Week 12 Assignment 12.2: Hockey Assumptions

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DSC530-T302 Data Exploration and Analysis Matthew Metzger

February 16, 2024

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The exploratory data analysis (EDA) was conducted to determine if right shot defensemen are better assets than left shot defensemen. This is a widely held belief of National Hockey League General Managers and analysts (Akabas, 2023). The data appears to support this finding in one dimension of play. Right shot defensemen show a measurable offensive advantage over left show defensemen. In a game that can be decided with one shot, this is a marked advantage.

# Improvements

The piece that my analysis is missing is more defensive statistics. While the focus is often on offensive power, defensemen are paid to defend. If a right shot defenseman is better offensively, but is a defensive liability, the team is not in a better position overall. However, if the player is better offensively and on par defensively, this would be a marked advantage.

# Additional Variables

Plus/Minus is a team stat and does not measure individual performance. I think that the best route would be to review advanced statistics such as defensive zone giveaways or on-ice expected goal against to help measure defensive performance.

# Assumptions

The assumptions made were sound. However, the assumptions are supported by over 25 years of watching, playing, and analyzing statistics around the game of hockey. The assumptions and questions asked were developed over decades of enjoying hockey.

# Challenges and Conclusion

The biggest challenge I faced was obtaining the data I wanted to use for the analysis. Quality statistics and advanced statistics are hard to find in hockey.

# References

Akabas, L. (2023, February 3). “Right-Handed Defensemen Are the NHL’s Hot Commodity: Data Viz”. *Sportico.com*. Retrieved 2/18/2025 from https://www.sportico.com/leagues/hockey/2023/nhl-highest-paid-players-right-handed-defensemen-1234708533/

Downey, A. (2014). *Think stats: Exploratory Data Analysis*. “O’Reilly Media, Inc.”

Elite Prospects (2025). “Advanced Player Search”. Retrieved January 12, 2025, from https://www.eliteprospects.com/search/player?

Ellis, M. (n.d.). “NHL Game Data”. Retrieved January 12, 2025, from https://www.kaggle.com/datasets/martinellis/nhl-game-data