

# *Exploring the Correlation between Set Piece Performance and Final Table Position*

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## **Outline**

A successful set piece is highlighted by coaches, players and fans as foundationally important to overall team success. In this article, I will attempt to examine the correlation, if any, between the performance of a given teams' set piece and its relationship with where that team will finish the regular season.

In exploring the above, I have analysed data from three competitions around the world. These competitions are the NSW Shute Shield, the English Premiership, the French Top 14 and the French ProD2.

## **Data Description**

The data I used is generated Pro Rugby Hub Stats Perform, otherwise known as Opta.

There is a plethora of statistical information available through Opta in relation to set piece performance, however I selected five metrics from which I was going to assess outcomes. These are metrics which I, and many other coaches, deem most important when reviewing a team's performance. These metrics are: Tries from Lineout Origin, Tries Conceded from Lineout Origin, Attack Lineout Completion, Lineout Defence and Scrum Penalty Differential.

I would describe these metrics as core to the output of set piece. I accept there may be some debate on which metrics should be additionally included, however these five are more encompassing than some smaller measurable elements and would carry the most weight. Put simply, these areas evaluate your ability score from lineout, your ability to prevent scoring at lineout, your ability to win a lineout, your ability to win opposition lineout and your net scrum penalty outcome.

In applying the data to the core question, I have arranged scores in ascending/descending order to gather a clear hierarchy of performance in a given area of set piece function. Once in order, I applied a number to each outcome position, the highest being the best and the lowest being the worst. The numbers allocated, and totals collected varied from competition to competition based on the size of said competition. Scores in the Top 14 will be higher as there are four additional teams to that of the English Premiership and thus higher values attributed.

I created the Scrum Penalty Differential outcome manually based on the interaction between scrum penalties gained and scrum penalties conceded by each team to attempt to get a net value for the scrum outcomes. I then generated a score and gave each team a ranking in line with the other metrics.

## 1. NSW Shute Shield 2024

### 1.1 Tries from Lineout Origin

Team	Lineout	Score
EASTERN SUBURBS	62	12
NORTHERN SUBURBS	56	11
HUNTER WILDFIRES	50	10
WARRINGAH	47	9
SYDNEY UNIVERSITY	44	8
EASTWOOD	42	7
MANLY	42	6
RANDWICK	40	5
GORDON	37	4
WESTERN SYDNEY	34	3
WEST HARBOUR	28	2
SOUTHERN DISTRICTS	27	1

### 1.2 Tries from Lineout Origin conceded

Team	Total	Lineout	Score
WEST HARBOUR	116	62	1
SOUTHERN DISTRICTS	109	55	2
WESTERN SYDNEY	95	54	3
NORTHERN SUBURBS	88	49	4
EASTWOOD	96	46	5
MANLY	84	45	6
WARRINGAH	68	36	7
HUNTER WILDFIRES	73	35	9
RANDWICK	74	35	9
SYDNEY UNIVERSITY	89	34	10
EASTERN SUBURBS	75	30	11
GORDON	64	28	12

### 1.3 Attack Lineout Completion

	Lineouts Won %	Score
WEST HARBOUR	89%	12
SYDNEY UNIVERSITY	88%	11
EASTWOOD	87%	10
NORTHERN SUBURBS	85%	9
RANDWICK	85%	8
WARRINGAH	84%	7
GORDON	83%	6
EASTERN SUBURBS	82%	5
SOUTHERN DISTRICTS	81%	4
HUNTER WILDFIRES	80%	3
WESTERN SYDNEY	79%	2
MANLY	77%	1

### 1.4 Scrum Penalty Differential

Team	Penalties Conceded	Penalties Won	Penalty differential	Score
EASTERN SUBURBS	24	42	+18	11
EASTWOOD	37	23	-14	4
GORDON	15	59	+44	12
HUNTER WILDFIRES	21	49	+18	11
MANLY	31	26	-5	6
NORTHERN SUBURBS	27	44	+17	9
RANDWICK	44	39	-5	6
SOUTHERN DISTRICTS	54	22	-32	1
SYDNEY UNIVERSITY	38	34	-4	7
WARRINGAH	53	27	-26	2
WEST HARBOUR	31	29	-2	8
WESTERN SYDNEY	32	13	-19	3

### 1.5 Lineout Defence

Team	Lineouts Won	Lineouts Won %	Score
EASTERN SUBURBS	70	23%	12
WARRINGAH	67	20%	11
MANLY	55	18%	10
RANDWICK	37	17%	9
NORTHERN SUBURBS	48	16%	8
EASTWOOD	47	16%	7
SYDNEY UNIVERSITY	43	15%	6
WEST HARBOUR	39	15%	5
WESTERN SYDNEY	37	15%	4
HUNTER WILDFIRES	39	14%	3
GORDON	33	14%	2
SOUTHERN DISTRICTS	36	13%	1

## 2. English Premiership Rugby 2024/2025

### 2.1 Tries from Lineout origin

Team	Lineout	Score
BATH RUGBY	47	10
SALE SHARKS	46	9
SARACENS	41	8
BRISTOL BEARS	40	7
LEICESTER TIGERS	39	6
HARLEQUINS	36	5
GLOUCESTER RUGBY	34	4
NORTHAMPTON SAINTS	28	3
EXETER CHIEFS	25	2
NEWCASTLE FALCONS	22	1

### 2.2 Tries from Lineout Origin Conceded

Team	Lineout	Score
NEWCASTLE FALCONS	53	1
EXETER CHIEFS	42	2
GLOUCESTER RUGBY	38	3
BRISTOL BEARS	36	4
BATH RUGBY	34	5
NORTHAMPTON SAINTS	34	6
SARACENS	32	7
SALE SHARKS	31	8
HARLEQUINS	30	9
LEICESTER TIGERS	28	10

### 2.3 Attack Lineout Completion

Team	Lineouts Won %	Score
BRISTOL BEARS	91%	10
LEICESTER TIGERS	91%	10
SALE SHARKS	91%	10
NORTHAMPTON SAINTS	90%	7
HARLEQUINS	89%	6
EXETER CHIEFS	88%	5
SARACENS	88%	5
BATH RUGBY	87%	3
GLOUCESTER RUGBY	85%	2
NEWCASTLE FALCONS	82%	1

## 2.4 Scrum Penalty Differential

Team	Penalties Conceded	Penalties Won	Penalty differential	Score
BATH RUGBY	24	34	+10	8
BRISTOL BEARS	27	24	-3	6
EXETER CHIEFS	40	25	-15	1
GLOUCESTER RUGBY	26	23	-3	6
HARLEQUINS	31	18	-13	2
LEICESTER TIGERS	29	48	+19	10
NEWCASTLE FALCONS	29	32	+3	7
NORTHAMPTON SAINTS	34	30	-4	4
SALE SHARKS	35	47	+12	9
SARACENS	35	29	-6	3

## 2.5 Lineout Defence

Team	Lineouts Won	Lineouts Won %	Score
SARACENS	40	16%	10
LEICESTER TIGERS	45	15%	9
BATH RUGBY	33	12%	8
BRISTOL BEARS	30	12%	7
EXETER CHIEFS	32	12%	6
NORTHAMPTON SAINTS	28	12%	5
GLOUCESTER RUGBY	29	11%	4
NEWCASTLE FALCONS	28	11%	3
HARLEQUINS	21	8%	2
SALE SHARKS	21	8%	1

## 3. French Top 14 2024/2025

### 3.1 Tries from Lineout Origin

Team	Total	Lineout	Score
STADE TOULOUSAIN	123	60	14
ASM CLERMONT	85	49	13
VANNES	76	47	12
BAYONNE	74	42	11
STADE ROCHELAISS	75	38	10
RC TOULON	88	37	9
RACING 92	81	36	8
SECTION PALOISE	73	36	7
BORDEAUX-BEGLES	106	34	6
LYON	77	33	5
MONTPELLIER HERAULT	66	32	4
STADE FRANCAIS PARIS	64	29	3
CASTRES OLYMPIQUE	71	28	2
USAP	40	22	1

### 3.2 Tries from Lineout Origin Conceded

Team	Total	Lineout	Score
VANNES	115	62	1
SECTION PALOISE	92	46	2
RACING 92	83	43	3
STADE FRANCAIS PARIS	92	42	4
BORDEAUX-BEGLES	78	41	5
BAYONNE	78	39	7
LYON	84	39	7
CASTRES OLYMPIQUE	77	37	9
USAP	72	37	9
ASM CLERMONT	68	29	12
RC TOULON	75	29	12
STADE ROCHELAIS	65	29	12
MONTPELLIER HERAULT	64	28	13
STADE TOULOUSAIN	56	22	14

### 3.3 Attacking Lineout Completion

Team	Lineouts Won %	Score
SECTION PALOISE	87%	14
STADE TOULOUSAIN	87%	14
ASM CLERMONT	86%	12
STADE FRANCAIS PARIS	84%	11
RACING 92	83%	10
RC TOULON	83%	9
VANNES	83%	9
BAYONNE	81%	8
BORDEAUX-BEGLES	81%	8
MONTPELLIER HERAULT	81%	8
STADE ROCHELAIS	81%	8
CASTRES OLYMPIQUE	80%	3
LYON	79%	2
USAP	77%	1

### 3.4 Scrum penalty differential

Team	Penalties Conceded	Penalties Won	Penalty differential	Score
ASM CLERMONT	55	48	-7	7
BAYONNE	63	41	-22	4
BORDEAUX-BEGLES	60	33	-27	2
CASTRES OLYMPIQUE	50	55	+5	8
LYON	50	18	-32	1
MONTPELLIER HERAULT	37	84	+47	14
RACING 92	48	31	-17	5
RC TOULON	20	53	+33	13
SECTION PALOISE	59	33	-26	3
STADE FRANCAIS PARIS	57	41	-16	6
STADE ROCHELAIS	44	51	+7	9
STADE TOULOUSAIN	41	52	+11	10
USAP	48	77	+29	12
VANNES	42	57	+15	11

### 3.5 Lineout Defence

Team	Lineouts Stolen	Lineouts Stolen %	Score
STADE TOULOUSAIN	47	12%	14
BAYONNE	51	11%	13
MONTPELLIER HERAULT	43	11%	10
RACING 92	45	11%	12
RC TOULON	44	11%	11
SECTION PALOISE	41	11%	9
ASM CLERMONT	44	10%	8
LYON	36	9%	7
STADE FRANCAIS PARIS	37	9%	6
BORDEAUX-BEGLES	31	8%	5
CASTRES OLYMPIQUE	27	7%	4
STADE ROCHELAIS	29	7%	3
USAP	26	7%	2
VANNES	22	6%	1

## 4. French ProD2

### 4.1 Tries from Lineout Origin

Team	Total	Lineout	Score
CA BRIVE	96	61	16
GRENOBLE	121	60	14
PROVENCE RUGBY	109	60	15
AGEN	81	46	13
BIARRITZ OLYMPIQUE	88	46	12
SOYAUX ANGOULEME	100	46	11
COLOMIERS	116	45	9
OYONNAX	83	45	10
USO NEVERS	82	44	8
VALENCE ROMANS	87	42	7
BEZIERS	91	41	6
US MONTAUBAN	93	39	5
NICE	69	38	4
AURILLAC	75	36	3
MONT DE MARSAN	82	36	2
DAX	66	31	1

#### 4.2 Tries from Lineout Origin Conceded

Team	Total	Lineout	Score
USO NEVERS	107	62	1
BIARRITZ OLYMPIQUE	90	60	2
NICE	121	56	3
AURILLAC	111	51	4
SOYAUX ANGOULEME	95	50	5
AGEN	86	46	6
MONT DE MARSAN	98	45	7
US MONTAUBAN	87	44	8
VALENCE ROMANS	88	43	9
COLOMIERS	87	42	10
DAX	82	42	11
GRENOBLE	82	41	12
BEZIERS	73	38	13
PROVENCE RUGBY	83	38	14
OYONNAX	82	31	15
CA BRIVE	67	27	16

#### 4.3 Attacking Lineout Completion

Team	Total Lineouts	Lineouts Won %	Score
USO NEVERS	445	85%	16
VALENCE ROMANS	399	84%	15
CA BRIVE	482	83%	14
AGEN	480	83%	13
NICE	466	82%	12
OYONNAX	478	80%	11
PROVENCE RUGBY	474	81%	10
COLOMIERS	449	80%	9
GRENOBLE	468	80%	8
US MONTAUBAN	448	80%	7
SOYAUX ANGOULEME	480	79%	6
BIARRITZ OLYMPIQUE	475	79%	5
MONT DE MARSAN	473	79%	4
AURILLAC	424	77%	3
DAX	470	76%	2
BEZIERS	421	76%	1

#### 4.4 Scrum penalty differential

Team	Penalties Conceded	Penalties Won	Scrum differential	Score
CA BRIVE	54	94	+40	16
PROVENCE RUGBY	45	65	+20	15
AGEN	53	65	+12	14
GRENOBLE	43	52	+9	13
SOYAUX ANGOULEME	39	45	+6	12
YONNAX	48	53	+5	11
USO NEVERS	39	44	+5	10
US MONTAUBAN	51	54	+3	9
BEZIERS	47	50	+3	8
COLOMIERS	46	48	+2	7
AURILLAC	59	59	0	6
DAX	58	44	-14	5
NICE	53	39	-14	4
MONT DE MARSAN	56	32	-24	3
BIARRITZ OLYMPIQUE	58	33	-25	2
VALENCE ROMANS	55	27	-28	1

#### 4.5 Lineout Defence

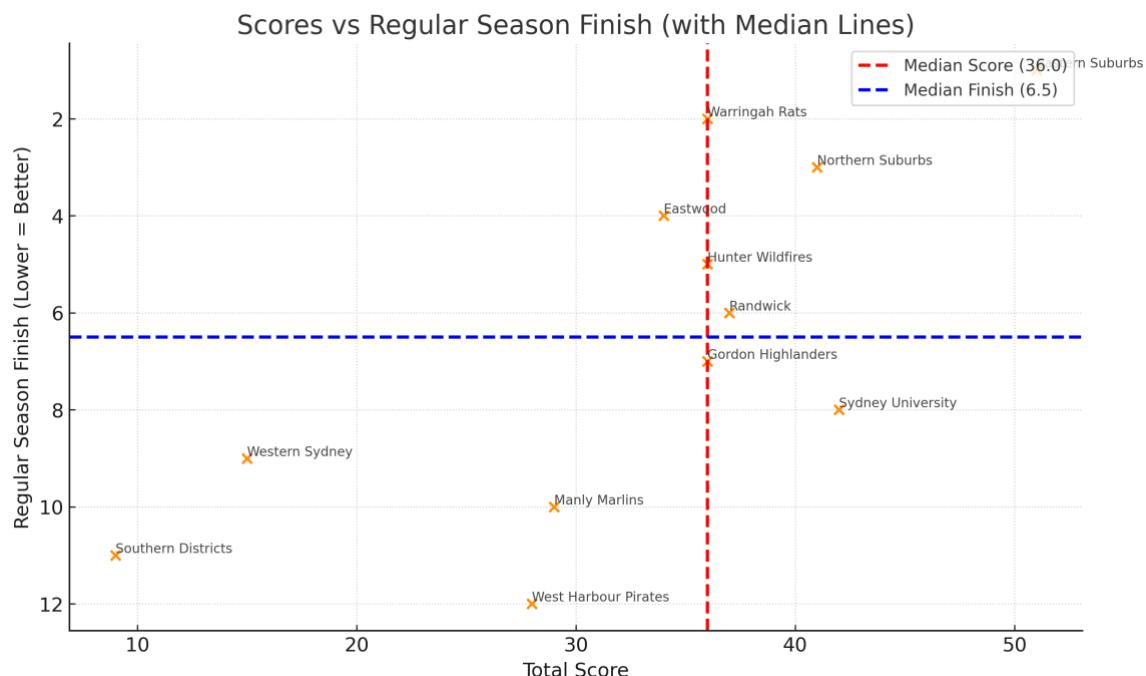
Team	Lineouts Stolen	Lineouts Stolen %	Score
NICE	63	12%	16
CA BRIVE	62	13%	15
GRENOBLE	57	12%	14
US MONTAUBAN	54	10%	13
SOYAUX ANGOULEME	51	10%	12
AURILLAC	50	10%	11
PROVENCE RUGBY	49	11%	10
BEZIERS	48	11%	9
VALENCE ROMANS	47	10%	8
AGEN	43	10%	7
USO NEVERS	41	9%	6
BIARRITZ OLYMPIQUE	38	8%	5
MONT DE MARSAN	37	9%	4
YONNAX	33	9%	3
COLOMIERS	30	7%	2
DAX	24	6%	1

## Data Results

### Shute Shield 2025

*Total Score vs Regular Season Finish*

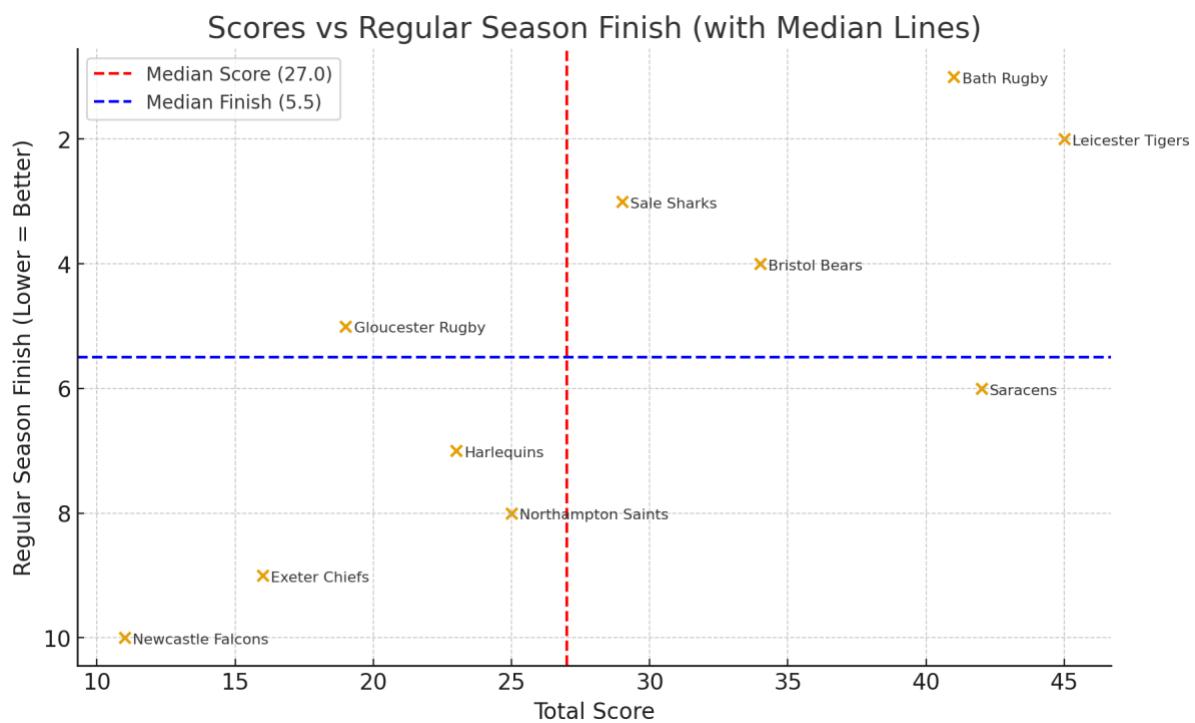
	Score	Regular Season Finish
<b>Eastern Suburbs</b>	51	1 <sup>st</sup>
<b>Sydney University</b>	42	8 <sup>th</sup>
<b>Northern Suburbs</b>	41	3 <sup>rd</sup>
<b>Randwick</b>	37	6 <sup>th</sup>
<b>Gordon Highlanders</b>	36	7 <sup>th</sup>
<b>Warringah Rats</b>	36	2 <sup>nd</sup>
<b>Hunter Wildfires</b>	36	5 <sup>th</sup>
<b>Eastwood</b>	34	4 <sup>th</sup>
<b>Manly Marlins</b>	29	10 <sup>th</sup>
<b>West Harbour Pirates</b>	28	12 <sup>th</sup>
<b>Western Sydney</b>	15	9 <sup>th</sup>
<b>Southern Districts</b>	9	11 <sup>th</sup>



## English Premiership 2024/2025

*Total Score vs Regular Season Finish*

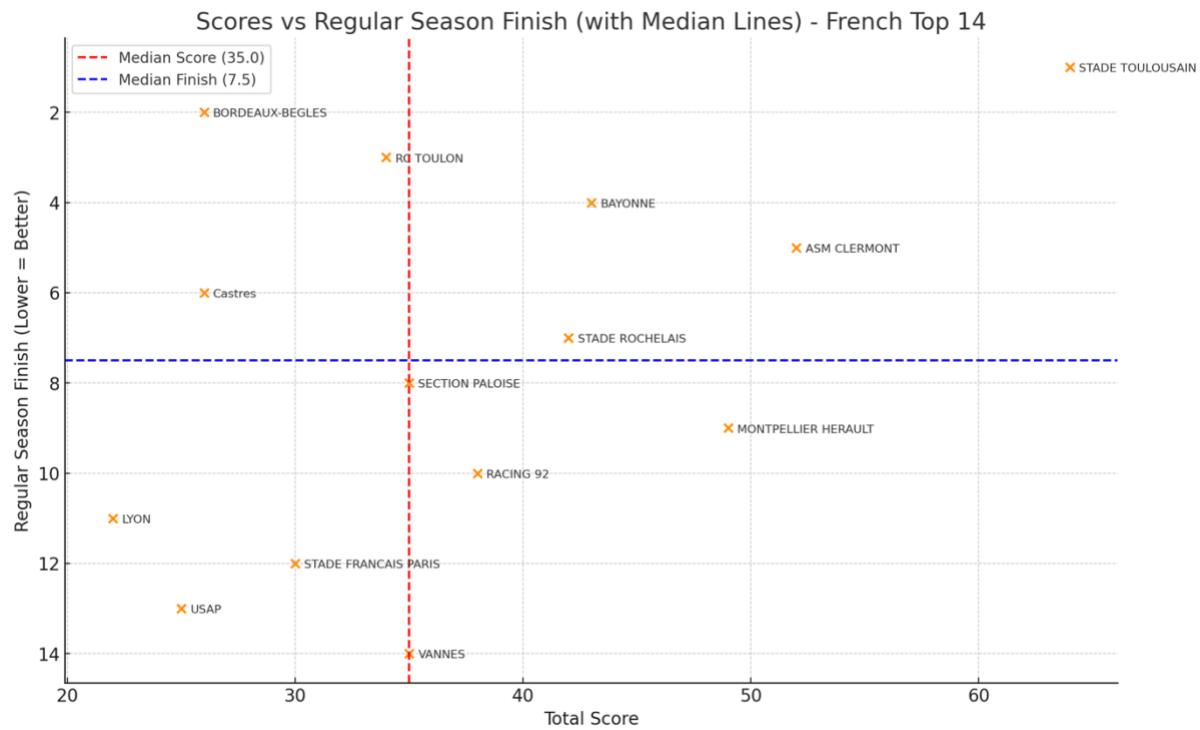
	Score	Regular Season Finish
<b>Leicester Tigers</b>	45	2 <sup>nd</sup>
<b>Saracens</b>	42	6 <sup>th</sup>
<b>Bath Rugby</b>	41	1 <sup>st</sup>
<b>Bristol Bears</b>	34	4 <sup>th</sup>
<b>Sale Sharks</b>	29	3 <sup>rd</sup>
<b>Northampton Saints</b>	25	8 <sup>th</sup>
<b>Harlequins</b>	23	7 <sup>th</sup>
<b>Gloucester Rugby</b>	19	5 <sup>th</sup>
<b>Exeter Chiefs</b>	16	9 <sup>th</sup>
<b>Newcastle Falcons</b>	11	10 <sup>th</sup>



## French Top 14 2024/2025

*Total Score vs Regular Season Finish*

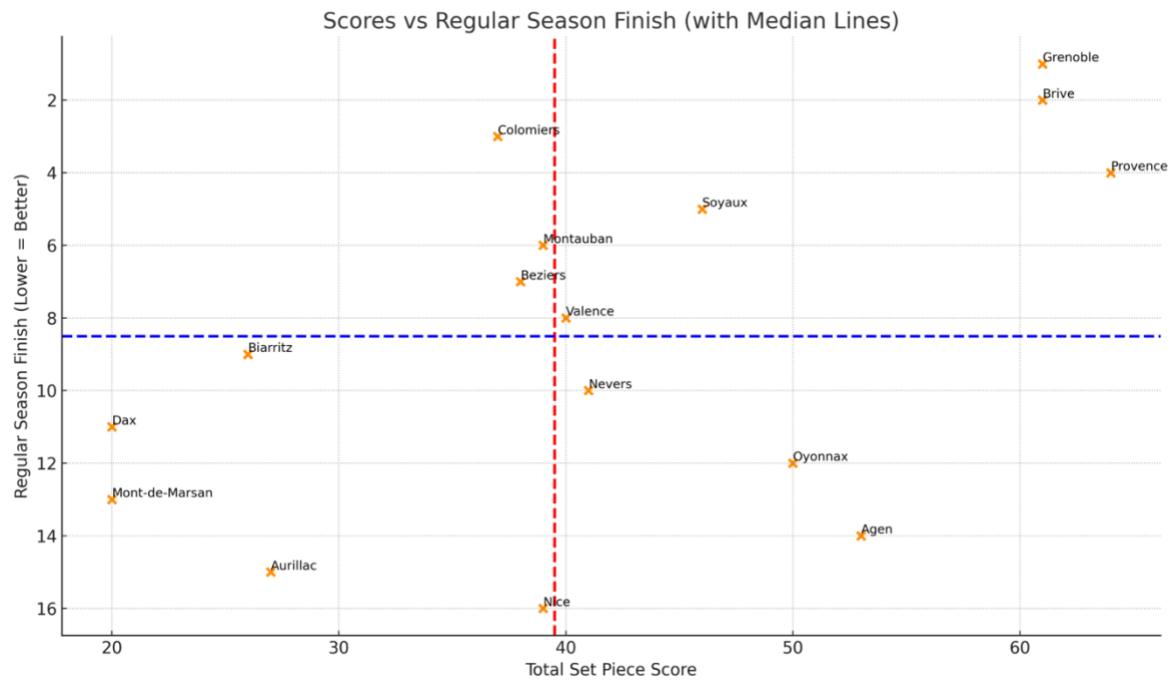
	Score	Regular Season Finish
<b>Stade Toulousain</b>	64	1 <sup>st</sup>
<b>ASM Clermont</b>	52	5 <sup>th</sup>
<b>Montpellier Herault</b>	49	9 <sup>th</sup>
<b>Bayonne</b>	43	4 <sup>th</sup>
<b>Stade Rochelais</b>	42	7 <sup>th</sup>
<b>Racing 92</b>	38	10 <sup>th</sup>
<b>Vannes</b>	35	14 <sup>th</sup>
<b>Section Paloise</b>	35	8 <sup>th</sup>
<b>RC Toulon</b>	34	3 <sup>rd</sup>
<b>Stade Francais Paris</b>	30	12 <sup>th</sup>
<b>Bordeaux-Begles</b>	26	2 <sup>nd</sup>
<b>Castres</b>	26	6 <sup>th</sup>
<b>USAP</b>	25	13 <sup>th</sup>
<b>Lyon</b>	22	11 <sup>th</sup>



## French Prod2 2024/2025

*Total Score vs Regular Season Finish*

	Score	Regular Season Finish
<b>Provence Rugby</b>	64	4 <sup>th</sup>
<b>CA Brive</b>	61	2 <sup>nd</sup>
<b>Grenoble</b>	61	1 <sup>st</sup>
<b>Agen</b>	53	14 <sup>th</sup>
<b>Oyannax</b>	50	12 <sup>th</sup>
<b>Soyaux Angouleme</b>	46	5 <sup>th</sup>
<b>USO Nevers</b>	41	10 <sup>th</sup>
<b>Valence Romans</b>	40	8 <sup>th</sup>
<b>Nice</b>	39	16 <sup>th</sup>
<b>US Montauban</b>	39	6 <sup>th</sup>
<b>Beziers</b>	38	7 <sup>th</sup>
<b>Colomiers</b>	37	3 <sup>rd</sup>
<b>Aurillac</b>	27	15 <sup>th</sup>
<b>Biarritz Olympique</b>	26	9 <sup>th</sup>
<b>Mont De Marsan</b>	20	13 <sup>th</sup>
<b>Dax</b>	20	11 <sup>th</sup>



## Summary

There is a clear correlation between highly effective set piece performance and finishing at the top of the table. In two of the four competitions, the team with the highest cumulative set piece score finished in first place after the regular season. In the remaining two competitions, the teams with the second and third most effective set piece finished in first place on the final ladder.

From the data we can suggest that to finish near the top of the table, a team needs to perform above, or at bare minimum, near the median set piece score. Out of the twelve teams in the who each made the top four in their respective competitions, only two sit well below the median, this being Bordeaux-Begles in the Top14 and Colomiers in the ProD2. Eastwood also sat below the median in the Shute Shield, but by a very narrow margin.

There is a strong correlation between poor set piece performance and a low finishing result on the regular season table. The worst performing set piece sides sat comfortably in the bottom four in each competition.

The Shute Shield and English Premiership follow similar lines of data output. Teams do not directly finish on the ladder where their set piece score places them, but the majority of teams are within a standard deviation, with a few exceptions.

The Top 14 and ProD2 have more dispersed outcomes. Having said this, the top four placed teams all sit above the median set piece score. Three out of four in the Top 14 and two out of four in the Prod2 top ranked set piece sides are placed in the top four of the ladder. Two of the bottom four ranked set piece sides in both French competitions are also bottom four sides on the final table position. Hereafter, there is a much wider data spread than in the English Premiership and Shute Shield. Bordeaux-Begles is a major outlier in the Top 14, with the tenth best set piece but finished in second place. Agen and Oyannax are also abnormal, with the fourth and fifth ranked set pieces, yet secured fourteenth and twelfth place finishes.

As an aside, what is extremely interesting is the disparity in attacking lineout percentage between the English Premiership and the Top 14/ProD2. Whilst the Top 14 and ProD2 have a similar range to the Shute Shield, the English Premiership have approximately 5% higher

completions across the board. I am unsure if this is based on coaching, training times or defensive systems in the competition.

## **Conclusion**

Having a high functioning set piece, evaluated across an array of metrics, is a decisive factor in regular season success and position on the competition table. There is a strong correlation between poor set piece performance and lower placement on a competition table. Whilst a top two set piece will secure a top four table position, interestingly a poor set piece can still deliver outcomes higher than the median finishing position, it is just far less likely.