

Soccernomics 2010

How the World Cup can contribute to a more balanced global economy

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Introduction

After suffering through a bitterly cold winter, I think we all deserve the heart-warming summer that is rapidly approaching. A summer that promises to bring more than sun, sea and sultry evenings. What lies ahead is a summer full of Orange-coloured days: a summer in which the Dutch will, briefly, unite behind their soccer team. The 2010 World Cup is set to kick off on 11 June, just after the general elections on the 9th! What an exciting prospect, and a great reason for us to indulge in a little *soccernomics*.

Soccernomics is simply about looking into the crystal ball of the upcoming World Cup Soccer championship. We, as economists, are expected to be guided by proven theory and meticulous research. What is special about *soccernomics* is that it is tongue-in-cheek science, where the intuition of the soccer-loving economist is also part of the equation. In fact, *soccernomics* should be viewed in the same way as a soccer match - and taken just as seriously! *Soccernomics* has become something of a tradition we 'kicked off' in 2000. Why? Because it combines our twin passions of economics and soccer. Forecasting is our profession and we have a deep-seated conviction that sports are not only closely tied to politics, but also to economics – and our *soccernomics* reports have only strengthened this conviction.

At the World Cup in Germany four years ago, we excelled ourselves. We picked Italy as the best winner for the economy. And you all know who came out tops. But we don't want to overdo the self-congratulation. We were right about Italy, but in 2006 we had no idea how things would stand with the bank and the global economy in 2010. Even if we had been able to foresee what lay in store, we would have considered it hardly credible. So certain modesty is in order. What's more, we did not actually predict that Italy would win the world cup (our favourite was Brazil), but that a morale-boosting victory would give the country's economy a timely impulse. Which is quite another thing.

Two years ago, our predictions for the 2008 European Championships were wide of the mark. Based on a mix of economic and sporting indicators, we concluded that a Dutch, Italian or French victory would be the best outcome. Unfortunately, Spain carried the day. There were, however, extenuating circumstances. For one thing, the organisers certainly made things difficult for us by placing our three candidates in the same group. Another problem was a flaw in our theory, namely the assumption that a country with a league dominated by foreign players would tend to have a weak national team. This gloomy conclusion was based on the

English situation, where some clubs field entirely non-English teams and the national team cannot win to save its life.

We now know that this theory does not hold water. A national league with lots of strong foreign players actually makes the local soccer heroes raise their game. Our forecast for the 2010 World Cup is based on these latest insights. You can read the projected results in chapter 2. But before this, in chapter 1, we examine the relationship between economics and soccer: is there a connection, what influences what and which country would make the best world champion from an economist's perspective? If, after reading this report, you consider yourself an even greater soccer pundit than before, then we have succeeded in our aim.¹

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¹ With thanks to Fortis economist Joost Beaumont who, ahead of our merger, gave us the benefit of his soccer knowledge and to Marijke Zewuster and Han de Jong of our Group Economics department. Marijke wrote the text blocks about emerging economies, while Han helped us craft lots of insightful comments. And, thanks to him, we avoided calling the quarter of an hour between the first and second half of a football match a 'break' instead of 'half-time'.

Chapter 1 Who are the best champions for the economy?

Much has been said about the relationship between sports and politics. Sceptics who doubt such a connection should google 'sports and politics'. The Romans were right about the 'bread and circuses' factor. This was recently confirmed for the umpteenth time when President Putin promised to sack a host of sports officials in the wake of Russia's disappointing performance at the Winter Olympics. South Africa is not just organising the World Cup for sporting reasons. Other, at least equally important, considerations involve promoting national cohesion and improving the country's image abroad. And the fact that sports (read: bread and circuses) influence the economy is also beyond dispute. A report we wrote in 2008 showed the significance of sports for the Dutch economy in promoting such matters as public health, national cohesion and the country's image abroad².

Conversely, does the economy influence a country's sporting performance? Does our performance on the soccer pitch improve when we are more prosperous? And, in our context, is a poor country less likely to win the World Cup? But we are getting ahead of ourselves because this question relates to chapter 2, where we will try to forecast the next world cup champions. The current chapter is more concerned with establishing soccer's economic significance. The question we want to answer here is: who would be the best winner for the global community. To answer this, we must first ascertain how a World Cup title impacts a country's domestic economy.

Is a World Cup title good for the country's economy?

Last winter we looked at what, if any, economic benefit the Netherlands would derive from organising the Olympic Games.³ The main conclusion was that answering this question is not a simple addition and subtraction exercise. Direct revenues (ticket sales, TV rights, etc.) may cover the operating expenses, but there are many other costs to consider, such as accommodation, sports venues and infrastructure. The costs of these can vary strongly, depending on the availability and quality of existing facilities. And even after you factor in the investments, you still do not have the full picture. This is because some costs and benefits are difficult to measure. These include such intangible benefits as: increased social cohesion reduced socio-economic inequalities, improved image abroad and extra innovations. Against this, there are risks such as poor management of large-scale projects and additional pressures on the already stretched physical infrastructure.

What holds true for the Olympic Games holds equally true for other sporting events. In many respects sports can be seen as a *public good*, i.e. a thing whose value is not necessarily expressed as a monetary value. After all, nobody is charged for the enjoyment they derive from seeing the Dutch team win. And that is only one of the elusive and hard-to-measure benefits of sports.

Similarly, the direct revenues and costs associated with a World Cup victory in South Africa will be of marginal importance. There will be festivities, but the income and costs

Host country South Africa

Twenty years after Nelson Mandela was liberated, South Africa is taking part in the World Cup for the third time – and is, in fact, organising the event. The first time South Africa took part was in 1998, four years after the official abolition of apartheid. South Africa has long been the odd man out on the African continent. This is not just because of the apartheid regime; after all, Zimbabwe also had an apartheid style government. What mainly set South Africa apart was that it was and still is the most prosperous African nation in per capita GDP terms. It is also the country on the continent that has enjoyed an *investment grade rating* from the credit ratings agencies S&P, Moody's and Fitch for the longest time.

Last year the economy contracted by 1.8% due to the global recession. This was the first year marked by negative growth since free elections for everyone were introduced in 1994. The reinstatement of democracy ushered in a period of vigorous growth. In the period from 1994 to 2008, the economy grew by 3.6% per year compared to only 1.4% in the period from 1980 to 1994. Nevertheless, large structural imbalances remain and poverty, aids and crime are still widespread and difficult to combat. Persistent high unemployment is a particularly serious problem and has only sporadically dropped below 20% since the 1980s. The upshot is that South Africa only ranks 129th among the 182 countries on the *human development index* of the United Nations. Looking exclusively at per capita GDP, South Africa is ranked 78th, just above Brazil, while Brazil does much better in the overall index, taking 75th place.

Despite all its problems, South Africa is not a deeply unhappy country. In the *World Database of Happiness*, it scores six on a scale from zero (very unhappy) to ten (very happy), giving it a commendable mid-table position below Brazil but above Russia. The country has the highest score of all participating African countries. Whether organising the World Cup will make South Africa happier or more prosperous is doubtful. Many studies have failed to produce evidence that countries derive lasting economic benefits from organising the World Cup.⁴ Even if they win, the benefits will probably be confined to a short-lived revival. Their chances of winning, incidentally, are slim. South Africa has never progressed beyond the first round – and given their first-round opponents this year, they are not likely to better that performance.

of these will be negligible (unless, of course, all the houseboats in Amsterdam sink under the weight of revelling fans). And extra expenditures will also be incurred in countries around the world, regardless of who becomes world champion. Football fans (often male) will buy a new TV. Wives will be treated to a new summer dress, provided they accept four weeks of soccer madness. Adolescent sons will insist on having one of those ear-deafening South African trumpets.⁵ And Dad will be happy to oblige, as long as they don't actually use it. Younger children will get a 'Van Persie' shirt if they promise to go to bed quietly

² ABN AMRO, *Sport scoort*, 2008

³ ABN AMRO, *De olympische olifant*, 2010

⁴ Heinrich R. Bohman and Jan H. van Heerden, *Predicting the economic impact of the 2010 FIFA World Cup on South Africa*, 2006

⁵ Such a trumpet is called a *vuvuzela*: if you google this word you get 179,000 hits (for pages in Dutch). In *soccernomics* terms, this is convincing proof that World Cup fever is starting to take hold in the Netherlands

at half-time. These are relatively small expenditures, of course, but they all add up...

But here we are less interested in the material effects than in the psychological effects on the football fan's soul, i.e. on our communal soul if 'we' win the World Cup. As economists, we are deeply convinced that the indirect effects are important. If the Netherlands were to win, most Dutch would be over the moon. Individuals perform better when they are happy, and the same goes for countries. We all know this, but it is difficult to measure. What we can do, however, is look at how a country's economy performs after winning the world cup.

In our 2006 *soccernomics* report we drew the following conclusion: "The effects at macro-economic level and on the financial markets are not so great that they can turn a recession into a boom, but they should not be underestimated. Past figures show, for instance, that economic growth among world champions tends to outstrip that recorded in the losing finalist countries during a World Cup year. With a few exceptions, it is a case of *'winner takes all'*. A World Cup winner enjoys an average economic bonus of 0.7% additional growth, while the losing finalist suffers an average loss of 0.3% compared to the previous year." The report also noted that the Dutch economy – and the AEX stock exchange – had an excellent year in 1988, when the Netherlands won the European Championships.⁶

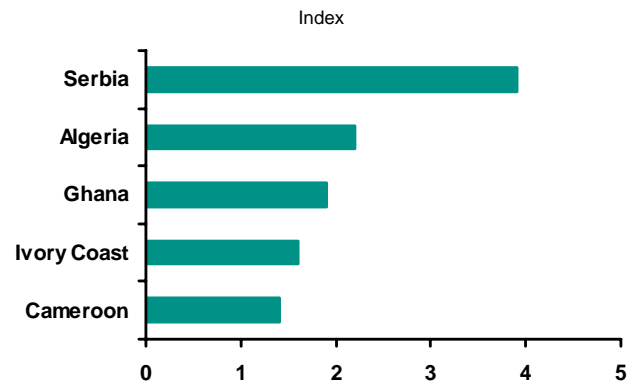
So, you might wonder, what happened in Italy in 2006? A lot can be said about this, particularly because the Italian political constellation changed that year. We refer to the opening sentence in the *executive summary* of the first OECD report on Italy after it won the title: "A welcome economic recovery is under way in Italy. In part, this reflects the cyclical upswing in the rest of Europe, but there are also early signs of a more fundamental improvement, notably in terms of export and labour market performance."⁷ Oddly enough, this OECD report makes no reference to Italy's World Cup triumph. Johan Crujff provided an eloquent explanation of this form of blinkered vision when he said: "You only start seeing it when you understand it."

What country should win if we follow our hearts?

Having concluded that a title is good for a national economy, we would now like to make a brief digression, and boldly follow our hearts instead of our heads. If we briefly put our Orange sentiments on hold, our favourite would be the country that is in most need of success. In our book, that would be the country that currently has the unhappiest population. If you rank the world cup participants according to happiness (this too is measured), you see four African countries among the five

unhappiest nations. They trail far behind the happiest countries, Denmark and Switzerland, which are first and second in the table with scores of 8.3 and 8.0.

Five least happy participating countries

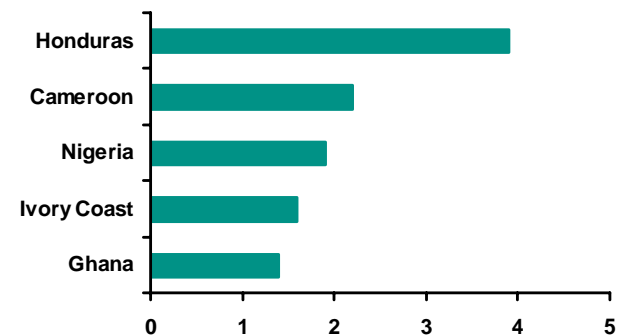


Source R. Veenhoven, *Average happiness in 148 nations 2000-2009*, 2009

But surely economists are interested in prosperity, and not in well-being? This is true, in principle, but what about the relationship between prosperity and happiness? Sometimes, apparently, there isn't one: Mexicans are reportedly happier than Americans – and that's not because they have fatter wallets. But looking at most participating countries, a clear link between prosperity and happiness is noticeable.

Five poorest participating countries in 2008

Per capita GNI in USD 1000, exchange rate based on purchasing parity



Source: World Bank, *World Development Indicators*, 2010

This connection is confirmed by the above graph, which shows the five poorest countries. And again it features Ivory Coast, Cameroon and Ghana. The contrast with the richest countries is huge. The per capita GNI (gross national income) of the leaders Switzerland and the US is, respectively, USD 46,500 and USD 47,000. The appendix contains a table with the happiness index and the per capita GNI of all participating countries.

We would be overjoyed if one of these three African countries were to win. So, no doubt, would the inhabitants of these

⁶ ABN AMRO, *Soccernomics 2006*, 2006
⁷ OECD, *Economic Surveys*, Italy, 2007

countries. Nor is it beyond the bounds of possibility. After all, Ghana was a finalist in the Africa Cup this year and Ivory Coast is managed by their well-seasoned Swedish coach Sven-Göran Eriksson.

Clearly, the World Cup is not a form of development aid. However, it does provide an interesting reflection of global social developments. More specifically, the composition of the participants clearly indicates the emancipation of Africa in recent times. In 1966, not a single African team was represented in the World Cup. Now six African nations, including the organising country, are contenders.

You may have expected to see North Korea in one of the graphs. However, this country was removed from our lists due to a lack of data (which, at least, also spares us the trouble of figuring out whether the data are reliable).

Does organising or winning the World Cup have an impact on emerging markets?

The World Cup is traditionally dominated by Europe and Latin America. Of the eighteen editions of the World Cup, victories have been split between the two at nine apiece. In fact, since 1962 they have politely taken turns providing the champions. Furthermore, the World Cup has been organised six times by a Latin American country and, including South Korea, the tournament has been held seven times in what we now call emerging markets. Over this long period, both Europe and Latin America have known times of prosperity and hardship, but you cannot say they performed markedly better than any of the other large regions – so economic performance can hardly explain their world cup prowess.

Looking more specifically at the winners, the group narrows to only seven countries and half of all World Cups have been won by only two countries: Brazil with five victories and Italy four. The last time Brazil won was in 2002. Though this was not exactly an economically easy period, we do see growth accelerating from just 1.3% in 2001 to 2.7% in 2002, only to fall back again to 1.7% in 2003. This fluctuation is entirely attributable to personal spending, which jumped from 1.1% in 2001 to 1.9% in 2002. Investments, by contrast, declined in 2002 by no less than 19%, after falling 4.5% in 2001. In 2002, South Korea hosted the World Cup together with Japan, and here we see growth almost doubling from 4% in 2001 to 7.2% in 2002 and then contracting again to 2.8% in 2003. So it looks as if there is a World Cup effect, both for the organiser and the winner.

In 1986, too, when Argentina won the championships in the midst of the debt crisis that rocked Latin America in the 1980s, we suddenly see a remarkable surge in growth from -7.3% in 1985 to 7.9% in 1986. In the years thereafter the country slid back into recession. But in 1986 Brazil also grew faster than in the adjacent years. Mexico, by contrast, which was the host country in 1986, actually suffered a sharp economic contraction in that year. And the preceding years, too, show no signs of a clear upturn, but this may be because Mexico used existing facilities that had already been constructed for the 1970 World Cup, when the country also hosted the event. All in all, it is impossible to draw any definite conclusions as we do not know what would have happened if the respective countries had not won or organised the World Cup.

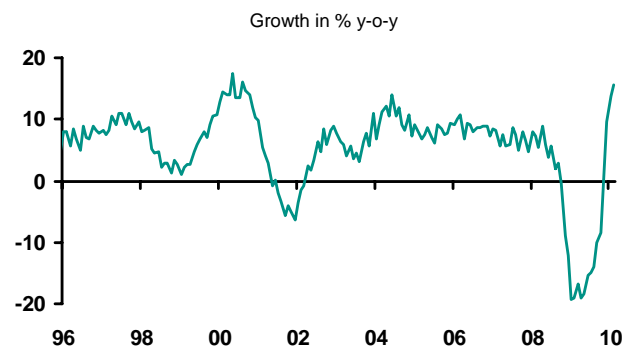
What country should win if we put head before heart?

Moving on from the realm of our heart, let us now approach the economic effects of the World Cup from a rational perspective. Rather than looking at the country we would like to see win, we will now focus on which champion would be best for the global economy.

Global economy out of balance

Any reflection on the relationship between soccer and the economy must take place against the backdrop of reality. In the year 2010 we live in a world that has barely recovered from the biggest economic crisis of the past decades.

World trade



Source: CPB

Looking at the development of world trade over an extended period of years, the global economy is recovering from an unprecedented decline. Though the revival is convincing, world trade is still some 7% lower than just before the crisis.

One could argue about the causes of the credit crisis, examining events through a telescope or a microscope: macro versus micro. The micro approach sees things close-up, and hones in on greedy bankers and profit-crazed shareholders, on credit rating agencies and regulators. A macro approach emphasises the tension between supply and demand, which causes prices to go up and down. Constant swings are part and parcel of our free market economy. If these movements become too violent, they trigger a crisis. For years, Americans have been spending more than they produce. The US current account deficit is high: 3.6% of GDP in 2009, and even as high as 6% in 2005 and 2006. Elsewhere, the reverse is true. China maintains a current account surplus, which is basically a savings surplus. It is able to do this partly by keeping its own currency, the renminbi, artificially low which in turn makes Chinese exports cheap. Savings surpluses in e.g. China make deficits on the US current account possible, and even necessary. Low US interest rates make it extra attractive for the country to live on credit. This is what led to the bubbles in the US housing and other markets. In essence, the credit crisis erupted when these bubbles burst.

Let us take the macro approach as our starting point. In *soccernomics* terms, this translates into the following question: can the 2010 World Cup help improve the imbalances among countries, reduce the surpluses and deficits, and thus lower the risk of fresh crises? To achieve this, a country with a balance

of payments surplus must win – because the inhabitants of the winning country will start spending more (i.e. their country will start importing more) and thus cause the imbalances to decrease.

Credit crisis and soccer

Is the world of football immune to economic crises? It certainly looks that way. Last summer Real Madrid signed Kaká for EUR 65 million and Ronaldo for EUR 94 million. And even when you take a broader view, as did Deloitte in its Football Money League Report, football clubs generally seem to have sustained little damage from the credit crisis. Ticket sales remain high, large sums continue to be paid for TV rights and companies still offer lucrative sponsorship deals. However, there are signs that less money was spent on transfers last year than in the previous year. And the credit crisis has also caused cracks to appear in the bastion of the English Premier League. Liverpool was confronted with financing problems because its owners had saddled it with mountainous debts. Portsmouth was forced to postpone the construction of a new stadium and has meanwhile gone into administration. In the past years the club has been bandied between Russian, Arab and Chinese owners, and has accumulated enormous debts. West Ham United was in the hands of the chairman of the Icelandic bank Landsbanki. When that ran into problems, West Ham also found itself strapped for finance.

According to Wikipedia, the joint budget of all of the Netherlands' top-flight clubs decreased between 2008/09 and 2009/10 from EUR 410 million to EUR 398 million. And there have also been recent reports of clubs running into financial trouble. But these are merely indications, and not conclusive proof, that the economic crisis has affected the clubs. Only one lower-league club (HFC Haarlem) had to withdraw from the competition because of its financial situation. But that was due to other causes.

Our criteria

Bearing the previous section in mind makes it much easier to formulate the criteria that a World Cup winner needs to meet. In simple terms, you could say that the global economy would benefit the most from a winning country that:

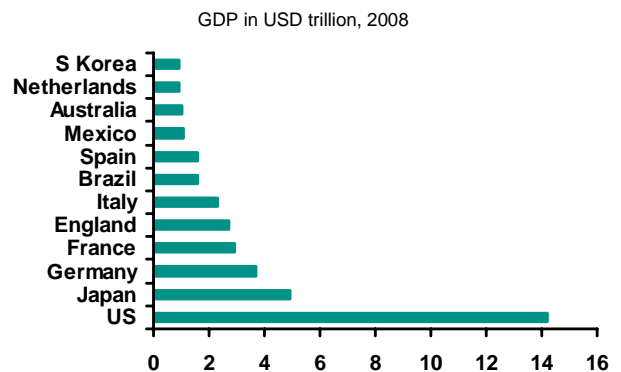
- a) is a major global economic player;
- b) derives significant benefit from the title;
- c) exports more than it imports.

We will start our analysis on economic grounds by classifying countries according to criterion a), the size of the national economy. We measure this on the basis of gross domestic product (GDP). Eight countries proudly lead the way: the US, Japan, Germany, France, England, Italy, Brazil and Spain. Number nine, Mexico, has a clearly smaller economy than Spain and is closely followed by the Netherlands. To be assured of real economic effects, the winner must be one of these eight.

Next, we apply criterion b) to the eight who made it through the preliminary selection. Of these countries we want to know which one suffered the most from the credit crisis that escalated into an economic crisis. The underlying idea is that the impact of a World Cup title on the economy depends on the phase of the economic cycle that the winner is going through.

A country with an overheated economy has no need for an extra impulse, which would only lead to higher interest rates and inflation. However, a country in recession would welcome

Participants with the largest economies



Source: World Bank, *World Development Indicators*, 2010

a purchasing power impulse that generates extra economic growth. This type of situation would be marked by overcapacity and hence room for jacking up the economy without fears of overheating and inflation.

Dip in largest economies



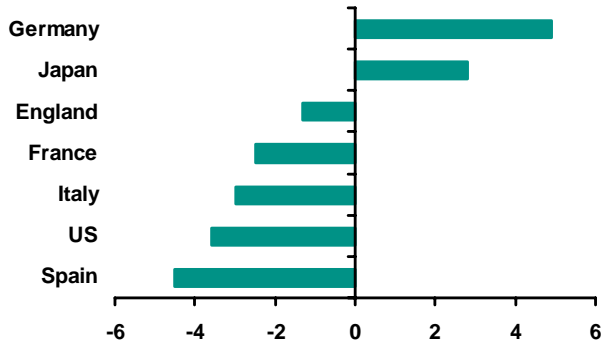
Source: Thomson Financial

The consequences of the economic crisis are clearly visible in the graph. Seven of the eight large participating countries contended with unprecedented economic contraction in 2009. Only Brazil escaped largely unscathed. This is, therefore, the only country to be eliminated from the race on the basis of criterion b).

The final question is which of these seven remaining countries scores the highest on criterion c)? In the previous section, we pointed to the importance of this criterion against the background of the economic crisis and, looking behind the scenes of the credit crisis, the balance of payments imbalances. As we have explained, our candidate must have a surplus on the current account of the balance of payments. So this is the end of the road for the US, France, England, Italy and Spain. Only Japan and Germany remain.

External imbalances

Current account balance of payments as % of GDP, 2009



Source: Thomson Financial

Both countries had large current account surpluses on their balances of payments in 2009 (Germany almost 5% and Japan nearly 3% of GDP). As noted, one of the laws of *soccernomics* is that a World Cup title leads to improved consumer and business confidence in the winning country. This triggers an increase in consumption and investments, thereby boosting imports and reducing global imbalances. So which country, Germany or Japan, offers the best prospects in this area? Japan clearly has a larger economy than Germany. But this is amply compensated by the high German import ratio. If a Japanese and a German consumer each spend an extra euro, the German spends a much larger part on imported goods.

Country	Size of GDP (EUR bn, 2009)	Import share	Impulse (import share x GDP)
Germany	2405	0.36	866
Japan	3639	0.10	364

Source: Thomson Financial

Conclusion

Our conclusion, purely on objective grounds, is that Germany must win. A German victory would make a relatively large dent in the country's external surplus. And that would have the greatest positive impact on the stability of the global economy - which is precisely what we need in the wake of the credit crisis.

Chapter 2 Who will be the next World Cup champion?

Our answer to this question will be brief: predicting the winner is not the main objective of our *soccernomics* exercise. However, we are by nature inquisitive and certain statistics reveal interesting relationships that provide some pointers as to who might win the 2010 World Cup. Statistics never tell the whole story but studied lovingly, they can reveal a lot.

Looking at the history of the World Cup, which was first held in 1930, we see that there have been eighteen tournaments in all. Five countries have won twice or more, namely Brazil (five times), Italy (four times), (West-)Germany (three times), Argentina and Uruguay (both twice). Uruguay will not be considered further as it has been sixty years since they last won. Of the fifteen post-war tournaments, twelve were won by Brazil, Germany, Italy and Argentina. So these are the countries with the best track records and they are all in contention this time as well.

Which raises the question of why these countries are such formidable footballing nations. They have four features in common: each has at least forty million inhabitants, soccer is the national sport, none are not extremely poor and their national league ranks high in the top 30 national leagues of the *International Federation of Football History and Statistics*. This is the cocktail that makes these countries potential winners.

Are there any other countries that meet these criteria? There is at least one: Spain ticks all the boxes. And though it has never won the world cup, we all remember what happened in 2008. Was this a harbinger of things to come? We can rule out England, because it has no chance of winning the world cup. Kuper and Szymanski convincingly demonstrate that the English team relies far too much on a single social group, namely the working class. This blocks the creativity that is necessary to become world champions.⁸ France can also be eliminated as it does not satisfy all the criteria: *petanque* is their national sport.

So the winner will come from this group of five: Spain, Germany, Argentina, Brazil, and Italy. What do the football statistics say about these five countries? Let's take a look at the FIFA rankings as well as the club team and national league rankings compiled by the *International Federation of Football History and Statistics*. The table shows the mutual relationships between each of these countries.

The conclusion is clear: Argentina will certainly not win the World Cup; Spain will triumph.

Country	FIFA index	Best league	Best club team
Spain	1	1	1
Brazil	2	3	3
Germany	4	2	2
Italy	3	4	4
Argentina	5	5	5

Source: website FIFA, Wikipedia

We would like to congratulate Spain for taking first place. But, you might think, wouldn't it have been better if the winner from the previous chapter, Germany, had also prevailed here? In *soccernomics* terms, that is certainly true. Given Spain's external deficit, a Spanish victory will not help to reduce the imbalances on the international balance of payments. Against this, a Spanish World Cup victory could provide a much-needed morale booster for the Spaniards. The working population there has suffered more than anywhere in the EU. Unemployment is currently at 20% and the property market has suffered an unprecedented blow. The Jules Rimet cup might well provide some consolation!

PS: Never underestimate the home advantage. Several World Cups have been won by the host nation (Uruguay 1930, Italy 1934, England 1966, Germany 1974, Argentina 1978, France 1998). Of the eighteen World Cups held since 1930, six were won by the host nation. So South Africa can certainly be seen as a dangerous outsider. And there is another type of home advantage. Since the inauguration of the World Cup, the winning team has always played on its own continent. The only country to break this rule is Brazil. So Ivory Coast, Nigeria, Ghana, Algeria and Cameroon all have a fighting chance. As does Brazil which, incidentally, has another reason to be optimistic: since 1962 South American and European teams have taken turns winning, and the last winner was Italy....

⁸ S. Kuper and S. Szymanski, *Why England Lose and Other Curious Football Phenomena Explained*, 2009

Appendix

Country	Per capita GNI in 2008 (USD 1000)	Happiness (rising from 0 to 10)	GDP in 2008 (USD trillion)	GDP growth in 2009 (%)
Ghana	1	5.2	0.0	4.7
Ivory Coast	2	4.5	0.0	3.0
Nigeria	2	5.7	0.2	5.4
Cameroon	2	3.9	0.0	-1.5
Honduras	4	7.0	0.0	-4.4
Paraguay	5	6.9	0.0	-3.8
Algeria	8	5.4	0.2	2.6
South Africa	10	6.0	0.3	-1.8
Brazil	10	7.5	1.6	-0.2
Serbia	11	5.6	0.1	-3.5
Uruguay	13	6.8	0.0	2.2
Chile	13	6.6	0.2	-1.0
Argentina	14	7.3	0.3	0.7
Mexico	14	7.9	1.1	-6.5
Slovakia	21	5.8	0.1	-4.7
Portugal	22	5.7	0.2	-2.7
New Zealand	25	7.5	0.1	-1.6
Slovenia	27	6.9	0.1	-7.8
South Korea	28	6.1	0.9	0.1
Greece	29	6.3	0.4	-2.0
Italy	30	6.7	2.3	-5.0
Spain	31	7.3	1.6	-3.6
Australia	34	7.7	1.0	1.3
France	34	6.6	2.9	-2.2
Japan	35	6.2	4.9	-5.0
Germany	36	7.1	3.7	-4.9
England	36	7.2	2.7	-4.7
Denmark	37	8.3	0.3	-5.1
Netherlands	42	7.6	0.9	-4.0
Switzerland	47	8.0	0.5	-1.5
US	47	7.4	14.2	-2.4
North Korea	?	?	?	1.9

Source: Veenhoven, World Bank and Thomson Financial

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