

Tutorial 8

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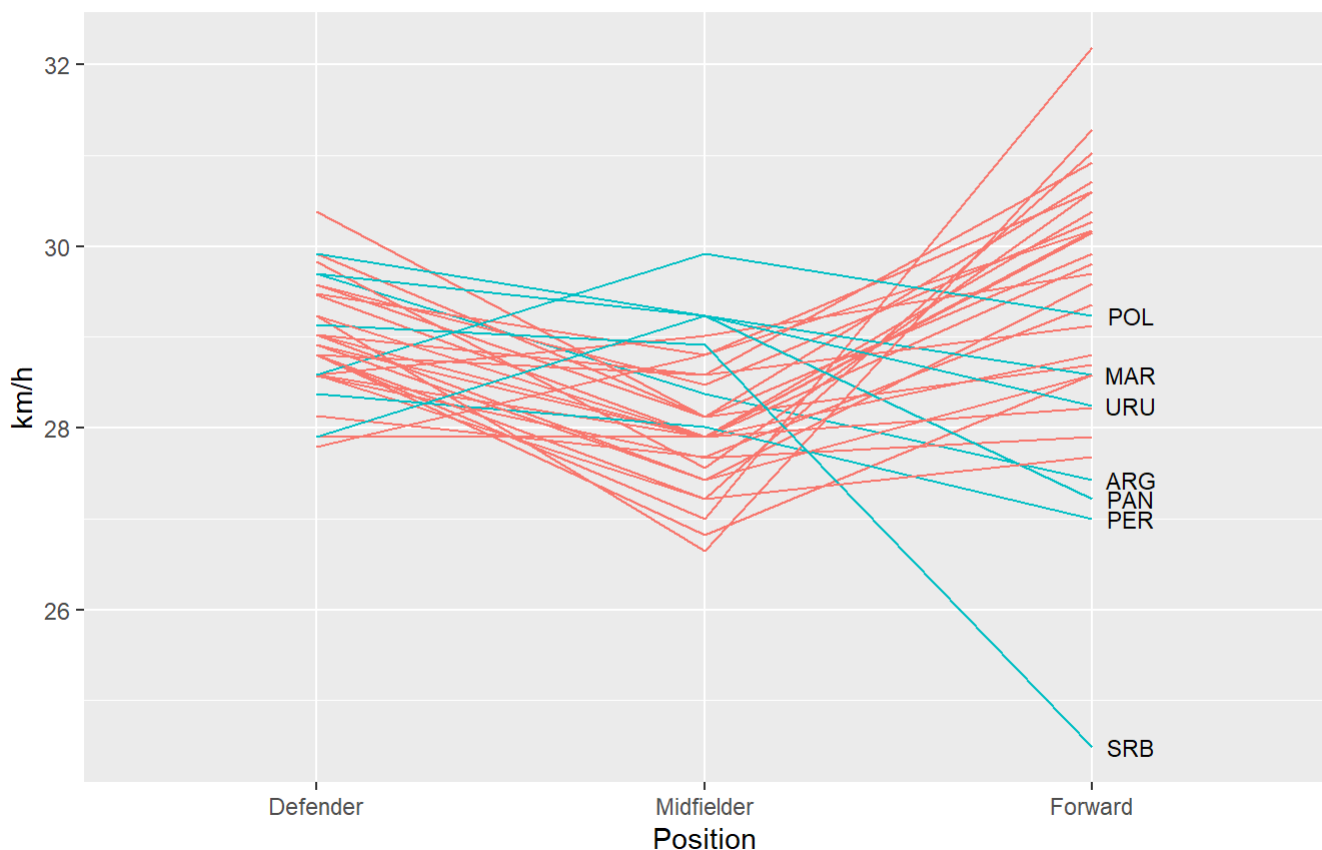
17/10/2020

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Question 1

Median Top Speed by Position

Most teams' forwards sprint faster than their midfielders, but not all..



Question 2

Time spent by defenders on the oposition half in matches of different stages

For this question, I only consider matches played by teams that have at least reached the knock-out stage. Otherwise, it would be impossible compare whether the teams decided to switch to play more conservatively during the knock-out matches.

Also, only defenders who played at least 45 minutes are considered. This is because a previous plot I made shows that some defenders playing less than 45 minutes clustered far from the rest (but not out of the $1.5 \times \text{IQR}$ because they reached the limit of the y-scale), extending the whiskers' length.

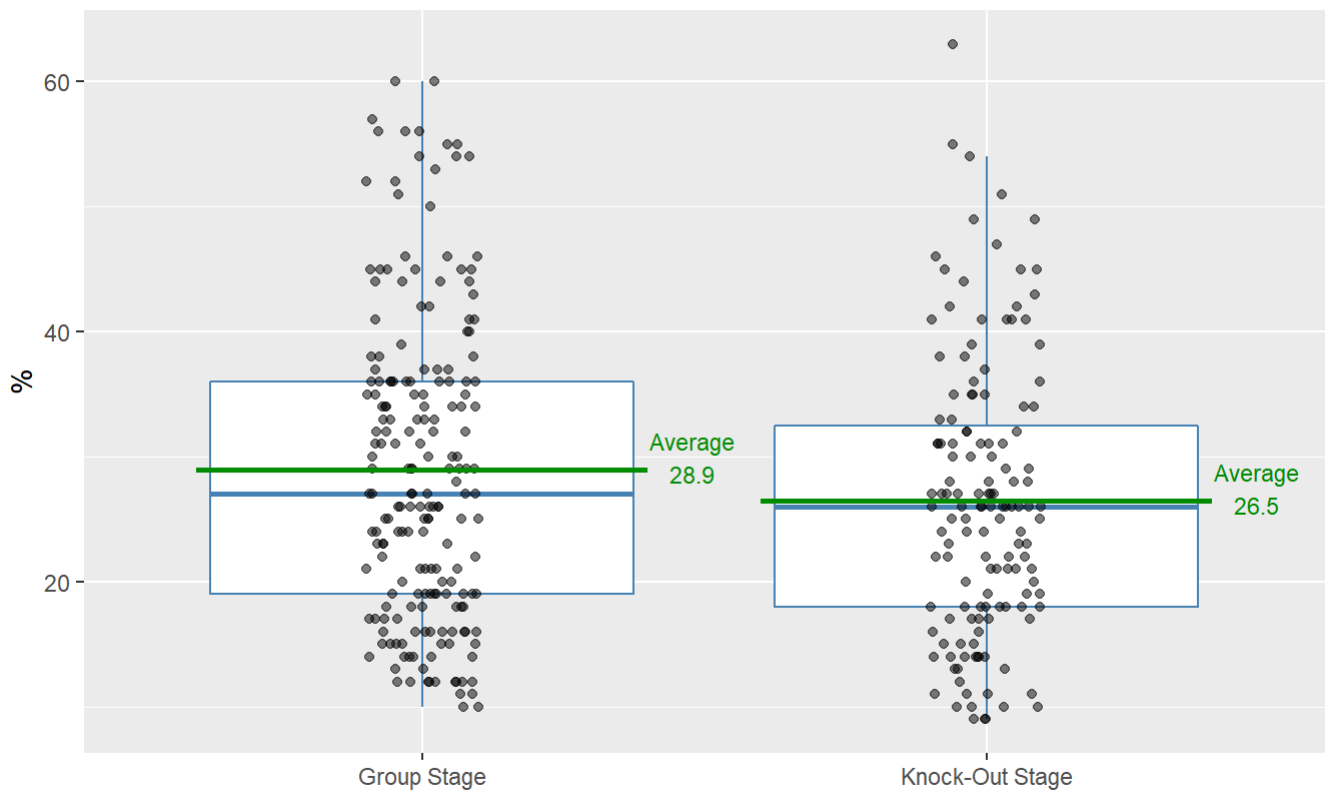
```
## [1] "Group Stage matches"
```

```
## # A tibble: 1 x 1
##   average_in_percent
##           <dbl>
## 1             28.9
```

```
## [1] "Knock-out matches"
```

```
## # A tibble: 1 x 1
##   average_in_percent
##           <dbl>
## 1             26.5
```

Time that Defenders Spend on the Opposition Half in each match in different stages

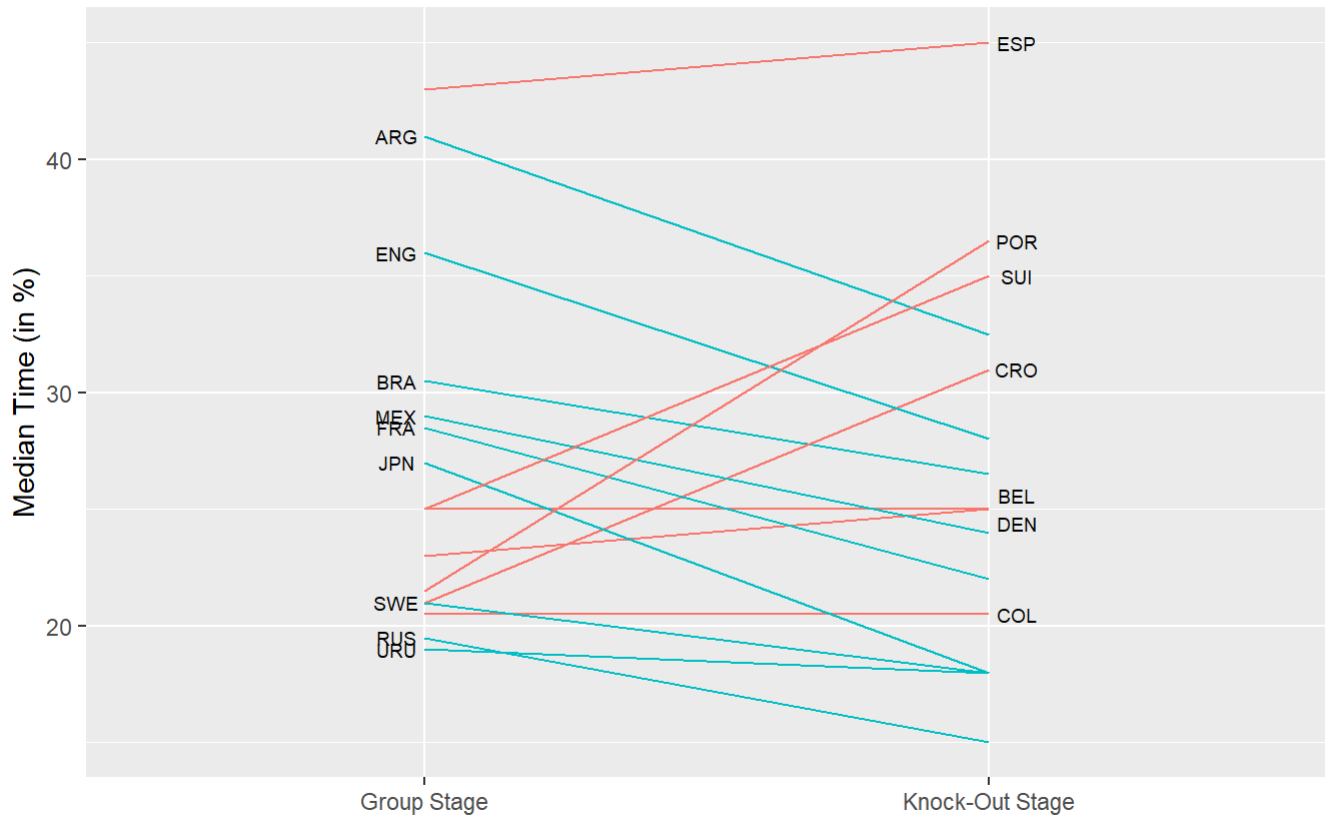


*only consider teams that reached the knock-out stage
and defenders who played at least 45 minutes

Indeed, in general, the teams switched to play more conservatively during the knock-out stage. Since mean is higher than median in general, the two graphs are right-skewed. In group stage matches, the skewness is much higher and the spread is also perceptibly higher.

Difference of Defenders' Time on Opposite Half

by Country and Stage



Out of the 16 teams considered, there are 7 teams (in red) that play less conservatively during the high stake Knock-Out Stage. POR, SUI and CRO in particular, have especially high difference in playing style (noted by the high slope)