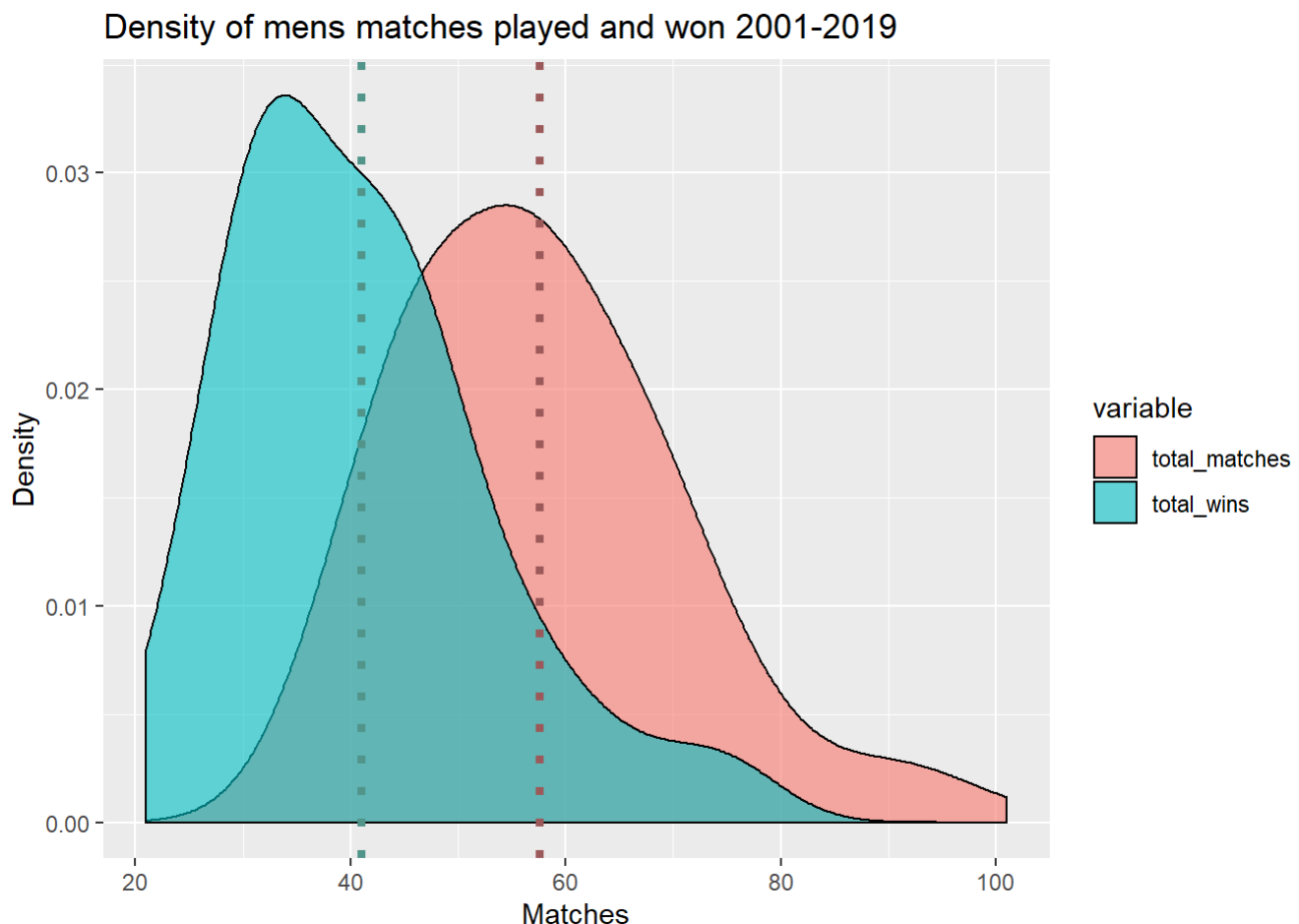# FIVB Beach Volleyball Historic Top 8 Teams Analysis

Tyler Widdison

Evaluation of winning trends related to court and hour for the top 8 FIVB Beach volleyball teams per gender since 2001. The concluding hypothesis is that teams ranked within the top 8 have a higher probability at winning on court 1 at 09:00. Generalized linear model is used in support of the hypothesis. Notes: **^Court records are not kept by FIVB until 2009. ^^Hour records are not kept by FIVB until 2004**
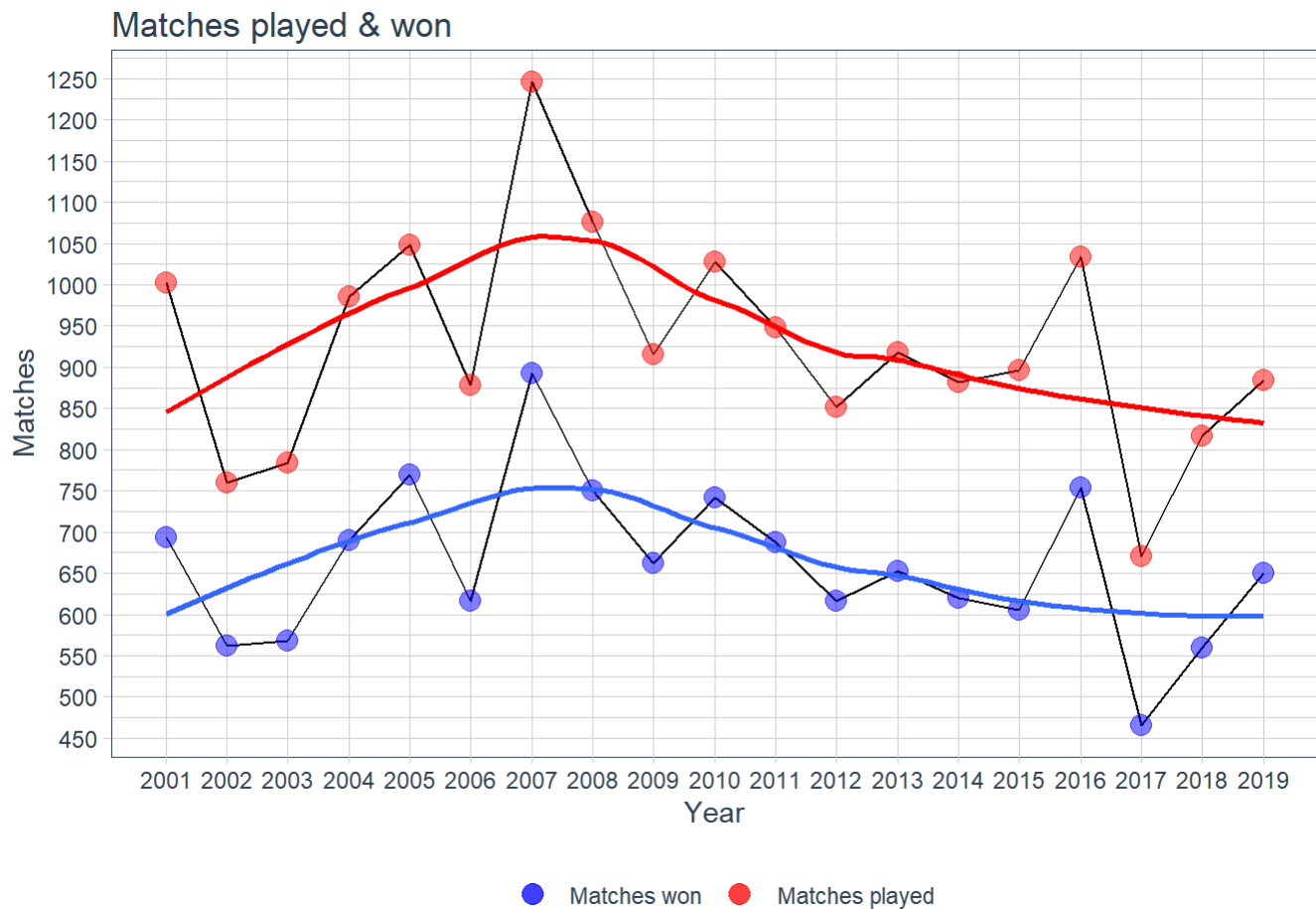
Mean of matches played and won from the top 8 teams considering 2001 - 2019.

Men

There has been a downward trend of top 8 mens teams playing matches per year with 2017 being the lowest. Avg matches played for mens top 8 in a FIVB season is 57.59 and wins is 41.04 from 2001 - 2019.
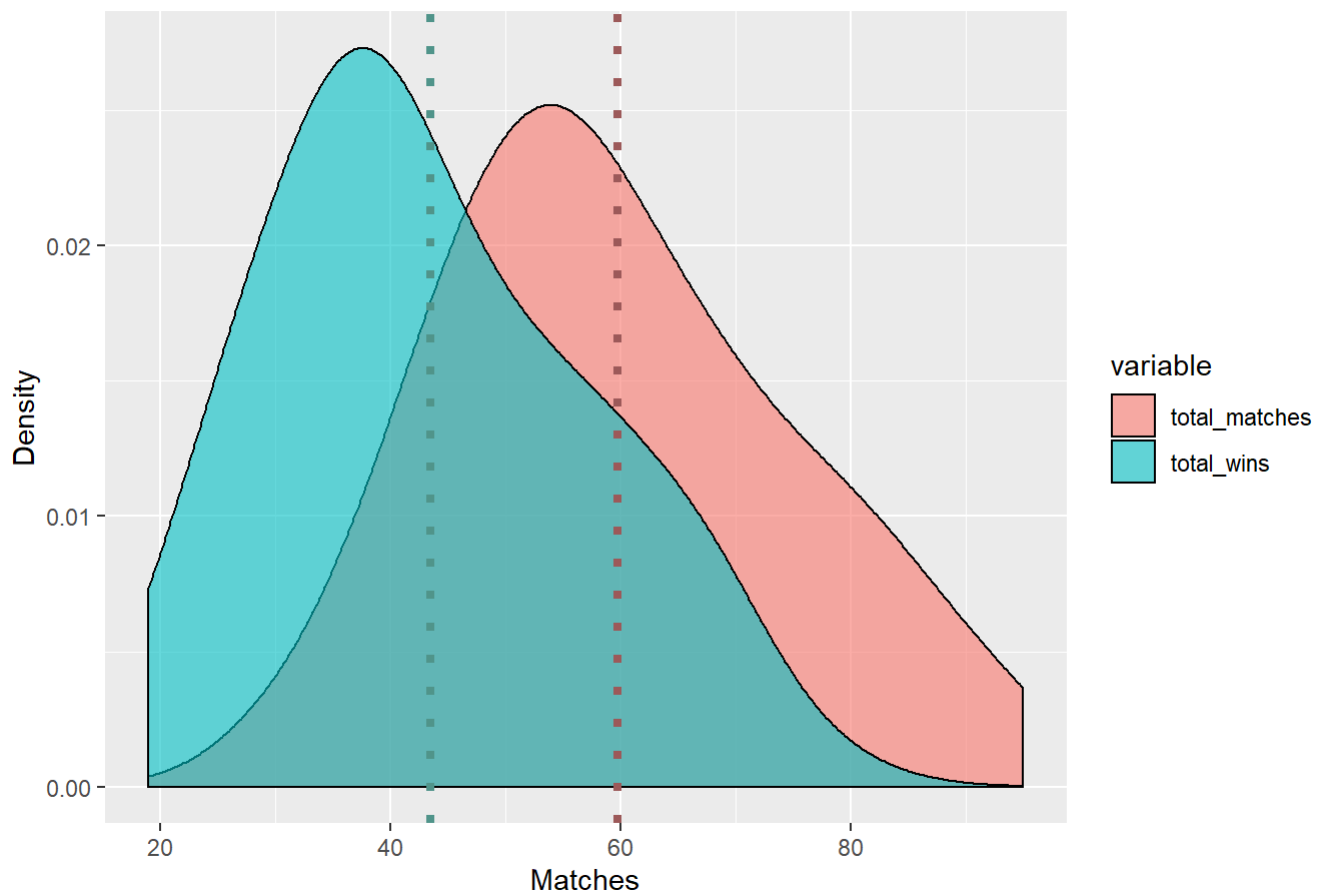

Density of mens matches played and won 2001-2019

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```
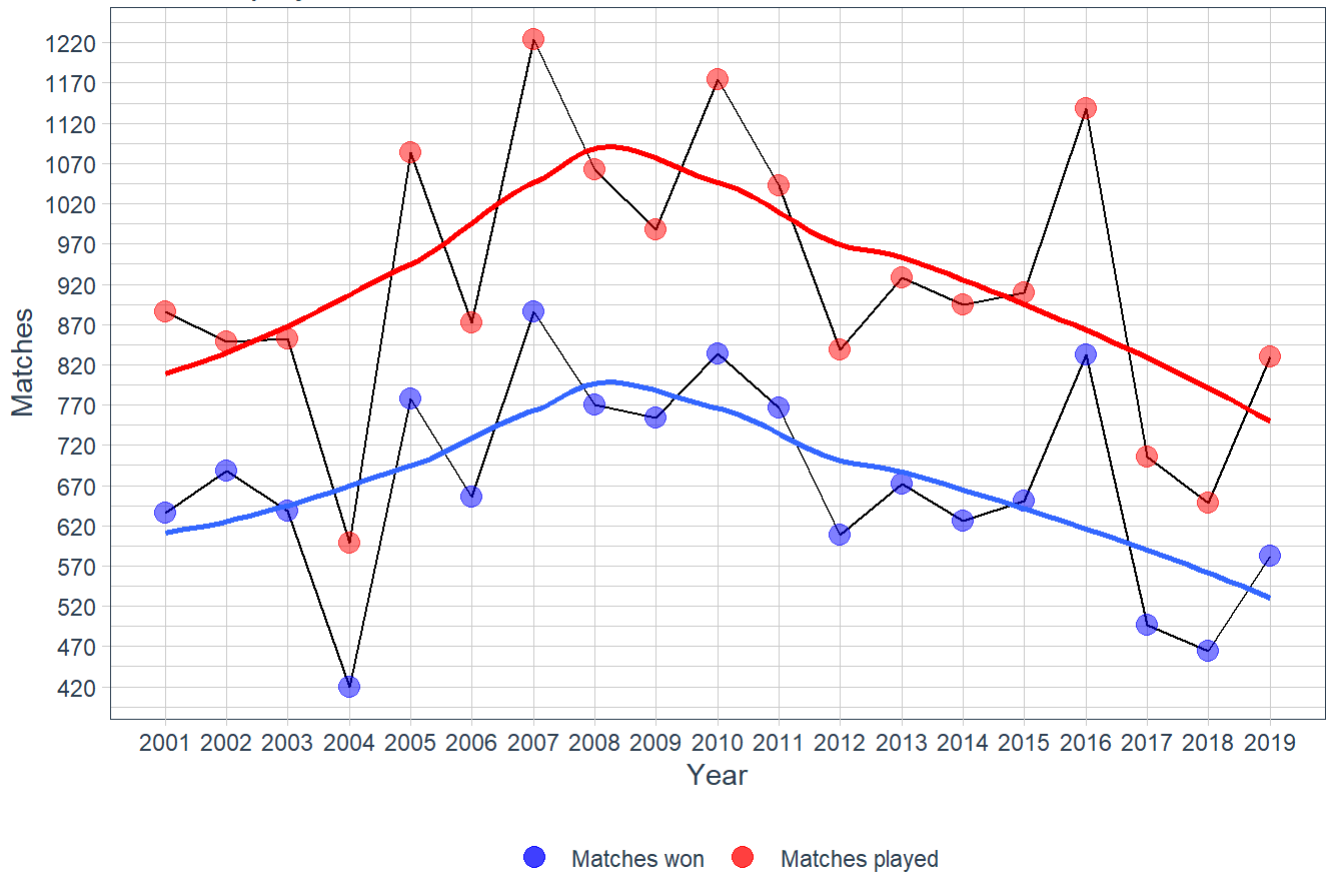
Matches played & won

Women

There has been a slight downward trend of top 8 womens teams playing matches per year with the lowest being 2004. The avg matches played for womens top 8 in a FIVB season is 59.8 and matches won 43.54 from 2001 - 2019.

Density of womens matches played and won 2001-2019


```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```
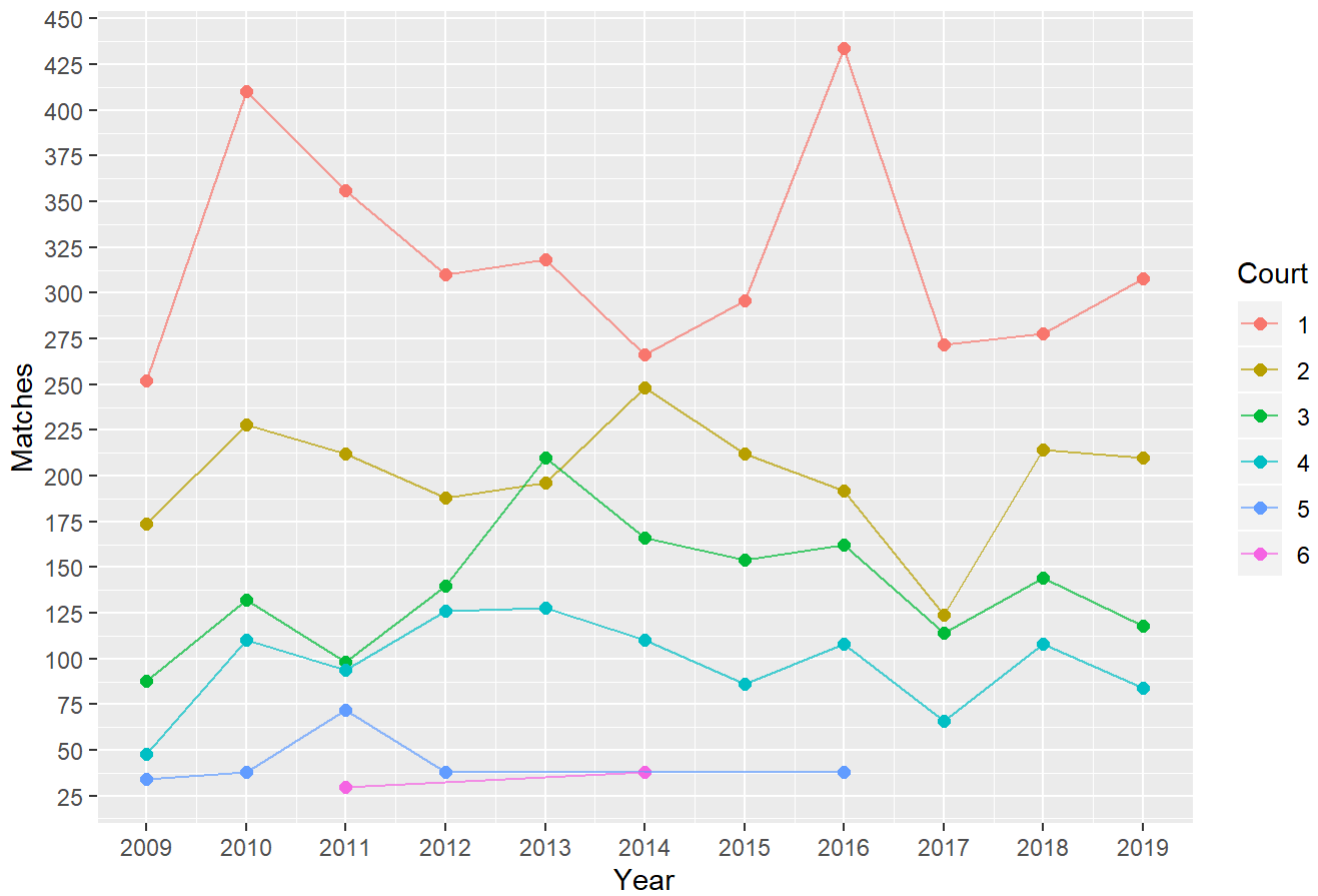
Matches played & won
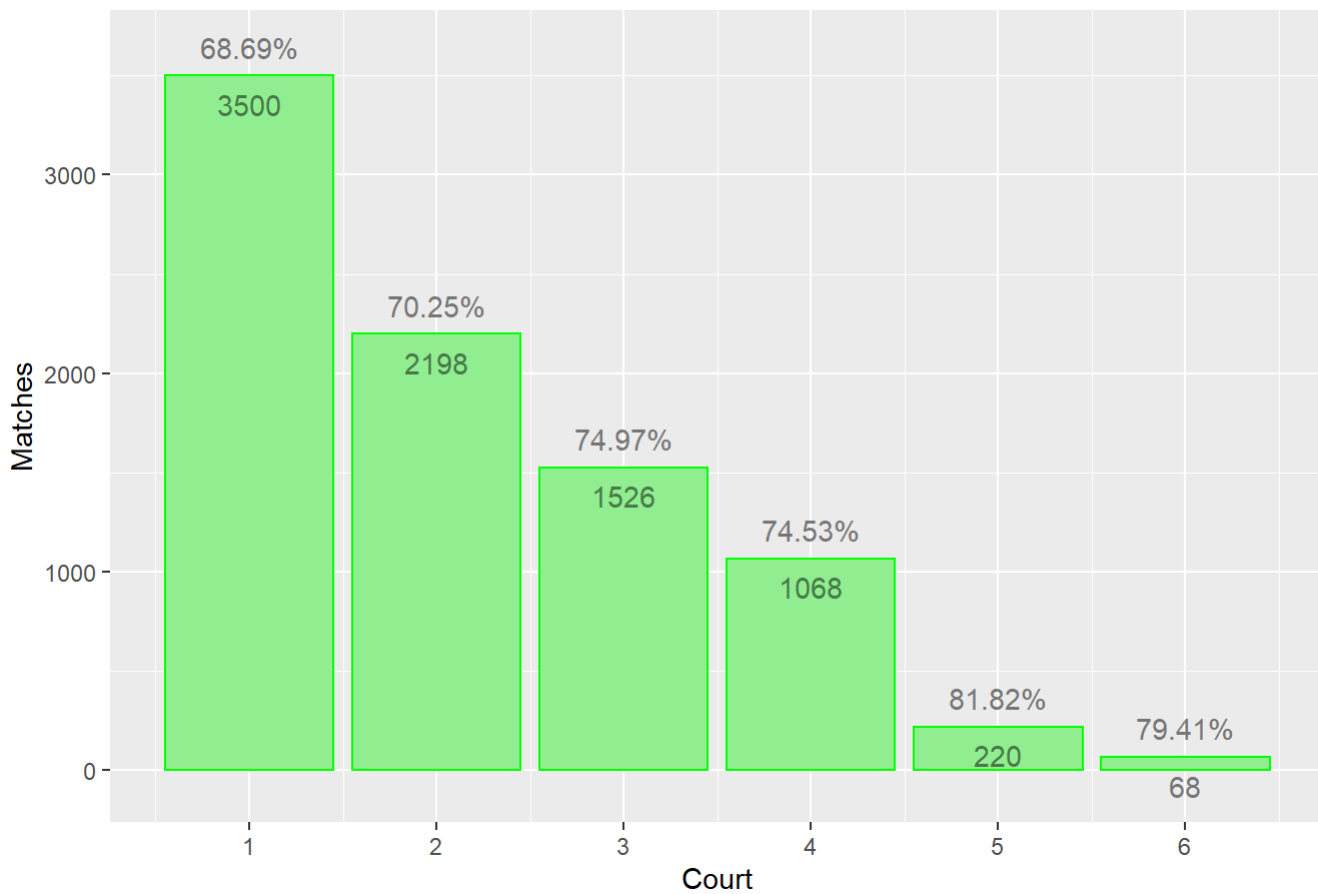
Courts match's were played by a team in the top 8.

Men

Matches played and matches won per court 2009 - 2019. Top 8 teams have the highest winning percentage on court 5 and 3. Court 1 has the lowest winning percentage.

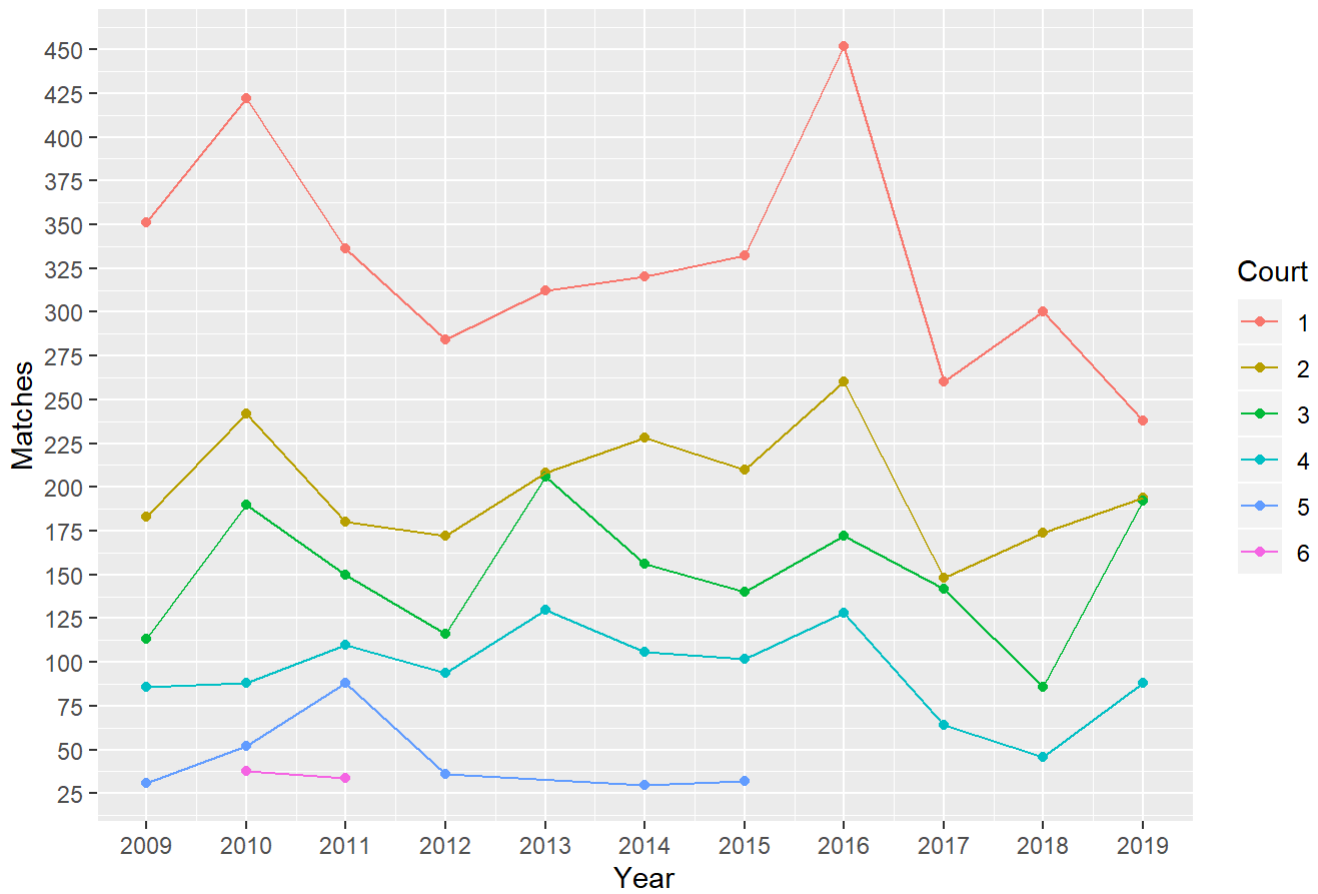Top 8 mens matches per court per year
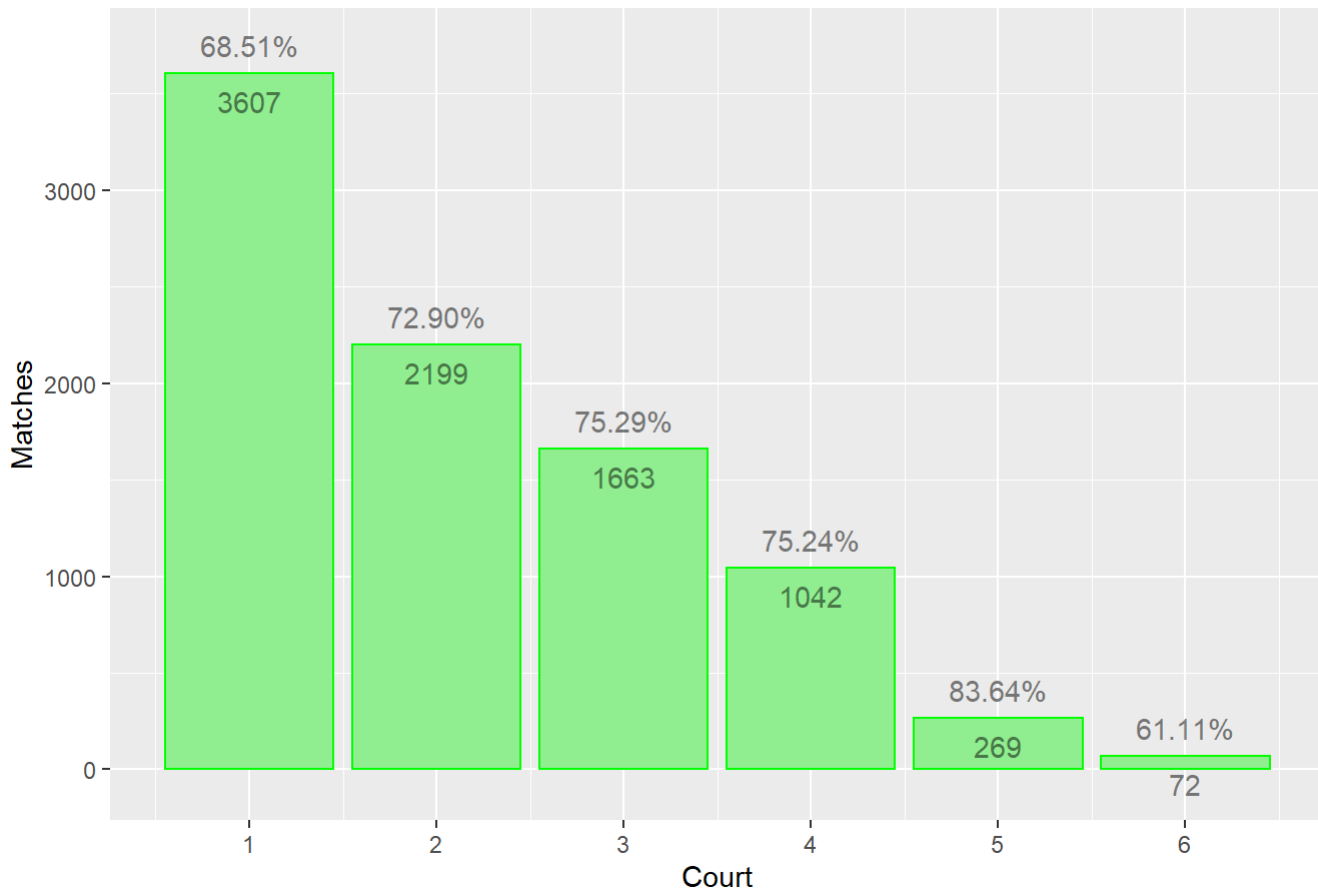

Win % and matches played per court

Women

Matches played on court by womens top 8 teams 2009 - 2019. Top 8 teams have the highest winning percentage on court 5, 3 and 4. Court 1 has the lowest winning percentage.
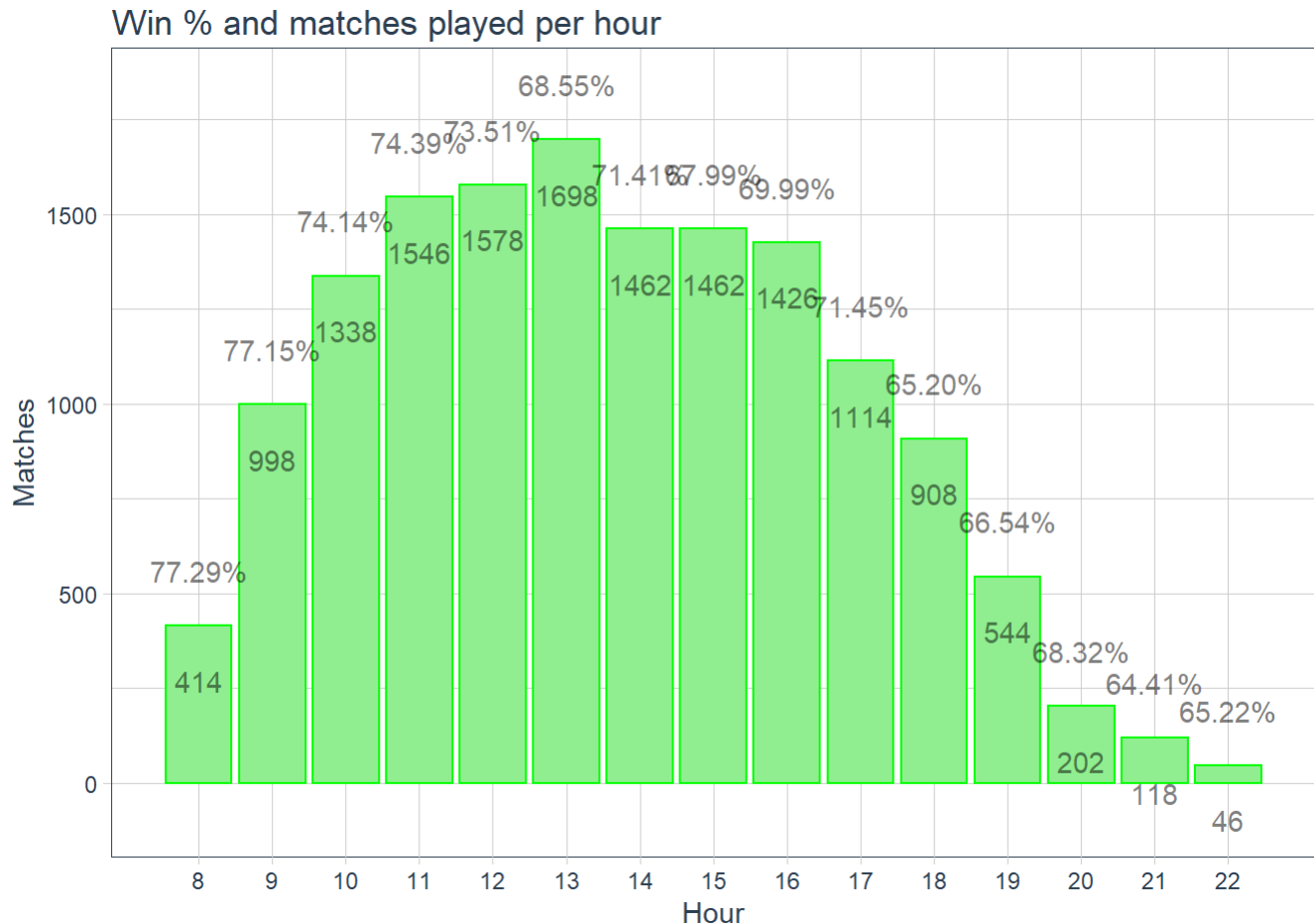
Top 8 womens matches per court per year

Win % and matches played per court

Hour of day match's were played by a team in the top 8.

Men

Matches played by hour by mens teams in top 8 from 2004-2019. The lowest winning percentage by a team in the top 8 is 21:00. And the highest is at 08:00.

Win % and matches played per hour
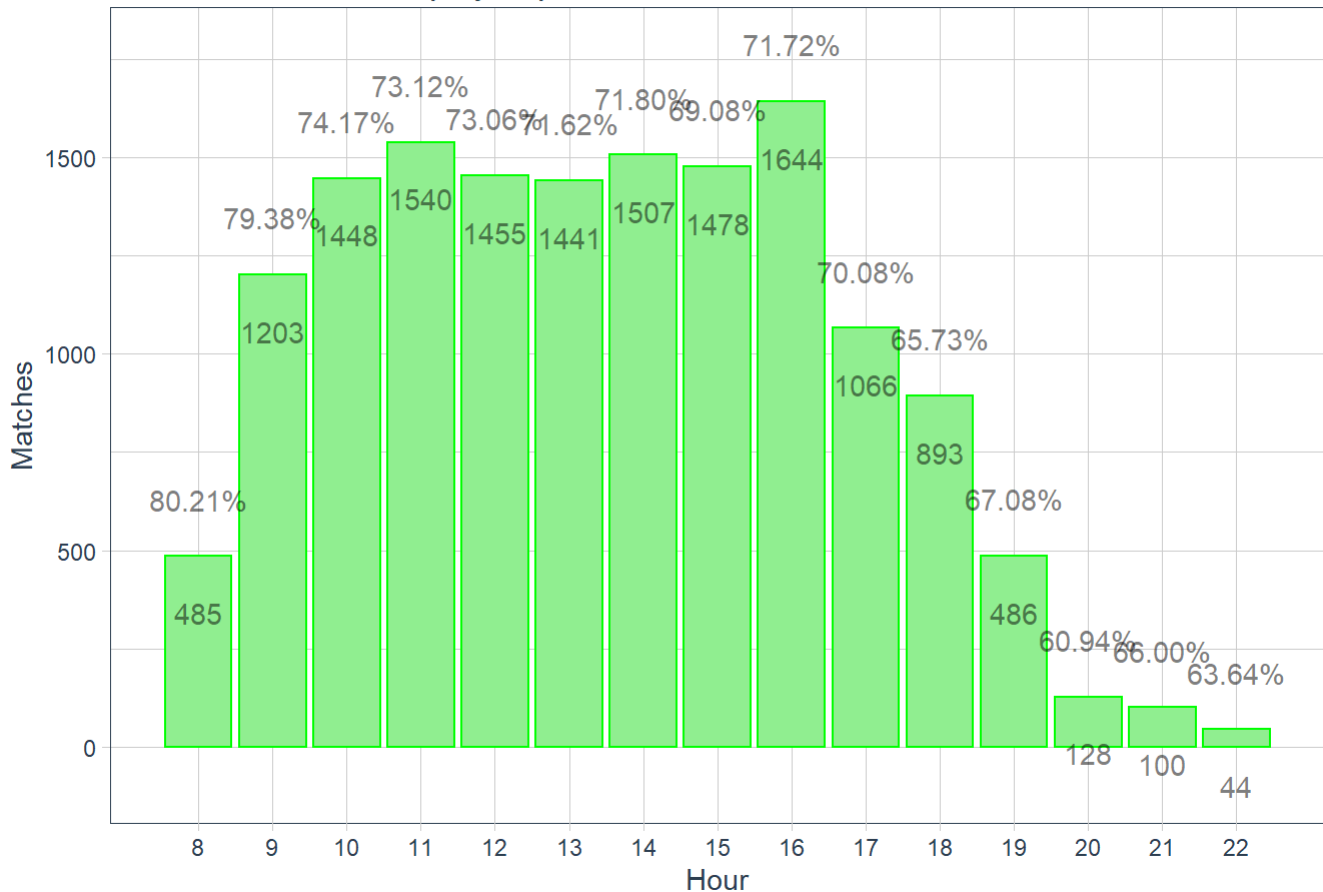

Women

Matches played by hour by womens teams in top 8 from 2009-2019. The lowest winning percentage by a team in the top 8 is 22:00. And the highest is at 08:00.

Win % and matches played per hour
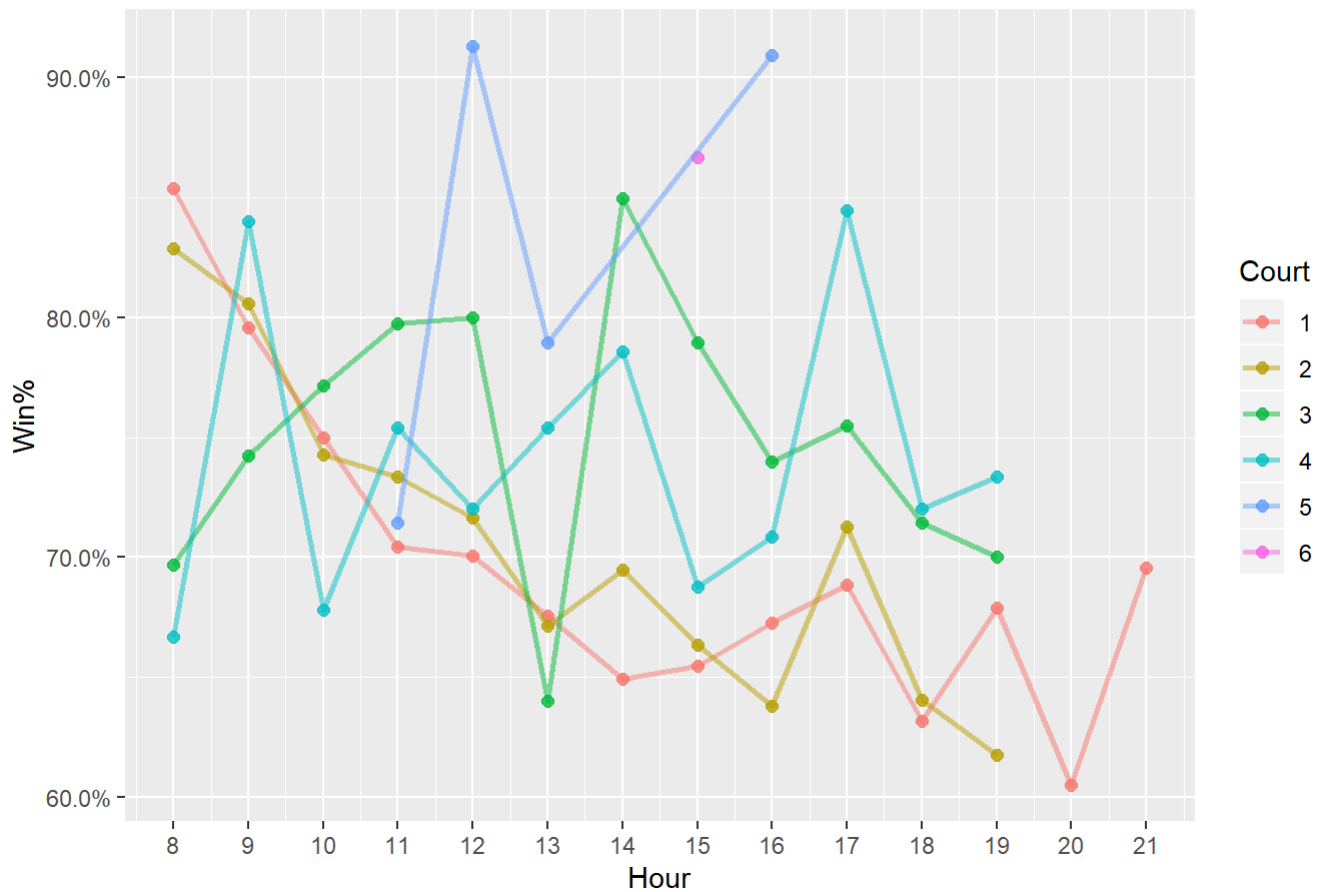
Match win % per hour and court trend by mens teams in top 8 from 2009-2019.

Men

This data only takes into account when the court and time were present. The highest winning % is court 5 at 12:00. The lowest winning % is court 1 at 20:00.
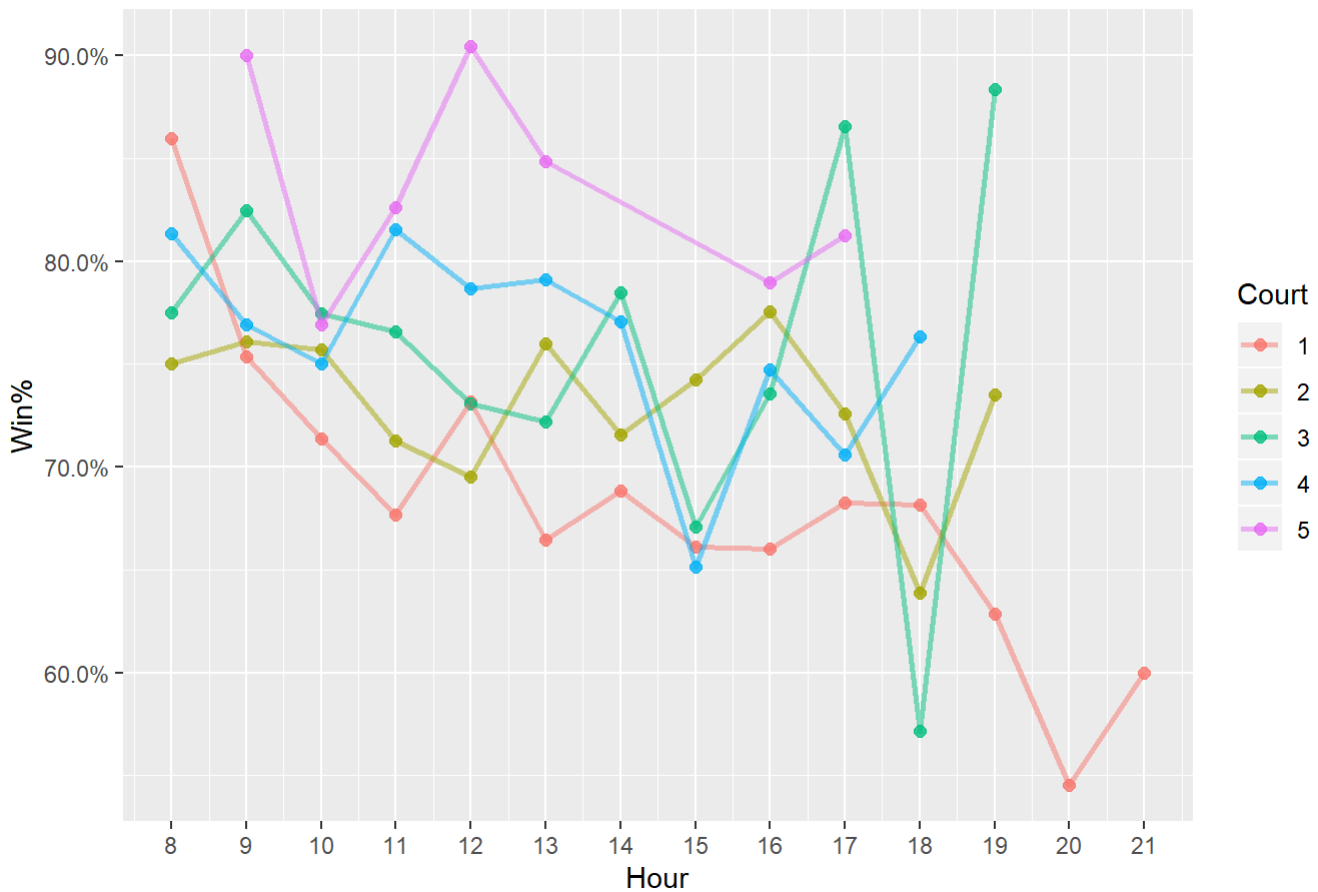
Top 8 mens win% per court per hour

Women

This data only takes into account when the court and time were present. The highest winning % is court 5 at 09:00 and 12:00. The lowest winning % is court 1 at 20:00.

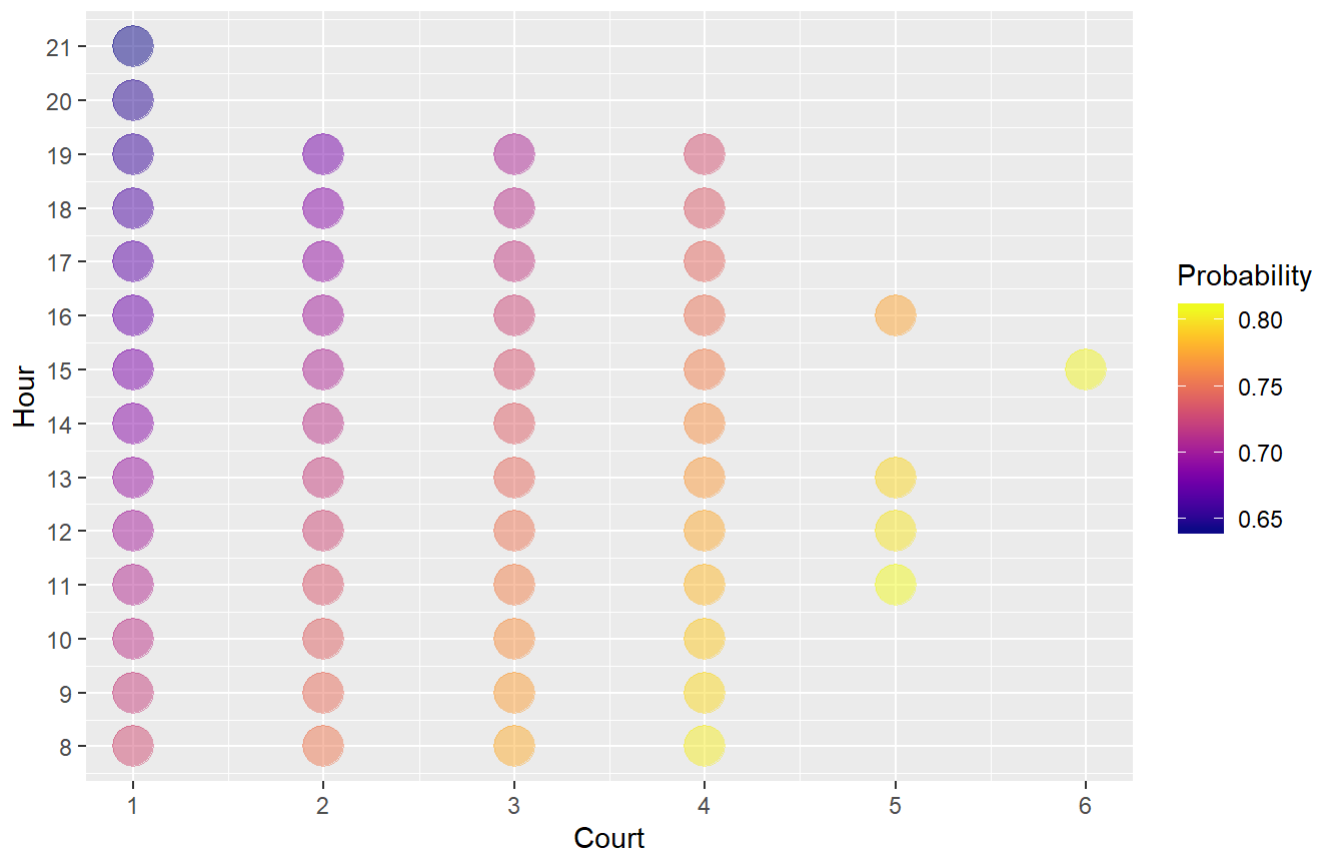Top 8 mens win% per court per hour

Probability of winning by court and hour using Generalized linear regression.

Men

The highest probability for a men's team to win in the top 8 is court 5 at 11:00. With the loweset being at 21:00 on court 1.

FIVB top 8 team probability of winning by court and hour
Data from 2009 - 2019

Hour	Court	Probablity
11	5	0.808
15	6	0.806
8	4	0.803
12	5	0.801
9	4	0.796
13	5	0.795
10	4	0.790
11	4	0.783
8	3	0.778
12	4	0.777
16	5	0.775
9	3	0.772

Women

The highest probability for a men's team to win in the top 8 is court 5 at 09:00. With the loweset being at 21:00 on court 1.

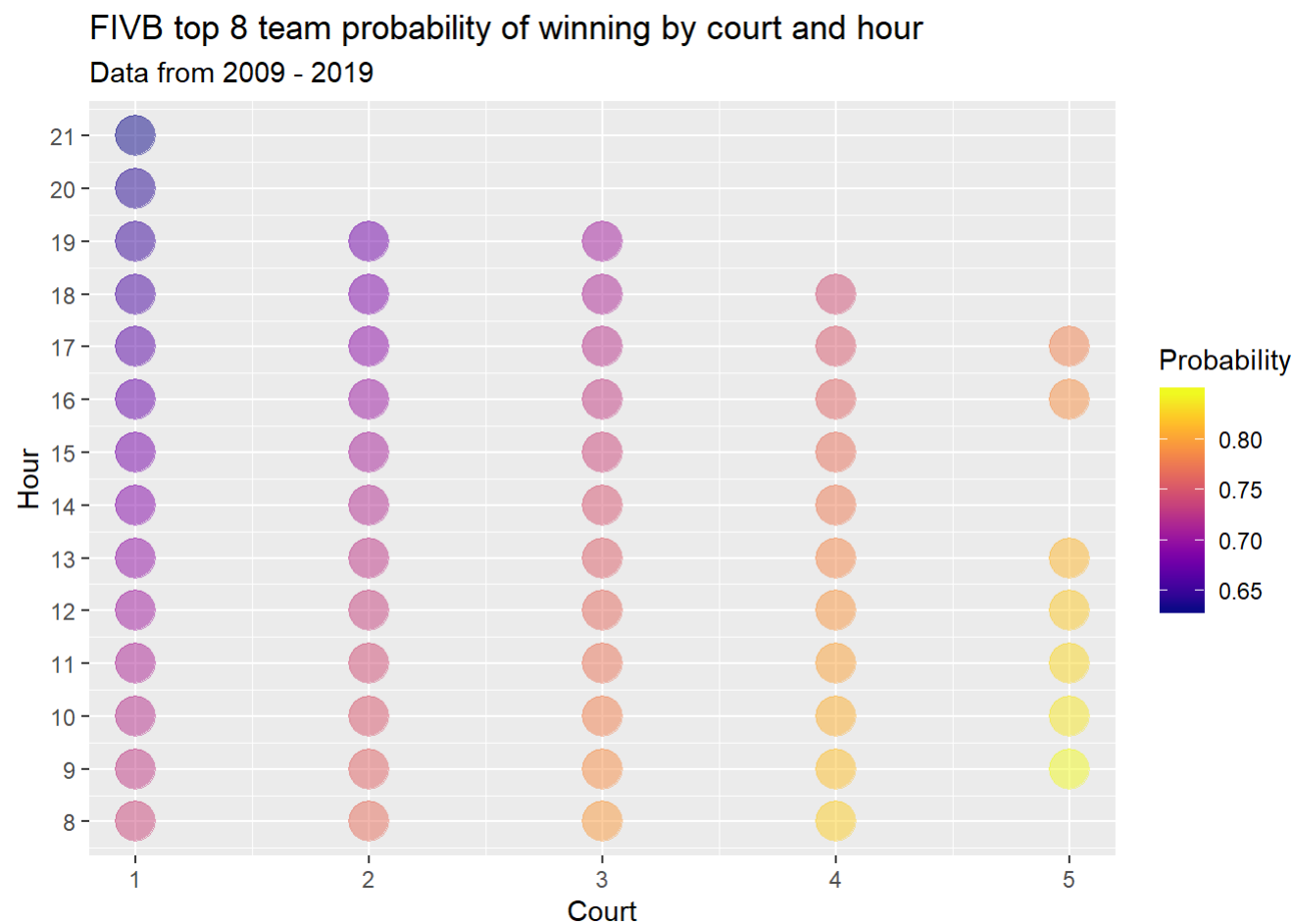FIVB top 8 team probability of winning by court and hour

Data from 2009 - 2019

Hour	Court	Probablity
9	5	0.846
10	5	0.838
11	5	0.830
8	4	0.825
12	5	0.822
9	4	0.817
13	5	0.813
10	4	0.809
11	4	0.801
8	3	0.796

Hour	Court	Probablity
12	4	0.793

Conclusion

There is an apparent trend of teams in the top 8 winning more and having higher probility of winning on lower courts earlier in the day. And lower probility later in the day on higher courts. This trend is likely due to teams in the top 8 advancing further into tournaments and playing other teams in the top 8.