

# Does Black Lives Matter Endorsement Affect Performance of Football Players?

## Abstract

June 2020, when the Premier League restarted, clubs began to respond to a massive and controversial anti-racism movement known as Black Lives Matter (BLM) progressively by publishing related posts on their Twitter accounts. This study is to address the influence by this kind of endorsement on their employees (players). I compiled 380 match reports from the 2019-2020 Premier League season and quantified each club's support for BLM through their Twitter activity. Utilizing Difference-in-Differences (DiD) methodologies, I investigate the causal link between each club's endorsement movements for the BLM initiative and their players' on court performance. The findings indicate a negative correlation between a club's endorsement movements of BLM and the performance of its players, especially significant on black players and England players.

**Keywords:** *Black Lives Matter; social media; corporate social responsibility; Difference-in-Difference*

**JEL Classification:** *J15; J53; J71.*

# 1 Introduction

## 1.1 Background and Literature Review

**Black Lives Matter and BLM in Premier League** The history of Black Lives Matter (BLM) could be traced back to 2013, a phrase in a Facebook post, not long after George Zimmerman was declared not guilty for causing the fatal shooting of Trayvon Martin, a defenseless African American teenager. (Ilchi and Frank, 2021; Sawyer and Gampa, 2018). After that, a series of shooting death of American African by police department aggravated the protest movement. Ultimately, following the incident in May 2020 where George Floyd lost his life at the hands of the police, the BLM movement advocating racial justice has effectively utilized social media to rally hundreds of millions. A peak was reached when an unprecedented 8.8 million posts were made in just one day.

For the prevalence and impactfulness of the BLM movement, the impact of BLM also spread to European countries, including Germany, Denmark, Italy, and Poland (Anderson et al., 2020). In UK, widespread civil protests are being extensively carried out. The Guardian highlighted that a crowd of around 15,000 individuals participated in a march in Manchester on the 6th June, which was one of 160 that weekend. In addition to this, rallies consisting of 6,000 in Cambridge and 10,000 in Bristol resulted in the overthrowing of a statue of Edward Colston, a 17th-century slave merchant. As of mid-June, the number of participants in protests across the nation exceeded 210,000. This includes 10,000 advocates for the cause in Brighton, 4,000 in Birmingham and 3,000 in Newcastle (Aamna Mohdin and Bannock, 2020). Simultaneously, Black Lives Matter UK further appropriated £350,000 to black-oriented entities and advocacy collectives nationwide. This elevated the overall funds distributed since 2020 to in excess of half a million pounds. In the aftermath of the widespread demonstrations in the summer of 2020, BLMUK successfully managed to muster £1.2 million in contributions from more than 36,000 individuals (Mohdin, 2023).

In June, 2020, the Premier League restarted, in honor to the death in COVID-19 and

Floyd, the Football Association (FA) allowed players to take a knee and observe a moment of silence before match begins. Besides, clubs posts relevant tweets such as photos of the silence or slogans about supporting anti-prejudice on their official twitter account with hashtag #BlackLivesMatter (Figure 1) or key words “Black Lives Matter” (Figure 2).



Figure 1: Tottenham Hotspur’s post with hashtag #BlackLivesMatter

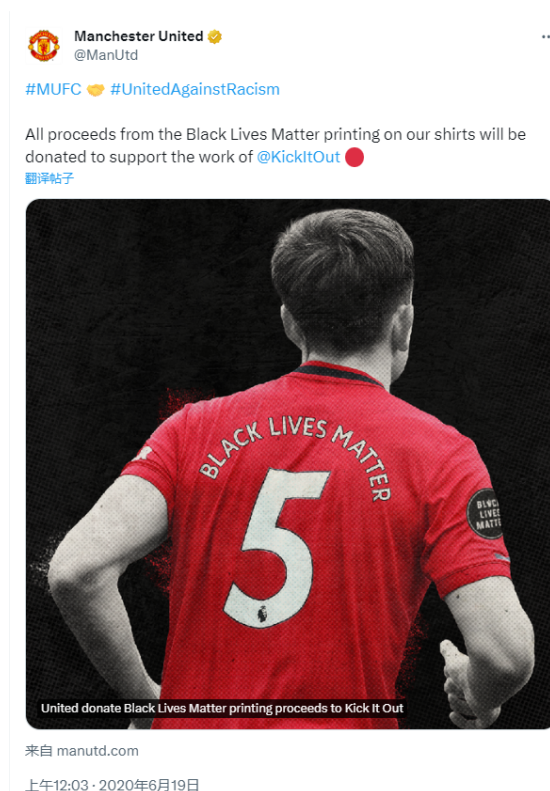


Figure 2: Manchester United’s post with no hashtag but words

Because of its unabashed political stand, BLM courted controversy. Someone views it as a practically promotion of anti-racism and pro-White prejudice. According to a report by The Guardian, a survey conducted by the polling firm Opinium, which involved over 2,000 participants, revealed some compelling data. Approximately 55% of UK adults believe that the BLM demonstrations, which occurred not only in major cities but also in locations such as the Shetland Islands and the Isle of Wight, have escalated racial tensions. Contrarily, merely 17% of those polled in October voiced their disagreement with this sentiment (Booth, 2020). Research conducted by Sawyer and Gampa in 2018 indicates a diminishing trend in

pro-White implicit racial bias. This shift coincides with the rising influence of BLM and its peak periods of advocacy. This development indicates an alteration in racial attitudes during this pivotal social movement (Sawyer and Gampa, 2018). Others argue BLM has become a “empty slogan” or tools of identity politics (Harker, 2020). The polling also showed 44% of ethnic minorities felt BLM increased racial tensions. British Social Attitudes (BSA) survey finds proportion of people in the UK who say they are racially prejudiced has risen since 2001, and different regions shows various degree of prejudice, for example, inner-London reports the lowest levels of racial prejudice (Matthew Taylor, 2014). Priti Patel, who served as Home Secretary prior to Euro 2020, had openly expressed that she did not endorse “people participating in that type of gesture politics”. Similarly, Gillian Keegan, who currently holds the position of Education Secretary, had previously mentioned her belief that taking the knee only “creates division”. In addition to this, Tory MP Lee Anderson made a statement by refusing to watch England’s Euro 2020 matches. He identified it as a political gesture that he could not agree with<sup>1</sup>. Some players also expressed their dissatisfaction with the BLM issue; the Crystal Palace forward Zaha declared that he will stop kneeling or wearing a shirt with “Black Lives Matter” on the back in 2021 (Ingle, 2021). Fans argues that to support BLM by taking a knee is “an identity politics agenda that focus on black people and skin colour”. This illustration does not make no sense, despite multiple and complex definitions of identity politics, it is always connected with a particular identity, such as race, nationality, religion, gender, sexual orientation, social background, caste, and social class (Bernstein, 2005). And in fact, the criticism on whether the identity politics could promote social justice does exist (Kurzwelly et al., 2023; Das, 2023).

It is not the first trial in which the Premier League speaks out about the issue of racial justice publicly, the Premier League has issued “No Room for Racism” since 2019. Moreover, there are also calls on the Premier League to address their positions on political or social events such as support on LGBT+ group or Ukraine issues; in turn, the League uploaded

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<sup>1</sup>Sourced from BBC news, see <https://www.bbc.com/news/explainers-53098516>

articles on their official website.

**Corporate Social Responsibility, BLM and Internal Stakeholders** As the definition of Aguinis (2011) on corporate social responsibility (CSR): “context-specific organizational actions and policies that take into account stakeholders’ expectations and the triple bottom line of economic, social, and environmental performance”. Football clubs who participated in actions with political implications could also be considered as CSR enterprises, and their audience and fans can be viewed as consumers, players as employees.

The main aim of CSR activities is to maximise the positive influences of companies and minimise their negative influences on society (Luu, 2020; Pomering and Johnson, 2009; Su and Swanson, 2019). Several research suggest that enterprises engaged in socially responsible actions often reap rewards such as elevated customer satisfaction and favorable client assessments (Brown and Dacin, 1997; Luo and Bhattacharya, 2006; Sen and Bhattacharya, 2001). But the empirical evidence on the effect of taking stands on political or social issues is ambiguous, with existing studies finding positive, negative, or even no impact of it. Liaukonytė et al. (2023) researched the net effect of boycotts / boycotts on social media on real sales of Goya beans, boycott-related social media posts, and media coverage dominated buycotts, but the sales impact was the opposite: Goya sales temporarily increased . In contrast, Wang et al. (2022) examine consumer responses to the support of BLM brands on social networks and the heterogeneous effect between brands using natural experiment and machine learning tools, revealing that the support of BLM engenders largely negative consumer responses on average.

Furthermore, existing studies have also shown that internal stakeholders (i.e. employees) are also influenced by CSR performance. Kim et al. (2010) argue that employees’ CSR associations and CSR participation were associated with employee-company identification (EC identification), and in turn leads to commitment to the company. Bauman and Skitka (2012) argue that CSR could be considered a source of employee satisfaction in theory,

discussing the mechanism by identifying four distinct paths through which CSR can affect the relationship of employees that correspond to universal psychological needs: security, self-esteem, belongingness and a meaningful existence. Furthermore, Youn et al. (2018) discuss the relationship by investigating the main effect of employee's perceived CSR on organizational commitment, mediated by job satisfaction in casino industry.

## **1.2 Research Significance**

Albeit multiple theoretical discussion on the impact, there are still gaps in empirical evidence. Firstly, existing studies mainly focus on the impact on employees' subjective indicators such as commitment, identification, and satisfaction instead of observing the objective characters such as work performance directly (Kim et al., 2010; Bauman and Skitka, 2012). Secondly, due to the limit to collect employee data regardless of objective or subjective ones, previous empirical studies rely mainly on survey data based on questionnaires (Kim et al., 2010). However, sports field has this advantage that (1) performance characteristics of employees (players) is relatively easier to obtain and well documented; (2) intensity and attitudes of consumers (fans) are more directly functioned to players' work environment. Third, previous studies mostly suggest that CSR performance is positively related with employee perception (Stephen Brammer and Rayton, 2007; Kim et al., 2010; Bauman and Skitka, 2012; Youn et al., 2018), but from the perspective of our empirical results, the evidence reveals that the BLM support of clubs could be a negative influence factor for players, this research provides new evidence that is different from previous ones. From the perspective of normative concern, this research could be a reference of the issue whether a corporate, or even more explicitly, club, should pronounce for social or political agenda and expose their employees to a controversial public opinion environment. I address that controversial public opinion environment especially the stress from domestic fans have an influence on the playing condition of players, especially for their core specifications.

This research is to narrow down firm's CSR performance issue to football industries,

more precisely, BLM support by Premier League football clubs, so that I address key research questions: (1) Does BLM support have a positive or negative impact on players’ performance? (2) Is this impact amplified or attenuated by clubs’ social media posting behaviors? (3) Is the impact varies between individuals and regions, whether black players or non-black players in areas with a more progressive political stand will be more affected? (4) Why the BLM support could affect players’ performance, how to interpret the underlying mechanism?

To answer these questions, I employ DiD methodologies on the dataset based on match reports of 2019-2020 Premier League and BLM support by clubs through social media, and further exploring the heterogeneity across the number of posts, players’ individual characteristics, and clubs’ regional characteristics. Simultaneously, for the perspective of public opinion, this article could be a response upon the controversy about sports club’s political participation, providing suggestions for sports clubs on whether they are expected to address stands on political or social issues.

## 2 Data

### 2.1 Performance Data

I collect match reports through a football statistical website FBREF (<https://fbref.com/en/>). By searching historical competition schedule, I access the report table of each match which document court players’ personal basic characters including name, nationality, position, age etc., and performance specifications categorized into 4 dimensions (see Table A1): (1) Passing, measures player’s performance of pass, including specifications measure player’s completed pass, pass attempt, pass distance, and assists, etc.; (2) Possession, including distance carried, touches and take-ons, etc.; (3) Defensive Actions, mainly focus on performance of tackles, blocks etc.; (4) Shot, mainly focus on actions threatening the goal, including shots, shot on target, penalty kicks, etc.. Since the wave of BLM was induced in May 2020, our sample includes the whole 380 matches of 2019-2020 Premier League, with 511 players in 20

clubs, spanning from Aug 9, 2019 to July 26, 2020. So I count week from August 9, 2019 to begin with, and every 7 days is counted as a week. It is worth noting that the Premier League paused since Mar 9, 2020 and restarted in June, hence, our dataset includes 3-months blank space.

## 2.2 BLM support Measure

To measure the support of BLM of each club, I count the number of posts with the hashtag #BlackLivesMatter or the text “Black Lives Matter” on their official Twitter account (called X today). The posts were mainly concentrated in June 2020, always along with a photo to show players observing a moment of silence. I take the total number of this kind of posts with hashtag #BlackLivesMatter as key independent variable to measure each club’s BLM support, the more the posts a club has, I could consider that the more progressive upon the BLM issue the club is.

## 2.3 Individual and Regional Characters

For club’s political stands upon racial justice issues are highly connected to locations: according to the BSA survey carried out by NatCen Social Research, the racial prejudice demonstrate quite difference across regions in England (Matthew Taylor, 2014). While a club’s attitude is influenced by local citizens, who make up the main fan base, the effect on player could be heterogeneous across clubs located in different regions. Therefore, I also identify the regional vote intensity across parties during the great election in 2019, which reflects a general political stand of local municipalities. I collect this information by accessing and Electionmaps.uk.

## 3 Empirical Process

Clubs with more posts send the signal that they have a more active and intensive attitude towards anti-racism issues. If the clubs’ BLM support does induce an impact on players, whether more intensive participating in the BLM support means more effect? If yes, how much effect would one more tweets posted cause? To test these hypothesis, I could estimate the treatment effect of BLM support by employing Difference-in-Difference (DiD) methods, where May 25, the day Floyd killed taken as treatment day, the equation could be written

as equation 1.

$$y_{i,t} = \alpha \cdot BLMpost_{c,t} + \mu_i + \nu_t + \epsilon_{i,t}, \quad (1)$$

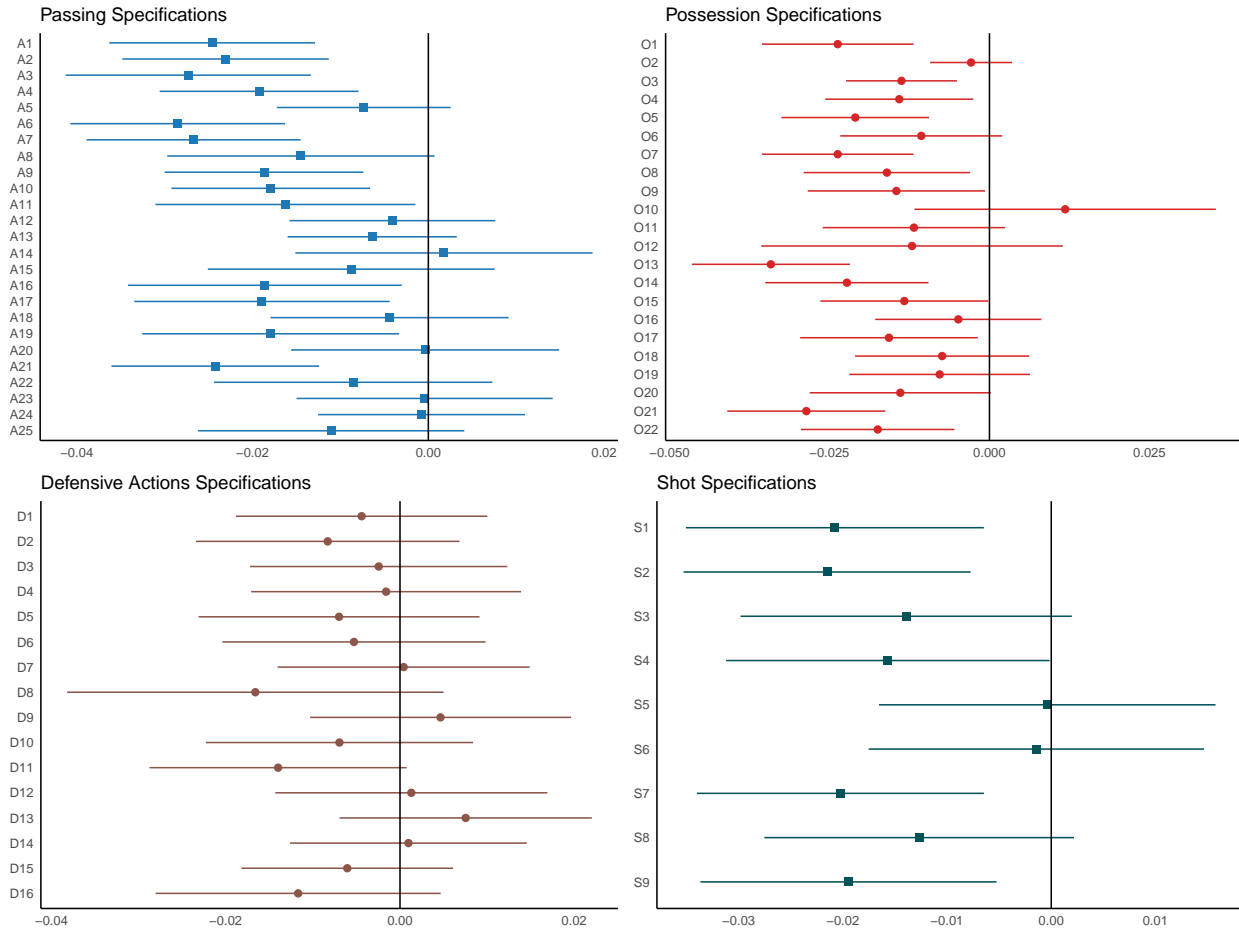
where  $y_{i,t}$  represents performance of player  $i$  in the point of time  $t$ .  $BLMpost_{c(i),t}$  equals to the number of BLM post by club  $c$  which player  $i$  plays for,  $BLMpost_{c,t}$  represents the intensity of BLM support by club  $c$ , and equals to the number of # BlackLivesMatter by club  $c$  after the treatment day, equals to 0 otherwise.  $X_{c,t}$  represents control variables,  $\mu_c$  represents club-level fixed effects and  $\nu_t$  represents fixed time effects, which control the unobserved heterogeneity.  $\epsilon_{c,t}$  is the error term. Results are demonstrate by Figure 3, where all specifications have been standardized.

For some of the specifications of passing, possession and shot categorizes, the results demonstrate that there could be negative correlation between clubs' BLM posts and players' on-court performance (all the specifications have been standardized): Not only variables specified the number of attempts on court, those specifications measuring progressive actions such as key passes, progressive pass distance, progressive received, carries into 1/3 of the pitch also illustrate significant negative coefficients.

**Principal Components Analysis (PCA)** With multiple specifications of each category, I attempt to narrow them down to one variable respectively, so that I could generally measure the performance of 4 dimensions. Firstly, I select ones that correlated with others significantly and highly (at least with one correlation greater than 0.5) in each category. The correlation tables of selected variables are presented by Figure A1, Figure A2, Figure A3, Figure A4. Then, I apply the Principal Component Analysis (PCA) method for each category. The loadings of the first principal component by each original specification are presented in Table A2. And variance explained of each component are demonstrated by their categorises as Figure A5, Figure A6, Figure A7, and Figure A8.

As expected, regression with principal components of each category still demonstrate

Figure 3: Baseline Model Results (All specifications have been standardized)



*Notes:* This figure demonstrates 95% confidence interval of performance specifications, which are labeled as Table A1.

similar results that the BLM support of clubs could be negatively associated with players' performance. It seems that exposure to controversial public opinion environments has no good to players' performance. On Average, one more BLM post by club, the player's passing performance declined by 0.062\*St.dev, possession declined by 0.066\*St.dev., shot by 0.040\*St.dev.. However, the results are not enough to illustrate the whole story, further exploration of the underlying mechanisms is needed.

Table 1: DiD Regression Models on Principal Components

	(1) Passing	(2) Possession	(3) Shot	(4) Defensive Actions
BLMpost	−0.062*** (0.017)	−0.066*** (0.016)	−0.040*** (0.013)	−0.008 (0.016)
Observations	10,503	10,503	10,503	10,503
R <sup>2</sup>	0.541	0.445	0.337	0.333
Adjusted R <sup>2</sup>	0.517	0.417	0.303	0.299

*Notes:* Table 1 presents estimations of equation 1. On Average, one more BLM post by club, the player's passing performance declined by 0.062\*St.dev, possession declined by 0.066\*St.dev., shot by 0.040\*St.dev.. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

## 4 Mechanism Exploration

There's one concern that clubs with worse performance may be more likely to encourage certain political activities, which introduces an interpretation of previous results in a totally contrast way. To illustrate this, I shed light on performance of clubs. If the test on BLM post by clubs dose not suggest significantly correlation to their match performance as a whole (winnings, goals, etc.), the concern would be rejected.

$$y_{c,t} = \alpha \cdot BLMpost_{c(i),t} + X_{c,t} + \mu_c + \nu_t + \epsilon_{c,t}, \quad (2)$$

where the dependent variables are converted to club level specifications  $y_{c,t}$ , and  $X_{c,t}$  are some control variables.

Table 2: Regression on Club's Match Results

	(1) Expected Goals	(2) Goals	(3) Net Goals	(4) Win
BLMpost	-0.040* (0.022)	-0.054 (0.034)	-0.054 (0.034)	-0.017 (0.019)
OpponentGoals	-0.107*** (0.022)	-0.181*** (0.034)	-1.181*** (0.034)	-0.442*** (0.019)
Home	0.177*** (0.053)	0.257*** (0.082)	0.257*** (0.082)	0.158*** (0.045)
Observations	760	760	760	760
R <sup>2</sup>	0.226	0.202	0.681	0.507
Adjusted R <sup>2</sup>	0.202	0.177	0.671	0.491

*Notes:* *OpponentGoals* equals to goals by opponent in the match. *Home* equals to 1 if the club played that match in home court, equals to 0 otherwise. *NetGoals* equals to the number of goals minus the number of opponent goals. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

Table 2 presents estimation results in club level, where *OpponentGoals* equals to goals by opponent in the match, *Home* represents if the club played that match in home court, *NetGoals* represents to the number of goals minus the number of opponent goals. Goals, net goals, and winnings all indicate insignificance between posts and club performance. Hence, it is not supported to recognize BLM posts are from bad performance clubs.

## 4.1 Heterogeneity on sub-Samples Test

Recall the baseline results seems arrays to a negative effect of BLM support. To understand and explain the potential mechanisms, I introduce some indicators may related to the heterogeneity of the impact. These indicators are generally categorised into 2 perspectives, individual ones including races, nationalities and club ones including vote intensity of club's region. By multiplying *BLMpost* with these indicators, the heterogeneous effect might be

inferred by observing the coefficient of interactions. And to reveal the function form i.e. the marginal effect of one more BLM post, models with various post thresholds are estimated. Hence, I estimate:

$$y_{i,t} = \alpha \cdot (Z_{c(i)}, W_i) \cdot BLMpost_{c(i),t} + \mu_i + \nu_t + \epsilon_{i,t}, \quad (3)$$

$Z_{c(i)}$  represents the characters of club  $c$  including location characteristics such as population, GDP, vote intensity and club's character such as ranking, nationality composition of the club's players. And  $W_i$  record personal characters such as race, age, nationality, and position on the court of the player  $i$ .

**Race and Ethnicity** Race and ethnic identity play an important role in shaping attitudes towards BLM, those who self-identified as African Americans versus white find positive and significant associations (Azevedo et al., 2022, Sawyer and Gampa, 2018). Thus, it may be expected that there's more positive results on the black players' sample. Table 3 demonstrates the results on black and non-black players sub-sample basis. As presented,

Table 3: Black Players versus non-Black Players

	Black Players				non-Black Players			
	Passing (1)	Possession (2)	Shot (3)	Defense (4)	Passing (5)	Possession (6)	Shot (7)	Defense (8)
BLMpost	-0.054* (0.031)	-0.045 (0.032)	-0.069** (0.028)	-0.035 (0.030)	-0.066*** (0.021)	-0.077*** (0.019)	-0.030* (0.016)	-0.004 (0.019)
Observations	2,480	2,480	2,480	2,480	8,023	8,023	8,023	8,023
R <sup>2</sup>	0.616	0.408	0.346	0.358	0.511	0.456	0.329	0.325
Adjusted R <sup>2</sup>	0.595	0.376	0.311	0.324	0.487	0.429	0.295	0.291

*Notes:* This table presents results of equation 3 with sample grouped by ethnicity. It could be referred that black players are less significantly affected than non-black players in passing and possession specifications that average 0.012\*St.dev. difference in passing, 0.032\*St.dev. in possession. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

black players are less significantly affected than non-black players in passing and possession

specifications that average 0.012\*St.dev. difference in passing, 0.032\*St.dev. in possession. Though the shot and defense seems to be contrast, the p-values do not show more significance. As I mentioned above, black people are more likely to possess positive attitude upon BLM activities. Hence, they may be less stressed because of the controversial phenomenon.

**Nationality** Meanwhile, the nationality of a player may also have an influence. I suppose that because: First, Since BLM movements had broadcast so widely that protest activities were launched in a large scale around the European countries such as Germany, Poland, Denmark, Italy. All these could shape the recognition of fans and players from different countries, in turn, affect their behavior. Second, the attitude of local fans is a worth-noting variable. BBC reported that England local fans booing to express their dissatisfaction upon taking a knee before each match (<https://www.bbc.com/news/newsbeat-57382945>). The response to this kind of dissatisfaction by players domestic or foreign could varies so the empirical results may also differ.

Table 4: English Players versus non-English Players

	English Players				non-English Players			
	Passing (1)	Possession (2)	Shot (3)	Defense (4)	Passing (5)	Possession (6)	Shot (7)	Defense (8)
BLMpost	-0.088*** (0.029)	-0.094*** (0.026)	-0.044** (0.022)	-0.017 (0.025)	-0.048** (0.022)	-0.052** (0.021)	-0.039** (0.017)	-0.004 (0.020)
Observations	3,549	3,549	3,549	3,549	6,954	6,954	6,954	6,954
R <sup>2</sup>	0.522	0.442	0.363	0.340	0.550	0.446	0.323	0.330
Adjusted R <sup>2</sup>	0.497	0.412	0.329	0.305	0.527	0.418	0.289	0.296

*Notes:* This table presents results of equation 3 with sample grouped by nationality. It could be referred that England local players are more significantly affected by the BLM support from the club oriented. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

The results by nationalities addressed the assumption. Table 4 and Table 5 both reveal that England local players are more likely to be affected by the BLM support from the club they oriented. A potential interpretation by us is that the local fans are more closely associated with the domestic players so that the stress issued by fans are more likely to affect

Table 5: EU Players versus non-EU Players

	EU Players				non-EU Players			
	Passing (1)	Possession (2)	Shot (3)	Defense (4)	Passing (5)	Possession (6)	Shot (7)	Defense (8)
BLMpost	-0.046 (0.040)	-0.047 (0.037)	-0.000 (0.030)	-0.005 (0.039)	-0.065*** (0.019)	-0.070*** (0.018)	-0.048*** (0.015)	-0.010 (0.017)
Observations	2,338	2,338	2,338	2,338	8,165	8,165	8,165	8,165
R <sup>2</sup>	0.566	0.499	0.284	0.341	0.533	0.428	0.349	0.331
Adjusted R <sup>2</sup>	0.545	0.474	0.248	0.309	0.509	0.398	0.315	0.296

*Notes:* This table presents results of equation 3 with sample grouped by nationality. It could be referred that non-EU players (mostly England local players) are more significantly affected by the BLM support from the club oriented. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

those with England nationality. To be more frank, these fans booing them taking a knee in Premier League can also be the audience of their national team match. Directly exposed to local fans in a way they do not prefer would be a negative factor for players' performance.

**Position** As our specifications are categorised into 4 perspectives, each measures one dimension of players' on-court performance, the position on court could play an important role in the assessment: you may not assess a backfield player by his shot skills or assess a forward by defense. Thus, it is necessary to shed more light on the core specifications of each position. To simplify, I categorize players into 3 position categorises: forward, middle and back. In general, I may expect there's more significant results of shots on the sample of forward players, middle on passing and possession, back on defense and passing.

Table 6, Table 7, and Table 8 present the results on back, middle, forward players respectively. As expected, back players suffers more significant negative effect on their passings and possessions, while middle players suffers on their possessions, forward suffers on shots.

**Regional Political Intensity** As I discussed all the times, the attitude of fans, consumers in football industry, matters. Not only that, the components of fans of different clubs varies a lot. In most circumstances, citizens support the local club. For example, citizens in Liverpool

Table 6: DiD Regression Models on Back Players

	(1) Passing	(2) Possession	(3) Shot	(4) Defensive Actions
BLMpost	−0.127*** (0.031)	−0.087*** (0.023)	0.004 (0.011)	−0.027 (0.026)
Observations	4,149	4,149	4,149	4,149
R <sup>2</sup>	0.422	0.506	0.155	0.380
Adjusted R <sup>2</sup>	0.384	0.473	0.099	0.339

*Notes:* This table presents results on back players, they are mainly affected in passing and possession specification. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

Table 7: DiD Regression Models on Middle Players

	(1) Passing	(2) Possession	(3) Shot	(4) Defensive Actions
BLMpost	−0.054 (0.036)	−0.068** (0.030)	−0.023 (0.020)	−0.006 (0.034)
Observations	3,074	3,074	3,074	3,074
R <sup>2</sup>	0.466	0.404	0.225	0.258
Adjusted R <sup>2</sup>	0.415	0.347	0.151	0.187

*Notes:* This table presents results on middle players, they are mainly affected in possession specification. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

Table 8: DiD Regression Models on Forward Players

	(1) Passing	(2) Possession	(3) Shot	(4) Defensive Actions
BLMpost	−0.028 (0.020)	−0.055 (0.034)	−0.111*** (0.039)	−0.009 (0.023)
Observations	3,280	3,280	3,280	3,280
R <sup>2</sup>	0.521	0.481	0.246	0.274
Adjusted R <sup>2</sup>	0.479	0.435	0.179	0.211

*Notes:* This table presents results on forward players, they are mainly affected in shot specification. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

mainly support their local Liverpool Club. Nevertheless, even in the same city, the supporter of different clubs could still be totally different. The attitude and preference of consumers (fans), especially when they are mainly made up with local citizens, could largely affect club's stands and behaviors. Referring to the BSA survey carried out by NatCen Social Research, the racial prejudice demonstrate quite difference across regions in England (Matthew Taylor, 2014). Sawyer and Gampa illustrated that the attitude upon BLM also varies across political orientation (Sawyer and Gampa, 2018). Above all, I imagine that as the stands on BLM of different regions varies, players play for these clubs may also be affected in various degrees. Therefore, I introduce regional political characteristics – the intensity of elected parties or regional political stands during the great elite in 2019 to explore the heterogeneity across regions in England. Table 9 reports the results.

## 4.2 Post Thresholds

To test whether there's any non-linear relationship that once the club support BLM more than a certain threshold, the effects on players would be greater or smaller sharply, I estimate the coefficients of different thresholds of  $BLMpost$ .  $kink_{j,c(i),t}$  is defined to equal to 1 if  $BLMpost_{c(i),t}$  greater than  $j$  and 0 otherwise. The estimation results are demonstrated by Figure 4.

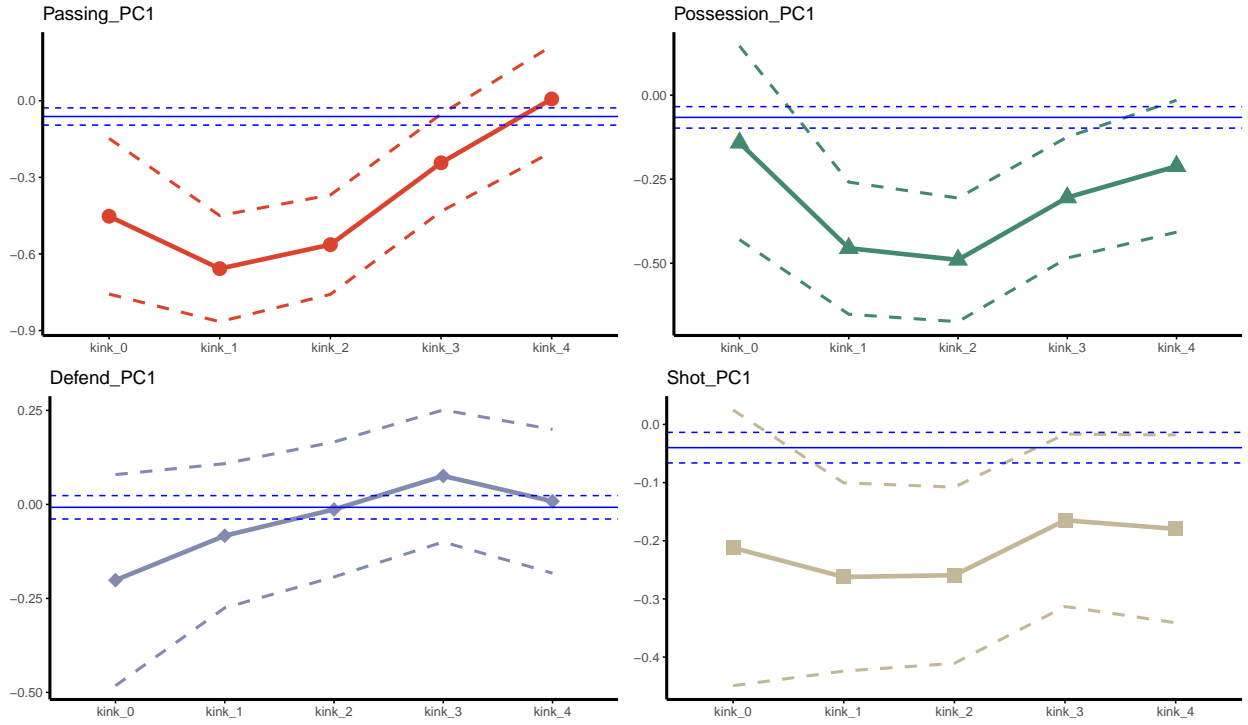
Results demonstrate more significance once taking  $kink_1$  and  $kink_2$  as independent variable. The underlying interpretation would be illustrated as: when club has not much intensity to express their support, but just a response to the trend, the effect are not so significant; once the club is more intensive and active in the issue, the effect would be aggravated; and if the number of posts beyond a certain threshold such as 3 or 4, the effect declines since fans and players are fully aware of the attitude of the club so that they might be less affected by the controversy.

Table 9: DiD Regression Models on Principal Components–Political Stands

	Labour				Conservative				Green			
	Passing	Possession	Shot	Defense	Passing	Possession	Shot	Defense	Passing	Possession	Shot	Defense
<i>BLMpost</i>	-0.147*** (0.055)	-0.082 (0.052)	-0.005 (0.043)	0.032 (0.051)	-0.036* (0.021)	-0.055*** (0.020)	-0.045*** (0.017)	-0.018 (0.020)	0.044 (0.035)	-0.033 (0.033)	-0.032 (0.027)	-0.016 (0.032)
lab	0.039** (0.018)	0.038** (0.017)	0.008 (0.014)	0.006 (0.016)								
<i>BLMpost</i> × lab	0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)								
con					-0.078** (0.032)	-0.072** (0.030)	-0.015 (0.025)	-0.017 (0.030)				
<i>BLMpost</i> × con					-0.002** (0.001)	-0.001 (0.001)	0.000 (0.001)	0.001 (0.001)				
grn									0.313** (0.147)	0.337** (0.139)	0.002 (0.114)	-0.078 (0.135)
<i>BLMpost</i> × grn									-0.019*** (0.005)	-0.006 (0.005)	-0.001 (0.004)	0.002 (0.005)
Observations	10,503	10,503	10,503	10,503	10,503	10,503	10,503	10,503	10,503	10,503	10,503	10,503
R <sup>2</sup>	0.541	0.445	0.337	0.333	0.541	0.446	0.337	0.333	0.542	0.446	0.337	0.333

*Notes:* *lab* represents the vote percentage of club  $c(i)$ ’ location on Labour Party; *con* represents the vote percentage of club  $c(i)$ ’ location on Conservative Party; *grn* represents the vote percentage of club  $c(i)$ ’ location on Green Party. \*\*\*Significant at the 1 percent level. \*\*Significant at the 5 percent level. \*Significant at the 10 percent level.

Figure 4: Post Thresholds



*Notes:* This figure presents 95% confidence interval in estimation with each post threshold, where  $kink_0$  equals to 1 if  $BLMpost > 0$ , equals to 0 otherwise;  $kink_1$  equals to 1 if  $BLMpost > 1$ , equals to 0 otherwise;  $kink_2$  equals to 1 if  $BLMpost > 2$ , equals to 0 otherwise;  $kink_3$  equals to 1 if  $BLMpost > 3$ , equals to 0 otherwise;  $kink_4$  equals to 1 if  $BLMpost > 4$ , equals to 0 otherwise. Horizontal lines presents 95% confidence interval of original estimation.

## 5 Conclusion

The empirical process examines whether football players' performance responses to club's BLM support on social media and the heterogeneous effect across the number of tweets, individual and regional characteristics through DiD methods. I reveal that BLM support could be a negative factor for players' performance, and the effect is relatively larger for non-black races and domestic England players. It can be interpreted that the controversial public opinion environment especially the stress from domestic fans have an influence on the playing condition of players. Players of different positions on court are affected in a way that the core dimensions of their specifications are influenced more significantly. Moreover, there's a pattern that the effect of BLM posts is of U-shape, when club has not much intensity to express their support, the effect are not very significant; once the club is more intensive and active in the issue, the effect would be aggravated; and if the number of posts beyond a certain threshold such as 3 or 4, the effect declines again. For the perspective of regional political factors, the figures of party support rate do not demonstrate significant heterogeneity, which could be interpreted as either no heterogeneity or taking vote intensity is not a wise measure of regional political tendency.

It is worth to address that, our interpretation of the negative effect revealed by empirical results does not illustrate any explicit or implicit racial-prejudice by players' subjective wishes. Instead, for the coefficients of regressions with not too large numbers, the decline of performance is more likely to due to an objective effect. And that is why I emphasize the role of fans.

Our work has several limitations, which serve as avenues for future research. First, the performance data is not balanced since there's missing values during the week that at least one club had no matches. If balanced data is obtained, I could handle the fixed effect more solid. Second, since an opposite result with previous study of CSR, the negative effect revealed by this study is with an unclear mechanism, thus, future work should shed more light on the mechanism exploration of negative CSR performance impact on internal

stakeholders. Third, it is far from enough to illustrate that it is detrimental for enterprises or sports organizations to address their political stands publicly, more work is called to do to evaluate the relationship between employees' performance and political issues, some other issues such as LGBTQ rights, Russo-Ukrainian War and Israeli-Palestinian conflict.

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# A Appendix

Table A1: Summary Statistics

	Label	Obs.	Mean	Std. Dev.	Min.	Max.
<i>Panel A. Passing Specifications</i>						
Passes completed	A1	10503	28.407	21.165	0	178.0
Passes attempted	A2	10503	36.498	24.176	1	188.0
Pass completion percentage	A3	10503	74.976	15.306	0	100.0
Total passing distance	A4	10503	495.934	396.374	0	2873.0
Progressive passing distance	A5	10503	175.907	163.315	0	1076.0
Short passes completed	A6	10503	13.200	10.307	0	94.0
Short passes attempted	A7	10503	15.097	11.176	0	97.0
Short passes completion percentage	A8	10224	86.177	14.986	0	100.0
Medium passes completed	A9	10503	11.294	10.963	0	84.0
Medium passes attempted	A10	10503	13.450	11.859	0	88.0
Medium passes completion percentage	A11	10069	79.949	20.944	0	100.0
Long passes completed	A12	10503	2.966	3.361	0	27.0
Long passes attempted	A13	10503	5.633	6.022	0	49.0
Long passes completion percentage	A14	8754	53.597	30.954	0	100.0
Assists	A15	10503	0.067	0.269	0	3.0
Expected assisted goals	A16	10503	0.070	0.162	0	2.1
Key passes	A17	10503	0.666	1.055	0	10.0
Passes to final third	A18	10503	2.098	2.563	0	22.0
Passes into penalty area	A19	10503	0.562	0.971	0	10.0
Crosses into penalty area	A20	10503	0.139	0.431	0	6.0
Live-ball passes	A21	10503	32.864	22.666	0	187.0
Through Balls	A22	10503	0.083	0.313	0	4.0
Switches	A23	10503	0.305	0.688	0	8.0
Crosses	A24	10503	1.376	2.361	0	20.0
Blocked (fail) Passes	A25	10503	0.646	0.953	0	7.0

*Notes:* The data is constructed by match reports provided by FBREF, including 380 matches of 2019-2020 Premier League, with 511 players in 20 clubs, spanning from Aug 9, 2019 to July 26, 2020. The Premier League paused since Mar 9, 2020 and restarted in June, so the dataset includes 3-months blank space.

Table A1: Summary Statistics (Cont'd)

	Label	Obs.	Mean	Std. Dev.	Min.	Max.
<b><i>Panel B. Possession Specifications</i></b>						
Touches	O1	10503	44.610	26.275	1	193
Touches in defensive penalty area	O2	10503	4.491	7.728	0	61
Touches in defensive 1/3	O3	10503	13.731	13.162	0	84
Touches in middle 1/3	O4	10503	20.308	16.618	0	134
Touches in attacking 1/3	O5	10503	10.990	10.533	0	79
Touches in attacking penalty area	O6	10503	1.576	2.163	0	21
Live-ball touches	O7	10503	44.601	26.274	1	193
Take-ons attempted	O8	10503	1.251	1.779	0	20
Successful take-ons	O9	10503	0.752	1.233	0	16
Percentage of successful take-ons	O10	5521	59.965	39.345	0	100
Times tackled during take-on	O11	10503	0.498	0.896	0	8
Times tackled during take-on percentage	O12	5521	39.965	39.321	0	100
Carries	O13	10503	25.354	17.881	0	169
Total carrying distance	O14	10503	135.345	102.793	0	785
Progressive carrying distance	O15	10503	70.252	64.219	0	608
Progressive carries	O16	10503	1.370	1.892	0	18
Carries into final third	O17	10503	1.021	1.426	0	12
Carries into penalty area	O18	10503	0.357	0.813	0	10
Miscontrols	O19	10503	1.077	1.347	0	11
Dispossessed	O20	10503	0.680	1.057	0	9
Passes receive	O21	10503	28.200	19.639	0	171
Progressive passes received	O22	10503	2.739	3.481	0	30

*Notes:* The data is constructed by match reports provided by FBREF, including 380 matches of 2019-2020 Premier League, with 511 players in 20 clubs, spanning from Aug 9, 2019 to July 26, 2020. The Premier League paused since Mar 9, 2020 and restarted in June, so the dataset includes 3-months blank space.

Table A1: Summary Statistics (Cont'd)

	Label	Obs.	Mean	Std. Dev.	Min.	Max.
<b><i>Panel C. Defensive Actions Specifications</i></b>						
Tackles	D1	10503	1.179	1.432	0	11
Tackles won	D2	10503	0.694	0.999	0	8
Tackles in defensive 1/3	D3	10503	0.584	0.941	0	7
Tackles in middle 1/3	D4	10503	0.459	0.790	0	7
Tackles in attacking 1/3	D5	10503	0.136	0.392	0	5
Dribblers tackles	D6	10503	0.498	0.830	0	7
Dribblers challenged	D7	10503	1.249	1.492	0	12
Percentage of dribblers tackled	D8	6211	39.905	40.582	0	100
Challenges lost	D9	10503	0.751	1.077	0	8
Blocks	D10	10503	0.757	1.001	0	7
Shot blocked	D11	10503	0.240	0.573	0	6
Passes blocked	D12	10503	0.518	0.814	0	7
Interceptions	D13	10503	0.777	1.100	0	8
Tackled plus interceptions	D14	10503	1.956	2.057	0	15
Clearances	D15	10503	1.541	2.194	0	18
Errors	D16	10503	0.034	0.185	0	3

*Notes:* The data is constructed by match reports provided by FBREF, including 380 matches of 2019-2020 Premier League, with 511 players in 20 clubs, spanning from Aug 9, 2019 to July 26, 2020. The Premier League paused since Mar 9, 2020 and restarted in June, so the dataset includes 3-months blank space.

Table A1: Summary Statistics (Cont'd)

	Label	Obs.	Mean	Std. Dev.	Min.	Max.
<b><i>Panel D. Shot Specifications</i></b>						
Non-penalty expected goals	S1	10503	0.093	0.202	0	2.5
Shot-creating actions	S2	10503	1.573	1.900	0	16.0
Goal-creating actions	S3	10503	0.163	0.448	0	6.0
Goals	S4	10503	0.095	0.329	0	4.0
Penalty kicks made	S5	10503	0.007	0.084	0	2.0
Penalty kicks attempted	S6	10503	0.009	0.094	0	2.0
Shot total	S7	10503	0.885	1.255	0	10.0
Shots on Target	S8	10503	0.296	0.642	0	6.0
Expected goals	S9	10503	0.100	0.222	0	2.5

*Notes:* The data is constructed by match reports provided by FBREF, including 380 matches of 2019-2020 Premier League, with 511 players in 20 clubs, spanning from Aug 9, 2019 to July 26, 2020. The Premier League paused since Mar 9, 2020 and restarted in June, so the dataset includes 3-months blank space.

Table A2: PCA Report for Selected Variables

	Label	Loadings
<b><i>Panel A. Passing</i></b>		
Passes Completed	A1	0.3332
Passes Attempted	A2	0.3337
Total Passing Distance	A4	0.3326
Progressive Passing Distance	A5	0.2614
Short Passes Completed	A6	0.2704
Short Passes Attempted	A8	0.2663
Medium Passes Completed	A9	0.3091
Medium Passes Attempted	A10	0.3133
Long Passes Completed	A12	0.2310
Long Passes Attempted	A13	0.1937
Completed Passes into Final Third	A18	0.2471
Live-ball Passes	A21	0.3300

*Notes:* This table reports the loadings of the original passing specifications on the first principal component.

Table A2: PCA Report for Selected Variables (Cont'd)

	Label	Loadings
<b><i>Panel B. Possession</i></b>		
Touches	O1	0.2831
Touches in Attacking 1/3	O5	0.3057
Touches in Attacking Penalty Area	O6	0.1907
Take-ons	O8	0.2463
Successful Take-ons	O9	0.2237
Percentage of Successful Take-ons	O10	0.1811
Tackles during Take-ons	O11	0.3114
Total Carrying Distance	O14	0.3434
Progressive Carrying Distance	O15	0.3178
Progressive Carries	O16	0.3035
Carries into Final Third	O17	0.2899
Passes Received	O21	0.3108
Progressive Passes Received	O22	0.2407

*Notes:* This table reports the loadings of the original possession specifications on the first principal component.

Table A2: PCA Report for Selected Variables (Cont'd)

	Label	Loadings
<b><i>Panel C. Defensive Actions</i></b>		
Tackles	D1	0.4212
Tackles Won	D2	0.3759
Tackles in Defensive 1/3	D3	0.3403
Tackles in Middle 1/3	D4	0.2967
Dribblers Tackles	D6	0.3632
Dribblers Challenged	D7	0.3531
Challenge Lost	D9	0.2093
Pass Blocked	D12	0.1509
Interception plus Tackles	D13	0.3929

*Notes:* This table reports the loadings of the original defensive actions specifications on the first principal component.

Table A2: PCA Report for Selected Variables (Cont'd)

	Label	Loadings
<b><i>Panel D. Shot</i></b>		
Non-penalty expected goals	S1	0.4822
Goals	S4	0.3885
Shot total	S7	0.4395
Shots on target	S8	0.4379
Expected goals	S9	0.4813

*Notes:* This table reports the loadings of the original shot specifications on the first principal component.

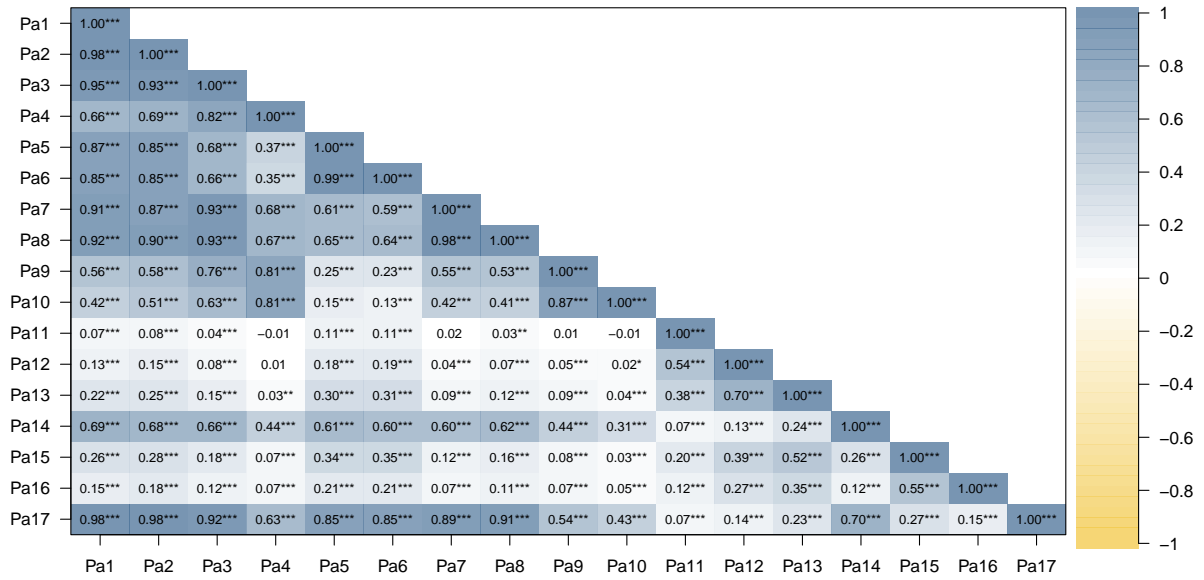


Figure A1: Correlation Plot – Passing

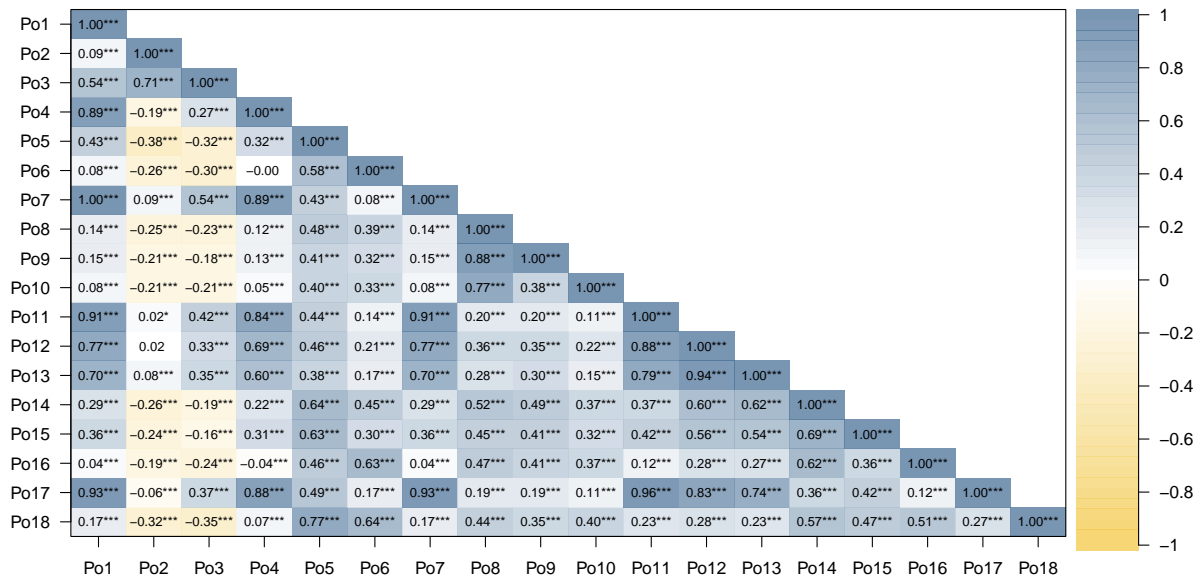


Figure A2: Correlation Plot – Possession

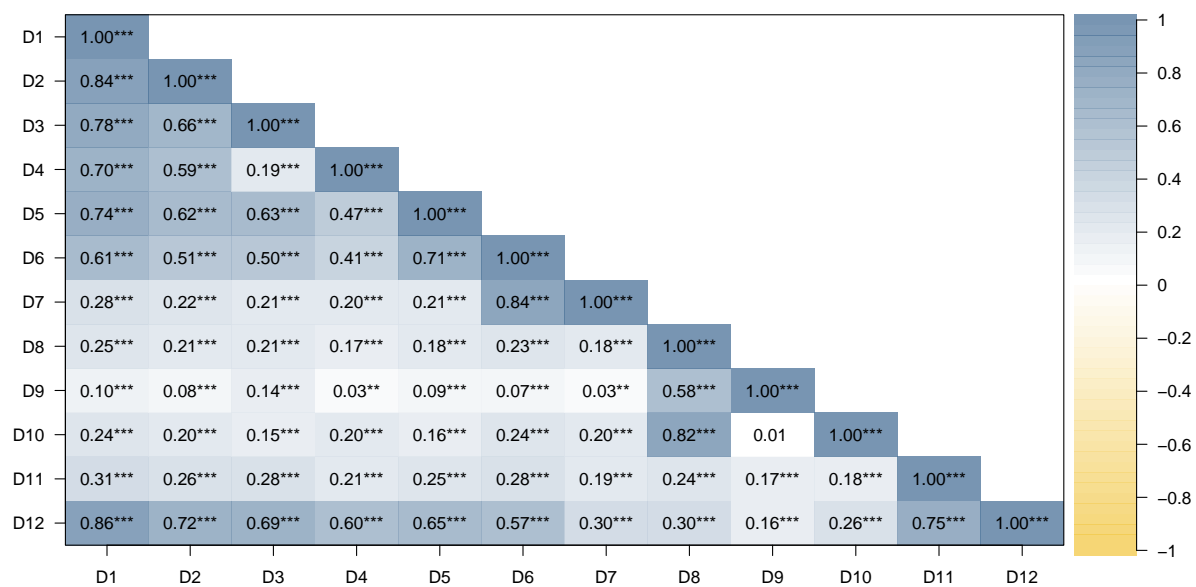


Figure A3: Correlation Plot – Defensive Actions

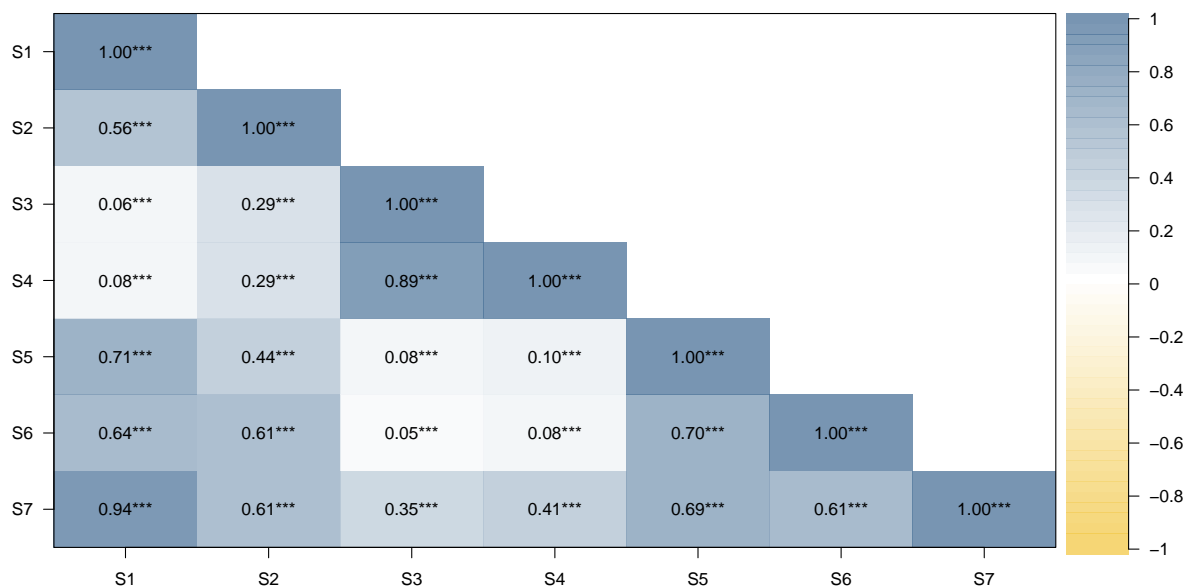


Figure A4: Correlation Plot – Shot

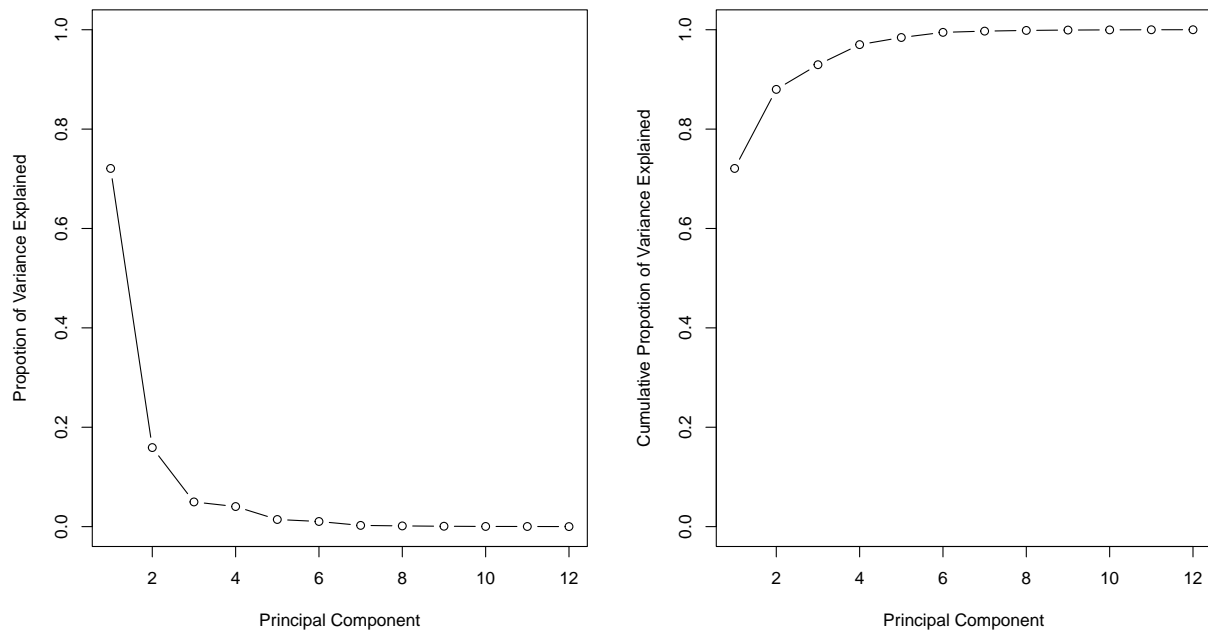


Figure A5: Variance Explained – Passing

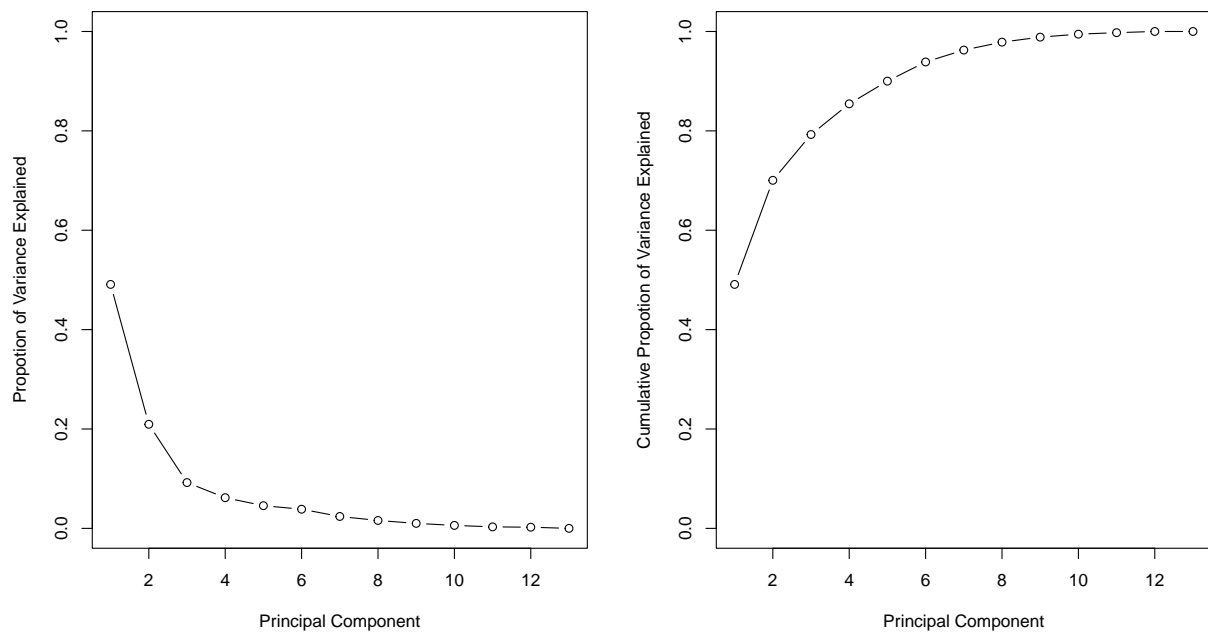


Figure A6: Variance Explained – Possession

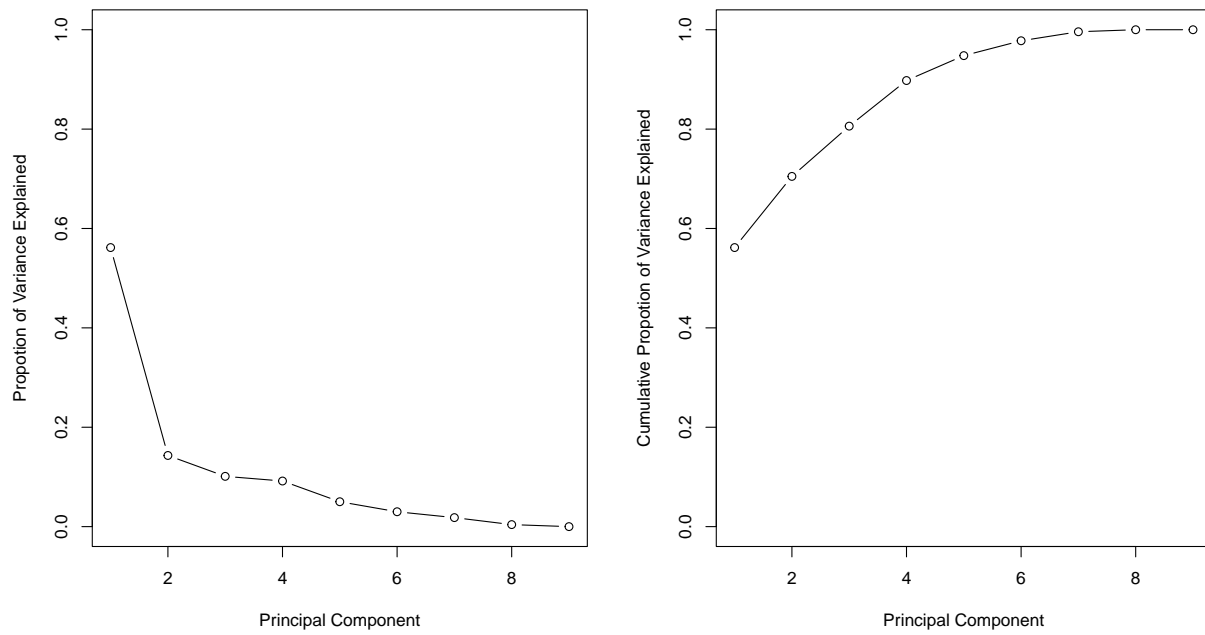


Figure A7: Variance Explained – Defensive Actions

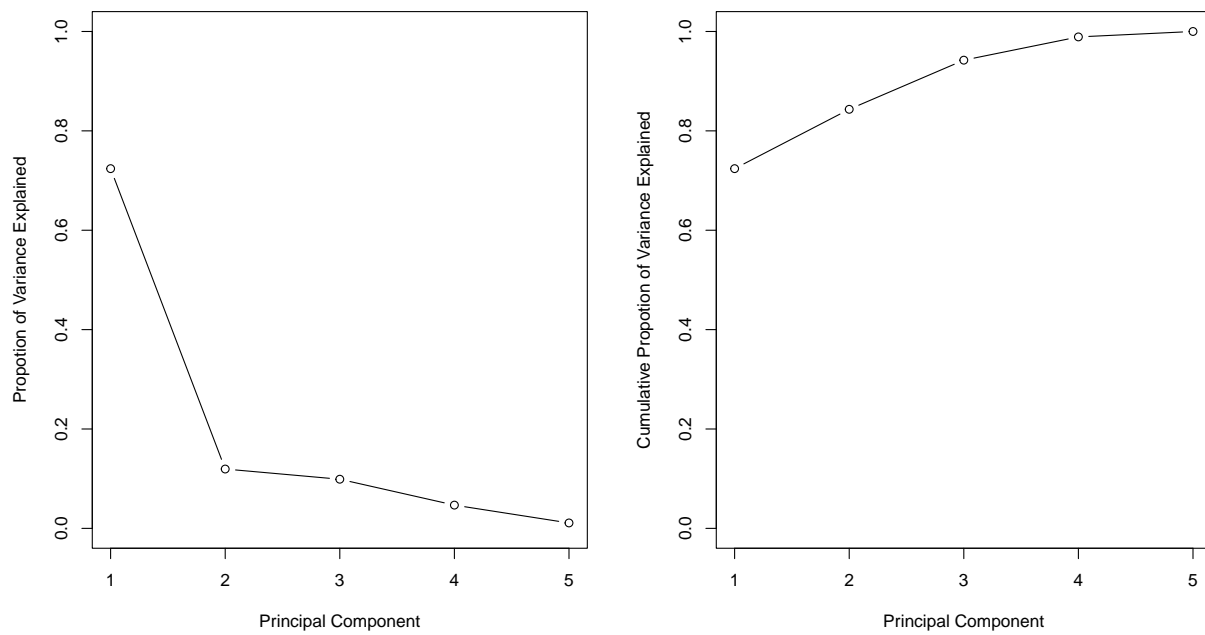


Figure A8: Variance Explained – Shot