## Attempts at Goal and Goals scored in 2018 World Cup

In previous World Cups I have analysed different elements of goals in order to make comparisons over time. In the 2018 World Cup I gathered the same data but also included attempts at goal to provide an additional perspective.

Figure 1 shows the number of attempts at goal for each team after three games at the end of the group stage.


Figure 1. Attempts at goal and goals scored in Open Play after three rounds.
It is interesting to note that only nine teams (25\%) scored more than two goals in Open Play and the average number of attempts was 24 after three matches, which is 8 attempts per game. Russia was the most efficient team in the World Cup scoring 7 goals from 22 attempts in Open Play.

Another interesting observation is that France, the eventual winners created 26 while Germany created 53 but failed to progress in the tournament. England were the second lowest with 15 attempts, one less than Australia with 16, but scored 2 goals whereas Australia failed to score a goal in Open Play along with Iran, Poland, Uruguay and Costa Rica.

The ability to score from Set Plays was a critical factor for England and Uruguay who scored 6 and 5 respectively.

Figure 2 below shows the number of attempts and goals in Open Play by each team, with the number of matches played for teams that progressed beyond the group stage.

Belgium and Croatia were the best with 14 goals from 88 attempts, a ratio of 1:6 while Croatia had 10 goals from 78 attempts, a ratio closer to 1:8.


Figure 2. Total attempts and goals in Open Play.
It is interesting that after 7 matches France created the same number of attempts as Germany did in 3 matches (53) but scored 8 goals to Germany's 1 goal. France's ratio was closer to 1:7. England had 32 more attempts in their next 4 matches after the group stage but only scored 1 goal, so compared with the group stage of 2 goals in 15 attempts (1:7.5 or 1:8), England got worse.

Further analysis showed the importance of being able to create attempts at goal from inside the penalty area. Figure 3 shows the data for the top eight teams.


Figure 3. Total attempts and goals and from inside the penalty area for the top 8 teams.

Belgium was clearly the best team with 57 attempts from inside the penalty area from a total of 88 attempts ( $65 \%$ ) and produced 13 of their 14 goals, a ratio of 1:4. France, the eventual winners, had $40 \%$ of their attempts at goal from inside the penalty area, which was the lowest of the top 8 teams, scoring 4 of their 8 goals in Open Play, a ratio of 1:5.

I have included the same data for the Asian teams in Figure 4 to make a comparison with the top teams.


Figure 4. Total attempts and goals and from inside the penalty area for AFC teams.
Figure 1 shows Japan, Korea and Saudi were close to the average number of attempts (24) and scored at least one goal in Open Play in the group stage. Australia and Iran failed to score a goal in Open Play, which is a reflection of the low number of attempts in total and particularly from inside the penalty area.

Japan also had 69\% of their attempts from inside the penalty area, which is comparable with Belgium's 65\% and indicates that Japan are on the right track, if creating attempts at goal from inside the penalty area is the objective. A ballpark figure for goals from inside the penalty area in Open Play is $80 \%$ in World Cup tournaments.

## Observations

It is stating the obvious to say that successful teams usually score more goals than less successful teams. France managed to win the World Cup by being the best at one performance indicator; the number of goals scored in Open Play from outside the penalty area with 4 out of 8 goals.

In the 2018 World Cup there were 1076 attempts at goal in Open Play and $47 \%$ were from outside the penalty area; 411 (38\%) missed the target.

Generally less successful teams would do well to assess how often they shoot from outside the penalty when it is possible to pass to another player inside the penalty area.

Reep and Benjamin (1968) estimated it took 10 attempts at goal for every goal scored. In the 2018 World Cup there were 1076 attempts at goal, which produced 100 goals; a ratio of 1:10.

No doubt you will find more interesting points after looking at the data.
For members of my website I have uploaded a movie of this presentation.

## Reference

Skill and Chance in Association Football
C. Reep and B. Benjamin

Journal of the Royal Statistical Society. Series A (General)
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