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The Effect of Rivalry on Sport Performance: A Case Study of Cristiano Ronaldo and Lionel Messi

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The motivation to outperform rivals can lead to sport innovation, creativity, and improved performance. Sport literature already affirms that rivalry leads to better team performance; however, empirical evidence to support the claim for individual performance is scarce. This study examines the effect of the Cristiano Ronaldo-Lionel Messi rivalry on their performances during their stay in Europe. We measured performance using non-subjective metrics such as number of goals, appearances, and assists. We also controlled for their years of professional experience as this is expected to be reflected in their performances. Data were analyzed using multivariate analysis of covariance. Empirical results confirmed the positive effect of rivalry on their average performances, and this effect size was similar. We also found evidence that years of experience did not significantly affect Messi's performance. The study concludes that individual rivalry has a significant positive effect on performance of athletes.

Keywords: rivalry, soccer, goals, assists, statistics, performance

Introduction

Innovation involves new ideas, technologies, strategies, training, products, services, media, formats, and development. The history of innovation is full of rivalries—healthy and otherwise. We recall the competition to decode DNA in Watson's "The Double Helix," the competition among the Renaissance painters, the popular exploration of North America, and the race to the moon (Watkins, 2013). These examples show that rivalry fosters creativity, innovation, and excellent performance that otherwise would not have been possible in a collaborative setting.

Sports innovation is an emerging field that connects sports to innovation management and practice. In the same vein, sports rivalry, as a field of study, is relatively new and requires more research interventions (Cobbs et al., 2017). The role of rivalry in sports innovation cannot be over-emphasized. The motivation to outperform rivals can lead to innovation, creativity, and excellence as individuals or teams strive to outperform each other and achieve their goals.

How much does individual rivalry affect performance? This question has important implications in sports innovation given the increased global interest in soccer and improved media visibility due to the Cristiano Ronaldo-Lionel Messi rivalry. Indeed, the rivalry between the duo has brought new dimensions and

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new ideas to sport discussions in the media (García-del-Barrio et al., 2019). The question also has significance in sports rivalry literature to provide more insights on the nature and pattern of rivalry-performance nexus and to accurately classify the varying effects of rivalry. It also emphasizes the distinguishing abilities and characteristics of the players concerned. Further, it could provide additional information on the relational dynamics between individual players and the potential positive influence of rivalry on their performance. In addition, Havard and Dalakas (2017) detailed the marketing implications of rivalry; therefore, the answer to this question could also help coaches and other sport managers optimize their players' performances for more financial gains.

Previous empirical studies have concentrated on the effect of team rivalry on sport performance (Karanfil, 2017; Kilduff et al., 2010; Otoiu et al., 2019), whereas studies on individual rivalry are scarce[1]. However, beyond the fact that team rivalry deals with a group and individual rivalry with individuals, there are important differences between the two types of rivalries. From the theoretical perspective, Kilduff et al. (2010) distinguished between the two rivalries by their sources; while individual rivalry involves some significant components of inter-relational dynamics, team rivalry stems from social identity issues. Milstein et al. (2022) also provided empirical evidence that the two types of rivalry do not have similar effects on performance.

This study provides empirical evidence in the individual rivalry–performance nexus using the case study of Ronaldo and Messi. Kilduff et al. (2010) gave two antecedents that can be used to identify rivalry in teams or individuals: similarity and evenly matched contests. Since Ronaldo and Messi are both offensive players, there is similarity between them. They also meet the second antecedent in that they usually take part in keen (close calls) contests, that is, they both participate in evenly matched contests; hence, they are rivals.

We measure sport performance of the players with the number of goals, assists, and appearances. We are aware that soccer fans and stakeholders have used certain metrics such as the number of individual trophies won, physical attributes and character, playing styles, and influence on the pitch to measure sport performance in football (Loyola, 2021). Later in this article, we give reasons why these metrics are highly subjective and controversial, and subsequently, we provide justifications for the variables selected for the study.

Literature Review

This section reviews the concept, definitions, theories, types of rivalry, and related studies on rivalry-performance nexus. It also describes the nature of rivalry between

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[1] To our knowledge, the only study that provides somewhat related information is Kilduff (2014).

Ronaldo and Messi. Finally, it gives some credible reasons why the number of goals and assists should suffice to measure performance of the players.

Rivalry: Concept, Definitions, Theories and Types

Though the concept of rivalry is as ancient as the competitive sport itself (Triplett, 1898), sports rivalry did not gain prominence in scholarly research until recently. The interest in sports rivalry has also been kindled among researchers and sports leagues owing to its enormous significance on players' performance (Arai et al., 2014), influence on the team and athlete brands (Dalakas and Levin, 2005), and business implications (Palmer, 2013). A comprehensive review provided in Tyler and Cobbs (2017) showed that rivalry is a major factor that influences and predicts demand such that an organization can profit from price tickets, advert placements, and sponsorships.

The concept of rivalry was popularized in Kilduff et al. (2010), who defined rivalry as a subjective competitive relationship between two actors involving "increased psychological involvement and perceived stakes of competition for the focal actor, independent of the objective characteristics of the situation" (p. 945). There are other definitions in sport literature due to Havard et al. (2013) and Tyler and Cobbs (2015); however, Kilduff et al.'s (2010) remains the most acceptable (Milstein et al., 2022).

Kilduff et al. (2010) theorized that rivalry leads to increased motivation and effort. Kilduff et al. (2016) also posited that the desire to preserve self-worth and status may lead to improved performance when competing against rivals. Converse and Reinhard (2016) added that, out of concern for current status and future legacy, an actor may be propelled to put in more action when faced with his archrival.

Rivalry has been investigated in competitive settings, as in Kilduff et al. (2010), as well as from a collaborative angle, as in Otoiu et al. (2019). Another form of rivalry is the team and individual rivalry. Empirical evidence abounds in literature showing that team rivalry leads to increased team motivation and improved sport performance.[2] However, empirical studies on individual sport rivalries are scarce. To our knowledge, the only available study that provides somewhat related information is Kilduff (2014).

In his first experiment, Kilduff (2014) required participants to imagine a personal rival they have had in the past and rate their performances against them. In the non-rival category, participants were also asked to imagine a competition they were involved in with an individual who is not a rival and rate their

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[2] See, for instance, a review by Milstein et al. (2022).

performances against them. The second experiment in the study identifies rivals using certain demographic characteristics such as ages of participants.

While the study represents a pioneer attempt to quantify the effect of individual rivalry on sport performance, its manner of approach clearly has some flaws. In the first experiment, the performance ratings are self-reported, which may introduce some bias in the outcome of the study. In the second experiment, the authors used some similarity scores computed from certain demographic characteristics to identify rivals. Certainly, this cannot be compared to a natural rivalry existing between Ronaldo and Messi. Their rivalry unarguably is the most publicized and most influential in the history of sports (García-del-Barrio et al., 2019). As a matter of fact, it is far-reaching and goes beyond sports, judging by the influence both players have in social media (Messner, 2022). This, therefore, provides a more appropriate example to measure the effect of individual rivalry on sport performance.

Review of Related Studies on the Effect of Rivalry on Performance

Most classic competition studies conducted in a psychological setting at the individual level (Church, 1962; Triplett, 1898) and also at team level (Mulvey & Ribbens, 1999; Nickell, 1996) have shown that competition improves performance. However, some strands of studies also hold that competition does not always lead to increased performance (Deci et al., 1981). In fact, Kilduff et al. (2010) opined that there is another factor that determines the influence of competition on performance: rivalry.

The effect of rivalry on performance has been investigated in sport (Kilduff et al., 2010), management (Hambrick, 1995), psychology (Conde et al., 2018), and music (Halgin et al., 2020). It has also been investigated from an individual perspective (Kilduff, 2014) as well as team perspective (Kilduff et al., 2010). There are also studies that viewed the relationship from a collaborative setting other than the usual competitive approach (Otoiu et al, 2019).

Most studies in rivalry literature found a positive link between rivalry and performance. However, there are others who reported a decrease in performance as a result of rivalry; most of these studies emanate from psychology. See a comprehensive review provided in Milstein et al. (2022). Another dimension to rivalry was discussed in Pike et al. (2018), which established that the influence of rivalry on performance is long-term, a feature they referred to as "long shadow." In addition, they also reported that rivalry motivates one's performance even in contests that are not directly against one's rival.

The Ronaldo-Messi Rivalry

Since 2007, Ronaldo and Messi have been two top competitors for the Ballon D'Or annual football award and FIFA world player of the year as they both are consistently featured in the top three. We recall the Champions' League final of 2007-08 in which the media turned the competition between two teams to a contest between the two players. The competition between Ronaldo and Messi officially developed into rivalry when the former secured a move to Real Madrid in 2009. Prior to his move, Barcelona and Real Madrid had been top contenders for dominance and trophies in LaLiga. Ronaldo's decision to join Real Madrid changed the El Classico[3] from an intense competition between two teams to a duel between the two players.

The duo has made significant history in football; they have broken many sport records and set new ones. They have both won a total of 79 trophies and are the only two players to have scored more than 800 goals each. Messi ended his spell at Barcelona with four Champions' League and 10 LaLiga titles while Ronaldo finished with five Champions' League titles, three of which were won in a row between 2016 and 2018. He also won two LaLiga titles. In terms of individual trophies, they have between them 12 Ballon d'Ors awards between 2008 and 2021—Ronaldo won five while Messi won seven.

The rivalry between the two ended when they both left European clubs in 2023; Ronaldo left for Al-Nassr in Saudi Arabia and Messi for Inter Miami in the United States. Ronaldo, in an interview that was conducted while preparing for European Championship qualifiers against Slovakia and Luxembourg, admitted that the rivalry has ended (Schlachter & Cotovio, 2023).

Why Goals and Assists Should Suffice to Measure Sport Performance of a Forward Player

The number of goals and assists are simple and basic descriptive statistics in football; however, they have important implications for the game. For instance, goals are the most important part and the ultimate goal of every game because they alone win games. Whatever attributes any player or team may have, if they do not translate to goals then they are, at best, good for entertainment. Matches, however, are not won on the basis of entertainment but number of goals. Next on the scale of importance is the number of assists because it is closely connected to goals and can also be used to measure teamwork. Thus, the influence of a forward player in a team can be reliably summarized in goals and assists just as the entirety of an educational degree program is effectively summarized in one descriptive statistic such as the cumulative grade point average (GPA).

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[3] El Classico is the football competition between Real Madrid and Barcelona.

Several other metrics exist in the literature such as the individual trophies and awards won; however, they are subjective and can easily be contested. For instance, the seventh and eighth Ballon d'Ors that were awarded to Messi generated a lot of controversy among sport stakeholders and fans. It is only trophies based on goals such as the golden shoes that are not contestable.

The number of fans and/or fans' loyalty, quality, and level of league are some other factors that could influence the performance of a football player; however, these could also be vague and difficult to quantify. Wages could also contribute to sport performance. Thadeu and Gasparetto (2012) had earlier documented a positive association between salaries and on-field performance in Brazilian Championships between 2007 and 2010. However, it is unlikely that salary could cause some disparities in the performances of both players under review as both were well-paid in their respective clubs and were the two highest paid footballers in the world (https://www.goal.com/en-ng/news/messi-edges-out-ronaldo-as-worlds-highest-paid-footballer/).

Further, some other metrics are derivatives of goals and assists. For instance, titles and team trophies are won based on the number of games won by a team; the number of games won in turn depends on goals. The goal-scoring prowess of a forward player also plays the most significant role in his ability to attract individual trophies and awards.

Other metrics include the individual attributes of a player such as being a playmaker, best at taking penalties, having a good attitude on and off the pitch, and so on. These attributes are, at best, a means to an end. If they all do not translate to scoring goals then they cannot win matches, which is the ultimate goal in football. Besides, what each fan finds amusing varies such that one player cannot be tagged the master entertainer; while some people enjoy Messi's dribbling skills and playmaking qualities, others prefer Ronaldo's numerous scoring tactics. Worthy of mention is the obvious fact credited to Nolan (2012) that the attributes a player displays often depend on the position he advances from—the wing or center.

In summary, goals and assists are not the only existing or valid metric to compare forward players; however, they provide a widely acceptable way to summarize the entire career of a player just as cumulative GPA would a tertiary institution student's degree program.

Data and Methodology

Data on number of goals, assists, and appearances by season are freely available online at https://messivsronaldo.net. The span of the data is from the start of their careers until they left European clubs; that is 2002-03 through 2021-22 for Ronaldo and 2004-05 through 2021-22 for Messi. We created a categorical

variable labeled "Rivalry" which takes value "No" from the start of their careers until 2008-09, after which Ronaldo joined Real Madrid. For the remaining seasons from 2009-10 until 2021-22 when he left Europe for Asia, the variable took value "Yes." Our definition of individual rivalry between the duo covers all the competitive games in an entire season rather than only the games where they competed against each other. This follows from Pike et al. (2018), who established the "long shadow" of rivalry such that a rival's performance in previous games motivates the player to perform better in future competitions, even in games outside head-to-head competitions. Besides, the Ronaldo-Messi rivalry extends beyond head-to-head because in both direct and indirect competitions against each other, each of them is trying to outperform the other because he is also trying to set incredible records ahead of his rival.

We also created another variable "Experience" to account for the experience that they have both gathered over the years. As they grow in age, they would be more experienced and this is expected to reflect in their on-field conduct and enhance their performance. We measured Experience by the number of years spent in the profession; hence for Ronaldo's first season in 2002-03, the variable takes a value of 1 and keeps graduating until the last season in 2021-22, when it takes a value of 20. Similarly, in Messi's first season in 2004-05, the variable takes a value of 1, and in the last season in 2021-22, it takes a value of 18.

Ronaldo started his career two years earlier than Messi, thus using the total number of goals and assists as is could result in some "undue" advantage in favor of the former. We circumvented this by dividing the total number of goals and assists per season by the corresponding number of appearances. We termed this "penalized" total number of goals and assists:

$$Penalized\ total\ number\ of\ goals\ per\ season = \frac{Total\ number\ of\ goals\ per\ season}{Total\ number\ of\ appearances\ per\ season} \quad (1)$$

$$Penalized\ total\ number\ of\ assists\ per\ season = \frac{Total\ number\ of\ assists\ per\ season}{Total\ number\ of\ appearances\ per\ season} \quad (2)$$

Another advantage that may accrue from measuring performances using the penalized approach is that it allows the goals and assists to be measured as probabilities rather than just absolute figures. This probabilistic approach is more illuminating and easier to interpret.

The Multivariate Analysis of Variance (MANOVA)

Consider the following observation vector

$$y = \left(\frac{\textit{Penalized total number of goals per season}}{\textit{Penalized total number of assists per season}} \right).$$

The model for each observation vector is (Rencher, 1998),

$$y_{ij} = \mu + \alpha_i + \beta Z_{ij} + \varepsilon_{ij}; \ i = 1,2, j = 1,2,\cdots, n_i, \tag{3}$$

where $i = 1$ represents Ronaldo's characteristics and $i = 2$ represents Messi's. n_i represents the sample sizes for each player or the total number of seasons each player has spent in professional football until 2021-22; μ represents the overall mean, α a measure of the rivalry effect on the observation vector, β represents the effect of the covariate "Years of Experience" (or Experience, for short) denoted Z. ε is the random error term assumed to be independently and identically normally distributed with 0 mean and variance Σ. Thus, for instance, y_{1j} represents the combination of Ronaldo's penalized total number of goals and assists in season j while y_{2j} represents the combination of Messi's penalized total number of goals and assists in season j.

The grand mean is calculated as

$$\bar{y} = \frac{1}{\sum\limits_{i=1}^{2} n_i} \sum_{i=1}^{2} \sum_{j=1}^{n_i} y_{ij} \ . \tag{4}$$

while the mean for each player is calculated as

$$\bar{y}_{i.} = \frac{1}{n_{i.}} \sum_{j=1}^{n_i} y_{ij} \tag{5}$$

The null hypotheses, H_0, to be tested are:

(i)   Given his years of experience, there is no significance difference in the average performance of Ronaldo while the rivalry lasted.

(ii) Given his years of experience, there is no significance difference in the average performance of Messi while the rivalry lasted.

If H_0 were true then there is no significant difference in the average performances of the two players based on their number of goals, assists, and appearances while the rivalry lasted. Details on sources of variations and degrees of freedom are contained in Chatfield and Collins (1980). MANCOVA proceeds by computing the Wilk's lambda and the corresponding F and p values. Subsequently, a statistical decision is made.

MANCOVA computations have been made easier with the introduction of common statistical softwares such as SPSS and R. This study was carried out using the SPSS.

Results

Table 1 refers to summary statistics for the two players. Figure 1 displays the plots of their (penalized) goals and assists. From the table, the average number of goals for Ronaldo during rivalry seasons is 55% more than that during the non-rivalry seasons; whereas, on the average, Messi had 48% more goals in the rivalry seasons compared to non-rivalry. The average number of assists for Ronaldo in non-rivalry seasons was 5% less than that during the rivalry seasons. In the same vein, Messi had 19% more assists during the rivalry seasons.

Table 1. Summary Statistics

Player	Variable	Rivalry	Mean	SD	N
Ronaldo	Goals	No	.35	.22	7
		Yes	.90	.15	13
	Assists	No	.17	.05	7
		Yes	.22	.08	13
Messi	Goals	No	.38	.21	5
		Yes	.86	.18	13
	Assists	No	.18	.14	5
		Yes	.37	.11	13

In addition, we observe from Figure 1 that the number of goals and assists were generally higher during rivalry seasons. Thus, it appears that their average performances in the rivalry seasons were better than the non-rivalry. In other words, it appears that the rivalry effect boosted their performances.

    Before MANOVA could be applied, certain assumptions must be met. These include the normality of variables and homogeneity of covariance. Two statistics were employed for test of normality: Kolmogorov-Smirnov and Shapiro-Wilk. Results are placed in Table 2. By and large, we can conclude, at the 5% level,
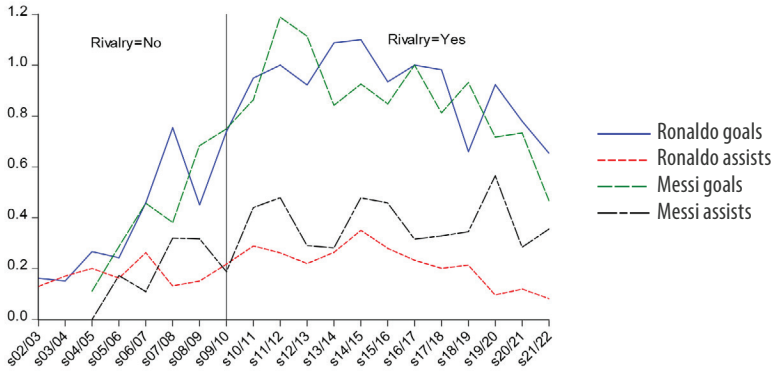

Figure 1. Plots of Ronaldo's and Messi's performances.

Table 2. Test of Normality

Player	Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	*df*	**Sig.**	**Statistic**	*df*	**Sig.**
Ronaldo	Goals	.197	20	.040	.892	20	.029
	Assists	.100	20	.200	.977	20	.889
Messi	Goals	.160	18	.200	.958	18	.555
	Assists	.174	18	.159	.962	18	.649

that the data are approximately normally distributed since the *p*-values were all greater than 0.05 except, of course, for Ronaldo's goals.

    Also, test of covariance results placed in Table 3 revealed that at the 5% level, there is homogeneity of variance across groups since the *p*-values exceeded 0.05.

Table 3. Test of Homogeneity

Statistic	Ronaldo	Messi
Box's M	6.062	2.112
F	1.735	.564
df^1	3	3
df^2	3651.339	920.464
Significance	.158	.639

At the start of the inferential analysis, we conducted multivariate analysis of variance (MANOVA) on the data, ignoring the covariate Experience. Test results are placed in Table 4. It is evident that the rivalry effect is significant at the 5% level. The inference here is that if we do not take into account their experiences and assume (though unrealistically) that their performances are only affected by the rivalry effect over the seasons, then the rivalry between the duo significantly affected their performances. Considering the column labeled "Effect size," it is easily seen that the rivalry effect is greater in Ronaldo's performance.

Table 4. MANOVA Results

Source of Variation	Player	Wilk's Lambda	F	Hypothesis df	Error df	Sig.	Effect Size
Rivalry	Ronaldo	.276	22.267	2.000	17.000	.000*	.724
	Messi	.387	11.877	2.000	15.000	.001*	.613

*Significant at the 5% level

Further investigation using "test of between-subject effect" (see Table 5) showed that the rivalry effect only affected Ronaldo's goals whereas both goals and assists were affected in the case of Messi. Thus, in the case of Ronaldo, it is obvious that the significant difference was only visible in the number of goals. Now in line with what was earlier observed in Table 1, we can conclude that rivalry boosted Ronaldo's average performance in the number of goals scored. In the same vein, it can be concluded that Messi's average performance experienced a significant all-round boost in both the number of goals and assists as a result of the rivalry between the duo.

Table 5. Test of Between Subject Effect

Player	Variable	Mean square	F	Significance
Ronaldo	Goals	1.363	45.074	.000*
	Assists	.009	1.898	.185
Messi	Goals	.823	22.493	.000*
	Assists	.125	9.523	.007*

*Significant at the 5% level

When their years of experience were explicitly accounted for, we observed from Table 6 that the inclusion of the covariate did not diminish the effect of rivalry on their performances, as the statistic for rivalry remained significant at the 5% level after the inclusion of Experience as a covariate.

It is noteworthy, however, that Messi's experience over the years did not significantly affect his performances. In addition, having controlled for their years of experience, the rivalry effect, as seen in the effect size, affects the performances of both players (almost) equally; Rivalry effect size ≈ 0.5.

Table 6. MANCOVA Results

Player	Source of Variation	Wilk's Lambda	F	Hypothesis df	Error df	Sig.	Effect Size
Ronaldo	Rivalry	.482	8.584	2.000	16.000	.003*	.518
	Experience	.604	5.250	2.000	16.000	.018*	.396
Messi	Rivalry	.463	8.103	2.000	14.000	.005*	.537
	Experience	.766	2.133	2.000	14.000	.155	.234

*Significant at the 5% level

Discussion

Earlier in Table 1, it appeared that there was an increase in the average performances of both players as a result of the rivalry that ensued between them. Later in our inferential analysis, we found significant evidence to support this claim. We also observed that the rivalry effect between the players was so strong that it failed to disappear even when the models controlled for their years of experience. We can,

therefore, infer that the average performances of both players received a boost as a result of their rivalry. This result provides quantitative evidence in support of the positive effect of individual rivalry on performance. Our finding, therefore, supports Kilduff (2014).

We also found evidence that the effects of rivalry on their performances are approximately similar. Both players, in one way or the other, have acknowledged the rivalry between them and admitted that it makes them perform better. According to an ESPN report from June 7, 2017 (www.espn.com/soccer/story/_/id/37524174/leo-messi-praises-phenomenal-cristiano-ronaldo-reiterates-barca-committment), Messi praised Ronaldo as being phenomenal and added that he enjoys the rivalry between the two players; however, he downplayed the rivalry claiming that it was not important to him. His manager at Barcelona, Xavi, in an interview with the BBC documentary 'Messi: The Enigma.' however, did not agree with his statement; he noted that it is natural for the players not to admit the rivalry between them but that he is convinced that they have an eye on each other and that the rivalry has certainly improved Messi's performance. Ronaldo, on the other hand, openly admitted that he enjoyed the healthy rivalry between them and that it had made him a better player (PTI, 2020).

The study presented empirical evidence that individual rivalry boosts players' performance. The rivalry between Ronaldo and Messi increased their performances and made them the favorites of most football fans. Beyond this, individual-rivalry-induced performance also has important implications for business managers and club owners (Havard & Dalakas, 2017). For instance, a direct consequence of the Ronaldo-Messi rivalry on their teams was that it improved the image, media visibility, and brand. Report has it that Real Madrid lost 1 million Twitter followers within 24 hours of Ronaldo's exit (https://www.sportsbible.com/football/news-fails-reactions-real-madrid-lost-million-followers-inside-24-hours-after-ronaldo-left-20180903). Within a few minutes after Messi's move to Inter Miami was confirmed, ticket prices for the game between Inter Miami and New York Red Bulls rose by more than 1,236% (https://www.cbsnews.com/miami/news/soaring-ticket-prices-and-a-social-media-boom-the-messi-effect-on-us-soccer/). This underscores the important implications of rivalry for business managers and club owners. It is important that they create a conducive atmosphere for healthy competition between players to place their brand in a better position for advertising placements, sponsorships, and profitable ticket pricing.

Individual rivalry-induced performance also has important implications for the players themselves. It has the ability to increase a player's earnings, media visibility, and brand. Ronaldo and Messi are among the top highest paid footballers globally (Settimi, 2021). They also have great influence on football fans

as evidenced by their huge followers on social media platforms. Big companies compete for their endorsements. Both players are among the top three most followed on social media with Ronaldo occupying the first position (Statista, 2022). In terms of athlete brand, Ronaldo has taken advantage of the rivalry and increased media visibility to build a formidable brand tagged "CR7." The brand has been successfully developed into a huge business empire that produces many popular products.

Conclusion and Future Research

The main objective of this article is to provide empirical evidence on the theory that individual rivalry influences sport performance. We made a case study of the rivalry between Cristiano Ronaldo and Lionel Messi. Their performances were measured using non-subjective metrics such as the "penalized" number of goals and assists. Multivariate analysis of covariance was employed. We controlled for players' years of experience in order to accurately capture the differential effect of rivalry on their performances. Empirical results revealed that the average performances of both players received a boost as a result of the rivalry that ensued between them. This, therefore, provides quantitative evidence in support of the positive effect of individual rivalry on performance. We observed further that the effects of rivalry on their performances are approximately similar. The study gave reasons why business managers and club owners should create and encourage healthy competitions among their players. It also explained why individual rivalry is important for each player, citing copious examples from personal experiences of Ronaldo and Messi. We also found evidence to support the claim that the years of experience Messi has in professional football did not significantly affect his performance. This claim clearly needs further investigation.

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