

Professional NBA Players’ Popularity Problems

How does an NBA Player’s Social Media Popularity Impact Their Salary?

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INTRODUCTION

Many NBA players have a large following on numerous social media platforms, like Instagram, Twitter and Tik Tok. Some of these players use their platforms to create a bigger name for themselves. Many player’s that are well-known on social media are also thought as being talented on the court. There may be cases where a player that is not as talented on the court have a more noticeable name on social media platforms. The level of performance from an NBA player would normally have an impact on how high the player’s salary is. Some players who have a high salary from on the court performance may look to social media to increase their overall income.

RELATED WORK

Throughout sports, there is ample research and literature related to the salaries. “Hot Stove Economics” digs into related topics of valuing long-term contracts, evaluating minor league players, and how to value players both through production and as an asset (Bradbury, 2010). “Predicating Salaries of Major League Baseball Players” looks into how salaries can be biased by both current production and previous historical production (Magel el al., 2015). “Computational Estimation of Football Player Wages” examines differing factors such as previous season performance, age, trajectory, personality, etc. For their method they created an algorithm that analyzes performance, behavior, and abilities, and uses this algorithm to compare projected vs. actual salaries (Yaldo et al., 2017).

DESCRIPTIVE STATISTICS

Table 1.

Descriptive Statistics for Predictor Variables

	Minimum	Maximum	Mean	Std. Deviation
Salary	925,258	45,780,966	14,817,370.81	11,527,008.28
Performance Variables:				
MPG	22.1	37.9	30.417	3.812
PPG	5.7	30.6	15.654	5.765
PER	7.24	32.94	16.196	4.644
All-Star	0	18	1.15	2.673
Popularity Variables:				
Twitter Followers	0	52,300,000	1,007,408.56	4,492,826.586
Instagram Account	0	1	.97	.180
Instagram Followers	0	133,000,000	2702440.48	10860856.71
TikTok	0	1	.22	.417
TikTok Mentions	1100	5,800,000,000	200,285,111.7	589,633,829.2

METHODOLOGY

Run a hierarchical model with 2 blocks measuring performance and popularity for the starting 5 and 6th man players for the teams in the NBA. The first block consisted of minutes per game, points per game, player efficiency rating, and how many times they have been an all-star. The second block consisted of if they have an Instagram account, if they have a Tik Tok account and how many Twitter followers they have.

Referenced data after popularity variables were added to ensure our data is accurate for what we are measuring. Evaluate the r-squared statistics, t-statistics, F-statistics, and significance for the data set.

Variable Selection

Correlations	1	2	3	4	5	6	7	8	9	10
1. Salary										
2. MPG	.533*									
3. PPG	.597*	.787*								
4. PER	.534*	.535*	.770*							
5. All-Star	.643*	.397*	.495*	.486*						
6. Instagram Followers	.379*	.265*	.356*	.291*	.691*					
7. Instagram Account	.025	.086	.023	-.069	.010	.046				
8. Twitter Followers	.375*	.254*	.338*	.289*	.757*	.947*	.039			
9. TikTok	-.026	.090	.160	.107	.075	.064	.099	.039		
10. TikTok Mentions	.398*	.337*	.475*	.398*	.699*	.899*	.047	.858*	.188	

\*  $p < .01$

Variables	VIF
Minutes Per Game (MPG)	2.771
Points Per Game (PPG)	4.951
Player Efficiency Rating (PER)	2.735
Number of All-Star Appearances	2.935
Instagram Account	1.040
Tik Tok Account	1.043
Twitter Followers	2.416

Final Selection

High correlations → collinearity issue

Final popularity variables: Instagram account, Twitter followers, TikTok account.

Final performance variables: MPG, PPG, PER, All-star

RESULTS

- Only 3.4% of variance explained by social media
- TikTok and Twitter Followers have a negative impact on salary
- TikTok and Twitter Followers were only significant popularity variables
- Social Media & Performance only explain 56.3% of variance in salary

Hierarchical Regression Analysis Results

Predictor Variables	Model 1	Model 2
Performance		
MPG	.175*	.142
PPG	.164	.223*
PER	.098	.063
All-star	.444**	.623**
Popularity Variables		
Insta Social?		.026
Tiktok		-.122*
Twitter Followers		-.222**
F-statistics	49.218**	31.674**
R <sup>2</sup>	.529**	.563**
ΔR <sup>2</sup>	.529**	.034**

Note: Standardized coefficients reported (β); t-values in parentheses; \*  $p < .05$ ; \*\*  $p < .01$

Implications/Limitations

Social media doesn't really affect a player’s salary. Salary is impacted by performance rather and social media.

Some of the players with larger social media followings use their brand and following as their method of income instead of basketball performance. Especially if they don’t rank as high on the court in performance.

Only used actual salaries, not off the court salaries (don’t know the endorsements, brand deals, social media income). Only looked at the starting 5 and 6th man for all 30 NBA teams instead of the whole roster. Not include players with a lower performance

The negative standardized coefficients for Tik Tok and Twitter followers show that having these accounts or the number of followers has a negative effect on player salary. Players should focus on their on-court performance or their social media popularity, but not both. Players that are more popular social media are less focused on their performance on the court.