

Are you watching England?

An economic analysis of TV audiences for England football matches

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Football Economics

Cathy Ke and Ian Mitchell

Executive Summary

This report analyses the drivers of UK television audiences for England football matches. It uses an econometric model built by Football Economics to quantify these drivers and estimate household viewing figures for future games. We find:

Euro 2016 in France could set new records for England viewers

- Top England games in World Cups and Euro Championships have attracted over three-quarters of viewers in the past (over 20m households)
- The timing of kick-offs, and potential opponents from the British Isles, could mean that figure is exceeded if England get to, or beyond, the quarter-finals
- England's first game against Russia, with its prime-time kick off, could attract over half of UK viewers, around 15m

England's major tournament audiences remain strong

- England's major tournament TV audiences have remained high over the past 16 years, consistently attracting over 10m households (36% of the current total of 27.9m TV households).
- Only against Costa Rica in 2014 did viewers fall below 10m (to 6m).
- Major tournament games typically attract 7.9m more viewers than qualifiers (see chart).

Qualifying games are barely more attractive than friendlies

- Around 6m households (just over a fifth) will tune into watch a typical England qualifying game which is only 0.8m above those that tune in to an average friendly.

UEFA's new Nations' League is likely to draw much larger audiences

- Our analysis suggests the UEFA's 2018 Nations' League is likely to draw significantly bigger audiences than friendlies or qualifiers

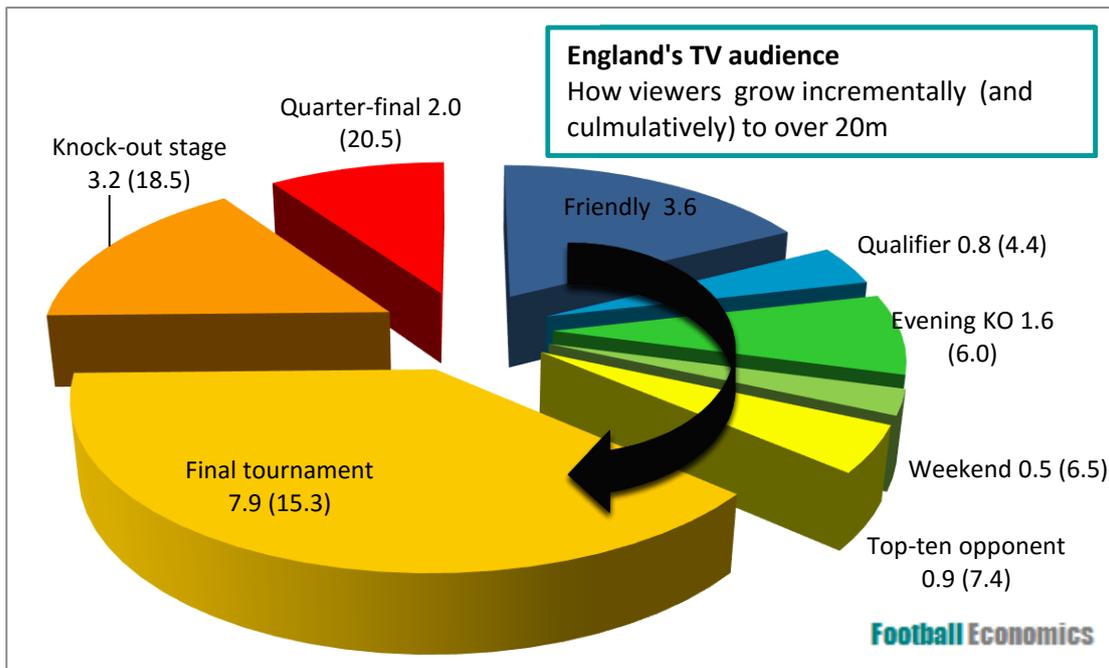
Qualifying campaigns for major tournaments could be significantly improved

- Our modelling shows kick-off time, day, opponent ranking, and channel all have a material bearing on the number of viewers
- Better-designed qualifying tournaments could realistically attract 2m or 33% more viewers than current campaigns

Summary of Findings

By understanding what drives TV audiences, we can develop a better understanding of football’s appeal and design competitions and schedules that work for fans.

Football Economics has built an econometric model to quantify the importance of the factors determining viewing figures. The chart below uses our modelling results to show how England’s TV audience can grow from just 3.6m friendly viewers (in blue) to 20.5m for a prime quarter-final game (red).



The modelling and analysis also highlights a number of other findings:

Qualifying games are only marginally more attractive than friendlies

Just 0.8m extra viewers tune in for a qualifier than a similar friendly. This suggests that the design of the qualification campaigns hold little additional appeal to viewers.

Stage of the competition is much more important than opposition rank

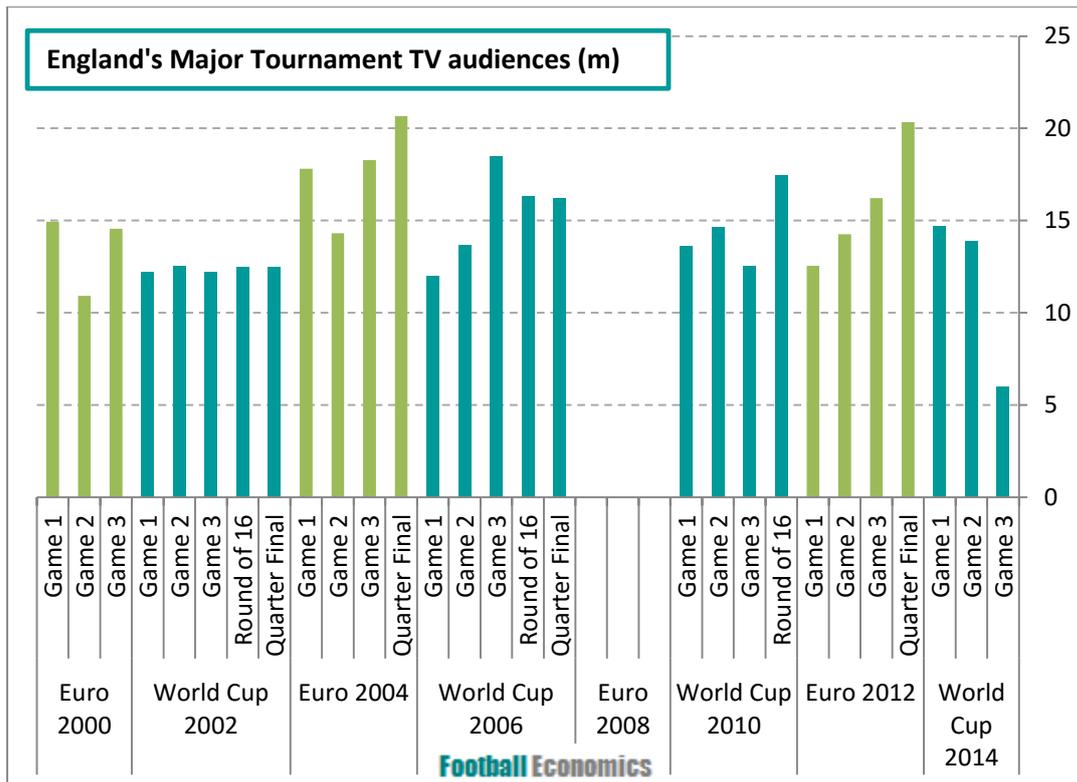
Some 7.9m additional viewers tune in to major tournament group games (as compared to qualifiers). Quarter-finals attract a further 5.2m (3.2 for knock-out plus another 2m for quarter finals).

After adjusting for stage of competition, a team ranked 100 would only attract 1m fewer viewers than playing the top-ranked international team.

The timing of kick off makes a big difference to viewing figures

Evening games attract over 1.6m more viewers than afternoon ones, while weekend games attract a further 0.5m. The morning games in the 2002 World Cup attracted 4m fewer viewers than we’d expect for games in the evening.

The below chart shows TV audiences for each of England’s final tournament games



UEFA’s 2018 Nations’ League¹ to draw significantly larger audiences

The format for UEFA’s new Nations’ League will incorporate key audience drivers – high ranking opponents, uncertainty of outcome, and meaning in terms of the tournament progress. This should ensure viewers comfortably exceed the typical 6m for qualifiers and could even attract 10m if games can draw in half of those that usually only tune-in for final tournament games.

Redesigned Euro/ World Cup qualifiers could add 2m additional viewers

Our initial analysis of the potential for a qualifying campaign with more competitive and meaningful games suggests that 2m additional viewers is a realistic target. This is 33% more than the current 6m viewers.

Euro 2016 in France has the ingredients to set new record audiences

Most games will kick-off at peak time, and audiences could rise above 20m for a quarter-final against strong opposition. There aren’t enough games against British Isle nations to measure a ‘local rivalry’ effect but is likely to boost viewing figures and could lead to new records if England face these opponents in the knock-out phase.

These findings will be of interest to games authorities, broadcasters and advertisers, and there are opportunities for further research to provide further insights (page 13).

¹ <http://www.uefa.com/community/news/newsid=2079553.html>

Introduction and approach

This report examines how many households tune-in to watch the England football team on television, uses a model to understand what drives those numbers and to predict viewer numbers. It highlights conclusions for both broadcasters and for administrators keen to enhance viewer experience and numbers.

The analysis compiles TV audiences for England's games since 2000 using publicly available data from the Broadcasting Audience Research Board (BARB). Football Economics has modelled this data to identify the importance of a range of drivers. These drivers included the stage of the competition, the kick-off time and day and the ranking of the opponent.

The results will be of interest to the FA, UEFA and FIFA in designing international football competitions as well as to broadcasters and advertisers.

The first part of the report below describes the data and the approach to developing the model. The second part analyses the data and identifies findings from the modelling.

Data

The figures on number of viewers are drawn from the BARB² database and measure UK households. BARB follow a large panel of viewers, record their viewing habits and then aggregate that data to provide figures for the UK's 26m TV households. It is widely recognised as a reliable source of UK TV viewing data.

There were 145 televised England games from June 2000 to September 2015. We have used publicly available data on viewing figures providing data for 110 games. The data covers all major tournament games during this time but data on 35 games are missing from our sample. In particular, very little data was available on the World Cup qualifying games in 2001-02 and 2004-05 (8 and 10 games missing respectively). In addition, 9 friendlies (mostly from 2007-08) were missing and the remaining 7 were from qualifying games spread over the period. This will undoubtedly reduce the accuracy of our model. The further data could be purchased from BARB, and it would be relatively simple to revise the model and improve its accuracy.

The data does not include public viewing, for example in pubs. Still, the trends and drivers identified in our report are likely to be a good guide to public viewing and further work could incorporate these figures into our model.

Finally, the introduction of High Definition (HD) channels occurred during this period. In particular, from spring 2010 ITV HD was extended to a wide range of platforms (inc Sky and Virgin). We have incorporated available HD viewing figures into the estimates (available from May 2010 from the BARB data). In many cases, esp for BBC, it appears that HD figures are not reported separately. HD viewing figures are typically a fifth of overall figures. If HD data were missing (e.g. in 2009) then this would create a downward bias in both the models predictions, and in relation to the

² Data available to the public on the BARB website can be published without a BARB publishing licence, although reproduction must be credited accordingly

importance of the factors ('the coefficients' – see below). Again, further work could incorporate any further HD data.

Modelling approach

The model we have built seeks to establish and quantify the importance of the main factors that determine how many television viewers (households) watch England football games. This can then be used to model or predict how many might do so under a given set of circumstances. For example, it could be used to predict how many people would watch a quarter-final on the BBC on Sunday night against Germany? What would the figure be if it was a European qualifier?

Given this aim and the limited number of available data points, we are not seeking to build a model that would meet the standards of an academic journal. Instead, we are aiming for a simple, practical model, which can be used to guide policy makers and advertisers. We have therefore used a straightforward regression model (Ordinary Least Squares) where total viewing figures (inc HD) is the independent variable (Y) we seek to model. The explanatory variables used include the competition stage, kick-off time, day of the week, ranking of the opponent, and channel. The basic model identifies the values of the 'coefficients' (B1 to B7):

Y (viewer numbers) =

$B1 + B2(\text{stage}) + B3(\text{time}) + B4(\text{day}) + B5(\text{ranking}) + B6(\text{critical}) + B7(\text{channel}) + \text{error}$

Putting each variable (in brackets) into the model yields an estimate of the number of viewers watching that game. For example, for the England game against the Netherlands: stage = friendly; time = evening; day = weekday; long-term ranking = 7; channel = ITV.

During the analyses we considered and tested a number of other potential explanatory variables. For example, we considered a variable which gave even more weight to higher ranked teams. We also considered more detailed variables on day of the week kick off time. However, statistically these variables were not significant, and given the limited number of observations and desire for simplicity, they were omitted. Analysing initial model runs also identified the variability in the final group games in major tournaments, and a variable was added on whether that game was key to England's progress (see findings).

Although the intention is to produce a simple model, there are a number of opportunities to improve the model's robustness. As discussed above, data on the games currently omitted would improve the model. In addition, the explanatory variables could be expanded and refined – for example, using contemporaneous country rankings rather than long-term average ones, or adding in a variable to account for particular national rivalries.

The model achieves a relatively good fit to the data. The "R squared" – a statistical measure of how well observed outcomes are replicated by the model – gives a value of 0.93 (a perfect fit would give a value of 1). The coefficients on the variables are statistically significant at the 5% level except for channel and weekday. Still, we should re-iterate that the data limitations mean that this model is not robust to academic standards.

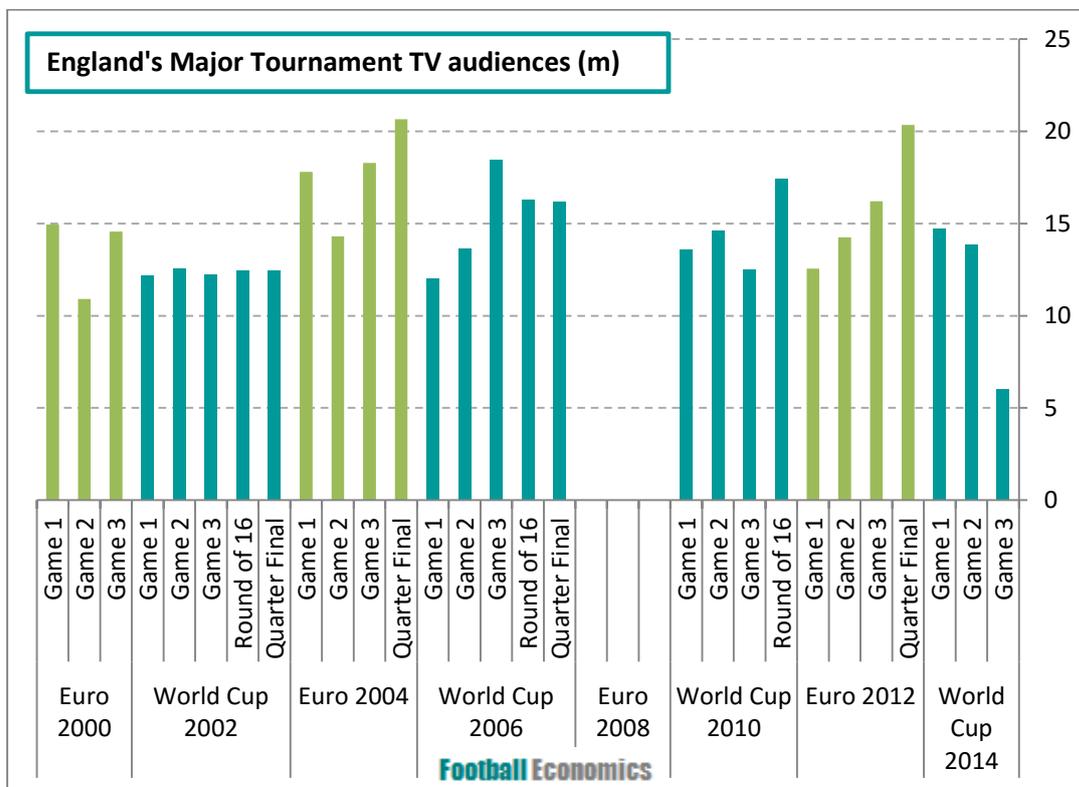
Data and Analysis

This section looks at trends in viewing figures and summarises the sample data.

Summary data and trends

The average number of television viewers in our sample is 6.99m. The most-watched game of the period was (just) England’s game against Portugal in the 2004 European Championship quarter finals, when 20.66m tuned in (20.34m watched the game Italy at the same stage of the 2012 competition)³. This represents 82% of the UK’s 25.2m UK TV households at that time. Conversely, in World Cup qualifying against Andorra on Sky Sports 2 just 0.1m tuned in.

Chart 1 – Overview of England viewing figures in major tournaments



The above chart shows that audiences for final tournaments have consistently attracted over 10m households (36% of today’s 27.9m total⁴). Only against Costa Rica in 2014 did viewers fall below that figure to 6m. England’s hopes of progress were over before the third group game which attracted just 6m viewers. This was the lowest figure in any major tournament in our sample period.

³ According to the British Film Institute figures on the 1980s and 1990s only England’s World Cup game against Argentina in 1998 made the top 20 most viewed events or exceeded 20m (23.78). They estimate 32.3m watched England’s 1966 win.

⁴ <http://www.barb.co.uk/resources/tv-ownership/>

The chart also identifies a general upward trend in viewing figures as England progress through major tournaments. The 2002 and 2014 campaigns are notable exceptions. For the former, morning kick-off times are likely to be a factor for the tournament held in Japan and South Korea.

The below tables give an overview of the data in our sample.

<i>Table 1 – England viewing figures by competition stage</i>		
Stage	Data points	Average Viewers (m)
Friendly	34	5.50
Qualifier – Euros	31	2.78
Qualifier – World Cup	17	5.25
Finals – World Cup	17	13.60
Finals – Euros	11	15.89
Overall	110	6.99

Source: BARB data, Football Economics analysis

Table 1 shows that we have a reasonable spread of games between friendlies, qualifiers and finals. It also illustrates that games in the final attract almost three times the audience of friendlies. Interestingly, friendlies attracted almost twice the number of viewers in Euro qualifiers in our sample. This is partly explained by satellite broadcasters showing some of the qualifiers.

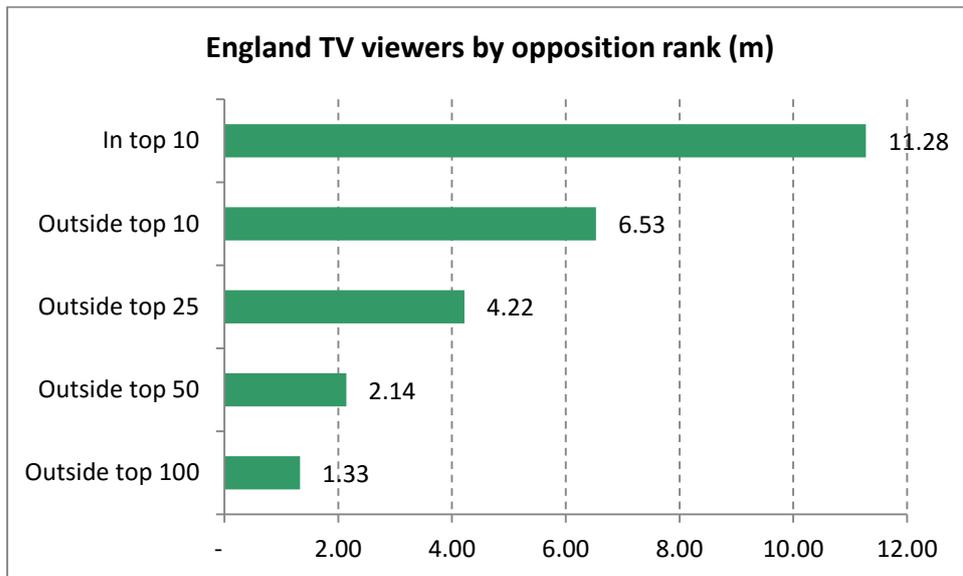
<i>Table 2 - England viewing figures by channel</i>		
Channel	Data points	Average viewers (m)
BBC1	16	14.87
ITV1	70	7.24
Sky Sports 1	17	1.19
Other*	7	0.58
Total	110	6.99

*Other includes Setanta Sports and Sky Sports 2 & 3
Source: BARB data, Football Economics analysis

Table 2 shows the spread of data points and average viewers by channel. This shows that almost all the available data since 2000 relates to ITV's coverage. Between 2001/02 and 2007/08 the BBC and Sky shared rights for England's friendlies and qualifiers but only limited data is available for those games. The BBC data therefore relates largely to final tournament games over the period. Expanding this data set is an obvious extension to the work.

The raw data does point to some variables to include in the model. As well as competition stage and channel, there's also a clear trend in international ranking as chart 2 below shows.

Chart 2 – TV viewers by opposition FIFA long-term average rank



More viewers tune-in to see England play teams that have a high long-term average ranking. Still, this is affected by the fact that England tend to play higher ranked teams in the major tournaments.

Overall, these table and charts are interesting but illustrate the difficulty of direct comparisons – the channel figures are heavily affected by the fact that BBC data is from major tournaments whilst Sky Sports was unable to show any major tournament games. Similarly, England play few qualifiers against higher ranked teams. Within the data it would be possible to compare games that are otherwise similar (e.g. playing a mid-ranked team in a friendly, and in a finals tournament; a similar qualifier on ITV vs Sky). This demonstrates the value of the model, which systematically makes these comparisons to separate the effects of the factors.

Modelling, forecasting and implications

This section reports the model's findings and implications.

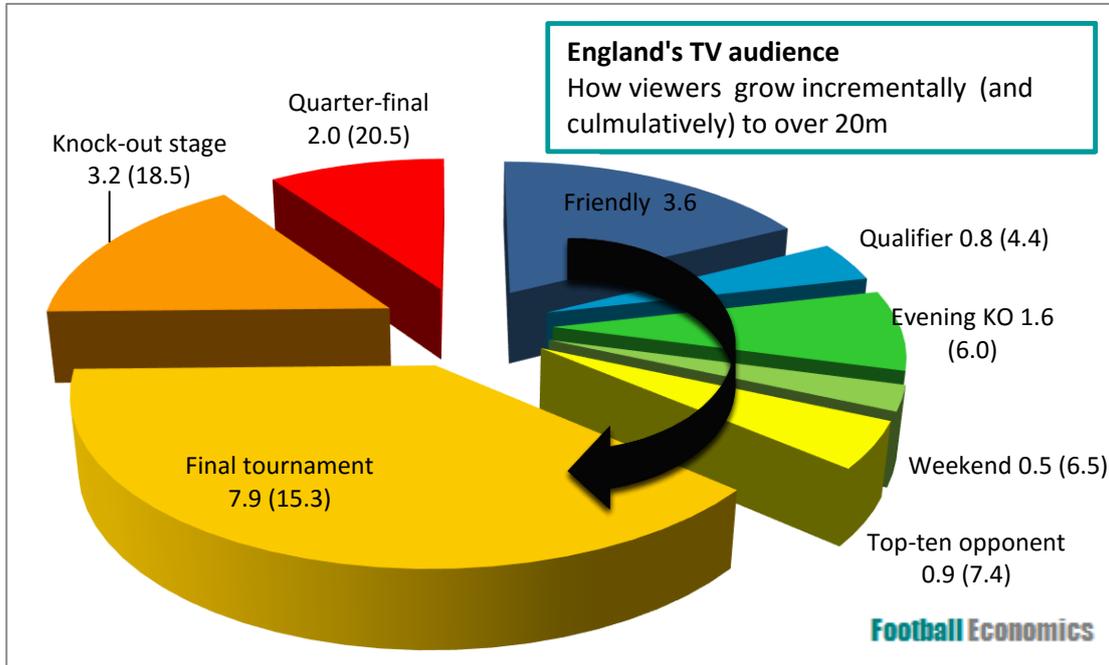
The modelling confirms that several factors have a meaningful bearing on viewer numbers. The model shows the impact of competition stage and identifies distinct increases according to whether the game is a friendly, qualifier, group game in a major tournament, last 16 game, or quarter final (if only we had semi and final data!). The model also quantifies how viewers rise in the evening, on a weekend and against teams of higher rank⁵.

After reviewing the modelled data, it was clear that viewer numbers in the third group game in a major tournament varied significantly depending on whether England could progress. We therefore added a further variable for the criticality of the major tournament group games (the 'last 16' and 'quarter-final' variables already capture the criticality of those games).

Key modelling findings

A friendly against, say, Estonia (ranked 91st in FIFA's long-term rankings) would attract some 3.6m viewers. Charts 3 and 4 shows how this figure would grow incrementally with the competition stage, kick-off time and the strength of the opposition. In combination, this could give the 20m figure equivalent to England's quarter-final against Italy in Euro 2012. This represents almost three quarters of the current 27.9m total UK household viewers.

Chart 3 – Incremental increases in TV Viewers for England international games⁶



⁵ These effects are all 'statistically significant' within our sample (that is, there's less than a 10% chance that each of these effects could be observed in the sample by pure chance).

⁶ Base friendly refers to 100th ranked team. Top ten opponent uses 5th ranked team

The model also highlights other findings:

Stage of the competition is more important than opposition rank

- Almost 8m additional viewers tune in to major tournament group games (compared to qualifiers)
- Quarter finals attract over 13m additional viewers (compared to qualifiers)
- After adjusting for stage of competition, a team ranked 100 would only attract 1m fewer viewers than playing the number 1 team

Qualifying games are only marginally more attractive than friendlies

- Friendlies attract 0.8m fewer viewers than similar qualifiers

If a tournament is effectively over for England, viewing numbers stay well above the figures for qualifiers or friendlies. Still, 2.5m more viewers will watch a critical third group game, than one where England's exit is near-certain (see below).

Games on satellite attract far fewer viewers

Our sample of satellite games is relatively small but it's clear from the data the viewing figures are up to 5m lower than the equivalents for terrestrial channels.

Kick-off time makes a big difference to viewing figures

- Evening games attract over 1.6m more viewers than afternoon ones
- The morning games in the 2002 World Cup attracted 4m fewer viewers than we'd expect for games in the evening
- Weekday games attract 0.5m fewer viewers

'Rivalries' are likely to boost viewing figures

Although we haven't included a distinct rivalry variable in our model, there is evidence that rivalries increase viewing figures. For example, in June 2013, England played Brazil in a friendly on a Sunday evening, and two months later played Scotland in a mid-week friendly. All else equal we'd expect the weekend scheduling and Brazil's higher ranking to attract higher viewing figures but in fact, the Scotland game attracted 4.8m to Brazil's 4.2m.

Forecasting capability and implications

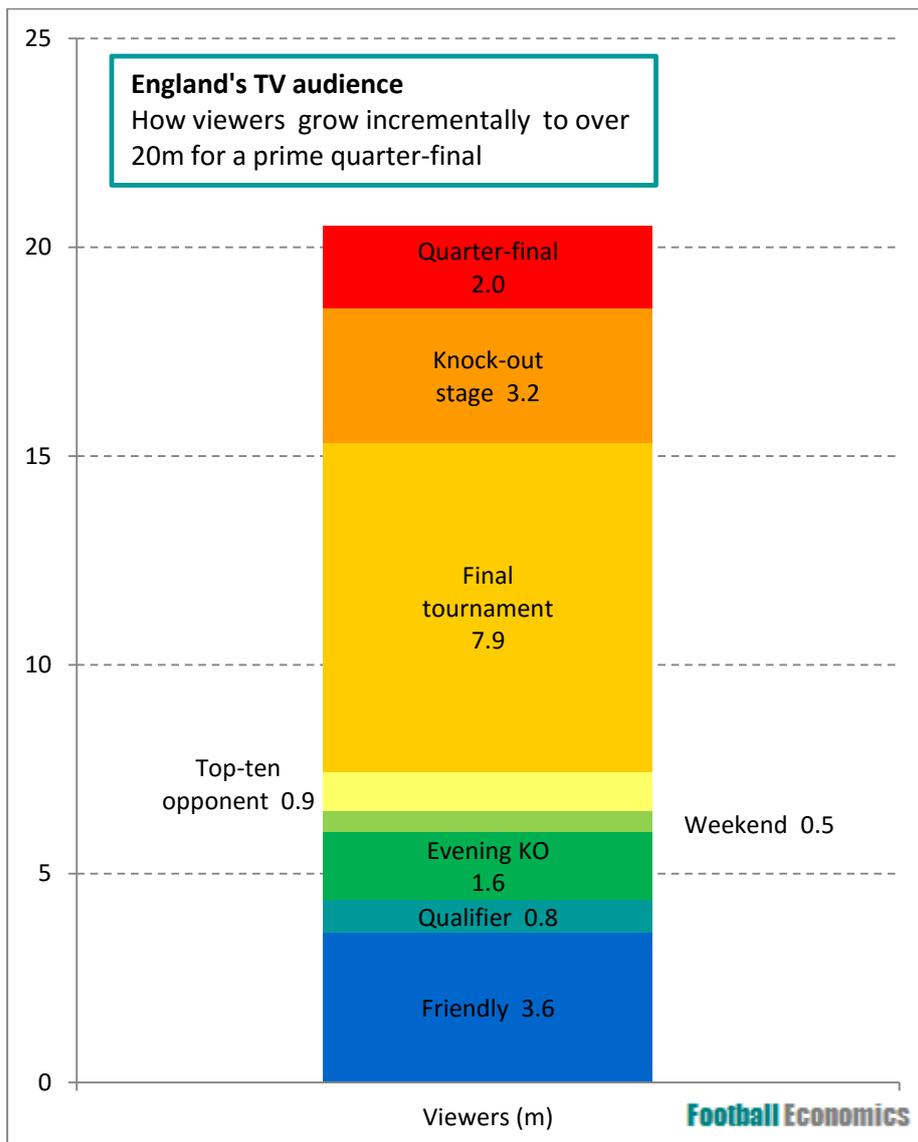
The model provides forecasts of viewing figures of which, when applied to backwards over the sample, 89% are within 2m of the actual viewer numbers. The model can provide a useful tool for TV channels and advertising looking to provide a guide to their reach for forthcoming televised games.

Predicting viewers in alternative competition formats

A further application of the model is to look at how many people might watch games in alternative competition design. For example, the model shows and quantifies the significant viewer interest in games when the outcome matters. In the European or World Cup finals where the competition starts with a mini-league of four teams, the third game can be crucial, but sometimes qualification has been largely decided. Our model suggests that this difference is some 2.5 million viewers, or 17%.

As above, the model can indicate how many viewers might be attracted by playing teams with higher rankings and with games at different kick off times.

Chart 4 - Incremental increases in TV Viewers for England international games⁷



⁷ Base friendly refers to 100th ranked team. Top ten opponent uses 5th ranked team

Assessing UEFA's 2018 Nations' League

In September 2018, UEFA will launch the Nations' League⁸. This aims to rejuvenate national team football by replacing the vast majority of friendlies.

The format takes a radical approach. For the twelve highest ranked European national teams⁹ the new League will mean four groups of three teams who will play in a mini-league format (ie home and away games). The four teams finishing top will progress to a final four competition (a knock-out format with semi-finals and a final), while the team finishing bottom will slip into a second tier of three-team groups for the 2020 tournament. In addition, each group winner will also have the chance to qualify for Euro 2020 if they fail to do so via the qualifying groups.

UEFA's new Nations' League format is likely to prove significantly more attractive than the international friendly matches it replaces. The format ensures that games will incorporate key drivers of audiences – high ranking opponents, uncertainty of outcome and meaning in terms of tournament progress.

This should ensure that viewing figures comfortably exceed the typical 6m for qualifiers and could even attract 10m if games can draw in half of the 7.9m that usually only tune-in for final tournament games.

Re-thinking Europe's qualification system for Major Tournaments

European and World Cup qualifying attract similar television audiences to international friendlies, and almost never reach the viewers attracted by finals tournaments.

Our modelling suggests that an alternative format for the qualifying, with closer, more meaningful games, could substantially increase viewing figures. For example, the South American qualifying competition uses a league format where Brazil, Argentina, Uruguay regularly play each other in competitive and often intense games. Such a design could enhance fan interest, viewing figures and sponsor opportunities.

The modelling shows that 14m viewers – almost 8m more than for a similar qualifier – typically tune-in to each final tournament group game. A further 2.5m will watch a key final group game. This is a substantial additional audience some of whom could be attracted to watch qualifying games. If a quarter of the additional 8m watched qualifying games, that would boost the typical qualifier audience of 6m by some 33% to 8m.

The figures on additional viewers here are speculative, but they demonstrate a potentially significant increase in revenue and fan interest for advertisers and the Football Association. Further research, for example on how viewing figures in other regions' qualifying tournaments, could give a much clearer guide to how alternative competition design could impact viewer numbers and wider benefits.

⁸ See <http://www.uefa.com/community/news/newsid=2079553.html>

⁹ in Feb 2015 England were ranked 9th by FIFA, the 5th highest European team

Further research and conclusions

This report has highlighted a number of further areas for research which could be of interest. We see the following areas as potential priority issues for broadcasters and Football authorities:

- Understanding demand for Premier League, FA Cup and other competitions drawing on TV audience figures
- Modelling alternative competition designs and analysing how they could affect viewing figures and habits – inc UEFA Nations' League and alternative qualification formats
- Estimating the number of viewers watching in public and other venues (inc pubs, offices etc.)

It would also be possible to refine and extend the findings in this report. In particular, we can enhance our understanding of viewers through:

- Assessing the effect of 'rivalries' on viewing figures – for example, in games against the home nations, or against Germany and Argentina
- Overseas comparisons on international viewing figures
- Improving the coverage and performance of the model by:
 - Expanding the source data to include all broadcast England games
 - Developing and refining the data used to measure drivers – for example using opponent's ranking at the time of the game
 - Identifying more subtle trends and drivers – for example, how ranking interacts with competition stage

Concluding remarks

By understanding what drives viewing numbers, we can develop a better understanding of football's appeal and enable administrators and broadcasters to design competitions and schedulers in line with fans' preferences.