Value of an NHL Player

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Abstract
The National Hockey League (NHL) consists of 30 teams which are located in all diverse types of markets around North America. With these teams being in different size markets, it is becoming more difficult to survive in the rigid economic times. With sports being a billion dollar industry, the NHL is an organization who is really struggling because of the lack of support from fans and sponsorships. With money being an issue, owners of these 30 NHL teams, have to make a decision whether they want to be a winning organization or a profitable organization. With this being said owners need to think about how much money their players are making. My research question is: What is the return on investment of NHL players? How does the return on investment compare to the value of a player? This research being performed will benefit the academic community because it will open up the job markets for the NHL. With moving the idea of using statistical data to determine a players worth, we are able to validate the idea of saber metrics in the NHL. This can add a whole new field of study in the academic community. It will also benefit the sport community, because it will give owners of sport organizations the knowledge needed to spend their money wisely when deciding to sign a player. Finance is a very important aspect in sports, and doing this research we can predict future values to find ways for NHL owners to make a profitable organization. With this being said, the players also want to make sure they are making what they are giving back to the organization.
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Introduction

The National Hockey League (NHL) consists of 30 teams which are located in all diverse types of markets around North America. With these teams being in different size markets, it is becoming more difficult to survive in the rigid economic times. With sports being a billion dollar industry, the NHL is an organization who is really struggling because of the lack of support from fans and sponsorships. With money being an issue, owners of these 30 NHL teams, have to make a decision whether they want to be a winning organization or a profitable organization. With this being said owners need to think about how much money their players are making. My research question is: What is the return on investment of NHL players? How does the return on investment compare to the value of a player? This research being performed will benefit the academic community because it will open up the job markets for the NHL. With moving the idea of using statistical data to determine a players worth, we are able to validate the idea of saber metrics in the NHL. This can add a whole new field of study in the academic community. It will also benefit the sport community, because it will give owners of sport organizations the knowledge needed to spend their money wisely when deciding to sign a player. Finance is a very important aspect in sports, and doing this research we can predict future values to find ways for NHL owners to make a profitable organization. With this being said, the players also want to make sure they are making what they are giving back to the organization.

Literature Review

When looking at past research statistical data has been used for a long time, to determine the value of a player. The use of data has been used in sports such as baseball and basketball, but not really in hockey. Saber metrics is becoming more and more popular in sports, because it is giving owners the opportunity to use the statistical data given to them, and see whether or not
they are getting a good return on investment (Mason & Foster, 2007). With hockey being such a complex sport, it is very hard to use the data provided to predict the value of a player (Mason & Foster, 2007). In baseball, each player works independently to provide runs for their team. Baseball is known as a simple organization because of this (Mason & Foster, 2007). With this being said it is easier to find the value of a player in baseball than it is hockey, however hockey provides more statistical data than any sport (Mason & Foster, 2007). Gary Thorn, a sportscaster, says “Hockey, like most sports, has scads of numbers and statistics. But there is not yet a well-established system that tracks those numbers to tell you what kind of player brings you the best results in the course of a year” (Dalter, 2006, p.BB.01). With the idea of statistical analysis being so new, NHL owners are really skeptic on if they should use saber metrics, because yes it may help them but when it comes to arbitration players can use the numbers to get better pay based on their performance (Mason & Foster, 2007).

**Players**

According to Kahane, 2001, Players who may be valued the same, can be paid differently based on what market these players play in play in. With this being said, two players who are star in the league and for their team, will be compensated based on how big of a market they play. Sidney Crosby is a great example of this. Before Sidney Crosby was drafted by the Penguin, Pittsburgh was struggling to maintain a franchise in their city. With this being said the Penguins drafted Sidney Crosby and other star players. After the draft the revenue started increasing, and the team saw financial success. They eventually won a Stanley Cup together. With the addition of Crosby the Penguins grew to a top organization. This shows how valuable Crosby is to the organization (Farber, 2008). Another example of this can be looking at a player in Philadelphia,
and a player in Minnesota (Gennaro, 2007). They can have the same skills; however with being in different markets the pay is different, (Siegel, O’Brien, & Beech, 2012). In order to find how much a player makes, you have to first determine how much a player’s worth (Gennaro 2009). A way to measure a value of a player is to first look at the player’s contract compared to the free agent market (Gennaro 2009). Another way you are able to look at this, is determining a players economic value to his team, by seeing how much additional revenue he generates for his respective organization (Gennaro 2009). Another way we can look at this is by taking how much a team makes for each additional win, and we can look at how much contribution each player has to each additional win, and we can determine a players value from there (Gennaro 2009). Looking at how well players perform under pressure can also determine a player’s value (Depken, Sonora, & Wilson, 2012).

When a player is looking to rebuild his contract, he is able to go to arbitration. In arbitration, players and staff will look into how well the player performed and how much they attributed to an organization. Based on those numbers a salary will be made (Lambrinos, & Ashman, 2007). In the 2001-2002 hockey season the average salary for a forward was slightly more than 1.4 million (Lambrinos, & Ashman, 2007). The average defenseman earns about 1.4 million in salary (Lambrinos, & Ashman, 2007). With a player going through arbitration, they might be able to bring their salary up to market level when maybe it was being kept below market level (Lambrinos, & Ashman, 2007).

Owners

A team’s value is just as important as a player’s value. If a team has a poor value, then a player who plays for that team will also have a poor value (Gennaro, 2007). It is very difficult to find a team’s value because a lot of the information needed, teams don’t have to share because
they are private organizations (Humphreys, & Lee, 2010). In looking at a team’s value, you have to consider the intangible assets, which include player’s contracts, television rights, stadium agreements, and the relationship with the fans (Humphreys, & Mondello, 2008). Other variables that contribute to a team’s value are market size, stadium, and team performance (Humphreys, & Mondello, 2008). In having a new stadium, you are able to increase your value. The reason behind this is because you are going to increase attendance with having a new appearance (Miller, 2009). A team who plays out of a public stadium will have less value than a team who plays out of a private stadium (Humphreys, & Mondello, 2008). Winning will also increase the value of a franchise. Where a team is on the win curve, which is a curve that reacts to fan loyalty compared to the number of wins a franchise has (Gennaro, 2009). The higher the team is on the win- curve the better off, however different franchises react different on the win curve. What you want to make sure is you keep the same loyalty throughout the years (Gennaro, 2007). When you have great fan loyalty you are able to raise ticket prices without worrying about a decrease in attendance (Gennaro, 2009). With market size, the larger your market size the less value your team has because you have other competing teams in the same area, which can take away fan loyalty (Humphreys, & Mondello, 2008). A team’s license also can strengthen the value. If you have a trademark you can also increase value, because there is only one out in the field (Sonntag, 2011).

According to Hudson,” the NHL has the weakest revenue sharing proportions in North American sports”. With this owners can from a winning program, or a program that is profitable (Gennaro, 2007). Just because you have a winning program doesn’t mean you are going to be profitable (Gennaro, 2007). With 18 of the 30 NHL teams losing money in the 2010-2011 season, owners are trying to find ways to generate more revenue (Hudson, 2012). Right now one
way that these owners are trying to turn a profit is by asking players to cut their salaries (Hudson, 2012). With the new Collective Bargaining Agreement being put into place the players were going to lower their wants to 50% instead of the 57% they are making now (Forbes.com, 2012). This means that the players want to split the revenue generate by the teams 50%-50% instead of 57%-43%. This would help the small market teams become more profitable and it will also help the large market teams (Forbes.com, 2012). This would also help increase the overall profitability of the league (Forbes.com, 2012).

Even though hockey attracts richer and more educated adult fans, than any American sport, and while having the highest ticket prices in sports, the NHL is still unprofitable (Forbes.com, 2012). This has a lot to do with the revenue sharing in the NHL. Twenty six teams in the NHL will share 85 million dollars. When we compare this to another sport such as football, which makes 1.1 billion dollars and shares the revenue among the entire league, we see why teams are not very profitable in the NHL (Forbes.com, 2012). Even when small market teams are winning they are still losing money (Forbes.com, 2012). When a team wins, they will draw more fans, which in essence will bring in more revenue (Gennaro, 2007). With that being said, the Florida Panthers made it to the playoffs, yet still lost 25 million dollars (Forbes.com, 2012). Another team who experienced this is the Colorado Avalanche, who won the Stanley Cup yet still lost 4.5 million dollars (Forbes.com, 2012). Hockey organizations lose a lot of their money through real estate (Forbes.com, 2012). An arena in which a team plays out of is only used by the hockey team 41 days out of the year (Forbes.com, 2012). This causes a problem for organizations because they are paying a lot of money for these arenas. If teams are leasing out an arena, they are only using the arena for half a year, when the lease is signed for a whole year (Forbes.com, 2012). If a franchise owns their building there increasing their value because of
having more assets (Humphreys, & Mondello, 2008). When we see this teams need to be more aware of what is going on and make sure they follow their budget (Duhatschek, 2010). With this being said owners and organizations need to use their farm system, and develop players to the fullest (Gennaro, 2007). They also have to look at stats and use that to find what players are worth their money they are asking for (Kennedy, 2011). Ryan Kennedy reports a statement from a western conference scout saying, “any information, whether new or old is useful” (Kennedy, 2011). Referring to statistics being used to help determine the value of a player, like done in baseball. A few teams who are doing a good job of using their farm systems, and there statistical data are the Nashville Predators, Phoenix Coyotes, and the Minnesota Wild (Duhatschek, 2010). All three of these owners are using smart business decisions to help the money situation through the years. The Predators deal with minimal payrolls every year (Duhatschek, 2010). Berry Trotz described their success by saying, “No.1, we’ve come to pure grips with what our restraints are. Because of that, you have to make really good hockey decisions, based on what you have given to you” (Duhatschek, 2010). With that Trotz also says, “The key is, we’re patient and we develop players” (Duhatschek, 2010). The Phoenix Coyotes changed their approach. They decided to trade for players, for players who they have developed through the franchise that would benefit their program (Kwak, 2010). They relied on a short term success to boost their franchise to the next level (Kwak, 2010). The Minnesota Wild is a team who look at statistics in order to find players who will generate the same stats put are cheaper than your star players (Egan, 2003). With one of the lowest payrolls, the Wild made it to the semifinals in 2003 (Egan, 2003). Two of their top scores had a base salary of 350,000 dollars (Egan, 2003). This goes to show how well their system is working because they are paying players less because they signed them right from the draft, and signed them for a cheaper price.
The Wild have developed these players into playmakers, who are still on the same contract as when they started. The return in investment is a positive one with the Wild (Egan, 2003). The Wild are paying less in salaries than the teams they beat (Gietschier, 2005). With this Gietschier, (2005) says that teams are using statistics to compare players to one another. Teams want to know who is better, who will win the next game. Statistics will tell them that (Gietschier, 2005).

Teams are looking to grow into the community to gain better community relations, and expanding their image throughout the market. With this there value will increase (Inoue, Kent, & Lee, 2011). In a journal by Inoue, Kent, & Lee, (2011) discuses corporate social responsibility (CSR) which is actions taken to provide social good. Ways to engage in CSR with athletes is through community outreach programs, community development, youth educational initiative, and environmental programs (Inoue, Kent, & Lee, 2011). All of these will help better a team’s image, and will provide more support from fans, which will help bring in more revenue, to increase your value. Charitable foundations are also huge in community support within a team’s market (Inoue, Kent, & Lee, 2011). In all of sports the NHL provides the lowest amount of charitable donations, with the average being $308,866, with the highest being $948,185 and the lowest being $1,445 (Inoue, Kent, & Lee, 2011). However when you look at the donations compared to the revenue brought in, the NHL is equal to the MLB in giving about 42% of their revenue to charity (Inoue, Kent, & Lee, 2011).

Finance

Finance is a big part in what sports are all about. The term Finance means, managing money through investments (Brown, & Rascher, 2010). In saying this finance is when people who have money give it to those who don’t because the people with the money want to make a
profit. The ways they make a profit is through interest (Brown, & Rascher, 2010). The information gathered is then organized into different statements, known as the balance sheet, income statement, statements of retained earnings, and statement of cash flows (Winfree, & Rosentraub, 2012). Now taking finance and bringing it in the sport business, you are looking at the ways to increase the value of time, revenue growth. Franchises compete and cooperate with one another, to achieve these goals of sport finance (Brown, & Rascher, 2010). Franchises are either made up of one of these ownerships, single entity or distributed. Single entity ownership is when one person owns the whole league, as in a distributed ownership each team has individual owners (Brown, & Rascher, 2010). The NHL is a distributed ownership league. When you have a team there is five ways in which you can finance a team, debt, equity, retained earnings, government funding, and gifts. Debt has to deal with taking a loan out. Equity is when owners exchange ownership for money. Retained earnings are the portion of earnings that a firm saves to fund operations assets. Government funding deals with tax breaks, and funding. Finally gifts are associated with donations (Brown, & Rascher, 2010). When looking at the finance of a team, there are different areas you have to look at (Gennaro, 2007). As a franchise you goal is to be in the 1 quartile in wins, however the third quartile in payroll. What this means is that you want to have a team of good player’s in which cost next to nothing. You can achieve this by having a strong farm system, and free agency. (Gennaro, 2007). When looking at the value of a franchise there are different components that help put the pieces together. Your marginal revenue, player value, and winning, are all financial information that adds value to your team. Marginal revenue is how much each additional win cost. Player value is how much money a player brings in to your program. Finding a players value is very important because without a certain player a team will have less wins, which could lose them money (Gennaro, 2007). With this being said, a
players value depends on the market, fan loyalty, the win curve, and the players performance (Gennaro, 2007). Finally winning, helps bring in more fans which brings in more revenue (Gennaro, 2007).

Based on where a team subsides determines the kind of revenue brought in. Teams located in cities such as Los Angeles, Philadelphia, Montreal, Toronto, and New York City, are making more money than teams in the lower markets such as Minnesota, Nashville, Phoenix, and Tampa (Siegel, O’Brien, & Beech, 2012). Teams in larger markets are able to generate larger deals, such as broadcasting, and sponsorships (Gennaro, 2007). Ever sense the lock out in 2004-2005 revenues of the teams has increased by 50 percent, from $2.2 billion dollars to $3.3 billion dollars (Korbitz, 2012). Teams who are north of the boarder and who are also in large markets have been profitable, however nearly two-thirds of the NHL operated in the negatives in the 2011 season (Korbitz, 2012). At the end of the 2012 season the revenue jumped to $3.4 billion (Forbes.com, 2012). With this the each NHL hockey team is worth about $282 million dollars (Forbes.com, 2012). The league was able to increase their value per team by 18 % last year, which has allowed them to raise tickets 5 % and also fill its arenas to about 95.6%. With all of this, the NHL has also secured new sponsorships with Discover, Geico, Honda, The Las Vegas Convention and Visitors Authority, McDonalds Paramount Pictures, Tim Hortons, Verizon, and Visa (Forbes.com, 2012). Even though all of this is happening and a lot of positives are occurring, there is still a huge gap between the poor and the rich. The top 5 teams right now in the NHL in value are Toronto Maple Leafs ($1 billion), New York Rangers ($750 million), Montreal Canadians ($575 million), Chicago Blackhawks ($350 million) and Boston Bruins ($348 million). The 5 teams who are the lowest in the league in value are Carolina Hurricanes ($162 million), New York Islanders ($155 million), Columbus Blue Jackets ($145 million),
Phoenix Coyotes ($134 million), and St. Louis Blues ($130 million) (Forbes.com, 2012). The overall operating income which is your gross income nearly doubled during the 2011-2012 season (Forbes.com, 2012). The three most profitable teams in 2012 were the Toronto Maple Leafs, New York Rangers, and the Montreal Canadians, which accounted for 83% of the leagues income (Forbes.com, 2012).

Statistics In Hockey

Many different studies have been done assessing the different ways you can determine the value of a player. Ideas based how fit and how the size of the player can determine their value (Roczniok et al., 2012). All the way to using statistical data to determine how important their role is to your franchise, and also what their value is worth (Mason & Foster, 2007). With hockey being a complex sport it is very hard to determine where players made an impact during a game. Multiple of studies have been done to look at, what factors can determine a players value. A study done by, Nadaeu, Godbout, and Richard,( 2008) looked at assessing players into three categories, a dominate player, a good player, and a less decisive player. A dominate player was defined as, “a player considered essential to the team and whose presence on the ice is generally decisive. Offensively, he is the player who leads the team, either by the number of scoring chances or by the players he develops. Defensively he is the player who prevents the opponent from scoring , by either shadowing the opponent closely, or shutting down the opponent” (Nadaeu, Godbout, & Richard, 2008). A good player is defined as, “an efficient player whose presence on the ice is important, but not as much as the dominate player. He possess less physical or technical skills. In offense he scores and gets point. In defense he isn’t as consistent as the dominate player” (Nadaeu, Godbout, & Richard, 2008). Finally the less decisive player is defined as, “a player who posses all basic qualities to be on the team. They lack the
skills needed to provide points to the organization” (Nadaeu, Godbout, & Richard, 2008). There are two different types of variables being looked at when using statistical data. One study labeled these variables as predictive, and outcome variables (Tarter et al., 2009). In looking at the predictable variable, three areas were looked at, physical fitness, skill ratings, and game statistics (Tarter et al., 2009). The outcome variables were used to find the value of a player. The study looked at two different factors because a player’s accomplishment doesn’t indicate a player’s value to a team, because player needs come differently based on what position they play (Tarter et al., 2009). The variables looked at were, total time played on the ice and the number of times an athlete was selected to the three stars of the game (Tarter et al., 2009). Not only does skill reflect on your value, your physical features, and personality attributes, play a factor into your value (Roczniok et al., 2012). Player’s total goals can be predicted based on personality such as “competitiveness, and self-orientation (Gee, Dougan, Marshall, & Dunn, 2007). Your physical traits can also play a factor into your value. How big you are will determine what position you are playing (Quinney et al., 2008). Players, who have the ability to have great aerobic and anaerobic skills, will provide better value to a franchise (Roczniok et al., 2012). When looking at statistical analysis, players are able to take the information generated and can use it to their advantage when asking for a raise, or a new contract (Mason & Foster, 2007). In looking at information regarding player value, there is going to be evaluations that are subjective and evaluations that are objective. A study performed by, Vescovi, Murray, and VanHeest, (2006), looked at these different classifications. A subjective evaluation is going to include the playing ability of the player (Vescovi, Murray, & VanHeest, 2006). Objective testing, is going to look at the physical, and physiological side, which will provide some insight on talent identification (Vescovi, Murray, & VanHeest, 2006).
As an organization you want to develop a strong farm team, so your able to keep player’s in your organization for a long time, and you are able to develop them how you want to develop them (Gennaro, 2007). If you are able to draft a player in a lower round for a cheaper price, you can develop them to the same potential as a player picked up in the early rounds (Vescovi, Murray, Fiala, &VanHeest, 2006). In a study performed in 2006, Vescovi looked at a players off-ice performance to determine their draft statues (Vescovi, Murray, Fiala, &VanHeest, 2006). These authors found that draft statues cannot predict how well you will perform in the NHL (Vescovi, Murray, Fiala, &VanHeest, 2006). With this being said, it is very important for teams to find prospects that have low draft statues, which will be paid less to start and eventually an organization can build them to a star player (Gennaro, 2007).

Looking at the recent success of statistical analysis in sports such as baseball and basketball, hockey is become very interested in what ways can the NHL use their statistical data to better their sport. Saber Metrics can be defined as “employing statistical analyses in order to apply objectives to a certain sport” (Mason & Foster, 2007). Over the past decades teams around the sport world have been hiring “stat heads” which will have a great influence on the team’s decisions down the road with the use of saber metrics (Mason & Foster, 2007). Part of saber metrics is the use of video and computer data bases. These have been used by the San Jose Sharks organization to help with their coach (Mason & Foster, 2007). In determining the players worth you have to see where he performs during the game. A former general manager named Mike Smith said that, “Among the many things we can do… is evaluate players at different times of the game” (Mason & Foster, 2007). With this we can see how well players, coaches, and the team performs under critical situations (Mason & Foster, 2007). Ken Holland stated in (Dater, 2006) that “We’re all trying to get the best bang for our dollar… and statistics can help that. But
to me, hockey will never become a Moneyball sport like baseball, because I think baseball is more of an individual sport, wrapped in a team game. But its batter versus pitcher every play, just two guys. We’ve got five guys on the ice that need to be in unison. But, what are quality minutes, what are they like in the last few minutes of a game, when do they score majority of their goals? In that sense I think we are probably headed a bit towards Moneyball” (Mason & Foster, 2007). With looking at statistics in hockey the time of the goal, can matter because if the hockey player is a high scorer, he might not be scoring all of this goals when it matters. When the game is no longer in doubt then scoring doesn’t really affect the value (Mason & Foster, 2007). In finding a player’s value you need to figure out what is undervalued? Is it penalty killing, or is it something in the league that nobody is paying for (Mason & Foster, 2007). You are also able to look at even strength and how a team performs on that level (Foster, 2006). In creating new statistics such as +/- minutes. These minutes are based on goals against on even strength and goals scored on even strength (Mason & Foster, 2007). In recent years the NHL has been using different statistics which are being discovered through Trakus (Mason & Foster, 2007). Trakus is a device that is connected to a player. The device can determine where a player is on the ice at all times, how fast they are, and the distance traveled (Mason & Foster, 2007). This will provide the teams with data first hand (Mason & Foster, 2007). With the new salary cap being put into place statistical analyses will be very important. As explained by Chris Snow from the Minnesota Wild, “In the new salary cap era, I think it will be more important than ever to find individual value, especially among your role players, guys who may all be making minimum or close to it. The most difficult thing is trying to measure individual value, but maybe measuring different forms of new data can be an aid” (Mason & Foster, 2007).
Methods

Research Tradition

The research approach I used is post positivism. In using data I was able to gain knowledge that will help NHL franchises better understand how they are able to make a profit off players, by seeing their skill level compared to their play. This information will help NHL teams in the future when contracts need to be negotiated and salaries need to be set. The post-positivism approach works for my research because I won’t be looking at player’s emotions or theories (Gratton, & Jones, 2010). Based off of my study each individual will be looked at on an individual bases. Through this approach I will be creating knowledge that will determine a player’s value through statistical analysis, which will provide an understanding to the New York Islanders and me as a researcher of how you can value a player in the NHL (Gratton, & Jones, 2010). Once my findings are set, I will know how well a team does with making the best return on investment possible. This will not only help the organization, but it will also help the player, who is getting underpaid. The quantitative approach is the use of numerical measurement and analysis, which will help me answer my research question. (Gratton, & Jones, 2010).

Conceptual Framework

For my study I will be looking at the New York Islanders. The Islanders are located in New York and have been on the lower end of profits made each NHL season. The are on the lower 5 for most valued team (Forbes.com, 2012). I will begin to look at different variables to determine the value of the players on the team compared to their salary for the two seasons. I will look at the 2010-2011 and the 2011-2012 season states for each player. The variables I will be looking at are goals scored, assists, plus or minus minutes, time on ice, shifts, and total points. I will be looking
at where they are on the win curve, how many wins, how much marginal revenue is produced? However in doing this study there is going to be some variables that I not able to control. The size of the market, different revenue streams the player has. These two are not able to take in due to the lack of knowledge of a player’s financials, and also the availability of certain financial information. In taking in all this information I will be able to look at a one aspect of why a team, may be making less profit than another. This is through paying their employees and making sure their receiving a positive return on their investment.

Goals: A goal is scored when the puck goes between the goal posts from the stick from another player. The puck must completely cross the red line between the posts. A player will receive one point for a goal. (firstbasesports.com)

Assists: Being involved with goal by enabling it to happen, helping someone out. A maximum of two assists are credited for one goal. You also receive a point for the individual who scored an assist (firstbasesports.com).

Plus or Minus Minutes: This is calculated by subtracting the total number of goals allowed by the teams by the amount of time a player is on the ice (even strength or power play) from the total goals allowed when either (even strength or short-handed) (Hockey-Reference.com).

Time on Ice: The amount of time spent in the game (Hockey-Reference.com).

Total Points: For each point awarded for either a goal or assist adds up into your total points (Hockey-Reference.com).

Goals against average: On average how many goals does a goalie let in a game (Hockey-Reference.com).

Production Time: Amount spent on ice divided by total points (Hockey-Reference.com).
Save Percentage: The percentage of shots per game a goalie doesn't let in the net (HockeyReference.com).

Marginal Revenue: How much each additional win is worth. This meaning that when a team wins one game, how much money to they produce in revenue. Then once they win another game, how much more money will they receive based on fan responsiveness to the win (Gennaro, 2007).

Theoretical Framework

I looked at my results through business theory, with the idea that business are out there to maximize profit (Garcia-del-Barrio, & Szymanski, 2009). However with this, is it ethical for business to pay a player under his value to help maximize profits? In my research I will be looking at how a player is paid, and how he is being valued. And are the NHL owners maximizing profits. Economists have argued that teams who are out to maximize profit will be more competitive than teams who are maximizing their wins (Garcia-del-Barrio, & Szymanski, 2009). Profit maximizers do not care about winning, unless it affects their profits, while winning maximizers invest as much as they can into playing talent in order to win (Dietl, Lang, & Werner, 2009). According to Vrooman (2009), sport owners are more likely to sacrifice profit in order to win. This causes owners to be win maximizers. However if team owners are profit maximizers, it is said that they don’t affect competitive balance (Vrooman, 2009). When looking at revenue streams, teams who are profit maximizers and share gate revenues, the incentive to invest in players decreases because the return on investment is smaller. If win maximizers share revenue, spending incentives will not be hurt, because teams are expected to spend everything they receive (Vrooman, 2009). In a study in which ticket pricing behavior was tested, results showed that the NHL made choices that are consistent with profit maximization (Vrooman,
In looking at the business theory of making a profit, I will determine if the New York Islanders focus on winning or profit maximization, through the value of the players on their team.

**Design**

The research that I will be collecting is quantitative data. The secondary data that I will be collecting will be coming from NHL.com, capgeek.com, hockeydb.com, and Forbes.com. In performing my research I will be looking at all the players on the roster from the 2010-2012 seasons. After calculating the amount of productivity each player brought compared to the amount of money they receive, I will then be able to see how much value each player brings to the team. I will be using players who have played more than 30 games in the regular season.

**Procedure**

In doing my research, steps have been taken in order to make sure all variables are accounted for. I will first get every player who played on the team in each of the 2010-2012 seasons. I will make sure they have played a minimum of 30 games for the Islanders. However there will be one exception, and that will be the backup goalies. The goalies have to have a minimum of 20 games played. I am going to retrieve this information about player’s statistics from NHL.com. I will then look into player’s contract information on websites such as capgeek.com and hockeydb.com for 2010-2012 seasons. For financial information for the New York Islanders I will be looking on forbes.com. With the data gathered I will look at the different relationships between the player’s and the team. I will compare the player’s stats to their team’s finances to determine if these players are undervalued or overvalued. After I receive this information I will then look more in depth at their stats such as goals, assists, plus and minus and total points. I have taken different statistics such as total points, time on ice, shifts, and total points. I will then find how much each
of these statistics is worth in dollar amount which came from the amount of revenue the Islanders brought in for the 2010-2012 seasons. When looking at each statistic I am able to see how much a player brings in from their performance, how many times/how long their on the ice, and how much money they bring in from just being on the ice. I will then take an average of the results. For the goalies I took how much each win, lose, and save was worth. I then took the value in wins and subtracted them from the value of loses. Then I added in the value for saves and came up with a value for the goalies. When I compare that to their salary I can then determine if they are underpaid or overpaid, through finding how much on average they bring in from these statistics. In testing this out, I took 5 NHL players from the 2012 season, and collected information based on their performance and their pay. After doing my pilot test I determined that my procedure for doing my research is valid and can be carried forward.

Results

The goal of this study was to determine the value of an NHL player. The organization used was the New York Islanders because of how low on the revenue stream they were during the 2010-2011, and 2011-2012 season. All information regarding contracts were found through capgeek.com. All statistical data was taken from espn.com. Most of the data was kept, unless the players played less than 30 games for that season. All players that played under 30 games were tossed out of the analysis. The reason behind this was not only lack of time and resources, I wanted to make sure that the results were as accurate as possible. With hockey having such a high risk of injury players can find themselves out for the whole season if needed. In the 2010-2011 season, my sample consisted of 25 players in which 14 of them were forwards, 8 defenders, and 3 goalies, and had a age range of 18-41 years old. Out of the 25 players 20 of them have less
than 5 years experience, while having one rookie. In 2011-2012 season the sample consisted of 21 players in which 2 of them were goalies, 13 forwards, and 6 defenders who had an age range of 19-38 years old. Out of the 21 players 14 of them have less than 5 years experience. A lot of these players are in the last couple years of their entry level contact (capgeek.com, 2013). Are the New York Islanders trying to make a profit by buying their players less or are they being ethical and giving players the salary in which they are worth.

The New York Islanders are trying to maximize profits by buying their players less than what they are bringing in to the organization. In order to determine the value I collected statistics such as games played, time on ice, shifts, and total points. For goalies I looked at their wins, loses, and the amount of saves. When I looked at the forwards and defensemen, I first found how much each point, each time, each shift, and each game was worth in dollar amount. From that I found out how much each player was able to produce for the season. I then added each player’s dollar amount and took the average which gave me the value of that player for the year. For the goalies I took how much each win, lose, and save was worth. I then took the value in wins and subtracted them from the value of loses. I then added in the value for saves and came up with a value for the goalies. In the 2010-2011 season the New York Islanders had a total revenue of $63 million dollars. During this season almost all of their players generated more revenue than their salaries (see table 1.0). However there are a number of players who generated less. James Wisniewski a defender for the Islanders had a salary of $3,250,000 dollars for the 2010-2011 season, however he only brought in a total of $2,468,560.78 dollars. With this the Islanders lost just under a million dollars on this player for the season. If they knew before his contract, what he was valued at the Islanders could have used the extra money elsewhere. One of the biggest
losses was with goaltender Rick DiPietro. Rick had a salary of $4,500,000 which secured
the highest salary on the team.

In the 2011-2012 season we see the same results as in the previous season. Players are being paid
under than what they are valued at. With this being said some players are underperforming and
the New York Islanders are losing out on money that could be used in another part of their
organization. Table 1.1 shows the relationship between salaries and players value for the 2011-2012 season.
Brain Rolston, a left wing forward is making a salary of $5,000,000 dollars. Brain is only bringing in $2,085,919 dollars.

**Conclusion**

The New York Islanders have been on the lower end of the revenue stream for the past decades (Forbes.com, 2012). My research question stated: What is the return on investment of NHL players? How does the return on investment compare to the value of a player? Through my research I found that the New York Islanders are focusing on the business theory of profit maximization (Garcia-del-Barrio, & Szymanski, 2009). The New York Islanders have an agreement with each player stating how much each player will be making during their time with the team, as well as how much they will be making each year. For the 2010-2011 and 2011-2012 season the Islanders paid their players less than what they are valued at. This could be because of the entry level contract a lot of their players started with. However through the two seasons the Islanders spent a total of 83 million in players expenses (Forbes.com, 2012). In these two seasons
the players in which I sampled brought in an total revenue of $127 million dollars. In looking at this we can see that the Islanders did indeed make a profit all because they failed to pay their players close to what they are valued at. An example of this is Jonathon Tavares. In 2011 John brought in over $5 million dollars, while only making $900,000 dollars. The teams return on investment was great which supports the idea profit maximization. However teams who are finding themselves on the higher end of the scale are seeing their return on investment to be higher (Egan, 2003). Teams like the Islanders need to start focusing on developing players at a younger age so they can determine the value of that player and pay him accordingly. So they don’t lose money with over paying players, once the player entry level contract is up. If players over perform then that not only benefits the player in the long run, it will help bring more money into the organization each year. Through my study there were many limitations. One of the major issues I faced was the different level of contracts which are in the NHL. A lot of the players I sampled with the Islanders were still in their entry level contract which meant they were getting paid less. This caused the return on the investment to be higher than expected. Another limitation I had was the ability to get raw data from the Islanders themselves. In the future I recommend that the researcher looks at a sample in which players are out of their entry level contract. This will make sure you are able to get a better result when comparing their value to their salary. A great example of this is with Jonathon Tavares. When John signed his new contract ( $33 million/ 6 years) at the end of the 2012 season, he makes $4 million in 2012-2013 which puts him around what I valued him at.
References


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