Report on the Economics of the Canadian Hockey League and its Team Members

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Prepared for Charney Lawyers Professional Corporation

June 14, 2016

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1 Expert Report of Dr. Kevin Mongeon

My name is Kevin Mongeon. I am an Assistant Professor of Sport Management at Brock University in St. Catharines, Ontario where I teach sport economics, sport analytics and quantitative analysis at the graduate and undergraduate level. I also provide analytics related consulting services to professional sport organizations. My educational background includes a PhD in economics from Washington State University, an MBA from the University of Windsor and a B.Sc. in Mathematics from Lakehead University. My complete curriculum vitae is provided.

My primary area of scholarship is in the field of Sports Economics. I develop economic models and use econometrics to test hypotheses and understand behaviours on real-world markets. Some of my recent published work examining sport league behaviours is particularly relevant to this assignment. Significantly, I develop a sport league model to understand the collective impact of joint production and cross-ownership on owner profits, player salaries, and league competitive balance in an article titled, *The Effects of Cross-Ownership and League Policies Across Sports Leagues Within a City.* In other peer reviewed publications, I examine the impact of league design and fan preferences on the accuracy of referee penalty calling decisions, and test for salary and ethnicity discrimination in the National Hockey League.

I am currently the Primary Investigator of a Social Sciences and Humanities Research Council of Canada Insight Development Grant that applies computer programming, big-data, and Bayesian econonometric techniques to test whether sport bettors exhibit behavioural biases when they interpret and update probability related information. I regularly present my scholarship at academic and industry conferences. I recently presented my work on the production of winning sports contests at the Statistical Society of Canada's annual conference, and organized a sports economics panel at the Pan American Sport and Exercise Research Summit.

2 Assignment

Charney Lawyers has asked me to provide an expert report on the following areas in the context of the Ontario Hockey League (i.e., OHL) and the Western Hockey League (i.e., WHL), hereafter Leagues:

- explain how teams and leagues produce games and generate revenues, and discuss players' involvement,
- discern the leagues' and teams' operating objectives and measure their business outcomes,
- discuss the viability of a player minimum wage policy,
- provide economic perspective on the validity of arguments made in the defendant's affidavits.

To undertake this task, I rely on academically established and credible Industrial Organization and Sports Economics theories. Sports Economics is a mature sub-discipline of Industrial Organization based on core consumer, firm, and market structure principles. Many Industrial Organization and Sports Economics concepts I use in the report are explained in the textbook authored by 2014 Nobel Laureate Jean Tirole titled *The Theory of Industrial Organization*, and the third edition of *Sports Economics* by Rodney Fort. The academic and public sources that inform this report are listed at the end of the document.

While there is available research on sport markets, leagues, and teams, limited context-specific research exists. I therefore devoted significant time and resources to collect, verify, and critically analyze the data. In some instances, I was required to analyze small samples of data. I used modern applied microeconomic econometric techniques to obtain unbiased estimates and make accurate inferences.

This report contains the results of my analysis for which I have received financial compensation. It is my understanding that this report is being submitted in connection

with a request for class certification and that I am not being asked to opine on the merits of this claim. Rather, I am using my knowledge of Sports Economics and the available data to provide expertise on a number of questions that clarify the behaviours of hockey players, teams and leagues.

3 Summary and Conclusions

My examination of the economic environments and the business operations of the OHL, WHL and their member teams led to the following conclusions:

- all players contribute to the value of all teams within their league,
- teams consistently interact with players in the common,
- the Leagues and their member teams make decision to maximize profits,
- a minimium wage is a viable policy that will have a negligible effect on the provision of teams.

I arrive at these conclusions through the construction of models and observation of data. I do not attempt to account for private financial data from individuals teams nor do I want them because they reflect accounting practices rather than responses to the incentives of leagues and teams. The issue of player pay concerns players' contributions to the economic production of games and revenues.

4 The Economics of Sport Leagues

Sports Economics theory offers insight into how hockey markets operate. Specifically relevant to the case at hand, Sports Economics models explain how leagues and teams produce games and measure the impact of potential policy changes on sport markets.[2]

Like most markets, sport markets are defined by how industry (i.e., teams and leagues) respond to consumer demand (i.e., fan preferences). Sport fans are unique consumers. Fans want their home team to win (i.e., quality), but also demand uncertainty in their game outcome (i.e., competition). Sport leagues respond to fan demands by providing games that are characterized by quality and competition.

In hockey, two teams (home and away) collectively produce games with talent supplied by players. Home team business operations sell games, which are defined by quality and competition, and collect related revenues. Since hockey fans have the choice to consume games from various leagues and levels of play, the quality and competition of games is not only determined in relative terms (i.e., across teams), but also in absolute terms (i.e., across leagues). The unique characteristic of sport markets lies in the mutual reliance between competing teams to produce games. This mutual reliance requires teams and leagues to cooperate to jointly produce games and generate revenues.

An important outcome of the co-production of games is the fact individual team revenues, as well as league-wide revenues, are a function of the contribution of players throughout the entire league. These revenues extend beyond ticket sales and include all revenues that would not be generated without players' contribution (e.g., television rights, merchandise, concessions, parking, etc.). The economic value of a player is determined by the revenue generated from his contribution to the game.[3] From a production perspective, although individual player contributions to revenue vary, all players contribute to revenue generated throughout a league.

[2]For example see Fort and Quirk (1995); El-Hodiri and Quirk (1971); Mongeon and Winfree (2013).

[3]The economic value of a player is determined by his marginal revenue product (Kahn, 2000; Scully, 1974).

In my report, the analysis of team objectives, ticket revenues, and franchise value estimates are presented at the team-level and show that each team in the Leagues can support a minimum wage policy. The viabilility of this policy should be based on aggregated team values given revenues are co-produced.

5 Market Conduct

Previous research has found that teams have cooperated beyond what is necessary to enable game play by engaging in joint venture activities through the strategic allocation of teams and through the imposition of labour market restrictions. I assess the behaviour of the Leagues and their teams to discern their objectives.

5.1 Expansion and Relocation

The systematic expansion and relocation of teams to previously occupied regions is an indicator of under-expanded Leagues and of profit-maximizing teams. Under-expanded markets are characterized by the threat of viable relocation from which teams and leagues extract benefits. Owners need only show a threat of alternative location to extract benefits.

Data from the OHL show evidence that benefits have been extracted from strategic expansion and relocation. For example, a $22 million public subsidy was generated from the OHL expansion to Mississauga in 1998. In 2007, the team was sold and relocated to St. Catharines along with a $44.7 million public subsidy. The data also reveal that the benefits extracted extend beyond the duration of the threat. Under the agreement on allocation of revenues between the Ice Dogs and the City of St. Catharines, the Ice Dogs receive a significant portion of the revenues generated at the new venue, including 100 percent of all media revenues from team games, advertising in the arena bowl, sales from their retail store and 50 percent of concessions, pouring rights and in-house advertising.

The movement of teams in and out of a given location allow leagues and teams to extract direct and indirect benefits. This is evidenced in the NHL where the league received a $60 million relocation fee from the relocation of the Atlanta Thrashers to Winnipeg in 2011. Data from the OHL show that the league and teams extract direct and indirect profits, most notably by leveraging public subsidies. As an example, the OHL expansion into Brampton in 1998 was accompanied by the opening of the $26 million Powerade Centre. After completion

of 15-year lease with the Powerade Centre, the Brampton Battalion's move to North Bay led to a $16.2 million renovation subsidy.

While patterns of relocation and expansion in the NHL and OHL reveal profit-maximizing behaviour, this behaviour is not evidenced in the case of the WHL where the threat of relocation has not generated public investments comparable or relative to the OHL. For example, the mayor of Chilliwack refused to meet the Chilliwack Bruins demand for annual financial support, which led to the teams sale and relocation to Victoria, where it plays in an arena that was already constructed.

5.2 Demand and Total Revenue

Buisiness that operate in a competative market are not able to profitably increase prices because consumers have the ability to purchase similar (i.e., substitute) products from competing business. The OHL and WHL provide teams wth exclusive geographic territories rights and local monopoly in Major Junior Hockey. In the absence of direct competition for tickets, teams exhibit profit-maximizing behavior by exercising market power and profitably increase ticket prices.

To determine whether the Leagues use their market power to set ticket prices, I estimated teams' price elasticity of demand ($\epsilon_{p,d}$) and compared it with the theoretic known value of -1. I estimated the price elasticity with a traditional demand equation that controls for other factors that can potentially influence demand beyond price.[4] The demand for game attendance is expressed as

$$ln\left(\frac{att_{s,i}}{pop_{s,i}}\right) = \beta_0 + \beta_1 ln\left(price_{s,i}\right) + \beta_2 win_{s,i} + \beta_3 NHL_i + \epsilon_{s,i} \tag{1}$$

where the subscripts s, i denote season-team observation. The dependent variable, $\frac{att_{s,i}}{pop_{s,i}}$, is per capita attendance. The independant variable *price* denotes the teams' average ticket price, *win* denotes the annualized winning percentage, and NHL is an indicator variable identifying whether the i^{th} team is located in a region with a NHL club. The *win* term controls for team quality and the NHL term controls for the availability of a substitute hockey product. Economic theory suggests that the parameter estimates of *price* and *NHL* should be negative to reflect a decrease in demand from increase in price and the presence of a NHL team, and winning should be positive to reflect an increase in demand from an increase in team quality. I collected 80 season attendance, average ticket prices, team winning percentage, and population census observations and estimated the equation with Ordinary Least Squares.

[4] I estimated various demand equations in terms of specification and functional forms. All model estimates have similar results.

The estimation results are presented in the following equation:

$$ln\left(\frac{att_{s,i}}{pop_{s,i}}\right) = -0.0.66 - 1.02 \times ln\left(price_{s,i}\right) + 0.76 \times win_{s,i} - 1.58 \times NHL_i \qquad (2)$$

The price elasticity of demand estimate is -1.02, which is the theoretic value of a profit-maximizing monopolist. The interaction between price and quality would cause teams to generate less revenue if they altered their current price strategy and increased or decreased their ticket prices. This is an important finding because it provides strong evidence that teams profit-maximize and exercise market power when setting ticket prices.

The parameter estimate of winning is 0.76, indicating that winning increases attendance. The expected difference in attendance for teams with a winning percentage of 0.450 to 0.550 is 400 spectators per game. The parameter estimate for the NHL is -1.58, implying that the presence of an NHL team decreases attendance. The NHL variable acts as a control variable rather than a predictive variable because of the large difference in populations of cities with NHL teams. Nonetheless, depending on the size of the city, the presence of an NHL team decreases attendance from approximately 5000-10000 spectators per game.

I used equation (2) to derive the inverse demand function $P(A)$ and total revenue curves ($R = P(A) \times A$). The estimated revenues are presented in Table 1.[5] Based on 2014 data, I estimate that the average team game level revenue was approximately $4 million annually with some of the smaller regions generating less than $2 million and larger regions generating close to $10 million. Note that these are conservative estimates because they only account for ticket revenue, and some teams can generate similar revenue from other sources.

[5]Note, Hamilton is a new franchise with limited data available. Therefore, their estimated revenues reflect potential revenues.

5.3 Labour Market

The wages people recieve is determined by competition for their services. In a competative labour market a players' salary reflects the revenue they generate. Team owners have long argued that policies restricting player salaries are needed to ensure competitive balance. This argument rests on the assumption that, without policies, systemic competitive imbalance will ensue. Since competitive imbalance can reduce fan interest in games, leagues, teams, players, and fans have a vested interest in preserving competitive balance.

Economic theory explains that many league policies have a negligible or non-existent impact on competitive balance because talent inevitably moves to where is it valued most regardless of whom collects the revenues (Rottenberg, 1956). When player transactions occur in competative markets, a new team pays the player to move from their old team. In restricted markets, a new team pays a player's old team to move the player. Identical amonts of money are transacted between a player, and their old and new teams, only the distribution of the money differs.

The OHL and WHL have eliminated all intraleague competition for players. First, players gain entry into the league via the entry-level draft that involves teams picking players. Second, upon entry into the league a players' services are retained by their team for the duration of their career. The draft and Player Service Agreement have collectively eliminated the labour market for player services. As long as teams are able to trade players and the Leagues are the only supplier of Major Junior Hockey, teams will retain the entire value of a players' services.

6 League Outcomes

Exclusive geographic territories leads to varying benefits from winning to vary across teams. Profit maximizing teams optimally invest in winning causing competitive imbalance. I measure the Leagues competitive balance to make inferences about teams' business objectives.

I use standard deviations ratios, which measure the dispersion of winning percentage throughout leagues, and normalize it to 1 to allow comparison across seasons with varying number of games played.[6] A standard deviation ratio equal to 1 indicates a perfectly balanced season. Values greater than 1 imply less (worse) competitive balance. The standard deviation ratios based on the 2011-2015 team winning percentage across all teams, OHL teams, and WHL teams are 1.63, 1.64, and 1.62 respectively. These ratios are similar to historical NHL standard deviation ratios that range from 1.61 to 1.71, indicating that the Leagues have similar levels of competitive imbalance as the NHL and are profit maximizing.

[6]Standard deviations ratios allow comparison of standard deviation by dividing standard deviations by a perfectly balanced season and the number of games played, $\frac{0.5}{\sqrt{m}}$

7 Player Benefits

CHL players receive benefits from participating in the Leagues. While the conditions of their participation can vary across teams and Leagues, all players receive provisions for housing, education, allowance, transportation, and equipment. Several of these provisions are conditional on the period and type of services offered to players.[7] Scholarships, for example, must be taken within 12 months (WHL) and 18 months (OHL) of leaving the league, and players become ineligible upon playing at the professional level. Other items such as transportation and equipment are costs of business and not player benefits.

Insofar as teams and Leagues can act as conduits to other sports leagues, they also provide players with professional benefits. In order to determine the value of this benefit, I use data to estimate the probability that the Leagues' players will play in other hockey leagues. I analyzed OHL player-draft and roster data from three cohorts (1999, 2000, 2001) over 10 years to discern the likelihood that the OHL will lead to a NHL career. Tables 2 and 3 present the results.

The data show that players who get drafted to the OHL in early rounds have a much greater probability of playing in other hockey leagues than those drafted in later rounds. Players drafted in the first round have a 44 percent probability of playing at least one game in the NHL. That probability drops to 21 percent in the 2nd round and to less than 10 percent by the 4th round. Probabilities based on whether or not a player will play at least 100 games are similar.

Players drafted in later rounds are probable to play at least one game in a league other than the NHL. For example, players drafted in the 4th round have a 75 percent probability of playing a game in a North American junior league and a 15 percent chance of playing in an European league. The associated probabilities decrease to 17 and 6 percent when we increase the number of games played to 100.

[7]For example, billet families receive $300 a month and 2 season tickets in the OHL and $200 to $350 a month in the WHL. OHL players receive an allowance of $470 or $900 for over age players. Teenagers in the WHL receive $250 and 20 year olds receive $350.

I also conducted an analysis conditional on the number of OHL games played. Specifically, I used a Logistic specification to estimate the impact of OHL games played on an indicator variable identifying whether a player played in the NHL, and a Poisson specification based on the number of NHL games played.[8] For the purpose of analysis, I grouped players in three categories according to the number of games played in the OHL: low, medium and high. Players in these three categories have, respectively, a 1 percent, 25 percent and 40 percent probability of being drafted to the NHL. Players with low numbers of games played in the OHL are predicted to play half of an NHL game whereas players in the medium and high categories are predicted to play 39 and 66 NHL games, respectively. Since the WHL has a similar economic environment of the OHL, I assume similar trends exist in the WHL.

My analysis also leads to general observations concerning the participation of OHL players in post-seconday education. The data show that between 20 and 30 percent of OHL players eventually play hockey in a Canadian Interuniversity Sport hockey league. These percentages are substantially lower than Canadian average population (42 percent) that enrolls in post-secondary population.[9] I note, however, that this data does not accout for OHL players who attend university and do not play hockey and does not show whether students who play in interuniversity leagues utilize or are eligible for scholarships.

[8]The logistic and Poission specification are expresssed as $NHL_{s,p} = F(\beta_0 + \beta_1 ln\,(ohlgps, p)$. In the logit specification, NHL is an indicator variable identifying playing in the NHL league, $ohlgp$ is the number of games played, and $F(\bullet)$ represents the Poisson functional form.

[9]*http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/educ71a-eng.htm*

7.1 Franchise Values

The general principle of business ownership is to maximize profit. The profit maximizing hypothesis, which is a common economic view, holds that owners make decisions about their venues, players and media contracts to maximize the difference between total revenues and total costs.

Complete and sufficiently publicly available revenue and cost data are rarely available to analyze and estimate franchise values. Accounting regulations do not always attribute revenues and costs and can also make valuation estimates based on balance sheets difficult. Many team owners have a background in investment and business ownership suggesting CHL team ownership is an investment vehicle.

Market prices, however, provide observable information of franchise values. In recent years the Mississauga franchise has sold twice. Expressed in 2015 dollars, the Mississauga franchise sold for $4.56 million in 2003 and $10.68 million in 2006, resulting in a 138 percent $\frac{10.68-4.56}{4.56}$ return on invesment. I collected 11 franchise sale prices since 1990 and created a rate of return model that accounts for population to estimate franchise values (Tables 4 and 5). The average rate of return of a franchise can be expressed as:

$$ln\left(\frac{price_{y,i}}{population_{y,i}}\right) = \beta_0 \tag{3}$$

where $price_{y,i}$ is the selling price expressed in 2015 CAD and $population_{y,i}$ is the region's census metropolitan area.

I find that the average rate of return of a CHL franchise is 7.9 percent. Note that this is a high rate of return and substantially greater than the average Canadian GDP growth rate of 3.0 percent. My finding is similar to research findings that the rate of return of Major League Baseball franchises is approximately 1.6 times greater than the economy Fort et al. (2006). My model estimates that CHL franchises located in markets with populations of 100,000, 500,000, and 1,000,000 are currently worth $6.2, $31.4, and $62.8 million dollars

respectively. Table 5 presents the estimates the current franchise values of OHL and WHL teams. [10]

[10]Franchise values and team revenues are positively correlated. Franchises values located in large cities reflect their increased potential of a stadium subsidie.

8 Minimum Wage Policy

The literature concerning the impact of sport league policies is vast (Marburger, 1997; Szymanski, 2004, 2010). Economic models of sport leagues explain policies by representing small and large markets based on their share of talent to determine each team's winning percentages, and the proportion of total revenues allocated to the small and large market owners and players. The models discern the impact on revenue, player pay, and winning based on their impact on owner's incentives to invest in winning.

A player minimum wage resulting in equal pay throughout a league can be expressed similarly to a payroll floor. Payroll floors have no effect on league outcomes unless they are binding and force an owner to make investment in player decisions they would not otherwise make. The amount of hockey revenue generated from players in the smallest markets far exceed the cost of a player minimum wage. Therefore the minimum wage policy will not impact owners' incentives or the league outcomes. It will however have an impact on the redistribution of revenues from owners to players.

A minimum wage policy based on a 40 hour work week, for 25 weeks, with a 25 player roster at the Ontario minimum wage rate of $11.25 costs $281,250. I estimated that small markets generate over $1.5 in revenues, not including other source of related revenues (i.e., sponsorships, merchandise). According to the Erie Otters' financial statements, ticket revenue represent only 50 percent of total related revenues. The model becomes simpler from a normative perspective if we safely assume that every player contributes at least his salary to hockey revenues (i.e., $11,250).

The viability of a minimum wage policy will not impact competitive balance or the number of teams in the league. Under a straight owner centric model with no sharing, the small market teams pay a larger portion of the revenues they collect to their players. If this is an issue for owners, a number of appropriate revenue sharing models (i.e., pooled gate revenue sharing) exist that will redistribute money amongst owners with little to no impact on league outcomes.

9 Affidavits Comments

The defendant's affidavits contain a number of statements on the affordability of a minimum wage policy that have been challenged by Sports Economics theory and that are contradicted by my findings.

The key argument that teams and leagues do not have enough money (i.e., are not sufficiently profitable) to pay players minimum wage is economically flawed. The CHL currently has a salary cap of $0. A minimum wage will not impact the production revenues, it will simply impact the restribution of the revenues produced from owners to players. Players contribute to revenues generated by their own and opposing teams. They also contribute to league merchandising sales, televison rights fees, etc. Unless the minimum wage costs exceeds the total of all revenues generated, the argument is unfounded and distracts from the issue of whether owners are willing to alter the redistribution of revenues in a similar way to competitive markets.

The revenue estimates that I provide show that sufficient revenue is generated to pay players. These findings raise questions about the statement that one third of teams would be unable to afford minimum wage. The economic question about player pay concerns revenues, and not profitability. How and whether owners operate their businesses profitably and redistribute wealth is separate from the question of whether players contribute to the production of revenues.

If the economics of team ownership were as dire as the defendants affidavits suggest, why would individuals seek ownership of a team? Economists have long argued that owners have strategic reasons to plead poor. Claiming losses most notably enhances an owners position in bargaining for new stadiums with current host cities or for leveraging new investments from other actors. An important point to note is that the strategic nature of claims does not render them untrue. Since the defendants did not provide supporting documents, I cannot comment on the accuracy of their statements. I can however infer that these claims are based on accounting practices, rather than economic principles. Allowed

accounting practices are to count monies for the purposes of tax, not to discern the accurate values of assets. Economic value is based on the market price of the asset. Many businesses, including sport teams, can legitimately show accounting losses while also showing economic gains.

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Tables

Table 1. Estimated Ticket Revenue, in thousand of dollars

OHL team	Revenue	WHL team	Revenue
Barrie	386.73	Brandon	136.75
Erie	310.16	Calgary	618.24
Flint	221.70	Cranbrook	39.39
Guelph	253.19	Edmonton	405.61
Hamilton	1245.90	Everett	277.94
Kingston	367.74	Kamloops	232.58
Kitchener	646.41	Kelowna	344.92
London	1142.01	Kennewick	188.22
Mississauga	376.17	Kent	262.89
North Bay	145.41	Lethbridge	237.91
Oshawa	366.36	Medicine Hat	146.48
Ottawa	476.07	Moose Jaw	88.48
Owen Sound	57.14	Portland	1501.07
Peterborough	205.06	Prince Albert	94.90
Saginaw	118.13	Prince George	187.34
Sarnia	208.67	Red Deer	256.26
Sault Ste. Marie	196.93	Regina	510.93
St. Catharines	350.09	Saskatoon	517.70
Sudbury	343.08	Spokane	538.18
Windsor	594.52	Swift Current	36.50
		Vancouver	285.83
		Victoria	242.76

Table 2: Probability that a player drafted will play 1 game in other leagues, by rounds

Round	OHL	NHL	EP	Junior	Low. prof.	CIS	NCAA
1	1.00	0.44	0.25	0.22	0.69	0.20	0.00
2	0.96	0.21	0.05	0.35	0.63	0.33	0.09
3	0.85	0.19	0.08	0.62	0.44	0.44	0.17
4	0.69	0.08	0.15	0.75	0.50	0.31	0.25
5	0.62	0.08	0.06	0.68	0.34	0.26	0.16
6	0.55	0.12	0.10	0.71	0.33	0.27	0.24
7	0.45	0.06	0.10	0.82	0.39	0.14	0.33
8	0.41	0.02	0.10	0.80	0.41	0.20	0.20
9	0.43	0.07	0.12	0.79	0.40	0.33	0.31
10	0.36	0.08	0.08	0.78	0.32	0.30	0.32
11	0.36	0.05	0.18	0.74	0.41	0.21	0.28
12	0.22	0.03	0.12	0.62	0.31	0.25	0.41
13	0.38	0.04	0.11	0.80	0.36	0.22	0.29
14	0.32	0.02	0.17	0.78	0.37	0.29	0.29
15	0.32	0.08	0.03	0.82	0.34	0.21	0.34
All rounds	0.56	0.12	0.11	0.67	0.43	0.27	0.23

EP denote European professional, Junior denotes lower junior (e.g., Junior B), and Low. prof. denotes a lower professional league.

Table 3: Probability that a player drafted will play 100 games in other leagues, by rounds

Round	OHL	NHL	EP	Junior	Low. prof.	CIS	NCAA
1	0.98	0.32	0.05	0.03	0.42	0.07	0.00
2	0.79	0.12	0.02	0.05	0.33	0.11	0.04
3	0.67	0.17	0.02	0.12	0.25	0.15	0.06
4	0.50	0.06	0.06	0.17	0.23	0.15	0.15
5	0.32	0.04	0.00	0.34	0.16	0.08	0.08
6	0.31	0.08	0.04	0.06	0.24	0.02	0.10
7	0.20	0.04	0.02	0.37	0.18	0.02	0.20
8	0.17	0.02	0.00	0.34	0.22	0.02	0.12
9	0.26	0.02	0.00	0.31	0.24	0.17	0.19
10	0.26	0.08	0.02	0.22	0.16	0.08	0.12
11	0.26	0.03	0.03	0.23	0.26	0.00	0.18
12	0.19	0.00	0.03	0.28	0.22	0.06	0.19
13	0.22	0.00	0.00	0.29	0.11	0.09	0.11
14	0.12	0.02	0.05	0.34	0.24	0.10	0.20
15	0.11	0.08	0.00	0.34	0.08	0.03	0.16
All rounds	0.39	0.08	0.02	0.22	0.23	0.08	0.12

EP denote European professional, Junior denotes lower junior (e.g., Junior B), and Low. prof. denotes a lower professional league.

Table 4: Sale Price of Select Franchises

Year	Team	Price
1990	Spokane Chiefs	1.50
1999	Owen Sound Attack	2.73
2000	London Knights	5.043
2003	Mississauga Ice Dogs	4.56
2006	Mississauga Ice Dogs	10.68
2006	Windsor Spitfires	5.80
2007	Kamloops Blazers	7.95
2008	Portland Winterhawks	7.77
2013	Saskatoon Blades	9.28
2014	Prince George Cougars	7.08
2015	Erie Otters	9.23

Prices are expressed in millions of 2015 dollars.

Table 5: Estimated value of franchises, in millions of dollars.

OHL team	Value
Barrie Colts	8.53
Erie Otters	6.25
Flint Firebirds	6.22
Guelph Storm	7.69
Hamilton Bulldogs	32.69
Kingston Frontenacs	7.76
Kitchener Rangers	13.78
London Knights	23.02
Mississauga Steelheads	44.85
North Bay Battalion	3.37
Oshawa Generals	9.41
Ottawa 67's	55.53
Owen Sound Attack	1.36
Peterborough Petes	4.95
Saginaw Spirit	3.13
Sarnia Sting	4.55
Sault Ste. Marie Greyhounds	4.72
Niagara IceDogs	8.26
Sudbury Wolves	10.08
Windsor Spitfires	13.26

WHL team	Value
Brandon Wheat Kings	2.90
Calgary Hitmen	68.95
Kootenay Ice	1.21
Edmonton Oil Kings	51.06
Everett Silvertips	6.48
Kamloops Blazers	5.39
Kelowna Rockets	7.37
Tri-City Americans	4.65
Seattle Thunderbirds	5.81
Lethbridge Hurricanes	5.25
Medicine Hat Tigers	3.77
Moose Jaw Warriors	2.09
Portland Winterhawks	36.70
Prince Albert Raiders	2.21
Prince George Cougars	4.52
Red Deer Rebels	5.69
Regina Pats	12.14
Saskatoon Blades	13.97
Spokane Chiefs	13.13
Swift Current Broncos	0.97
Vancouver Giants	37.94
Victoria Royals	5.03