

Full Length Research Paper

Mega-events impact on economic growth: Analysis of the South African World Cup

Antonio J. Monroy Antón^{1*}, Juan José Méndez Alonso² and Gema Sáez Rodríguez³

¹Department of Finance and Marketing, Universidad Autónoma de Madrid, Spain.

²Department of Applied Economics, Universidad Autónoma de Madrid, Spain.

³Universidad de Alcalá, Madrid, Spain.

Accepted 8 March, 2011

According to the literature, a sport mega-event such as the Football World Cup or the Olympic Games has many advantages for the organizing country, not only in economic terms but also in other areas. This paper analyses the possible impact of the South African economy of the 2010 World Cup. In order to do so, it studies the former 6 World Cups obtaining the positive differential in terms of the economic growth that has been generated in those 5 or 3 key years that are distributed before and after the year of the World Cup. A regression "trend" is generated to each of the 7 countries that have hosted the last 6 World Cups, and the research makes a projection of two years (2011-2012) for South Africa. The results, confirming previous findings, show that four of the seven economies in the last World Cups taken in consideration, had a clear impact on the year of the World Cup. In the South African case, after registering a pre-World Cup period 2004-2008 particularly buoyant, further developments should be expected for the 2011-2012 period.

Key words: Mega-events, football, gross domestic product (GDP), South Africa.

INTRODUCTION

A mega-event is, according to Dwyer, Forsyth and Spurr (2005), an event with a limited duration that might occur only once or with a certain recurrence. Hosting a mega-event where crowds of people from all over the planet are involved is a challenge for any country. Increasing the security measures, organising transport and energy infrastructures, accommodation facilities, preparing new sport areas... are only some of the situations that the selected country has to plan in advance, with a short-time deadline and budget limitations (Ahlfeldt and Maennig, 2010). Nevertheless, every four years, there are always many candidates that compete against each other presenting ambitious projects to host the FIFA World Cup (Martins and Serra, 2007).

Football has showed up to be over the last 25 years the World's leading game. It can influence into other branches such as society, commerce and politics. Whole

regions and nations forget the differences and conflicts to build a feeling of union around the football phenomena, the only factor that can move masses in this scale. The potential of football is easily appreciated just mentioning that, since 2007, FIFA includes 208 member associations, making it one of the biggest and more popular federations of the World.

The interest of football worldwide has enhanced considerably due to the evolution of media technology in relevance to international communication. The FIFA World Cup and the Olympic Games are the most relevant and large events of our time in terms of television and Stadium spectators (Ritchie and Yangzhou, 1987). The impact of the sporting industry on economic decision making increased very fast since the global media attention enables the host country to showcase and introduce itself to the world as an attractive destination for tourism and investment (Martins and Serra, 2007). Which are the reasons for these countries that move them to present their selves as candidates for these mega-events? One of them could be the possibility to reach positive political, social, cultural and economic effects in the long term

*Corresponding author. E-mail: antonio.monroy@uam.es. Tel: +34609588782. Fax: +34915341035.

after the event (Ritchie and Yangzhou, 1987). Preuss (2000) listed some other incentives that can motivate a country to present a candidature: putting the country “on the map”, showcasing the region, promoting the political system, creating new trading partners, attracting investment, boosting tourism, creating jobs and business opportunities, urban renewal, including housing and infrastructure, and building a legacy of sports infrastructure.

As a contribution to economic growth in the host country, many projects that can improve the financial capacity of the economy of the elected one are planned, often as a result of advertisement and publicity (Irons, 2006). These projects are essential to prepare the countries to be able to face the economic influx that celebrating the championships involves. Private companies could also be interested to work to expand the capacity of accommodation or services before the beginning of the World Cup. In the case of South Africa, the president of the country Zuma explained that while preparing his country for the celebration of the FIFA World Cup 2010, the country's transports, energy, communications and social infrastructures were being upgraded and expanded, and that was contributing to economic development and improving conditions for investment.

The possibilities of the development are promising, as there are intangible factors around a macro-event which can increase the economic growth and give incentives to boost consumption not only in the host country, but also in the country that wins the championship (Ahlfeldt and Maennig, 2009; Rodríguez, 2008). The “champion effect” of the country that wins the World Cup refers to the proud and the psychological boost from being crowned champions in the world's largest-viewed sporting event. This boost might come from either internal sources, like an increase in consumer or business confidence, or from external sources, such as a surge in tourism. It is especially significant that the four countries that have hosted and won the World Cup have seen an increase in growth rates in the years following the event (Irons, 2006).

Nowadays macroeconomic studies count on the effect of mega-events, such as the World Cup and the Olympic Games, as analyst realised about its relationship with economic factors. A research from Lloyds (2010) suggests that “countries that enjoy a successful World Cup campaign could see their economy reap the benefits of an economic “feel-good” factor”. This research makes a comparison of the consumer spending growth in the year before and after the World Cup, using as subject of study those nations that have reached the semi-final stage in recent tournaments. It shows that in terms of consumer spending, the value has tended to be higher in the period following a successful World Cup which gives an impulse to economic growth.

The first economic study about the impact of hosting the Olympic Games took place in Los Angeles 1984 (Bohmann and Van Heerden, 2008). The general interest of this analysis was a direct result of the situation after

the Olympic Games of Montreal in 1976, where reports claimed a situation of deficit. Since then, many studies have been made about the impacts on economy of massive sporting events.

It has been confirmed, for instance, that Barcelona 1992 Olympic Games have become a model from a sporting, organisational, economic, social and urban perspective (Brunet, 2005). The city obtained tremendous gains after the Olympic Games celebrations that made an important contribution to its attractiveness.

Ritchie and Adair (2002) emphasized the importance of legacy planning in the host countries. Strategic planning is needed to keep the residents concerned about the long term development for the community, to justify the investment required to prepare the country to host the event (Hagn et al., 2007).

The Sydney 2000 Olympic Games have been analysed in detail many times (Ritchie and Adair, 2002). The Centre for Regional Economic Analysis of the University of Tasmania (1997) estimated that over the 12 years ending in 2005/2006 the Gross domestic product (GDP) of New South Wales State would increase an average of \$AU490 per year. The estimated impact on the GDP of Australia was \$AU6,5 billion. Madden (2002) confirmed this information in a more recent post-analysis.

But it has to be pointed out that not all the macro-events lead always to similar results. The FIFA World Cup of South Korea in 2002 was not as remarkable from the economic point of view. Nevertheless, the success of the celebration in this country was big in terms of social and cultural exchange and development (Kim et al, 2006). Comparing the economic effects of the last cities hosting a football World Cup, Irons (2006) reveals the following:

1. In 7 of the 13 World Cups since 1954 economic growth has been slower in the World Cup year than in the two years leading up the event
2. On average, economic growth is slower in a World Cup year than in the years both preceding and following
3. In 9 of the 13 World Cups since 1954, economic growth has been faster in the two years following the World Cup than in the year of the event
4. On average, economic growth is stronger in the two years following the World Cup than in the World Cup year of preceding two years.

Despite the exposed, there are some critical voices that point out the negative effects that could occur along the course of the planning a macro-event. Special attention must be paid to the direct and natural costs of putting on the World Cup. Security expenses and public safety (with 32 teams and thousands of supporters, the investment on security measures has to be considerable), possibility of transport collapse, sanitation and clean up and ecological impact are some of the costs that the host countries have to face.

Another problem is the opportunity cost. Although it is very complicated to be measured, it must be considered that many other destinies to the public funds could be more profitable for the residents of the country by providing a better return to society than spending money on the World Cup.

This paper analyses the economic growth of the last countries that hosted the World Cup, starting with the case of Italy in 1990 and finishing with the recent World Cup hosted in South Africa in 2010. Additionally, it makes a prediction about the possible economic growth in South Africa after the FIFA World Cup 2010.

MATERIALS AND METHOD

Economic growth can be used to compare different economies' situation, or to compare one economy with the group of countries to which it belongs. For instance, the economic growth in Argentina or Uruguay can be properly compared with the average of the four member countries of "MERCOSUR" while in the case of Spain; it would be more useful and practical to compare it with the EU countries.

The method used in this paper is not the direct comparison of GDP, but the comparison of the increase tendency of the population and that of the GDP. If the GDP rises in a faster rhythm than the increase of the population, it can be taken for granted that the living standards of the country have improved. Nevertheless, when the population grows up faster than the GDP, the living standards of the country are going worse.

Usually, economic growth is determined excluding the inflation effect from the goods and services that are produced (real GDP). In economics, "economic growth" and "Theory of economic growth" refer to the potential growth in production more in terms on higher employment than higher aggregated demand.

Generally speaking, economic growth is related to the enhancement of certain indicators such as the production of goods and services, the boost of energy consumption, increase in savings, investment, a positive Trade balance, the increase of calories consumption per person, etc. When the improvement of these indicators is perceived, it is confirmed that the population living standards of the country have followed the same way.

The research in this area have to pay attention to the improvement on the rate of employment per square meter, to the income and to the value of the produced goods and services. Using the measurement of real GDP the economic growth would be understood, in terms of historical data, as the desirable GDP as it is related to the goods and materials available and to the improvement of the population living standards.

In this paper, the evolution of the GDP in the host countries of the last 6 celebrated FIFA World Cups (Italy, USA, France, South Korea/Japan, Germany and South Africa) is examined. The data of the GDP from other countries which are closely related to the host countries are used to build an analytical framework (belonging to the same economic block or other relevant connections).

The maximum period of observation will take place among 1977 and 2012, taking in consideration blocks of 5 years (2 years before and after the year of the event). The reason to start in 1977 is the need to get a large enough number of years to calculate trends. The data are obtained from "Euromonitor International", described as the following in the mentioned source: "Country" - US\$ Per Capita - Constant 2009 Prices - Fixed 2009 Exchange Rates. The category definitions are:

1. GDP by Usage: Gross domestic product is the sum of gross value added by all resident producers in the economy plus any

product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

2. Real GDP Growth: Gross domestic product is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

3. Real GDP: The number reached by valuing all the productive activity within the country at a specific year's prices. When economic activity of two or more time periods is valued at the same year's prices, the resulting figure allows comparison of purchasing power over time, since the effects of inflation have been removed by maintaining constant prices.

This concept has two ways to improve its interpretation and utility. In one hand, it can be expressed per capita, and in the other hand the price effect can be discounted, as well as the exchange rate differences. The first one enables the possibility to make relative the sizes and to talk in terms of the living standards. The second way avoids the dissertations in the markets. All together, this indicator provides adequate comparisons among the Economic Growth and the Living Standards of the countries.

Specific procedures

The big size of the GDP of an economy does not permit, sometimes, to find the truly impact that the event can cause and it can be missing in the year or period of inversion average. Due to this fact, the most appropriate technique is to obtain the positive differential in terms of the economic growth that has been generated in those 5 or 3 key years that are distributed before and after the year of the World Cup.

An interesting approach can be made to the models of "differences in differences", which explains the differences related to the behaviour of the economy of a country in the relevant period of time related to the average of the difference that had the group of similar and important countries.

This procedure is made in specialized Software (Eviews). After applying the variation rate of a set of values of the GDP in constant terms (and with a fixed exchange rate) and per capita (base 1977=100), a regression "trend" is generated to each of the 7 countries that have hosted the last 6 World Cups. There is one more country than number of World Cups as Japan and South Korea hosted together the 2002 World Cup.

The research makes a projection of two years (2011-2012) based on reports from the European Commission and IMF and Euromonitor International, in order to build a complete period of analysis that can be used for the last World Cup, celebrated in South Africa and to avoid the impact of the financial crisis (very intense in 2009 and 2010) that could reduce the tendency in a significant way, leading to incorrect results.

Therefore, the trend of the economic growth (and living standards) of the studied countries is obtained from 1977 to 2012. It must be remembered that the result of this procedure is quantitative and very visual as well. It lets to know the tendency, the trend and afterwards, and the visual image of the difference, which is the economic dynamism (and improvement of the living standards) that overtakes that tendency. It is similar to the "plus" that exists in the economy in that year over the expected. As a result of multiple occasions and difficulty in calculating the potential GDP, international institutions have considered this GDP "trend" as a valid reference.

This procedure is very exigent, and any sign can be considered as valid even if it is a few units in the percentage points of the GDP

over the line of the trend line, as the data is corrected by the size of the population, the effects on prices or currencies and the inertial growth.

RESULTS

The study found that the impact of a big event was very different according to the development of the countries. For instance, the World Cup of 2002 did not have the same effect in the dynamism of the economic activity in South Korea and Japan, and the length of the event (usually it is only one month) had an influence so that in the current year, the total consumption of goods and services was somewhat diluted.

The World Cup had an impact in economic activity, as all economies must be prepared or strengthened to attend this event. This preparation was more intensive in the previous year to the World Cup (two years earlier is when the infrastructure required more resources) and usually left a positive string impact in successive years in both the host country and even in the finalists of the championship. The reading of the following graphs is made as follows:

1. Positive values above the horizontal axis "0" are years with improved living standards and GDP growth above the trend and vice versa.
2. The columns marked as "gray shaded" delimit three years, the year of the World Cup, the previous year (t-1) and the following year (t+1).
3. Six areas have been scored, respectively, since Italy 1990 to South Africa 2010. This allows seeing in each case, and all together, which has been the impact.
4. It is important to note that the vertical axes are automatically scaled depending on each country (e.g. South Korea has a greater variability of their growth).

The common and specific results are the following:

1. Four of the seven economies in the last World Cups taken in consideration, had a clear impact on the year of the World Cup. USA (+1 percentage points), France (+1.84 p.p.), South Korea (+1.76 p.p.) and Germany (+2.1 pp). In one case the impact is not that clear (Italy only gained +0.25 p.p.), and in the other two cases (Japan and South Africa) the positive effect above the GDP trend is not seen so as to say that it had a large impact throughout the year.
2. Japan recorded a very positive cycle of growth of GDP and living standards between 2003 and 2007.
3. South Africa registered a pre-World Cup period 2004-2008 particularly buoyant, that was truncated with the wide-spread bad year 2009, that none of the economies under study could avoid, and even with the global crisis, the estimates based in the FMI source has provided for the country a positive data for 2011 and 2012 as it is shown in Figure 1.
4. The growth of the South Africa World Cup effect is

seen more clearly in the preparation of previous years and in the years following, because of the progress already made.

5. The World Cup France '98 had good effects and coincided with a boom which is provided in the results. It is to be noticed how Germany, Spain, UK and Italy, together with France, perceived the phenomenon in Europe significantly.
6. This phenomenon is repeated in Germany '06 for the countries of the region, Italy, France, Spain, UK, even also including Japan, Brazil and South Africa.

The results taking in consideration the relevant economic blocks (Figure 2) are the following:

1. The case of USA and Canada is clear in 1994, and the indirect effect on Brazil, Mercosur and Latin America could be added.
2. The cases of 1998 and 2006 are the benchmarks for the European area.
3. In 2010 the World Cup effect has continued in Asian markets (ASEAN, Japan, and South Korea) and also in the geographic area of Latin America, which already has the effect of regional host for 2014.
4. Clearly, the world map of football is still completing its expansion when paying attention to Russia for 2018.

DISCUSSION

The results confirm the findings of previous studies (Irons, 2006) about the affirmation that hosting a mega event such as the FIFA World Cup is profitable for the country that organizes it. It can be seen clearly how the economic growth of the host countries of the FIFA World Cup, even with their continent's specificities and their different degrees of development, suffer a common effect on its evolution: a "feel-good" factor contributes to raise the trend of growth. This change is perceived in most of the past host countries and, according to the estimates of the FMI, it is expected to happen in South Africa as well, considering also the positive pre-World Cup period for the country's economy. But perhaps, in the case of South Africa, because the growth of the World Cup effect is seen more clearly in the preparation of previous years, much of the progress must be already made.

Nevertheless, the effect of the World Cup in the economy is not only determined by the planners of the event. The managing of the infrastructures and temporary worldwide attention on the country in the following years, together with another factors, determine the real relevance of the World Cup in the country's economy. The investment in the selected country rises since the moment the announcement as a future host country of the World Cup is done. And as Martins and Serra (2007) explained, this fact can be very different in the countries of study, and the degree of anticipation of the outcome of the bidding process can determine the variation in the

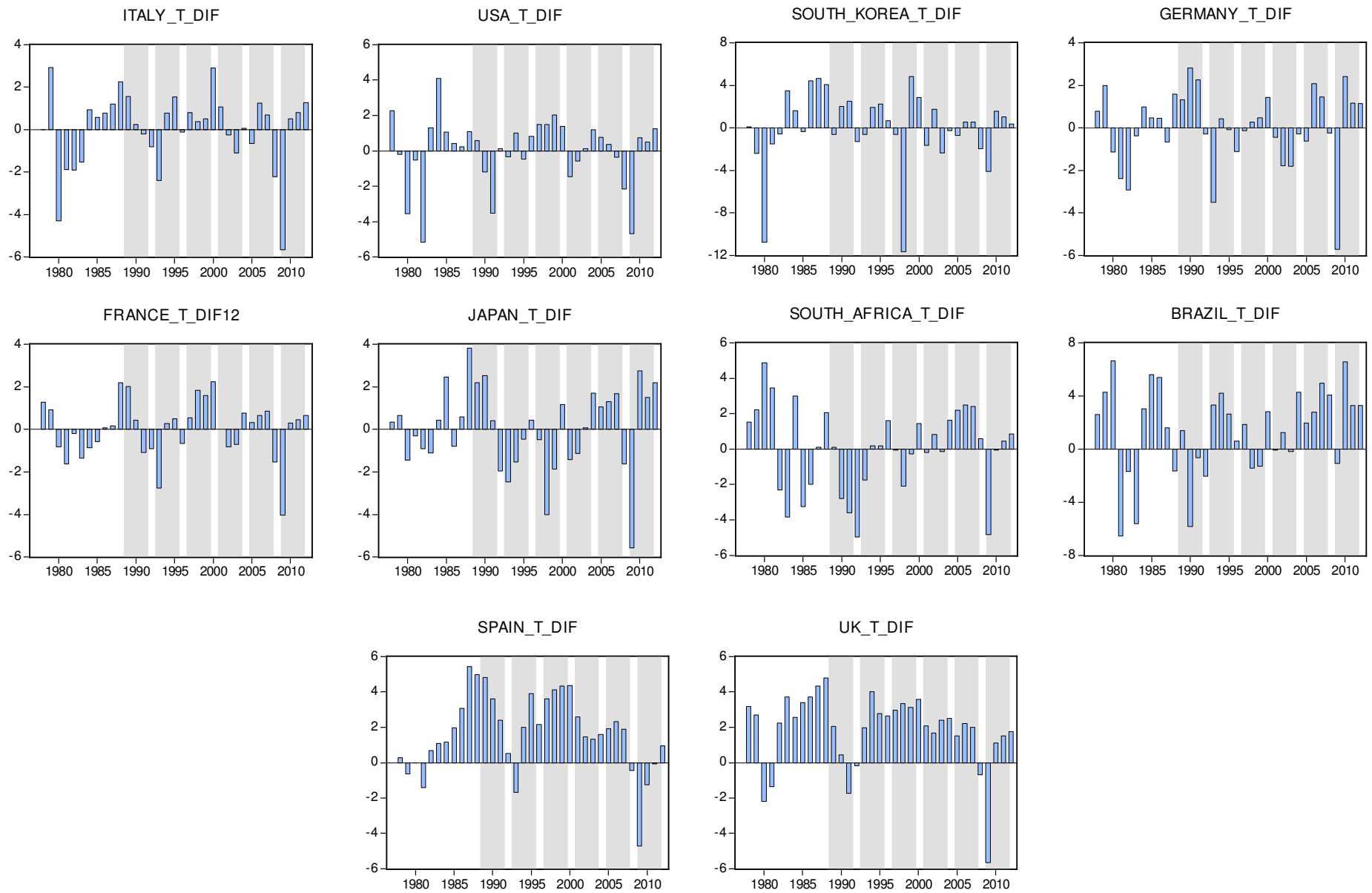
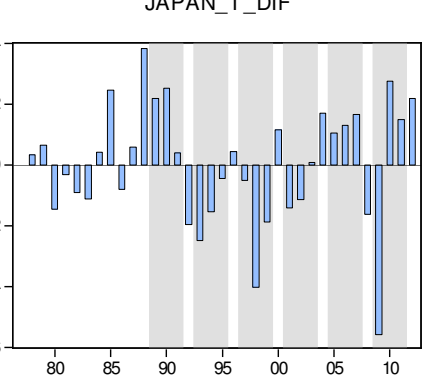
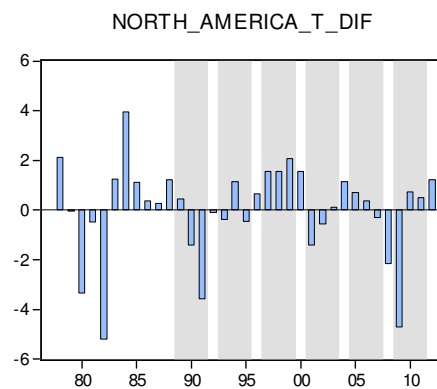
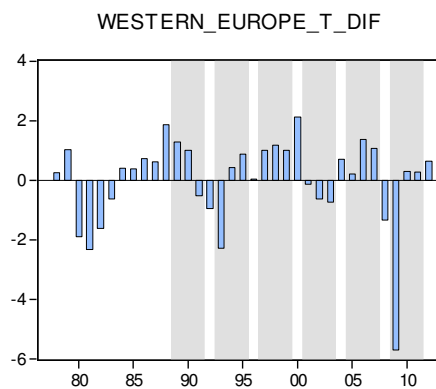
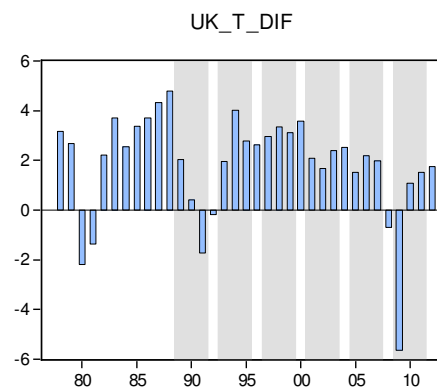
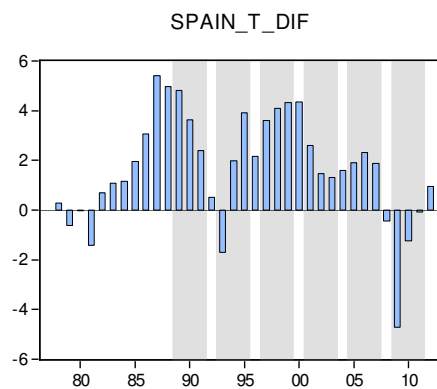
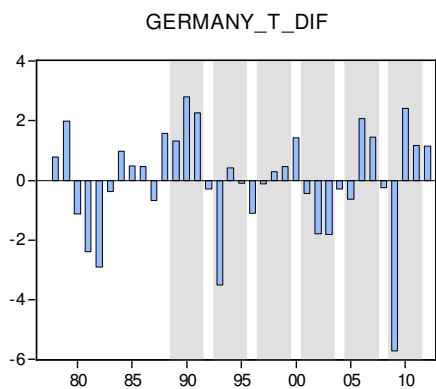
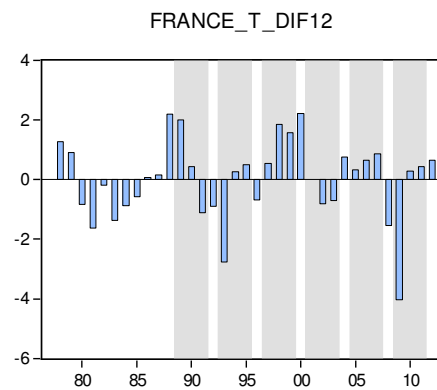
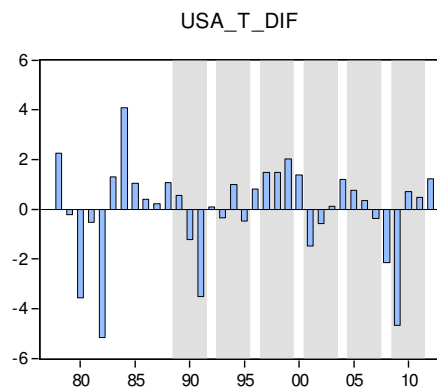
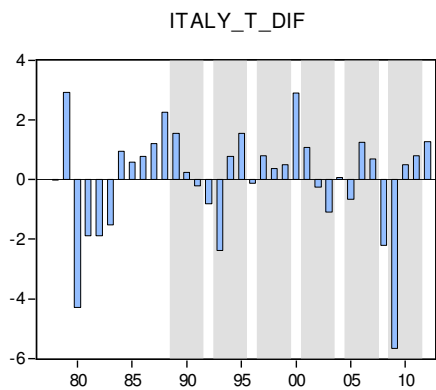


Figure 1. Deviation of tendency by countries. Source: own calculations from Euromonitor International (<http://www.euromonitor.com>), International Monetary Fund (IMF) and International Financial Statistics.



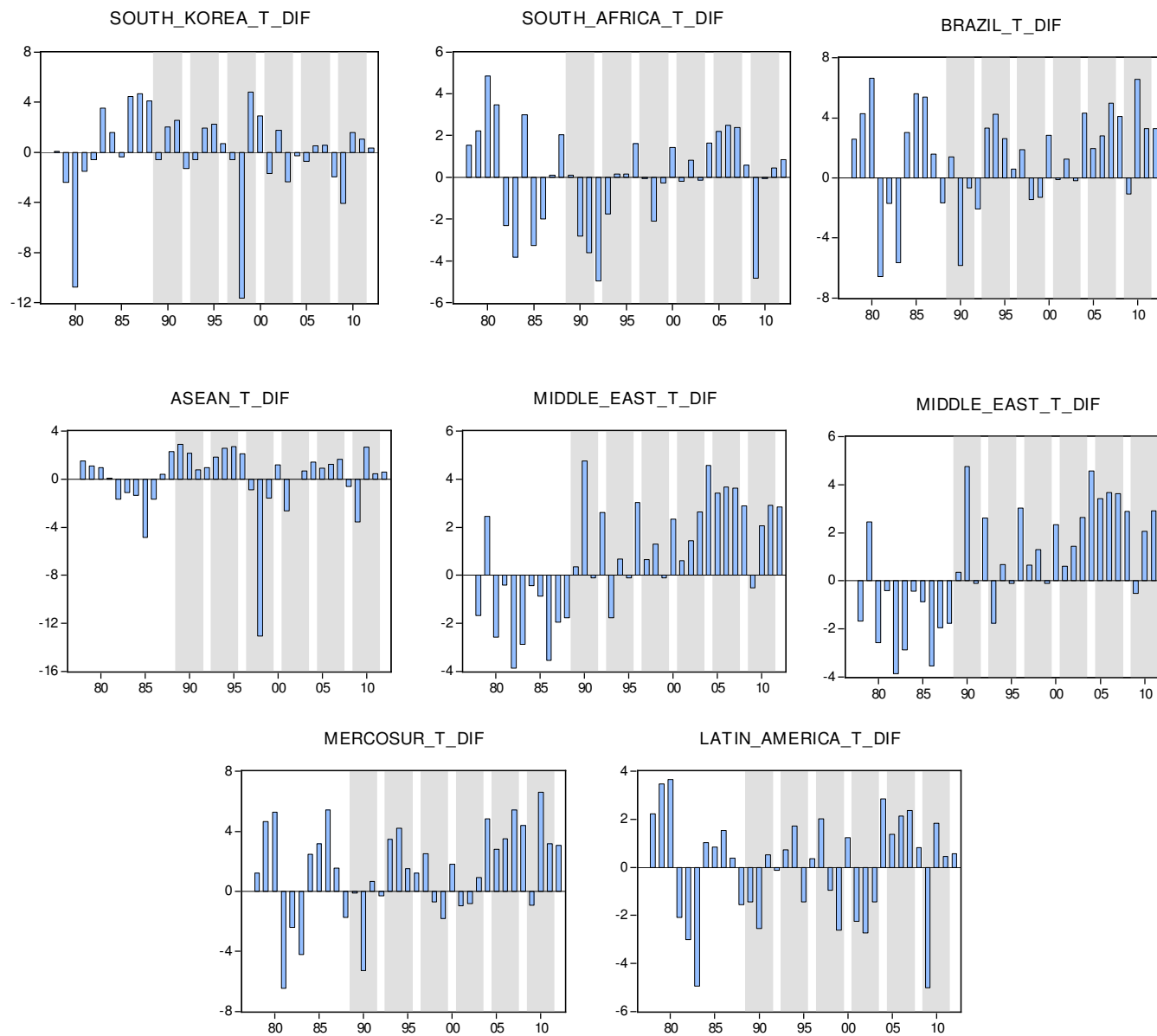


Figure 2. Deviation of tendency including Economic Blocks. Source: own calculations from Euromonitor International (<http://www.euromonitor.com>), International Monetary Fund (IMF) and International Financial Statistics.

economies.

The FIFA World Cup traditionally has taken place in the developed countries' block, so to determine the effect on the economy of such an event in an emerging country as South Africa takes more risks when comparing the data. Even after the very unstable world finance situation of 2010, the good evolution of the previous years to the 2010 predicts that this effect will be positive in the middle term. In this kind of studies, the concept of intangibles must be kept in mind. For example, above the quantitative assessment in terms of GDP and GDP per capita, there is a perception of communication of the country towards the rest of the world, enhancing the image and the knowledge of their culture, that is very difficult to be quantified in the short term, but is an additional profit for the country and a demonstration of its ability to organize.

The differences between Japan and South Korea might come from the different level of development of both economies. Japan is a highly developed economy, where major new investments were not needed, as it would be in the case of South Korea. The very positive cycle of growth of GDP and living standards in Japan between 2003 and 2007 could have been a reaction to the recession previously accumulated.

There is a topic that has been named in this paper: the "champion effect". Other studies have already given references about the reality of such an effect; however a deep study has never been made. The champion and the teams that reach the finals and semi-finals of the competition experiment a positive impulse in their economic activity that should be analysed in further studies.

This analysis is exposed to certain temporal limitations (only few years before and after the World Championship) and geographical limitations (countries are sometimes very difficult to be compared with each other, even taking in consideration different economic blocks, as economic development is very different according to areas and the global economic recession of 2010 have not displayed yet all its effects in the global economy).

The 4 weeks time period of the World Cup might not be enough to create an important impact in macro-economics factors (Dohmen et al., 2006). However, to correct a possible mistake in the analytical accuracy, this research has considered that the period in which the effects are displayed is along the year of the championship as a whole, expanding to the years when the host country has already been chosen as a host and the first years following the World Cup celebration.

Another limitation of this analysis is happening as well in previous studies, that have already remarked the importance of the changing of trends and fashion along time. The relevance of football in a worldwide scale has made nothing than growing up since the first years taken in consideration in the analysis. Therefore, comparing the global interest that football generates today to 1990 can decrease the exactitude of this analysis.

Finally, the study has not made a special focus on the

effects that the stadiums and infrastructure changes have had and will have in the host country, as the study from Swantje and Maening (2008) did. Nevertheless, our opinion in the case of South Africa is the same: the benefits of urban development will show in short-term positive benefits in the country's economy.

Conclusion

The impact of the South Africa 2010 World Cup has already started, but further growth and benefits for the country should be expected for at least the next two years. These benefits will include not only real economic growth, but also some intangibles very difficult to quantify. Looking at the future, countries hosting a mega-event such as a football World Cup will have a clear impact on their economies. So, it can be said that, in economic terms, doing that is a very good deal.

ACKNOWLEDGEMENT

This study was funded in part by the CMMP in Madrid, Spain.

REFERENCES

- Ahlfeldt G, Maennig W (2010). Impact of sports arenas on land values: evidence from Berlin. *Ann. Reg. Sci.*, 44(2): 205-227.
- Ahlfeldt G, Maennig W (2009). The role of architecture: The case of "Olympic Arenas" in Berlin-Prenzlauer Berg. *Urban Stud.*, 46(7): 1343-1362.
- Bohlmann HR, Van Heerden JH (2008). Predicting the economic impact of the 2010 FIFA World Cup on South Africa. *Int. J. Sport Manage. Mark.*, 3(4): 383-396.
- Brunet F (2005). The economic impact of the Barcelona Olympic Games, 1986-2004. Barcelona: Olympic Studies Centre UAB, pp. 5-12.
- Dohmen T, Falk A, Huffman D, Sunde U (2006). Seemingly irrelevant events affect economic perceptions and expectations: The FIFA World Cup 2006 as a natural experiment. *IZA Disc. Papers*, 2275: 1-16.
- Dwyer L, Forsyth P, Spurr R (2005). Estimating the Impacts of Special Events on the Economy. *J. Travel Res.*, 43: 351-359.
- Hagn F, Maennig W (2007). Short-term to long-term employment effects of the Football World Cup 1974 in Germany. IASE/NAASE Working Paper Series, Paper No. 7-21.
- Irons JS (2006). Does the World Cup Get the Economic Ball Rolling? Assessing the Impact of the World Cup of Soccer on Host Countries' Economies. Washington: Centre for American Progress. Retrieved January 2nd 2011 from <http://www.americanprogress.org/issues/2006/06/b1749253.html>.
- Kim HJ, Gursoy D, Lee S (2006). The impact of the 2002 World Cup on South Korea: comparisons of pre- and post-games. *Tour. Manage.*, 27(1): 86-96.
- Lloyds TSB (2010). World Cup and the economic feel-good factor. Retrieved January 4th 2011 from http://www.mediacentre.lloydstsb.com/media/pdf_irmc/mc/press_releases/2010/July/6810pressrelease.pdf.
- Madden JR (2002). The Economic consequences of the Sydney Olympics: The CREA/Arthur Andersen study. *Current Issu. Tour.*, 5(1): 7-21.
- Martins AM, Serra AP (2007). Market Impact of International Sporting and Cultural Events. FEP Working Paper Series, Paper No. 240.

- New South Wales Treasury and Centre for Regional Economic Analysis University of Tasmania (1997). The economic impact of the Sydney Olympic Games: a collaborative study. Retrieved January 11th 2011 from http://www.treasury.nsw.gov.au/___data/assets/pdf_file/0020/6644/TRP97-10_The_Economic_Impact_of_the_Sydney_Olympic_Games.pdf.
- Preuss H (2000). Economics of the Olympic Games Hosting the Games 1972-2000. Sidney: Walla Walla Press.
- Rodríguez A (2009). The accounts of the Spanish sports federations. *Int. J. Law Sport Manage.*, 4: 35-43.
- Ritchie B, Adair D (2002). The growing recognition of sport tourism. *Current Issu. Tour.*, 5(1): 1-6
- Ritchie B, Yangzhou J (1987). The role and impact of mega-events and attractions on national and regional tourism: a conceptual and methodological overview. Paper presented at the 37th AIEST Congress, Association International Scientific Experts in Tourism, Calgary, 28: 17-58.
- Swantje A, Maennig W (2008). South Africa 2010: Economic Scope and limits. *Hamburg Contemp. Econ. Discuss*, 21: 1-39.