



Medium Risk Research Ethics Approval

Project title

Assessing the Accuracy of Betting Odds in Football

Record of Approval

Principal Investigator

I request an ethics peer review and confirm that I have answered all relevant questions in this checklist honestly.	X
I confirm that I will carry out the project in the ways described in this checklist. I will immediately suspend research and request new ethical approval if the project subsequently changes the information I have given in this checklist.	X
I confirm that I, and all members of my research team (if any), have read and agreed to abide by the Code of Research Ethics issued by the relevant national learned society.	X
I confirm that I, and all members of my research team (if any), have read and agreed to abide by the University's Research Ethics, Governance and Integrity Framework.	X
I understand that I cannot begin my research until this ethics application has been approved.	X

Name: Joseph Pym (331MP)

Date: 23/11/2020

Student's Supervisor (if applicable)

I have read this checklist and confirm that it covers all the ethical issues raised by this project fully and frankly. I also confirm that these issues have been discussed with the student and will continue to be reviewed in the course of supervision.

Name: Maha Moustafa

Date: 14/12/2020

Reviewer (if applicable)

Date of approval by anonymous reviewer: -

Medium Risk Research Ethics Approval Checklist

Project Information

Project Ref	P114620
Full name	Joseph Pym
Faculty	Faculty of Engineering, Environment and Computing
Department	School of Computing, Electronics and Maths
Supervisor	Maha Moustafa
Module Code	331MP
EFAAF Number	
Project title	Assessing the Accuracy of Betting Odds in Football
Date(s)	25 Sep 2020 - 30 Apr 2021
Created	17/11/2020 17:56

Project Summary

The project will involve, using data from football-data.co.uk, assessing the accuracy of betting odds in professional European football, and whether these are accurate across the full odds range (whether they are calibrated correctly), specifically asking whether the odds are accurate on average; whether there is a difference in accuracy between the top and lower leagues; whether there is a difference between different countries; and whether the accuracy has changed over time.

Names of Co-Investigators and their organisational affiliation(place of study / employer)	
Is this project externally funded?	No
Are you required to use a Professional Code of Ethical Practice appropriate to your discipline?	No
Have you read the Code?	No

Project Details

What are the aims and objectives of the project?	The research will aim to assess the accuracy of betting odds, and to identify any biases in them using statistical modelling in R. It will specifically assess the accuracy of odds offered for professional level leagues across different divisions and seasons, and whether the accuracy of these odds differ significantly between either of these, or between countries.	
Explain your research design	The data used will be quantitative from a secondary source, namely from CSV (comma-separated value) files obtained from football-data.co.uk, with information available for each fixture including the full-time and half-time results, match statistics and odds on the result, total goals and Asian handicap.	
Outline the principal methods you will use	<p>Data will be collected through football-data.co.uk, with R used for the analyses. Ordinal and binomial models will be made to predict the outcome based on the bookmaker's "consensus" odds (the average odds offered by a range of bookmakers for an outcome: this rules out possibilities such as a bookmaker being too lenient, or too stringent, with their odds, or any offers that bookmakers have on), as well calculations such as % right. We will also review graphs, such as consensus probabilities (based on the odds offered) v. actual probabilities of a match result, and we will use predictors such as season, league or country to review if any of these have a significant impact on the bookmaker's accuracies.</p> <p>Further, the research can look into possible variations in accuracy such as competitive balance, with the possibility that more competitive divisions have less accurate odds offered, and we can investigate if there is evidence of "favourite-longshot bias", where (on average) bettors tend to overvalue long-shots and undervalue favourites.</p> <p>The markets that we can review include, but aren't limited to, the match result, under/over goals, Asian handicaps, etc.</p>	
Are you proposing to use a validated scale or published research method / tool?	No	
Does your research seek to understand, identify, analyse and/or report on information on terrorism or from terrorist organisations, require access to terrorist groups or those convicted of terrorist offences or relate to terrorism policies in other international jurisdictions?	No	
Does your research seek to understand, identify, analyse and/or report on information for other activities considered illegal in the UK and/or in the country you are researching in?	No	

Are you dealing with Secondary Data? (e.g. sourcing info from websites, historical documents)	Yes
Is this data publicly available?	Yes
Is the data about human participants? e.g surveys, measurements made on humans or results from samples taken from humans	No
Are you dealing with Primary Data involving people? (e.g. interviews, questionnaires, observations)	No
Are you dealing with personal data?	No
Are you dealing with sensitive data (special category data)?	No
Is the project solely desk based? (e.g. involving no laboratory, workshop or offcampus work or other activities which pose significant risks to researchers or participants)	No
Will the data collection, recruitment materials or any other project documents be in any language other than English?	No
Are there any other ethical issues or risks of harm raised by the study that have not been covered by previous questions?	No

External Ethics Review

Question		Yes	No
1	Will this study be submitted for ethical review to an external organisation ? (e.g. Another University, Social Care, National Health Service, Ministry of Defence, Police Service and Probation Office)		X
	If YES, name of external organisation		
2	Will this study be reviewed using the IRAS system?		
3	Has this study previously been reviewed by an external organisation?		

Confidentiality, security and retention of research data

Question		Yes	No
1	What data are you collecting / using / recording?	<p>The data that will be collected is statistics such as the match statistics (home goals, away goals, corners, cards), division, teams involved, result, average odds for a home win/away win/draw, and other markets, for a large number of football games in professional European leagues from 2000 onwards.</p> <p>The data will be collected from football-data.co.uk and is publically available.</p>	
2	Are there any reasons why you cannot guarantee the full security and confidentiality of any personal or confidential data collected for the study?		X
	Please provide an explanation	The data in my research is not personal and it is publically available.	
3	Is there a significant possibility that any of your participants, and associated persons, could be directly or indirectly identified in the outputs or findings from this study?		X
	Please provide an explanation	No: the data is not personal, it is about professional football matches. This data is readily available and in the public domain.	
4	Is there a significant possibility that a specific organisation or agency or participants could have confidential information identified, as a result of the way you write up the results of the study?		X
	Please provide an explanation	The data in my research is not personal and it is publically available: there is no confidential information.	
5	Will any members of the research team retain any personal or confidential data at the end of the project, other than in fully anonymised form?		X
	Please provide an explanation	Once the data has been analysed, it will be deleted from my personal devices: it is, however readily available and in the public domain.	
6	Will you or any member of the team intend to make use of any confidential information, knowledge, trade secrets obtained for any other purpose than the research project ?		X
	Please give an explanation	The data in my research is not personal and it is publically available: there is no confidential information.	
7	Have you taken necessary precautions for secure data management, in accordance with data protection and CU Policy		X
8	Specify location (physical and electronic) where data will be stored	The data is publically available from football-data.co.uk: it will only be downloaded for temporary analysis before being deleted from my personal device.	
9	Will you be responsible for destroying the data after study completion?	X	

	If NO, who will be responsible for this?	
	Please explain how any identifiable and anonymous data will be destroyed	As soon as the data is analysed, it can be deleted from my device, however, as the data is in the public domain, it will be accessible if required in the future. The data does not need to be anonymised as it is factual sporting data and does not have any personal information in.
	Planned disposal date	01 May 2024