Professional NBA Players Popularity Problems

How does an NBA player's social media popularity impact their salary?

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01 Introduction

INTRODUCTION

- Many NBA players have a large following on numerous social media platforms.
- Some use their platforms to create a bigger name for themselves.
- The level of performance from an NBA player normally would have an impact on how high the player's salary is.
- 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.

Related Work

- Throughout sports there's ample research and literature related to the salaries of players.
- "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).
- "Predicting Salaries of Major League Baseball players." looks into how salaries can be biased by both current production and previous historical production (Magel et al., 2015).
- "Computational Estimation of Football Player Wages" examines differing factors such as previous season performance, age, trajectory, personality etc. For their method they create a algorithm that analyzes performance, behavior, and abilities, and uses this algorithm to compare projected vs. actual salaries (Yaldo et al., 2017)

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Model Creation

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.

Variables Selection Procedure

- High correlations:
  Instagram followers and Twitter followers: .947
  Instagram followers and TikTok mentions: .899
  Twitter followers and TikTok mentions: .858

- High correlations – collinearity issue
- High VIFs among those three variables as we expected.

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

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	

$* p < .01$

03 Model Results

Final Model 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^2	.529**	.563**
ΔR^2	.529**	.034**

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

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Model Implications & Limitations

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 oncourt 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.