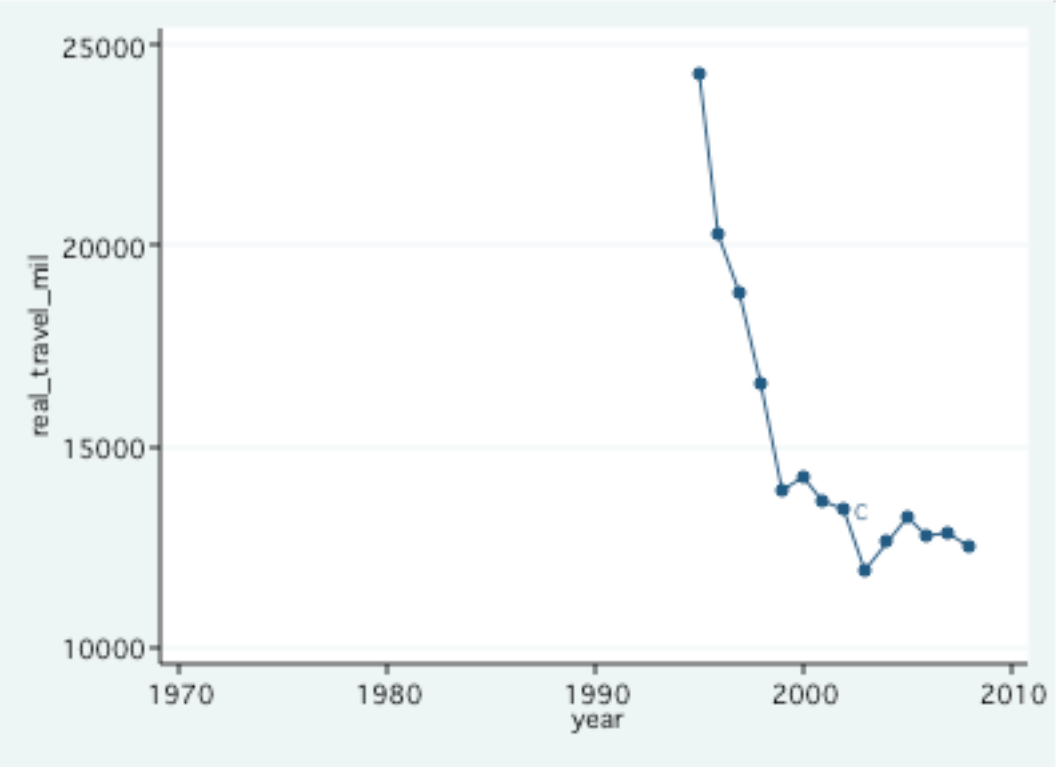


Figure 10: Russia

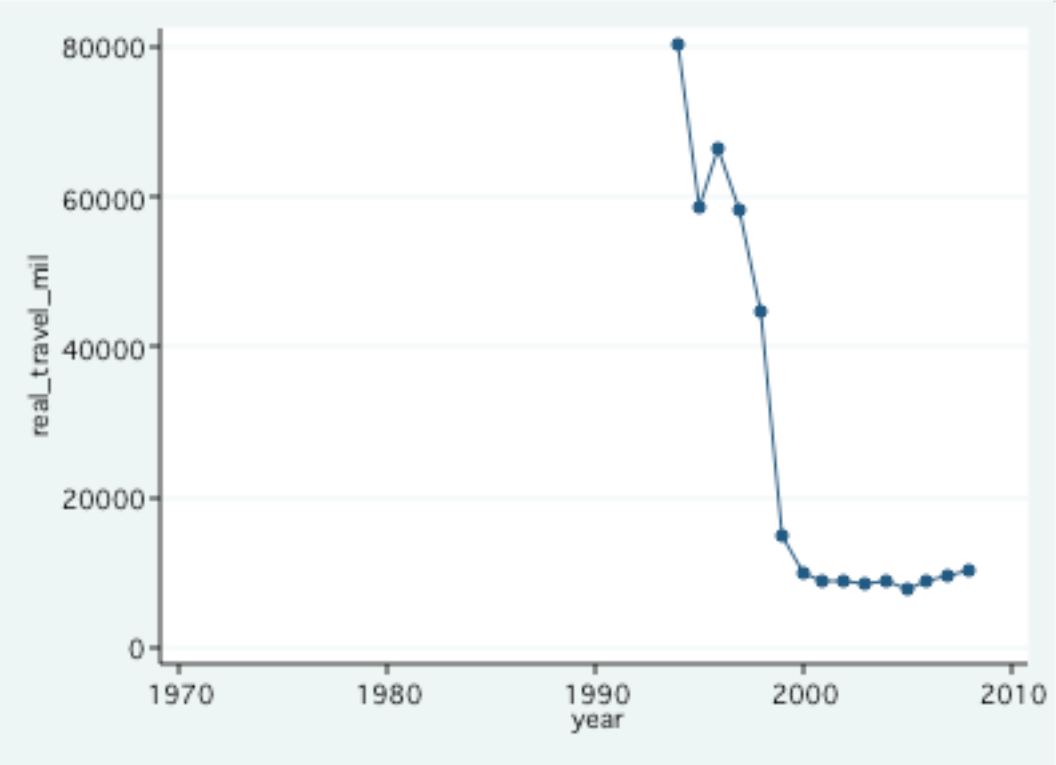


Figure 11: United States

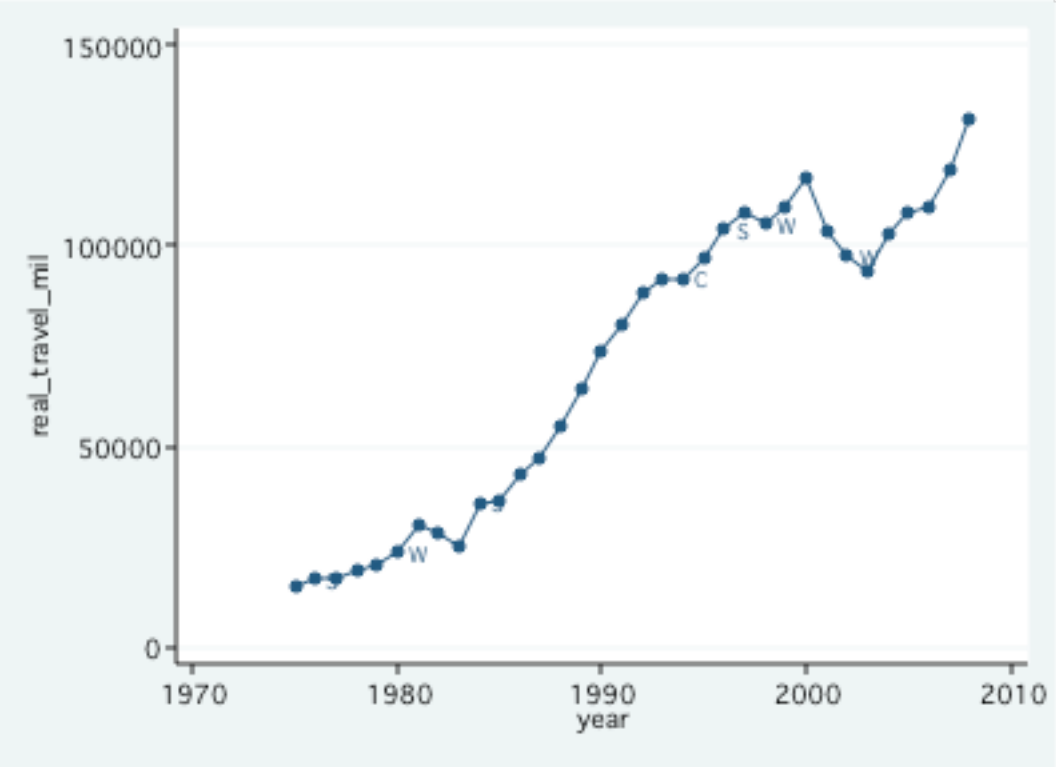


Figure 12: Korea

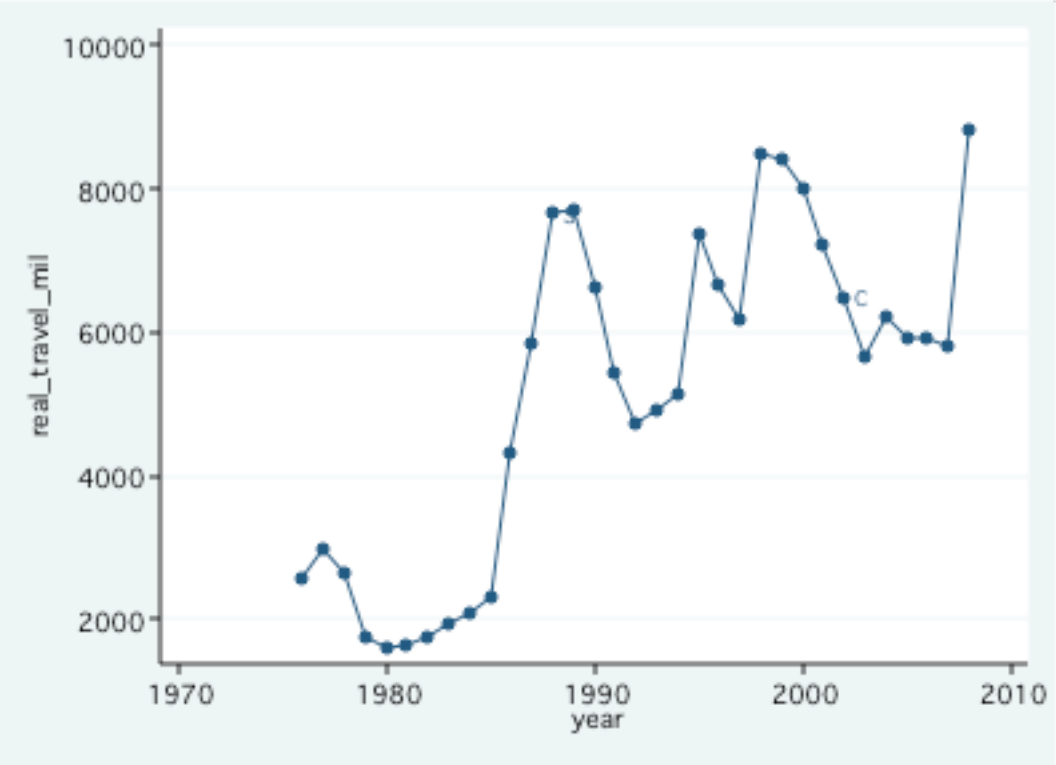


Figure 13: China

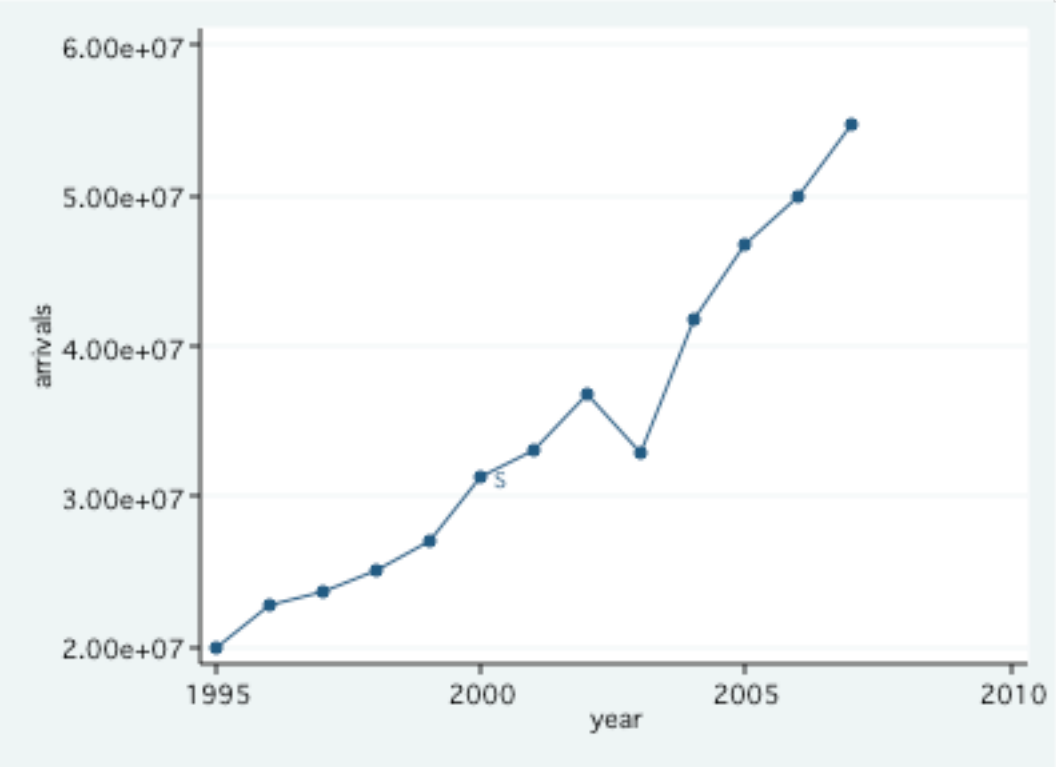


Figure 14: South Africa

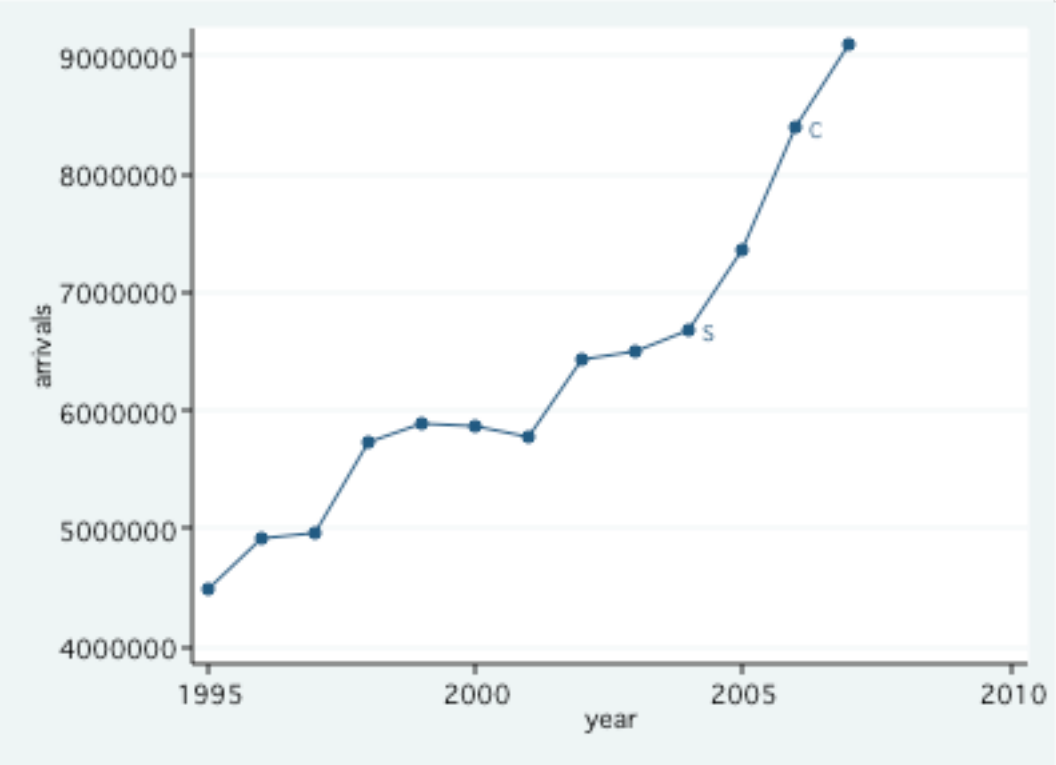


Figure 15: France

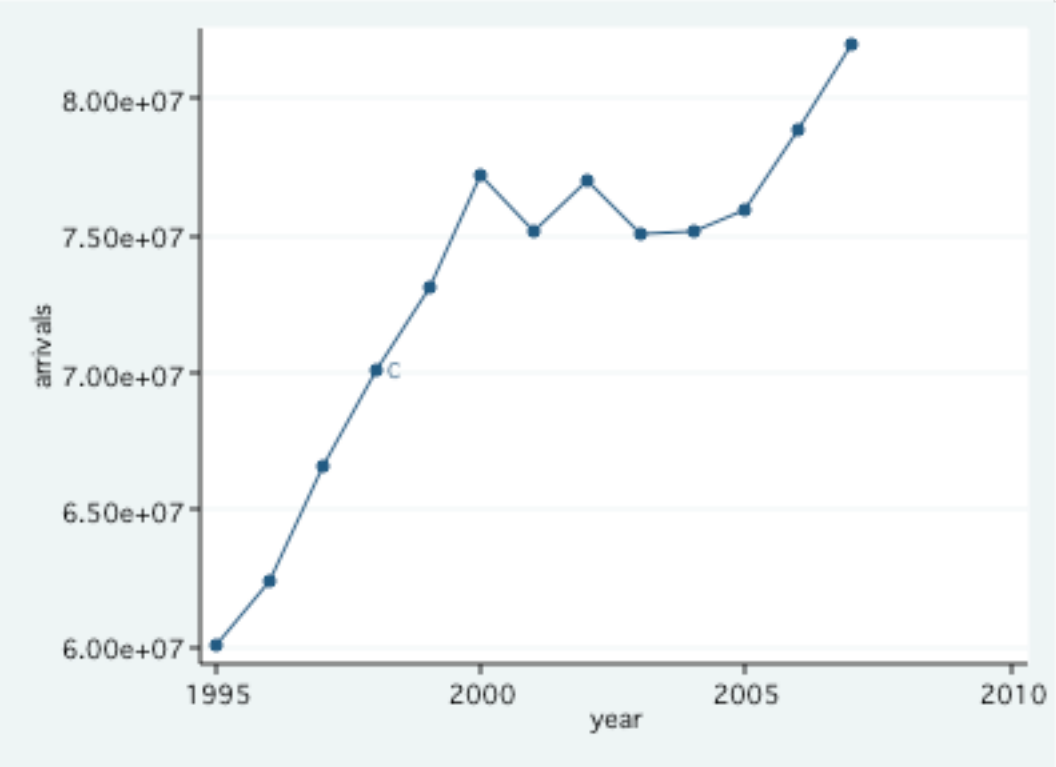


Figure 16: *ARRIVALS*

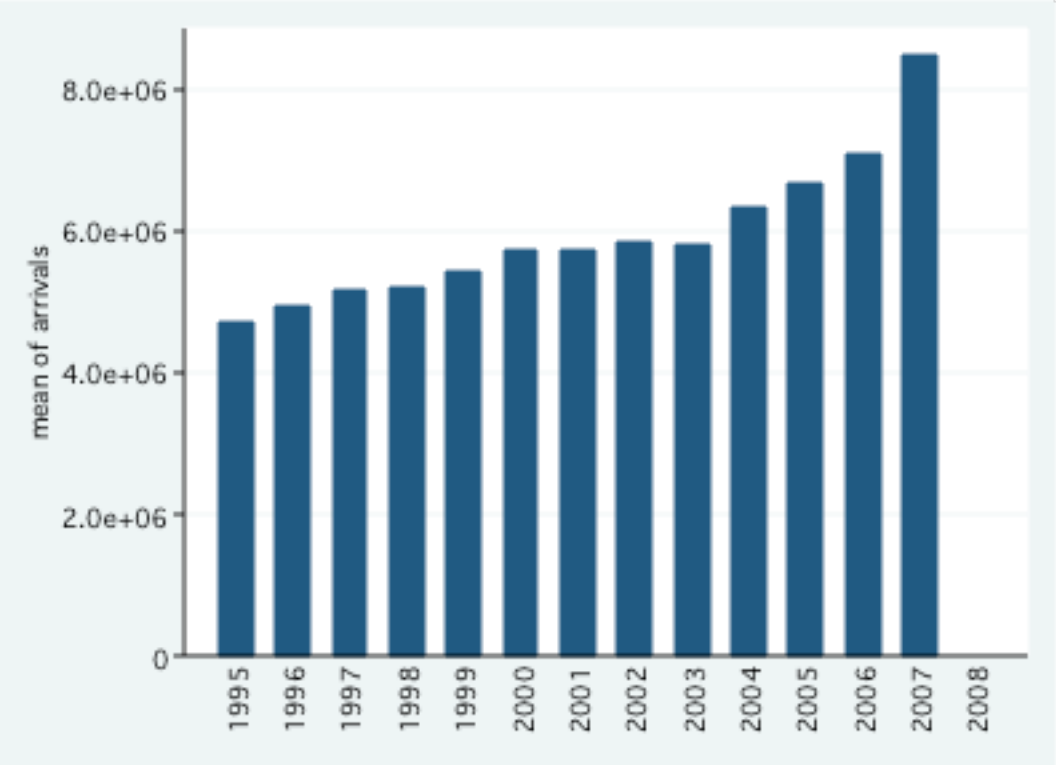


Figure 17: *REAL_TRAVEL_MIL*

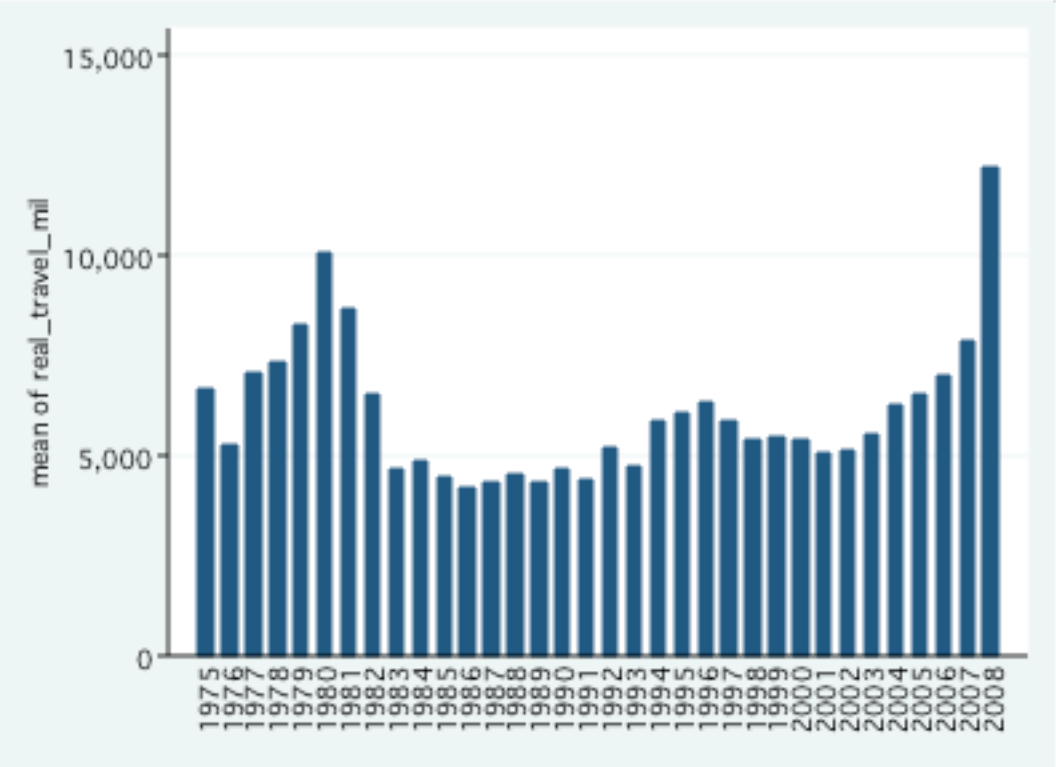


Figure 18: *ARRIVALS & OLYMPICHOST*

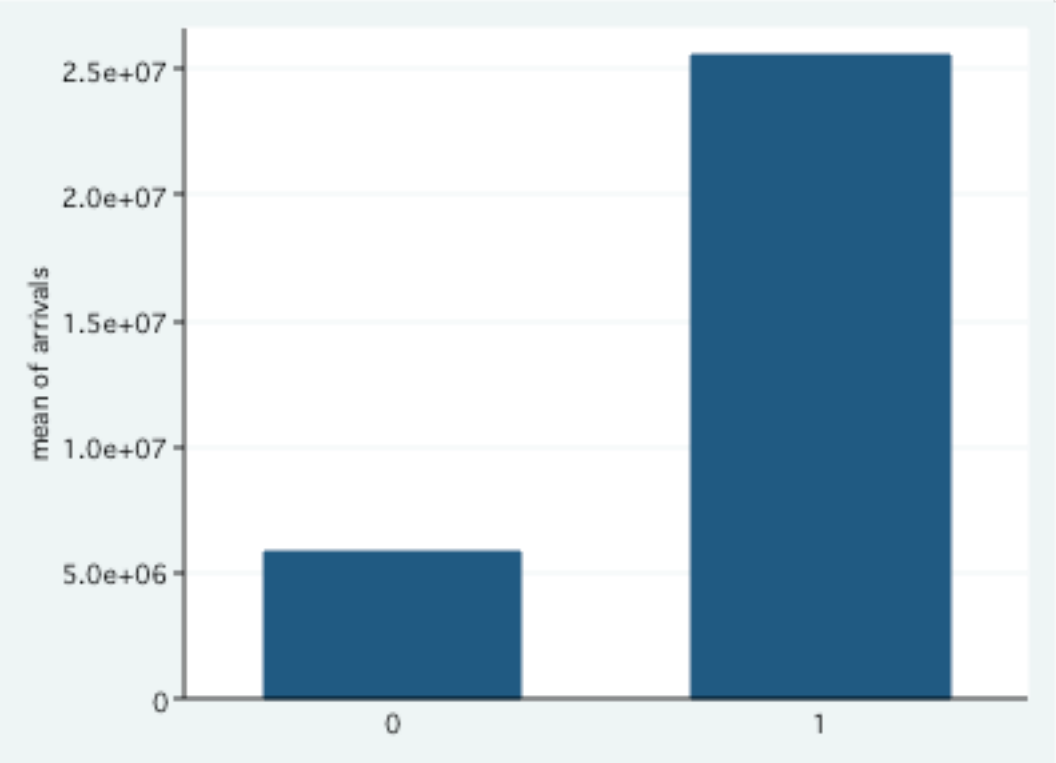


Figure 19: *ARRIVALS & OLYMPICHOSTPAST*

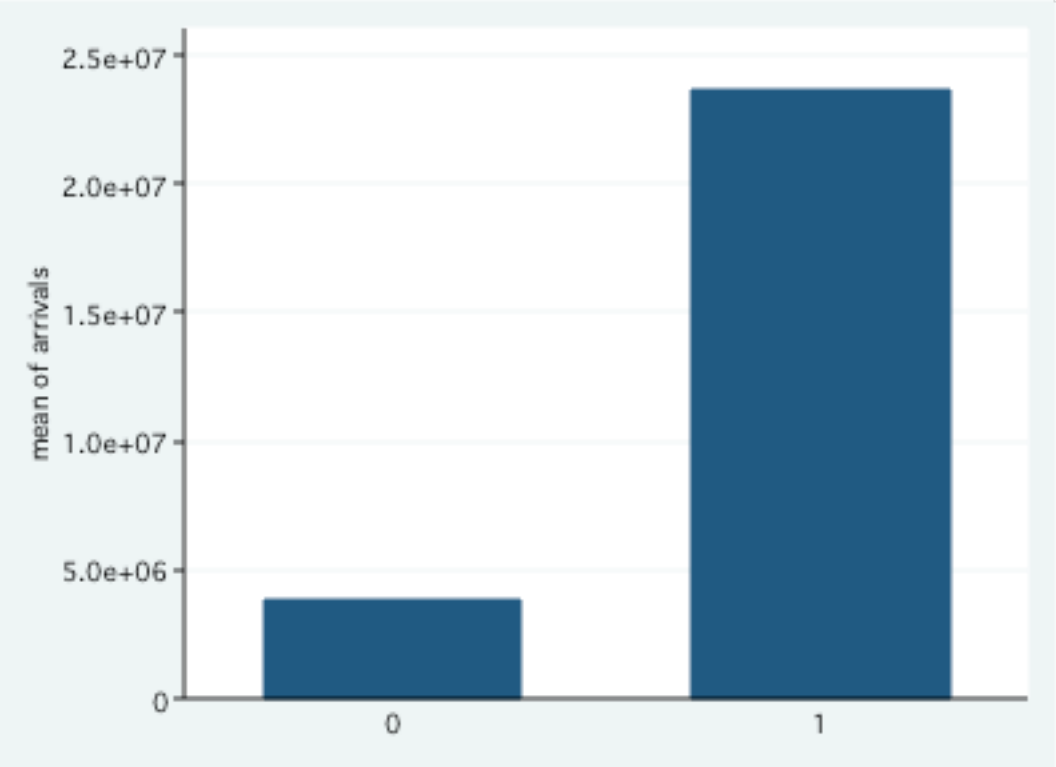


Figure 20: *REAL_TRAVEL_MIL & OLYMPICHOST*

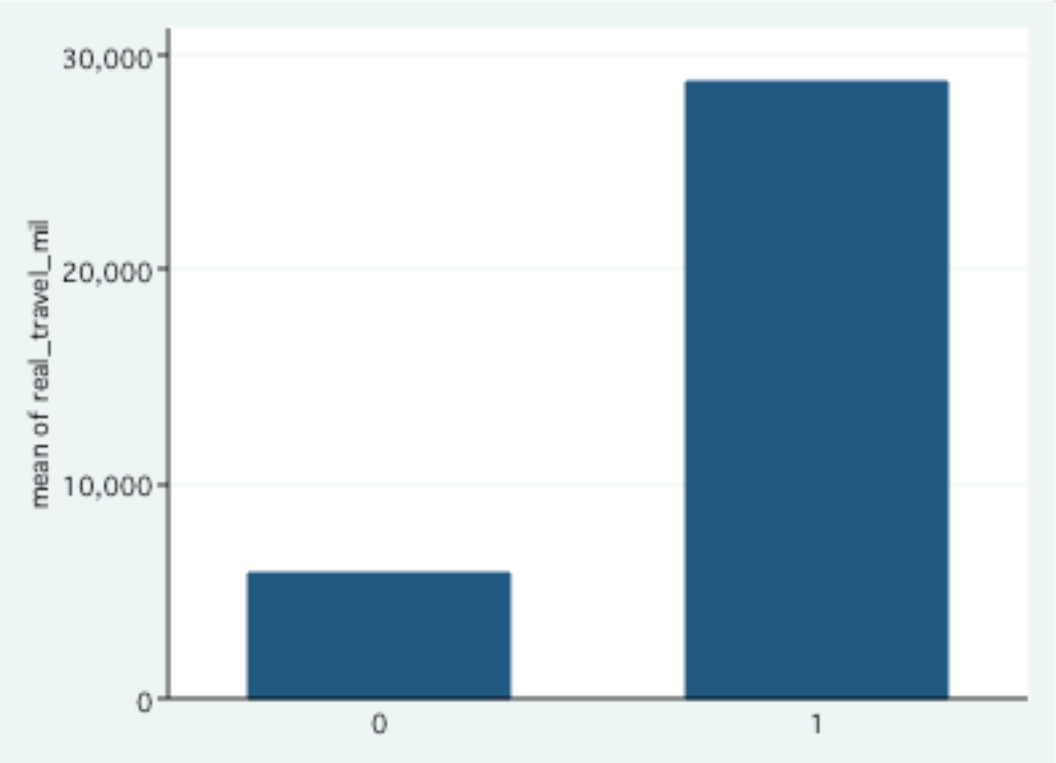


Figure 21: *REAL_TRAVEL_MIL & OLYMPICHOSTPAST*

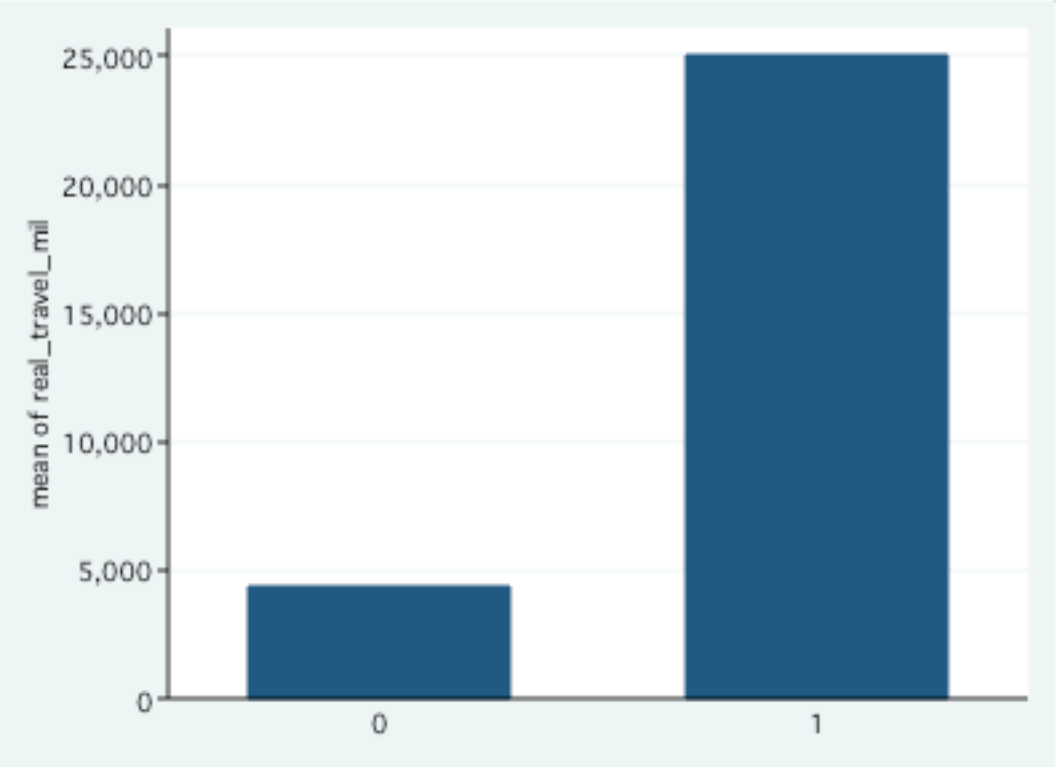


Figure 22: *ARRIVALS & WOLRDCUPHOST*

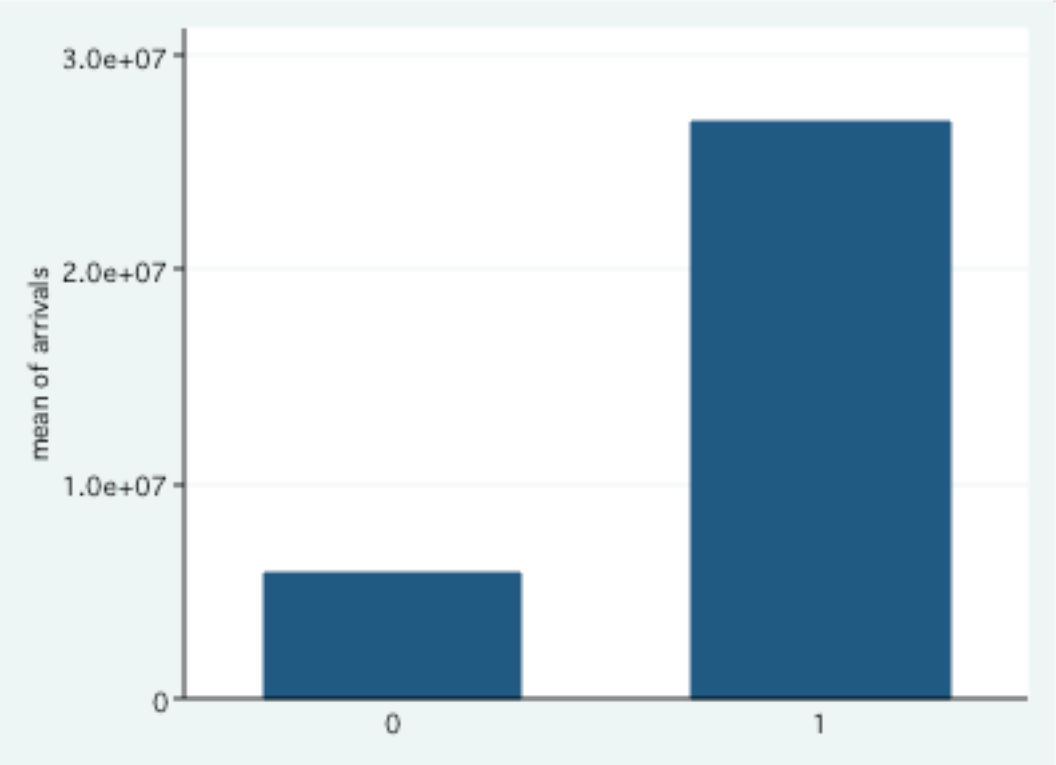


Figure 23: *ARRIVALS & WOLRDCUPHOSTPAST*

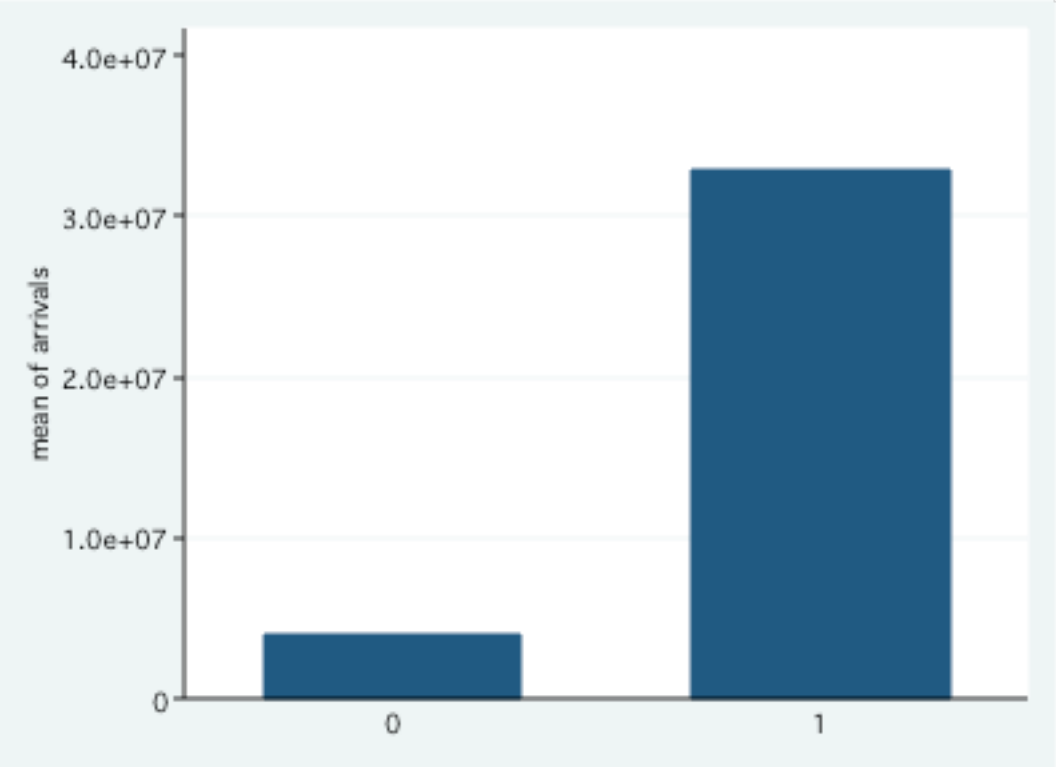


Figure 24: *REAL_TRAVEL_MIL & WORLDCUPHOST*

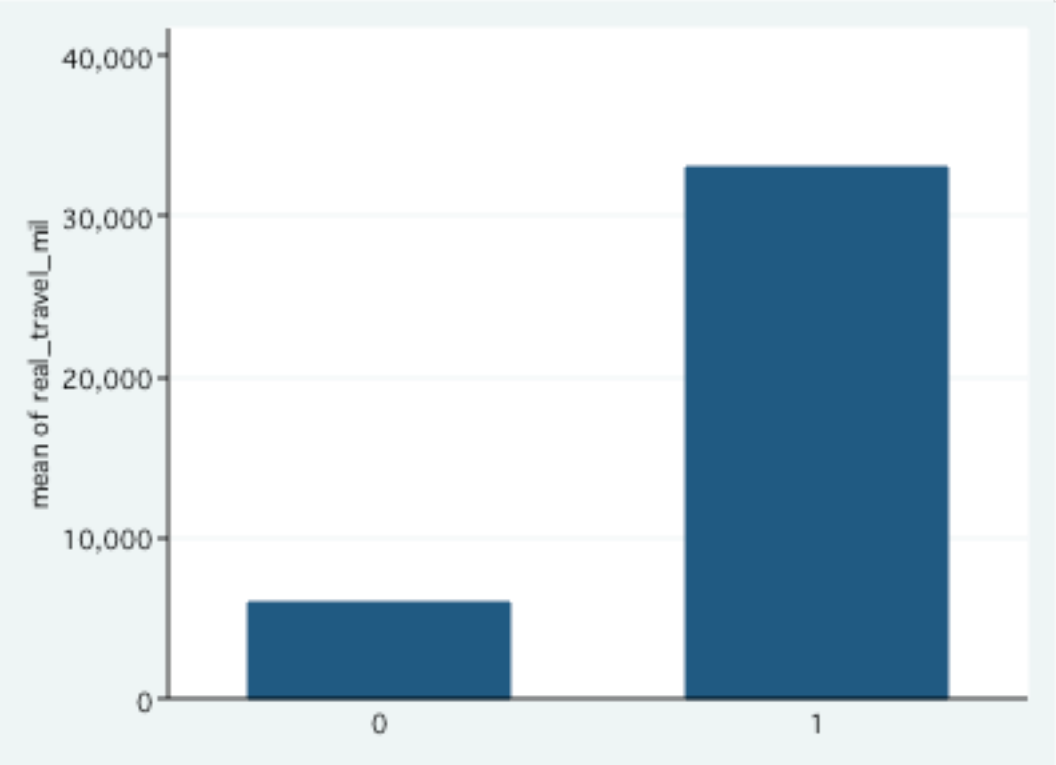


Figure 25: *REAL_TRAVEL_MIL & WORLDCUPHOSTPAST*