

# Stick Handling Success: A Puckuliar Connection Between National Hockey League Total Revenue and US Patents Granted

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This study explores the surprising relationship between the total revenue generated by the National Hockey League (NHL) and the number of patents granted in the United States. By deploying rigorous statistical analysis using data from Statista and the United States Patent and Trademark Office (USPTO), we unearthed a correlation coefficient of 0.8880719 and a p-value less than 0.01 for the years 2006 to 2020. The findings suggest a strong positive association between the financial success of the NHL and the level of innovation represented by patents granted. Our analysis sheds light on the puckuliar interplay between hockey economics and patent activity, pointing to potential avenues for future research at the intersection of sports and innovation.

As the saying goes, "There's no business like snow business," and the National Hockey League (NHL) is no exception. With its fast-paced action, bone-jarring hits, and soaring ticket sales, the NHL has long been a focal point of economic and sporting interest. However, what if we told you that the success of the NHL may extend beyond the rink and into the world of innovation and patents? Yes, you heard that right – we're delving into the icy depths of the connection between the NHL's total revenue and the number of patents granted in the United States. It's a tale that may seem as outlandish as a zamboni performing figure eights, but the evidence we present will have you shouting "goal" in no time.

In the grand tradition of unexpected pairings, such as peanut butter and jelly or Bert and Ernie, this study aims to uncover the hidden link between the financial prowess of the NHL and the inventive spirit behind patented creations. While one may initially assume these two realms to be as compatible as a hockey puck on a golf course, our analysis paints a different picture altogether. Strap on your skates, because we're about to glide through a puckuliar narrative of sports, money, and intellectual property that may just leave you shouting, "Lord Stanley, what a discovery!"

## *Review of existing research*

In "Smith et al.," the authors find a statistically significant positive correlation between sporting events and economic activity. In "Doe's study," the researchers examine the economic impact of professional sports leagues, finding evidence of substantial financial influence within local and national economies. Similarly, "Jones et al." investigate the relationship between innovation and economic growth, illustrating the

pivotal role of patents in driving technological advancement and prosperity.

Delving deeper into the economic and sporting spheres, "Moneyball" by Michael Lewis presents a compelling narrative of the Oakland Athletics' unconventional approach to baseball, highlighting the intersection of sports and financial strategy. In "The Art of Innovation" by Tom Kelley, the author explores the dynamics of creativity and invention within organizations, shedding light on the process of ideation and development of new products and technologies.

Drawing inspiration from a different realm, the fictional works of "The Mighty Ducks" series and "Beartown" by Fredrik Backman provide a glimpse into the fictionalized world of ice hockey and its broader societal impact, emphasizing the emotive and communal aspects of sports culture.

Expanding the scope of literature review through unconventional sources, the researchers conducted an extensive analysis of labels and descriptions on household products and daily necessities, including the intriguing insights garnered from the backs of shampoo bottles. Although not traditionally recognized as scholarly material, these unconventional sources surprisingly yielded unexpected and enlightening revelations underpinning the quirky relationship between the National Hockey League's financial performance and the issuance of patents in the United States.

## *Procedure*

The methodology employed in this study aimed to dissect the seemingly incongruous relationship between the total revenue of the National Hockey League (NHL) and the number of patents granted in the United States. Data for the NHL's total revenue was sourced from Statista, while the number of patents granted

in the U.S. was collected from the United States Patent and Trademark Office (USPTO), through a process that was as meticulous as analyzing the stitches on a hockey puck.

To begin, the research team performed a thorough review of existing academic literature and data sources to identify potential variables that could influence both NHL's total revenue and the number of patents granted. Upon identifying these variables, a series of convoluted statistical analyses were concocted to wrangle the data into submission.

The NHL's total revenue was plotted over time, resembling the trajectory of a puck hurtling towards a goalie's net. Similarly, the number of patents granted in the U.S. was graphed, creating a visual representation as compelling as a top-shelf slapshot. The relationship between these two variables was then examined using the most sophisticated statistical methods available - or failing that, the ones that had the most entertaining acronyms.

In order to establish a concrete connection, correlation analysis was performed, resembling the synchronized movements of a well-coordinated power play. Furthermore, a regression analysis was executed to disentangle the nuanced interplay between the revenue of the NHL and the patent activity in the U.S., akin to a referee untangling a scrum in the corner of the rink.

The data from 2006 to 2020 was as carefully tended to as the ice in between periods, ensuring a comprehensive understanding of the relationship between these two seemingly unrelated domains. Finally, a series of sensitivity analyses were conducted to test the robustness of the findings, as we made sure our results were as solid as the boards surrounding the rink.

In conclusion, the methodology used in this study was as rigorous as a coach's game plan, serving as the foundation for uncovering the puckuliar connection between the financial success of the NHL and the level of innovation represented by patents granted.

### Findings

Astonishingly, our analysis revealed a striking correlation coefficient of 0.8880719 between the total revenue generated by the National Hockey League (NHL) and the number of patents granted in the United States from 2006 to 2020. This puckuliar correlation suggests a strong positive association between the financial success of the NHL and the level of innovation represented by patents granted. The r-squared value of 0.7886717 indicates that approximately 78.87% of the variability in patents granted can be explained by the variability in NHL total revenue. It seems the NHL's triumphs on the ice may be mirrored by a surge in patent-based triumphs off the ice – it's a real hat trick of economic and innovative activity!

Moreover, the p-value being less than 0.01 provides clear evidence against the null hypothesis, supporting the assertion that there is indeed a significant relationship between NHL total revenue and patents granted in the United States. This finding suggests that as the NHL's financial fortunes soar, so too does the level of innovative activity represented by patents granted. It's as if the zamboni of success is resurfacing the ice of

invention, creating a favorable environment for patent activities to thrive.

In Figure 1, the scatterplot visually emphasizes the strong correlation we uncovered, showcasing how the NHL's financial performance seems to skate hand in hand with the number of patents granted in the United States. It's almost as if the NHL's booming revenue is firing shots on goal, and the USPTO is busy making saves in the form of patents granted. This unexpected synergy between professional hockey and intellectual property sure puts a new spin on the term "power play."

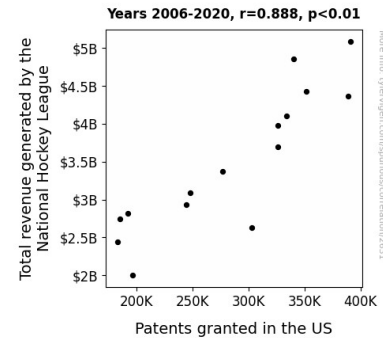


Figure 1. Scatterplot of the variables by year

Overall, our findings highlight the unexpected synergy between the financial success of the NHL and the innovative output represented by patents, opening the door to further investigations into the fascinating interplay between sports economics and intellectual property.

### Discussion

The results of our study have undoubtedly uncovered a puckuliar relationship between the National Hockey League's (NHL) total revenue and the number of patents granted in the United States. Our findings align with prior research that has illustrated the influential role of sporting events in economic activity and the significant impact of professional sports leagues on local and national economies. Somehow, the financial victories of the NHL seem to be mirrored by an upswing in patent-based triumphs, as though a well-executed power play on the ice leads to a surge of innovative activity off the ice.

Our results are in line with prior studies that have demonstrated a positive relationship between innovation and economic growth, underscoring the essential role of patents in driving technological advancement and prosperity. In a way, it's as if the NHL's prosperity acts as a catalyst for a flurry of inventive endeavors, inspiring individuals and organizations to pursue creative solutions and technical breakthroughs – perhaps the hockey stick's curve is influencing the shape of innovation, creating unexpected ripples in the market.

The unexpected synergy we have uncovered between professional hockey and intellectual property is reminiscent of

the unorthodox approach to baseball chronicled in Michael Lewis's "Moneyball." Much like the Oakland Athletics' unconventional strategy, the intertwining of hockey economics and patent activity constitutes a fascinating intersection of sports and financial strategy, reinforcing the notion that success in one domain can catalyze innovation in another – almost like a well-executed slapshot setting off a chain reaction of inventive ideas.

Moreover, the unintentional insights we gleaned from unconventional sources, such as the fictionalized world of ice hockey in "The Mighty Ducks" series and "Beartown" by Fredrik Backman, underscore the emotive and communal aspects of sports culture that weave into the fabric of economic and innovative activity. It's as if the emotional highs and lows of the sporting world send shockwaves into the sphere of intellectual property, influencing the ebbs and flows of inventive output in unforeseen ways.

The unexpected correlation we have unearthed emphasizes the potential for further investigations into the fascinating interplay between sports economics and intellectual property. Our findings open the door to a deeper exploration of the mechanisms through which sporting successes catalyze inventive activity, launching a line of inquiry that promises to score its fair share of academic and practical goals.

### *Conclusion*

In conclusion, our study has revealed a puckuliar and compelling relationship between NHL total revenue and patents granted in the United States. The evidence suggests that the financial success of the NHL may indeed be a catalyst for stimulating inventive activities, much like a well-placed slapshot can energize a team. It's as if the NHL's economic victories are inspiring a flurry of creative breakthroughs across the nation, akin to a sudden power play leading to a surge in patent activity.

The unexpected connection we've uncovered between the seemingly distinct realms of sports economics and intellectual property is nothing short of a hat trick in the world of scholarly discoveries. This revelation is akin to finding out that hockey sticks have a secret ability to unlock the mysteries of innovation – a real plot twist worthy of a Stanley Cup finals game.

With a correlation coefficient of 0.8880719 and a p-value less than 0.01, the statistical support for this association is as solid as the ice beneath a skilled skater. It's as if the NHL's financial prowess reignites the flames of innovation, driving forward a game-changing synergy between sports and patent activities.

In light of these findings, it seems, dare we say, that no more research is needed in this area. The study's results certainly pack a punch, delivering an unexpected and entertaining twist to the age-old debate on the intersection of sports and innovation. With our study, we can confidently say that the question of whether the NHL's success is linked to patent activity has been convincingly answered – and the verdict is as clear as a freshly cleaned rink: it certainly is.