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Slim Win Games: An Analytic Appraisal of the African Nations Cup Finals (AFCON 2013)

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The game of football (or soccer) enjoys one of the greatest followings in the world. The African Nations Cup Finals is played biennially at some selected locations and draws participants from sixteen (16) countries that were competitively selected after series of qualifying games played on the league basis – home and away games. This paper focuses on an analytical appraisal of the African Nations Cup with a view to gaining better understanding of the tournament, its format and changing scenarios from one level of the competition to another. We examine the changing rules and scenarios of the AFCON game as it moves through various stages and look at the predictability of the winners.

Keywords: Football, Slim-Win, Game, League, Adversarial Game.

INTRODUCTION

There are a lot of games that are of interest in artificial intelligence and games theory. Coppin (2004) remarked that one of the most interesting and well-publicized areas of artificial intelligence research has been in the playing of games. Some games are played by two or three persons. In the class of adversarial games, that is, games in which players play to win and reduce the chances of the opponents to win; efforts are made to gain advantage over the opponent. In the player's moves, he maximizes his advantage and minimizes the advantage of the opponent. When the opponent plays, he does exactly the opposite, minimizes the advantage of the opponent and maximizes his own advantage. In view of the fact that such games would result in a win, a loss or a draw, it is often described as a zero-sum game.

A zero-sum game is one in which the gain of one player is balanced exactly by the loss of the other player (Jones, 2008). The game of chess is an

example of a zero-sum game. In some games, both players have a perfect knowledge of the configuration of the game and possible moves by the opponent. However, in other games, there are elements of surprises. These are called perfect information and non-perfect information games, respectively. Milman (2006) has studied two-player zero-sum vector-payoff finite stochastic games in great depth. Chess is a static, turn taking game where players have complete and accurate information about the current status of the game and a centralized control. In contrast, football is a dynamic, real time game with incomplete sensory information and distributed control (Tame, 1999). Football is an adversarial game played by two teams and can end in a win, a draw or a loss. Each team synergies to win a match and team members combine efforts to force the opponent to loose. A team wins when it scores a simple majority over the opponent.

The game of football has some elements of chances. Two teams that play under similar circumstances may produce different results at different times. Nobody can precisely predict the outcome of a fair game of football. Being highly dynamic and unpredictable, football qualifies as an imperfect information game. On the other hand, we can classify it, as a modified zero-sum game in that though there can be a win, a loss or a draw, there are other parameters taken into consideration. For instance, the number of goals scored is counted and this may be a differentiating parameter when teams are tied on points.

Football game is played from the toddling age to middle age. It is a vigorous game that engenders a lot of passion and is followed by the young and the old. Football is regarded as a team game where each match is highly competitive (Sannicandro et al. 2012). Also, Brito et al. (2012), described football as a high demand sporting activity. The game creates a lot of excitement from all followers, which are called football fans. At the highest level of football, each country has a national football team, coached by a national team coach or manager and administered by a national federation. Club level football helps to raise the level of the game by organizing a league format tournament, which is played on a home and away basis. Players in such clubs are subjected to rigorous training, skill development and coaching. At the end of a season which is made up of 38 games in a 20-club league, a team emerges as the winner and is crowned as the reigning champion for a year. Usually because there can be so many club sides in a nation, the clubs are organized into various tiers. In England for instance, there are Premier League (EPL), First (1st) Division and second (2nd) Division. At the end of the season, three teams that occupy the bottom of the EPL table are relegated and their positions are taken over by the three top performers at the First (1st) Division.

Great clubs in Europe enjoy strong followership in Africa. It is common to find Arsenal FC, Manchester United FC, Chelsea FC, Liverpool FC, and Barcelona FC fans in Nigeria and other African nations. Whenever, the league games are played, a lot of passions are displayed among fans; arguments are generated and sometimes this can degenerate to physical engagements. Much of the interest in foreign leagues stems from the fact that many African footballers play in these leagues and

they are doing well. For instance, John Mikel Obi and Victor Moses from Nigeria play for Chelsea FC of England, Yaya Toure and Kolo Ture from Ivory Coast play for Manchester City FC and Michael Essien of Ghana plays for Real Madrid of Spain.

National team players are drawn from some of the best players from the club sides. In other words, all players belong to some club sizes but only a set of them belong to their National team. Therefore, it is often likely to find that the number one goal keeper of a national team is also the number one goal keeper of a big club side. The competitiveness of the club sides has therefore raised the standard of the game at the national level. Besides, the various skills and tricks learnt at the club levels impact positively on the national team performances, as there is a good blend of styles and skills at the national level.

Furthermore, since selection is only limited to 23 players, some very wonderful players may be left out of the tournament. The coach develops a game plan and he looks for the best hands that can fit into this. Those who may be very good but would otherwise not fit into his game plan would be inadvertently left out of the squad.

Hoshino and Kawarabayashi (2011) examined the scheduling of bipartite tournament with the view of minimizing the total distance covered in home and away games. They consider a case in which teams X and Y, each with n players compete against each other with the goal of determining the superior team. The game of football has been simulated in a robotic multi-agent collaboration and team-work system. This has been demonstrated in a RoboCup soccer tournament, RoboCup '97, which held in August 1997 in Nayoga, Japan (Tambe et al., 1999). In this paper, however, we present a real life tournament with all the maneuverings, intrigues and challenges. Games were competed for, won and lost at the field of play. Several real life factors interplayed to determine the success or failure of the participating

The popularity of football has grown significantly in recent times. FIFA claimed for instance that the FIFA world cup 2010 in South African attracted about 3.2 billion people (46.4% of world population) who watched the world cup in in-home television viewing; this represents about 8% increase over those who watched the 2006 world cup in Germany (Kantar Sport, personal communication). No fact is

available on the in-home viewership of AFCON 2013. However, in a pre-tournament preview, the local organizing committee Chief Executive Officer of AFCON 2013, Mvuzo Mbebe projected that about 2.3 billion people would watch AFCON 2013 around the world while some 40,000 visitors will come into South Africa during the games (Ventures, personal communication). According to reports, total attendance at stadia in AFCON 2013 stood at 729,000 (22,781 per match), a 60% increase over AFCON 2012 edition of 456,332 (14,260 per match) and 34% over that of AFCON 2010 with attendance 543.500 (18,741 per match) (Wikipedia, http://en.wikipedia.org/wiki/2013 Africa Cup of Nat ions, personal communication).

The African Cup of Nations (AFCON) holds at alternate years, that is, biennially. The finals take place in a country that must be able to provide at least four FIFA standard stadia. Sixteen nations compete at the final games. At each game, the players in each team are the major attractions. Other participants include the referee, the assistant referees, reserve referee, match commissioners and the fans. The referee, assisted by two assistant referees enforce the rules of the game. The match commissioners observe every game and offer technical opinions and write technical reports at the end of each game. The CAF (Confederation of African Football) officials and national federation officers are also present in the stadium. The fans serve to motivate their teams and encourage them to win. The number of fans is limited by the size of the stadium and guided by FIFA rules. FIFA, the world governing body of football have enacted strict standards on number of fans, conduct of fans and entrance and exit modalities.

The rest of the paper is organized as follows: in section 2 we look at the materials and methods adopted in this study. Section 3 presents the results of the study while in section 4 discussions are made. In section 5 we draw some conclusions.

MATERIALS AND METHODS

Football Basics

In line with Tame et al. (1999), we attempted to describe the basics of the football game in the following. Football is a continuous game between two teams competing in a rectangular field (Figure 1), each attacking a goal at the end of the opposite side of the field. The borders of the football field are referred to as sidelines (or touch lines). A football match is played in two halves of equal time duration and two extra periods (in playoff games, if necessary). The team scoring a greater number of goals during the entire course of the match is the winner. Each team consists of eleven players, one of whom is a designated goal keeper. A kick-off from the centre of the field is the way for starting the match. The play also resumes from the centre after any team's scoring a goal, starting the second half, or starting the extra time period. All players must be in their own side of the field before a kick-off.

Team Strategy

Due to the dynamic nature of football, a team plays according to a general team strategy but not to detailed step-by-step instructions. The creativity of the players can make a difference on which side wins the game. The team strategic philosophy determines the style of play and within that strategy; each player can express his creativity to take vital chances at scoring or to pass the ball to the player that is more strategically placed to score a goal. The ultimate goal of a team engaged in a football match is winning the match by scoring as many goals as possible and attempting to keep the opponents from scoring. In order to achieve the team's goal, football players are expected to possess several defensive and offensive skills (depending on their role in the game) with different levels of sophistication. Some of these skills are: passing to a teammate, shooting at the opponent's goal, dribbling, intercepting the ball, clearing the ball away from own goal area, marking opponents, tackling opponents, and positioning in the field. These skills often require a great deal of coordination and synergy between the player and one or more of his teammates. For example, a player passing the ball to a teammate expects the intended receiver to be prepared to intercept the ball in order for the pass to be successful. The basic rule of moving the ball to the next teammate is that there is a chance of playing the ball to him without it being intercepted by an opponent.

Four major departments are expected in the football team. The first 11 players that start the game can be express as follows in equations 1, 2 and 3:

 $Team_A = \{Player_1, ..., Player_{11}\}$

$$= \{Goalie, Defenders, Midfielders, Attackers\} \dots (1)$$

$$Goalie = \{Player_1\}$$

$$Defenders = \{Player_2, \dots, Player_d\}$$

$$Midfielders = \{Player_{d+1}, \dots, Player_e\}$$

$$Attachers = \{Player_{e+1}, \dots, Player_{11}\}$$

$$(2)$$

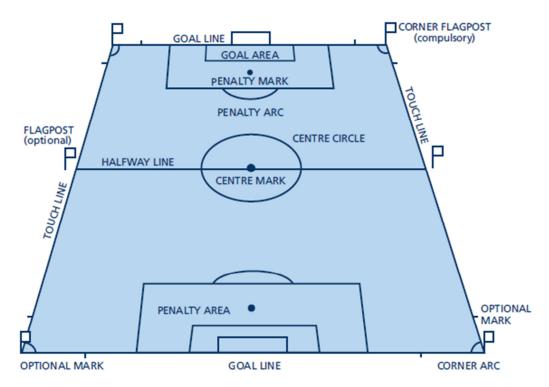


Figure 1. A typical football pitch (Source: FIFA, 2012).

Team Formation = {Attacking | Defensive}
=
$$\{x - y - z | x - y - z - w\} \dots \dots (3)$$

Apart from the Goalie that must be one per team, each of the other departments may feature multiple players depending upon the game strategies of the team manager. Whether the team strategy is defensive or offensive determines how many players are put in each department (equation (3)). These are called formations. In a 4-4-2 formation, there are four players playing the role of defenders, four players man the midfield and two players in the strikers' position. This formation is more of a defensive formation in that the defense line and midfields are choked and two attackers are put forward to take scoring chances. 4-3-3 and 4-2-4 are some of the other formations, and these are more attacking minded. We note that no role is more important than another role in the game of football. Since the main objective of the team is to score goals and win the match, anybody who is well positioned can score the goals. However, it could be more probable that the attackers or strikers will have better chances and skills to score the goals.

Slim-Win Rule

In the AFCON games, a game is won by any margins,

even slim margins. Let the score of the team A be represented by X, and the opposing team B be represented by Y. The following outcomes are possible as shown in equation 4:

$$GameOutcome \\ = \begin{cases} Team_A \ wins, iff \ X > Y \\ Team_B \ wins, iff \ Y > X \\ Team_A \ draws \ Team_B \ iff \ X = Y \end{cases} \dots \dots \dots (4)$$

Therefore, a team wins over the opponent with any of the following results: 1-0, 2-1, 3-2, or 5-4, etc. A win by a wide margins such as 4-0 or 10-3 are valid but are not really necessary. A game is drawn only if there a tie in scores - 0-0, 1-1, 2-2, etc. It is informative to note that a team that scored first does not necessarily wins. A winner is the one who has the highest number of goals at the expiration of the play time. A team that has been leading all the while can suddenly find itself losing out if the opponent redoubles efforts and puts in some goals that obliterate the advantages of the opponent. To this end, we often hear "it is not over until it is all over." A last minute win or draw can be forced if the previously winning side loses concentration at the dving minutes of the game. For instance, in the English Premiership League, Arsenal cancelled out a 0-5 deficit to Reading in an FA game, and came to win by 7-5 at the end of

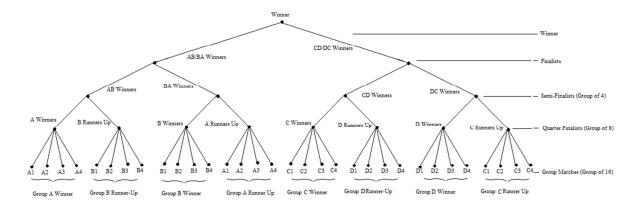


Figure 2. AFCON Tournament Game Tree.

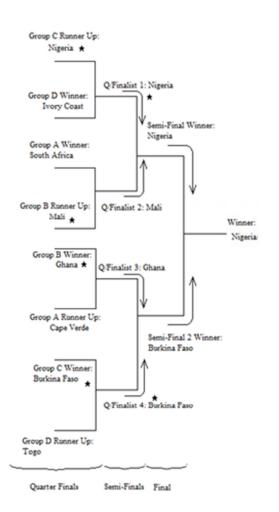


Figure 3. From Quarter-Final to Final of AFCON 2013.

the game. Such miracles, however, are the exceptions, not the rule.

AFCON Game Rules

The AFCON is governed by certain rules. These rules form a code of conduct for the players and any contravention of the rules are penalized. Some of the rules specify foul play, penalty, cautions (yellow card and red card), goal, corner kick, and offside.

AFCON Game Tree

Figure 2 depicts the AFCON game tree. Each node represents a team and a pair of edges is the game played by the two teams at the nodes in each stage of the tournament.

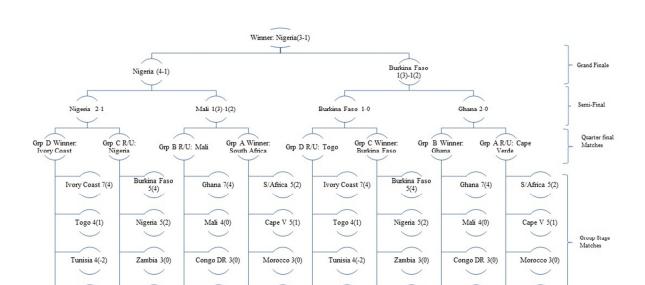
Group Games

At the group stage, sixteen (16) teams are involved; they are grouped into four (4) groups - A, B, C, and D. Each team will play three games and six games are played in each group, making twenty-four games altogether at the group stage.

Taking group A for instance, the following team pairing is made: A_1/A_2 , A_1/A_3 , A_1/A_4 , A_2/A_3 , A_2/A_4 and A_3/A_4 . Since a game can be won, drawn or loss by a team, the aggregate of each game counts at the end of the group stages. A game won earns three points, a game drawn earns one point and a game lost earns zero point. Any team that wins all three games will earn nine points and become the group leader or winner. The best that the runners up in that team can earn after the group leader has won all games is six points if it won two games and lost to the winner. Other winning combinations are also possible. For instance, if the group leader

Algeria 1(-4)

6



Algeria 1(-4)

Ethiopia 1(-6)

Niger 1(-4)

Angola 1(-3

Figure 4. The Road to the Grand Finally of AFCON 2013.

Ethiopia 1(-6)

Niger 1(-4)

Angola 1(-3)

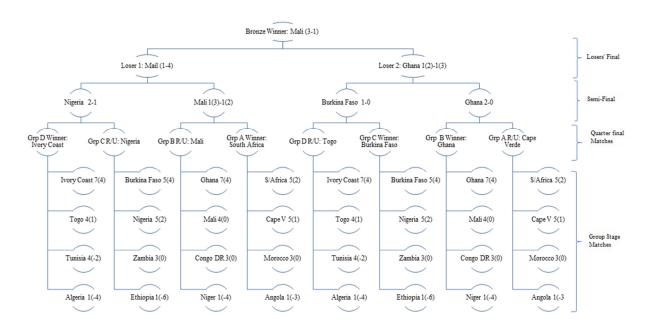


Figure 5. The Road to the 3rd Place Match of AFCON 2013.

won two games and drew one, he would have earned seven (7) points and the runners up may also earn 7 points but with lower goals difference. If they tally on goals difference, then other rules are invoked to determine the group leader. These include head to head rule and fair play records. When fair play is used to determine the group leader, the team with the least number of cautions are adjudged to be the group leader.

Table 1. Team pairing and conditions under which Team A1 wins and Team A2 will be runner up and advance to Quarter Final.

Team Pairing	Scenario1	Scenario2	Scenario3	Scenario4	Scenario5	Scenario6
A1 vs A2	3	3	3	1	1	1
A1 vs A3	3	1	1	1	1	1
A1 vs A4	3	3	3	3	3	3
Total	9	7	7	5	5	5
A2 vs A1	0	1	1	1	1	1
A2 vs A3	3	3	1	1	1	1
A2 vs A4	3	3	3	3	3	1
Total	6	7	5	5	5	3
A3 vs A1	0	0	0	1	1	1
A3 vs A2	0	0	1	1	1	1
A3 vs A4	3	3	3	3	1	1
Total	3	3	4	5	3	3
A4 vs A1	0	0	0	0	0	0
A4 vs A2	0	0	0	0	0	1
A4 vs A3	0	0	0	0	1	1
Total	0	0	0	0	1	2
G/Total	18	17	16	15	14	13

Table 2. Team Standings at the end of Group Matches.

Group	Team	Play	Wins	GD	Points
A1	S/Africa	3	1	2	5
A2	CPV	3	1	1	5
A3	Morocco	3	0	0	3
A4	ANG	3	0	-3	1
B1	Ghana	3	2	4	7
B2	Mali	3	1	0	4
В3	CDR	3	0	0	3
B4	Niger	3	0	-4	1
C1	B/Faso	3	1	4	5
C2	Nigeria	3	1	2	5
C3	Zambia	3	0	0	3
C4	Ethiopia	3	0	-6	1
D1	C/D'ivore	3	2	4	7
D2	Togo	3	1	1	4
D3	Tunisia	3	1	-2	4
D4	Algeria	3	0	-3	1

Team A1 will be the group leader and Team A2 may be the runner up under the conditions in Table 1. We note that under certain scenarios goal differences or other considerations have to be used to determine the winner and runners-up. We have represented each group with paired branches because two top teams from each group will emerge to the quarter final stage. The winners of Group A will meet with the runners up of group B while the winners of Group B will play the runners up of group A. In the same vein, the winners of Group C will play the runners up of group D and the winners of Group D will play the runners up of group C.

Quarter Final Games

At the quarter final stage of the competition, only one game is played and there is no second chance. This is the knock-out stage. The team that loses drops out of the tournament while the winning team advances to the semifinal. Here again, only a simple win is needed. When the game ends in a draw, there is an extra time and if still there is no winner, then penalty playoff is ordered. At the quarter final state, a winner emerges in a winner takes it all style.

Semi Final Games

The last four teams in the tournament move to the semifinal stage. At this stage the winners must also emerge either at regulation time or extra time or penalty shoot-out if both do not produce winners. However, unlike at quarter final stage, both losers do not go out here. They go ahead to play for the bronze which the winner takes. The winners at the semi-final stage go ahead to play at the final. The winner at this stage emerges as the champion and goes home with the gold cup while the loser takes home the silver.

We note that football remains a game. Performances at the guarter final have nothing to do with what happened at the group stage. In other words, each team stands a chance to win. Even though we can forecast that a team may win a match with higher probability because of antecedents, these are mere speculations. On the pitch, the result is wholly determined by the mental and the physical states of the players and how they are able to implement the team's game plan. It is also a common knowledge that a player who performs exceptional well in a match may be the culprit when his team loses to the opponent in their next game. For instance, a player that scores a vital winning goal in a previous match may score an own goal which jeopardizes his team's chances in the next game, or loses a penalty that would have resulted into a win. Furthermore, a team that had a clean record in all matches in the group stage may lose to a team that was struggling and only managed to qualify. However, a good team at the preliminary stage can also do very well as the game progresses to the final stages.

The worst case scenario for a team to win the AFCON tournament is that the team must have at least a draw in all group stage matches and qualify for quarter final, wins the quarter final, semi-final and the final games. There must be a win at least in the last three games. The most interesting scenario is for the team to win all matches at the group stage, then all marches from the quarter final to the final. Any team that wins the six matches would be respected as a true winner but nothing can be taken away from the team that drew all matches in the group stage and still went ahead to win the tournament. That team would be seen as the most improved team of the tournament and a giant killer, particularly if it qualified as the runners-up in its group.

AFCON 2013 Guidelines

The tournament was guided by the following rules and formats (AFCON, 2013);

Sixteen (16) teams were grouped into four (4) groups which were based in five host cities - Johannesburg, Rustenburg, Durban, Nelspruit and Nelson Mandela Bay.

Group A: - South Africa, Angola, Cape Verde, Morocco

Group B: - Ghana, DR Congo, Mali, Niger

Group C: - Zambia, Burkina Faso, Nigeria, Ethiopia

Group D: - Ivory Coast, Algeria, Togo, Tunisia

The sixteen (16) teams which were drawn into four (4) groups of four played a round-robin with mini-league

groups. The top two teams from each group progresses to the quarterfinals. There were six matches in each group and 24 in total during the group stage. Article 72 of the CAF Africa Cup of Nations regulations clarifies the parameters that will determine who progresses from the group in the event of a tie.

Knockout stage

This will be a straight elimination series with games played out for 90 minutes, followed by 30 minutes of extra time and, ultimately, if no winner emerges after full time and extra time, they will go straight to penalty shootouts (five kicks each) and thereafter, sudden death penalty kicks until a winner emerges. This guideline is stated in Article 73 of AFCON 2013 rules.

Predictability of Gold Winners

Each of the sixteen (16) teams that set out for laurels at the AFCON eyed the Gold cup. Some teams are however, classified as favourites by bookmakers based on their forms just before the games. In AFCON 2013, for instance, Ivory Coast and Ghana were the most favoured teams.

While Ivory Coast could boast of very outstanding players who ply their trade in Europe and are very much in forms at their various clubs (including the current African Footballer of the Year 2012, Yayah Toure, Ghana has a blend of youthful and experienced players. Other favourites for the Gold included Zambia and South Africa who were the current holders of the cup and the host of the game, respectively. Statistically speaking however, each of the participating teams at this stage has equal chances of winning the Gold. Hence, we can say the probability of any one of the teams winning is given in equation (5):

At the quarter final stage, only eight teams are left in the tournament and the each team now has better chances of winning the Gold. The new probability is given in equation (6):

We note that teams in the quarter finals have twice as much chance to win the AFCON 2013 as those in the group stages. In a similarly vein, teams at the semi-final and the final stage have brighter chances of winning the Gold of the AFCON by equations (7) and (8).

$$P = \frac{1}{n} = \frac{1}{2} = 0.5 \dots (8)$$

RESULTS

Table 2 gives the teams standings at the end of group matches. The teams are sorted according to their performances in each of the groups, so the first two teams in each group advances to the quarter final stage. We note that no team in the tournament won all their three matches. Cote D'ivore and Ghana won two matches and drew one of their games.

DISCUSSION

Figure 3 depicts the games from the quarter final stage to the final stage. Four games were played in the quarter final. Teams in group A are paired with teams in group B on Winner/Runners-Up basis. In other words, team A Winner played against Runners-Up of team B while team A Runners-Up played against the Winner of team B. In the same vein, Winner of C met Runners-Up of team D and Runners-Up of team C played against Winner of team D.

In the first match of the quarter final, South Africa played against Mali and Mali won by 2 goals against 1 to advance to semi-final. In the second game, Ghana beat Cape Verde by 2 goals to 0 to advance to semi-final. In the third match, Nigeria won Ivory Coast by 2 goals to 1 while in the last game, Burkina Faso played and won Togo 2-1 at extra time. The losers went home immediately and four teams remained to play the semi-final games.

At the semi-final stage, Nigeria was paired against Mali while Ghana was paired against Burkina Faso. At this stage, two matches were played. The game between Nigeria and Mali produced a winner at regulation time and Nigeria won over Mali by 4 goals to 1. In the other match, Ghana played Burkina Faso and the latter won 3-2 at penalty shoot-out after a 1-1 draw at full time and extra time. The two winners, Nigeria and Burkina Faso now met at the final to determine the winner of the Gold cup. The road to the Gold cup of the AFCON 2013 is completely

enumerated in Figure 4. The illustration is in agreement with Figure 3 except that the Group stage matches are left out as shown in the Figure 3. The loser of final game goes home with the Silver cup. To determine the Bronze winner, the losers of the semi-finals played each other; Mali beat Ghana by 3 goals to 1 at regulation time to pick the Bronze cup (Figure 5).

Football involves huge spending and investments. What is the economic importance of football? One main factor is that football promotes friendship. At its best, the game removes racial differences and language barriers. An African player who plays in a good club in Europe is well respected in that foreign land. His image also would unavoidably impact on the image of his home country. Footballers are regarded as "ambassadors" of their countries of origin.

Secondly, footballers are well paid. They earn wages that are some of the best in any fields of human endeavours. However, it should be noted that the playing lifespan of a player is very short. Those who began competitive football at very early age of 18 or 19 may exhibit peak performances until late 30s and as such they earn actively only for about 15 to 20 years. During that time, they might have made some huge amount of money, which if invested wisely, can help them to continue to have good standard of living.

The other side of football economy is what is called diaspora remittances. Players send money home for the upkeep of their family members and for the purposes of acquiring properties. In view of the fact that we have huge number of African players playing in various club sides in Europe and other parts of the world, the diaspora remittances accruable through them can be huge. Though we do not have a clear picture of how many African players do business in Europe and other leagues around the world, it is speculated that they run into hundreds. According to (Hodges, ten (10) Highest Paid African Footballers, personal communication), the top ten African footballers earn an average of €9.7m. If we assume that they remit 5% to their home countries, this comes to Euro 0.485m. If we take this as baseline for Nigerian footballers abroad and project that there are one hundred of them, then their remittances will stand at €48.5m or ₩10billion in local currency. If we assume that other African countries have a quarter players as Nigeria and we

take twenty of them, then total diaspora remittances of African footballers abroad will stand at €300m. This is a conservative estimate.

Football promotes happiness. Psychologists have agreed that happiness have therapeutic effects on people. Even the holy book underscores the fact that a merry heart does well like medicine. The game of football produces high level of excitement and happiness among fans as well as viewing audiences in the comfort of their homes. Some people invest in cable television connectivity services primarily to watch league games played in Europe, Italy, Spain and so on.

Football also promotes brands and businesses. Various brands like Adidas, Puma, Nike, Emirates, Samsung have become closely associated with football. Technologies have also been developed to help the growth of football. Football makers have designed various types of footballs with varying aerodynamic attributes to keep pace with changing demands of the game; scoreboards have been changed overtime to better ones with enormous capabilities. In Africa, SuperSports is synonymous with football in the Africa continent and Europe.

One of the greatest gains of football is bringing players to the limelight and talent discoveries. Some of the outstanding players of the AFCON 2013 have just won for themselves profound jobs in the European leagues. Every great club is constantly on the lookout for outstanding talents that it can develop into global stars. The scorer of the winning goal for Nigeria and the goal that dismissed the Elephants of Ivory Coast may for instance soon land himself a juicy deal in an overseas club. According to (Kazeem, AFCON 2013; Who Made The Most Money?, personal communication) "For the African continent as a whole, the AFCON represents a big chance of player sales which sees funds flow into the various football systems in the individual countries in the case of African based players. For these players, the lure of European football is overwhelming and their sales generate a nice slice of the jackpot as in terms of revenue, the European football market is estimated to be valued at an astonishing £14 billion (\$22 billion). For the African based players and their football clubs, this is a winwin scenario."

During any football tournaments, the host nation and the host communities benefit immensely. Participants come and spend their foreign exchange on accommodation, food, souvenirs, clothing and a host of other things. According to Raya (2012), local authorities hold sporting events in their territory as a and positioning of their promotion international destination. The economic impact of sporting events depends not only on the number of participants but also, and among other things, on the length of stay at destination. Various empirical studies have found a positive correlation between length of stay and total expenditure, although shorter stays tend to be the ones that generate a higher daily expenditure per capita (Cannon and Ford, 2002; Kastenholz, 2005). Thus holding AFCON 2013 in South Africa for three weeks would have promoted a lot of economy activities in the host communities. Among the 40,000 visitors were also heavy spenders who could stay in the most luxurious hotels and buy the most expensive food, drinks and gifts.

Finally, the club sides for which these footballers are playing were watching with keen interest. As much as they want their players to do well, they don't want any of them to sustain injuries that can affect their careers at the club side. Usually, any injury picked up at the tournament is a huge loss to the club as the national teams are usually not responsible to the treatments of the players and this can seriously affect the club's game plan for the rest of the season.

CONCLUSION

Football is one of the greatest recreational games in the world and perhaps one that draws the highest number of followers. The African Cup of Nations has become a showpiece in the continent, drawing global attentions because of varying degrees of interests. The last edition showed that the game is widely enjoyed in the continent and there had been marked improvement in the standard of the game and the level of competitiveness. The fact that not many wide goal margins were recorded is a testimony to the maturity of the games and that there are no minors in football any more. Football is a game of teamwork; this has shown clearly in the fact that though some countries paraded big stars, nevertheless, they could not excel for lack of effective synergy. The game of football should be of interest in the field of artificial intelligence and game

theory for complexity, dynamism its and competitiveness. However, these qualities pose a lot of challenges that would task the minds of researchers. The slim win rule of the game is both intriguing and comforting; after 90 minutes, the winning team might have just had the slightest edge over its opponent. Even a single goal is enough to differentiate the teams. It is noted that the team that plays the most robust football may not always be the winner of the game. Goal-mindedness is the import of the game of football.

AFCON 2013 was played with changing rules and

scenarios. In the group stage, the best two teams in each team emerges. There is therefore room to make one or two mistakes and survive to the quarter final. At the quarter final, any mistakes send the team out of the tournament. At the semi-final, the losers are down but not out as they can take part in the playoff for the bronze cup. The finals are played by the two surviving teams of the tournament. Win or lose, each team goes home with either the gold cup or the silver cup.

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