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Jacob Holmen
University of North Dakota

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The Most Important Statistics in Football



UNIVERSITY OF NORTH DAKOTA

Jacob Holmen

Introduction

This research is based on the Five Factors that were devised by Bill Connelly of SBNation. The Five Factors of football include Explosiveness, Efficiency, Field Position, Finishing Drives, and Turnovers. Each factor is composed of associated statistics that when put together make up the most important statistics in football. This research includes the analysis of all 857 FBS (the highest level of NCAA Division I football) games from the 2016 season. Data was analyzed through the use of an Excel spreadsheet. Five different statistics were looked at, each associated with one of the Five Factors. The statistics include Yards per Play, Success Rate, Average Starting Field Position, Points per Trip Inside the 40, and Turnover Margin. Game by game analysis of each statistic was conducted and the results were compiled together to help show the importance of each statistic and how each one impacted a team's likelihood of winning. Trends were found that help show the impact that each statistic has on a football game; however, it is important to note that with so much variability in the game of football and how just about every statistic is dependent on other statistics, the results of this research will not always be consistent with individual game results.

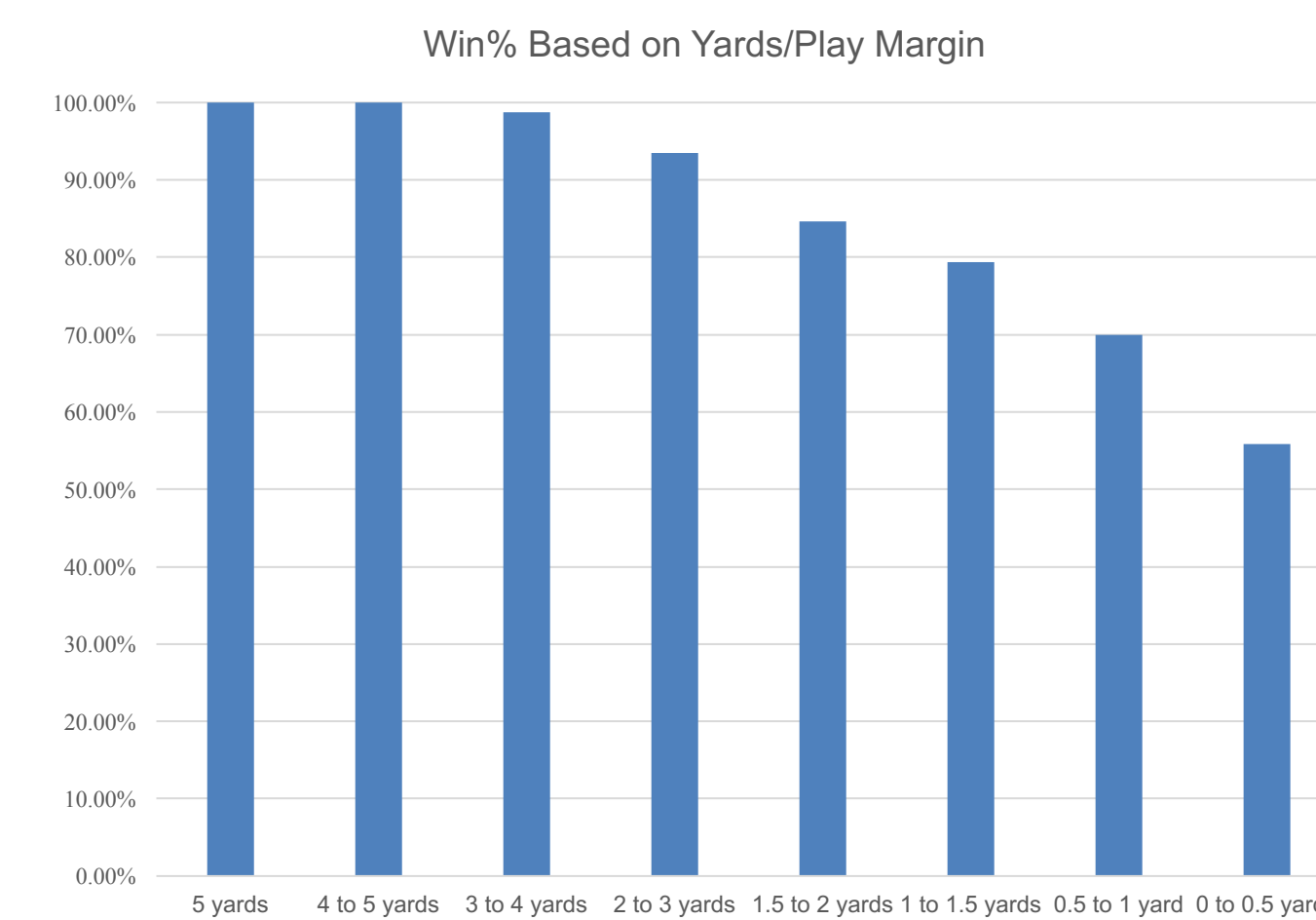
Methods

Offense	Defense	Points	Plays	Yards	Yards Per Play	Scoring Drives	Scoring Opps	Pts Per Opp	Avg Field Pos.	Success Rate	TO Margin
California	Hawaii	51	94	623	6.63	13	11	4.64	37.8	0.50	3
Hawaii	California	31	75	497	6.63	12	6	5.17	23.0	0.48	-3
Appalachian State	Tennessee	13	67	266	3.97	13	5	2.80	30.2	0.43	1
Tennessee	Appalachian State	20	74	299	4.04	11	5	4.00	32.8	0.36	-1
Florida International	Indiana	13	72	349	4.85	14	4	3.25	22.8	0.31	-2
Indiana	Florida International	34	82	481	5.87	13	8	2.12	26.0	0.50	2
Jackson State	UNLV	13	82	292	3.56	14	3	4.33	24.5	0.24	-2
UNLV	Jackson State	63	57	492	8.63	13	8	6.12	36.8	0.58	2

Through the use of an Excel spreadsheet, I was able to analyze data in an efficient manner by using different formulas that allowed me to arrive at my desired results. I went about this analysis by looking at each statistic separately on a game by game basis. This allowed me to compare opponents' statistics in each game over the course of the 2016 FBS season. Each of the five statistics are represented in the charts to the right which revolve around margins associated with each statistic. To find the margin of each statistic, I went game by game and looked at the difference of opponents' statistics. From here, I only looked at the data of teams who had a margin greater than or equal to zero. I then combined all of my game by game findings together to develop the charts on the right. These charts show how different margin ranges of each statistic impacts a team's chances of winning.

Results

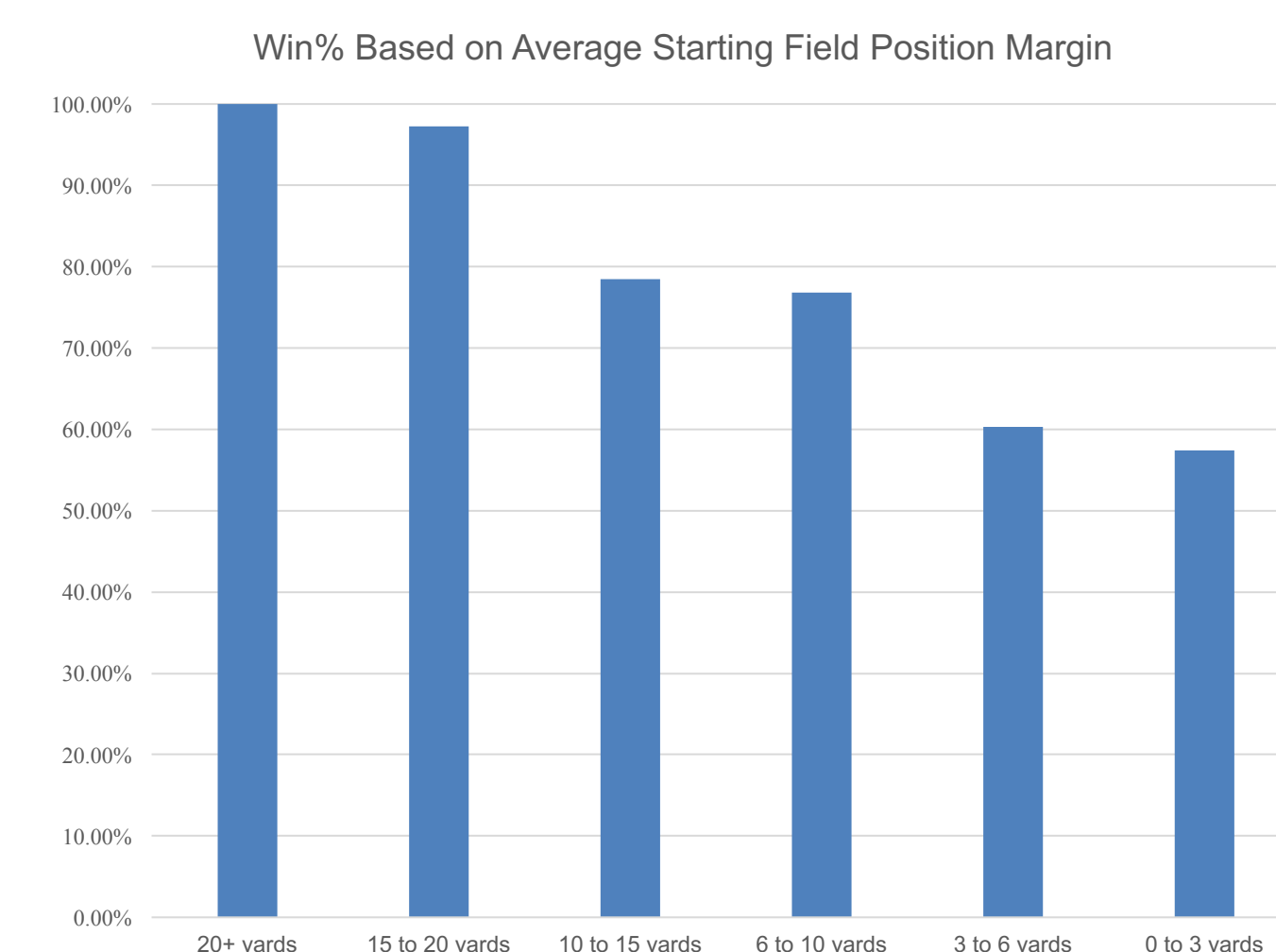
Explosiveness



Efficiency



Field Position

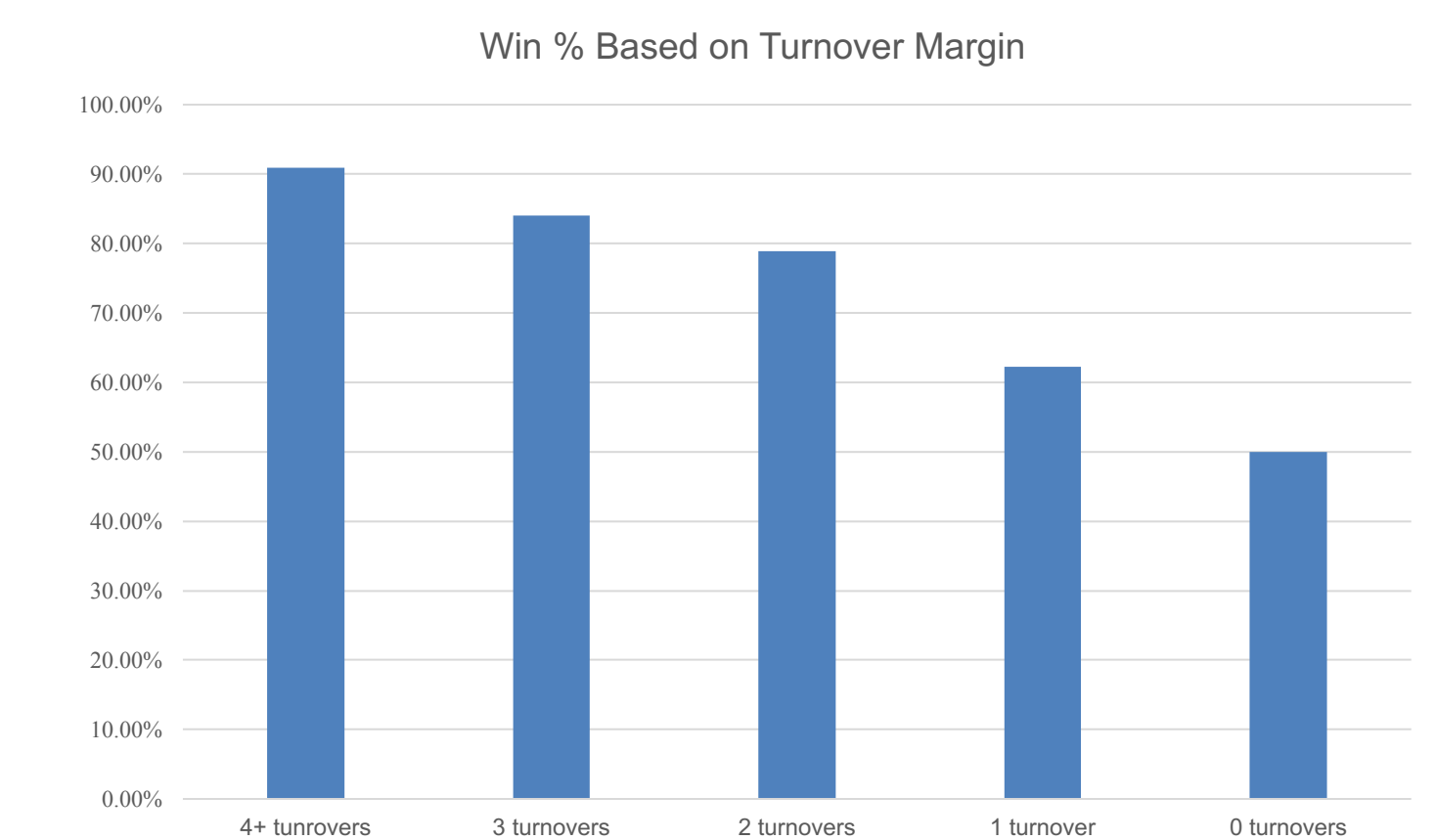


Finishing Drives



Results cont.

Turnovers



Conclusions

- Explosiveness
 - Outgaining your opponent by 1 to 1.5 yards per play improves your chance of winning by almost 30%.
 - When winning explosiveness battle, teams won 85.26% of the time.
- Efficiency
 - A 5% difference (1 out of 20 plays) raises chances of winning to around 75%.
 - When winning the efficiency battle, teams won 85.13% of the time.
- Field Position
 - When winning the field position battle, teams won 78.37% of the time.
- Finishing Drives
 - When winning the finishing drives battle, teams won 74.65% of the time.
 - Teams that averaged a field goal per trip only won 21% of the time.
- Turnovers
 - When winning the turnover battle, teams won 79.03% of the time.

References

- Connelly, B. (2014, January 24). The five factors: College football's 5 most important stats. Retrieved December 03, 2017, from <https://www.footballstudyhall.com/>
- Connelly, B. (2017). Five Factors Box Scores. Retrieved December 03, 2017, from <https://www.footballstudyhall.com/>